CAPHIA
COUNCIL OF ACADEMIC PUBLIC HEALTH INSTITUTIONS AUSTRALIA

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THE COUNCIL OF ACADEMIC PUBLIC HEALTH INSTITUTIONS (CAPHIA)

SUBMISSION TO

THE STRATEGIC REVIEW OF HEALTH AND MEDICAL RESEARCH IN AUSTRALIA

SUMMARY

Public Health research should be 'front and centre' in a strategic review of health and medical research support as it provides the evidence base and translational mechanisms for applying health and medical advances to improve Public Health. It is also the proven route to cost-effective improvement of community health, as demonstrated by large-scale Australian achievements such as smoking prevention, reduction and cessation interventions; iodine supplementation; screening for breast cancer; control of hydatid, malaria, dengue and TB; vaccination for prevention of epidemic childhood infections; compulsory seat belts; road safety campaigns; and mass sanitation and clean water supplies, to name a few.

For NHMRC funding commencing in 2012, 16% was allocated for Public Health research compared to 46% for basic science and 33% for clinical medicine and science. Additional funding is necessary for Public Health through either dedicated funding from the NHMRC or other sources if we are to deliver on a world-class preventative health agenda; especially given the increasing demands in relation to our aging population, health disparities and other epidemic health challenges.

Research training must be supported to attract gifted scholars to grow the Public Health research capacity. We also have responsibilities to support strategic Public Health research in low and middle income countries of our region. New mechanisms are needed to ensure funds are ear-marked for targeted skills development as well as international Public Health research to address defined regional priorities.

To improve awareness of Public Health research challenges, and set priorities, there is a need to engage researchers, policy makers and practitioners, such as through an annual National Public Health Research Forum. Existing mechanisms for research funding should also be reviewed to: better support collaboration and knowledge translation; build the infrastructure required to support large scale population-based studies, and establish and maintain biological and information repositories.

CAPHIA RECOMMENDATIONS

R1. Review mechanisms to establish research priority areas in Public Health, including revisiting the findings from the Nutbeam *Review of Public Health Research Funding in Australia (2008)* as accepted by the NHMRC.

R2. Support a range of funding sources, and develop mechanisms to grow the range and quality of partnerships from non-government funding sources, including industry partners.

R3. Dedicate funding to support knowledge synthesis and translation to policy and practice. This will facilitate a more sophisticated view of knowledge exchange that moves beyond the current focus on clinical guidelines to embrace policy and practice impacts in the health sector.

R4. Maintain funding models that support research projects, people and ideas, but include dedicated funding to identify areas of skill shortage for research training. The process for determining these skill shortage areas also needs to be developed in parallel to the research priority areas mentioned in R1.

R5. Reintroduce NHMRC enabling grants, or introduce small 'research development grants' of $100,000 to $200,000, to fund the development of novel ideas.

R6. Improve the structure of the NHMRC Partnerships Projects and Centres Programs to include longer lead times for strategic calls, to allow genuine partnerships to form in response to the priority funding opportunity, and improve marketing of these initiatives to promote more effective partnership access and support.

R7. Expand Centres for Research Excellence or develop/reintroduce alternative enabling funding, to support targeted capacity building for Public Health research.

R8. Foster a concerted national effort to improve academic institutions' and researchers' understanding of implementation science; and funding for several national centres of excellence in implementation science; some to focus on biomedical science, clinical sciences; and some dedicated to Public Health.

R9. Provide dedicated research funds for leveraging international funding partnerships on strategic global health priorities. Previous NHMRC bids to partner with larger international funding bodies failed, but success may yet be possible if we partner strategically based on shared health concerns that require a global solution, and where Australia offers world-leading research expertise and research infrastructure (eg, large-scale population-based interventions, systems approaches).

R10. Provide dedicated funding for research platforms and infrastructure that recognise a broader definition of 'infrastructure' to support large scale ambitious Public Health research initiatives required to take Public Health research to the next level (eg investing in large long term cohort studies, biorepositories).

R11. Initiate protected funds for carefully defined regional Public Health research that builds capacity, is fully collaborative, and which aims to understand and optimise the health transitions underway.

R12. Consider an annual high level round table event to bring researchers, policy developers and parliamentarians together to develop and review research and government policy directions in Public Health.

The strengths of Public Health (often also described as population health) are that it involves the long-term strategies required to minimise disease, delivers on the prevention agenda to ensure health targets are met, and provides the evidence base to inform best practice in health services and other health interventions. Unlike heroic medical procedures with immediate and obvious results, e.g. caesarean section which can highlight their successes with pictures of babies whose lives have been saved, the beneficiaries of effective Public Health who did not succumb to illness are not as visible or able to tug at the heart-strings. Yet Public Health arguably delivers better value for money. Public Health is best understood as a100 year view of policy and practice: controlling disease, building resilience, addressing drivers of health disparities, and managing the pressure on our health systems. It requires intergenerational approaches.

Public Health research tackles priority problems using both established and cutting-edge methodologies. There are few magic bullets. Instead, the complexity of the problems demands nuanced and context-specific solutions. For true population health, action is required at local, national, regional and global levels. For example the success in the second half of the 20th century in reducing prevalence of smoking and thus the attributable burden of cardiovascular disease and cancer etc., shows the effect of intervention from individual education and treatment (through nicotine replacement therapy) through to settings-based interventions such as the banning of smoking in public places; sector-specific intervention including changes in school curriculum and whole of population level intervention including taxation and social marketing. In our interconnected world few problems can be effectively isolated and instead there is often a volatile mix of causes and consequences. The most effective Public Health research is truly multidisciplinary and must engage with more specialised disciplines (e.g. clinical sciences, marketing, economics, etc.) within and outside health and medical research than any other defined group. Public Health can, and does, provide real insight as the major translational branch of all health and medical research.

THE TEN MOST NOTEWORTHY PUBLIC HEALTH ACHIEVEMENTS IN THE US IN 2001-2010

1. **Vaccine-preventable diseases;**
2. **Prevention and control of infectious diseases;**
3. **Tobacco control;**
4. **Maternal and infant health;**
5. **Motor vehicle safety;**
6. **Cardiovascular disease prevention;**
7. **Occupational safety;**
8. **Cancer prevention;**
9. **Childhood lead poisoning; and**
10. **Public Health preparedness and response.**

The impact of Public Health strategies for health improvement of populations is highlighted in the 2011 report from the US Centers for Disease Control and Prevention (CDC) which listed the above. The report concluded that advances in Public Health contributed significantly to the decline in the age-adjusted death rate to a record low in the United States from 1999 to 2009. The examples in this report also illustrate the effective application of core Public Health tools. Some, such as the establishment of surveillance systems, dissemination of guidelines, implementation of research findings, or development of effective Public Health programs, are classic tools by which Public Health has addressed the burden of disease for decades.

The creative use of the whole spectrum of available options, as demonstrated here, has enabled Public Health practitioners to respond effectively. Public Health practice will continue to evolve to meet the new and complex challenges that lie ahead.

CDC. Ten Great Public Health Achievements- United States, 2001-2010. MMWR 2011;60: 619-623.

Whilst human health, on average, is on the rise, health disparities are increasing and we have particular areas of concern including closing the Indigenous health gap. Research in Public Health also has to deal with important paradoxes of previous success such as increased longevity, even though health disparities are also increasing.

We are experiencing an ageing population in Australia that brings new challenges to the way we view health and manage our health systems. Similarly increasing access to technology that can decrease mortality and morbidity, but at considerable financial investment, place us under increasing pressure to make hard decisions at a population level on the most appropriate ways to expend health funds for the greater good – balancing the individual good with the long term view that gives us the smartest spend to support a healthy population. Those born into the next generations should expect a life expectancy pushing towards 100 years, nearly doubling over the past century (55 years for males and 59 years for females in 1900 and 80/83 in 2006 according to The Australian Institute of Health and Welfare).

This 100 year view, and the social, cultural and political approaches that are central to Public Health, and now recognised globally as the major drivers of health (e.g. equity), define some of the specific aspects relevant to the theory and practice of Public Health research. It is essential that these aspects are supported by our funding structures if we are to maintain Australia's position at the forefront of Public Health research and practice, and deliver the best outcomes for Australia's health.

Public Health brings to this review lengthy experience in targeted areas for research development as identified in the terms of reference for this review. We draw on these key strengths in collaboration and the 'translation of knowledge to influence policy and practice' to inform our recommendations for funding models, building capacity in Public Health research, and the core research methods that sit within Public Health that support the broader health and medical research agenda (such as biostatistics, epidemiology, health economics).

We do not reiterate the findings or the recommendations of the Nutbeam review here, though we note all but one were accepted by the NHMRC, whilst none have yet been applied. We do however acknowledge advances over the last 10 years in the funding support for Public Health research and researchers. We now see similar rates of project funding success by NHMRC Public Health panels to the national average, and 16% of all NHMRC project funds were allocated to Public Health endeavours commencing in 2012, but the question remains – what percentage of the health research spend is right for Public Health in order to deliver on the preventative health agenda? And can this be delivered by the current finding structures?

QUESTION 1 *Why is it in Australia's interest to have a viable, internationally competitive health and medical research sector?*

ToR 1 The need for Australia to build and retain internationally competitive capacity across the research spectrum, from basic discovery research through clinical translation to public health and health services research.

ToR 6 Strategies to attract, develop and retain a skilled research workforce which is capable of meeting future challenges and opportunities.

1. We need the local research workforce to respond to local Public Health priorities. For example, for Hendra virus – a local issue – we must have outstanding local researchers to solve such health problems. Also in Public Health we have local sociocultural issues and settings that are 'Australia-specific' and it is not possible, risky and too expensive to import

products or services from other countries. We need local research of a very high quality to understand the current health threats and plan for managing these into the future.

2. Export of products and processes generated through research contributes to Australia's Gross Domestic Product. This applies to Public Health research where intellectual property and patents can have significant dollar outcomes. Similarly, as indicated above, there is very good evidence that effective health promotion and disease prevention activities lead to substantial health dollar savings.

3. World-standard research workforce - If we do not have a high quality and competitive health and medical research sector, the best and brightest will simply leave Australia and leave us with second rate researchers unable to generate 1) and 2) above. Australia has built a number of best practice models recognised internationally as exemplars in Public Health research and practice (primary health care, disease screening, control of smoking in public places), and we are also at the forefront of a number of methodological areas (eg adapting complex systems approaches to the design and evaluation of large scale health interventions). Australia needs well-supported research programs to retain our bright young stars as well as to attract emerging researchers from around the world to engage in our research programs. Australian health and medical research would benefit greatly if some of our excellent early career researchers who have departed for research experience elsewhere could be attracted back to apply their knowledge to advance Australia's health.

   Australia has an international reputation as a leader in promoting the health of the public (e.g. life expectancy, VicHealth, smoking bans) and has a responsibility to itself and its neighbours to continue to lead this work world-wide.

QUESTION 2: *How might health and medical research be best managed and funded in Australia?*

ToR 2 Current expenditure on, and support for, health and medical research in Australia by governments at all levels, industry, non-government organisations and philanthropy; including relevant comparisons internationally.

ToR 3 Opportunities to improve coordination and leverage additional national and international support for Australian health and medical research through private sector support and philanthropy, and opportunities for more efficient use, administration and monitoring of investments and the health and economic returns; including relevant comparisons internationally.

ToR 7 Examine the institutional arrangements and governance of the health and medical research sector, including strategies to enhance community and consumer participation. This will include comparison of the NHMRC to relevant international jurisdictions.

The multiple funding sources currently available for health and medical research in Australia provide opportunities to address research in multiple settings. It is therefore considered valuable that government (national, state and local) provide multiple funding sources which allow relevant priorities to be addressed by each setting, recognising that the context for research is important. However, it is vital to ensure that funding from different sources does not duplicate efforts, and that intersectoral linkages are encouraged. Though substantial Public Health research is now supported through state government initiatives and Australian Government priority area funding, in the main there is still a heavy reliance on NHMRC funding, and to a lesser degree ARC.

The NHMRC funding process has become increasingly bureaucratic and competitive (less than 25% success rate) and there is a growing gap between the rich (those regularly funded with a NHMRC track record) and poor (researchers/institutions without NHMRC track record) such that the number of disenchanted researchers is growing. Furthermore, the current competitive process of

the NHMRC does not necessarily promote innovation because of the competitive advantage it creates for established researchers.

Substantial funds offered for Population Health CRE have created some opportunities for capacity building in Public Health research, especially in relation to developing post docs and training PhDs. This also encourages collaborations between universities and research institutions. However, the number offered is not sufficient to cover the breadth of areas in Public Health. The enabling grant scheme that funded establishing resources (Twin Registry, longitudinal studies) and the capacity building grant scheme (training postdocs) have now been discontinued and we need to consider ways to better support capacity building.

The NHMRC Partnerships Projects and Centres are a good idea, but poorly executed. In Public Health, we have very clear ideas of the priorities for improved systems and services, and these funding processes recognise and support this, however there simply needs to be more investment in systems change by well-informed researchers and well informed partners. The NHMRC must engage in active marketing of the opportunity these funds provide to both potential research partners and researchers themselves. The program would be improved in reach and outcome if it were developed to allow for the lead-time required to engage the government departments who are the intended partners in these schemes. Currently both Partners and Researchers have limited idea of the process and technicalities of government–researcher collaborations. The timelines from the call to the grant submission are far too short.

In Australia, apart from reorienting the existing funding opportunities to be more realistic and accessible, it is arguable that there needs to be more targeted research – similar to the NHMRC Partnership Centre – but without the limitations mentioned above. The targets should align with the national strategic priorities. Where these targets relate to global health problems (e.g. communicable diseases or complex interventions for widespread chronic diseases) then the Australian Government could consider negotiating collaborations with other large international funding bodies to pool financial resources to support international researcher collaborations, allowing a more coordinated approach to accessing and leveraging international research funds. Some work has already been done in this area, for example through funding initiatives such as the Global Alliance for Chronic Disease , AUSAID, or the EU partnership grants, though focused on the external partner country's priorities rather than Australia's. There is a need for more ambitious partnerships that direct the best Australian and overseas researchers to engage in research addressing current and emerging large scale global health problems that Australia has a vested interest in solving.

The suggestions made above with respect to NHMRC funding could be supported if there were a shift from most funds being released for 'blue sky' research and a much larger proportion invested in solving known problems that have a broad impact on population health.

Some other areas where funding which could be improved:

Philanthropic funding - little Public Health research is currently funded from philanthropic funding which may indicate the nature of Public Health research, where populations are the focus, rather than individuals, and where there are not disease-linked lobby groups promoting the need for research.

Funding from commercial/industry sources needs to be carefully considered in the context of Public Health to ensure that there are no conflicts of interest. However, consideration could be given to

developing a third party structure where industry can provide resources to support health and medical research, without linking their name to a specific project. Some sources should not be allowed to contribute directly (e.g. smoking industry, gambling industry and alcohol industry). There is also an argument for diverting health-related "sin taxes" to population health (ie QUIT and VicHealth) being expanded to other taxes and/or health conditions.

Co-funding models are a useful structure to consider, which support collaborations and encourage leverage opportunities. There are already successful models in place, for example the NHMRC-Cancer Council and Heart Foundation. It is important that consumers are also given an opportunity to participate and contribute to priority setting. This should be in balance with the available evidence so that priorities around funding are based on both the evidence supporting Public Health needs and input from the potential communities. Additionally, support is needed to provide research funding with the long term perspective of the health of the nation, which in the Public Health context may include long term community interventions or longitudinal cohort studies.

Opportunities to improve potential efficiencies of Public Health research should be given consideration. For example, data linkage provides an excellent opportunity to support Public Health research, yet current efforts to do this well are hampered by drawn out ethics applications which require large resources. More efficient processes to access linked data sets are required.

QUESTION 3: *What are the health and medical research strategic directions and priorities and how might we meet them?*

ToR 5. Likely future developments in health and medical research, both in Australia and internationally.

ToR 12 The degree of alignment between Australia's health and medical research activities and the determinants of good health, the nation's burden of disease profile and national health priorities, in particular "closing the gap" between indigenous and non indigenous Australians.

ToR 13 Opportunities for Australia's health and medical research activities to assist in combating some of the major barriers to improved health globally, especially in the developing world.

The foundational and primary nature of Public Health research enables it to relate to other areas of health and medical research. To date, the bulk of research funding is still investigator driven and we need to find smarter ways to set our research priorities. As we have outlined above, Public Health represents a complex branch, or set of branches, of health and medical research that focuses at the population level. However it also intersects with many of the other clinical and basic science fields in the identification of health issues, development of substantial research platforms, building the clinical evidence base and translating findings into practice, especially at policy and program level. Australia is a recognised world leader in the development and evaluation of large-scale population-based Public Health interventions, and now in applying systems approaches to the development and evaluation of complex interventions.

While the national health priority areas focus on disease risk factors, many interventions will fail due to a focus on either isolated aspects of behaviour change or risk mitigation, and/or relying on evidence gathered in easy to reach populations. There is a risk therefore that the highly competitive funding processes for category 1 grants encourages researchers to boost "feasibility" at the cost of the more valuable but complex research that focuses on analysing the problem and generating or evaluating the solutions within the broader population. The recommended directions indicated below assume that the funding process would support the intrinsically complex nature of Public Health research and move us away from these risks.

The effects of social determinants, which arise out of an inequitable distribution of resources, can be seen in social gradients of illness and death, whereby those populations and subgroups that are most disadvantaged suffer the greatest burden of disease and mortality. For example, Australian's

Indigenous people live on average twenty years less than the non-Indigenous population. Social determinants are associated with psychosocial factors that are known to be barriers to healthy behaviours, such as isolation, loss of sense of control, low self-esteem and low resilience. These and other factors mitigate engagement by individuals, families, and communities with strategies to reduce major non-communicable diseases. Without addressing the social determinants, attempts to change individual risk factor behaviours are likely to be limited.

Priorities

1. Recognition of the social determinants of health, and the health impacts of social disparities. Traditional models of working 'on' populations have delivered less than optimal results. The next step requires working 'with/in populations' to develop solutions. This requires some re-conception to extend research beyond simple exposure/ outcome thinking. This is coming worldwide but Australia has a real opportunity to lead the world in this area. The health of Indigenous Australians, in particular, provides a stark example of the effects of the social factors on health and illness, and should be set as a major target for Public Health research in Australia, as part of the 'Closing the Gap' initiative.

2. Research approaches that are respectful and inclusive of communities who are expected to benefit. Health literacy that enables and empowers community members to not just access the health systems but also potentially contribute to developing the research agenda should also be prioritised.

3. Research must involve interdisciplinary and interagency efforts, and systems level research, intervention development and evaluation. To do this effectively, recognition of, and support for, research collaborations with groups outside the direct health area is a priority.

4. Rapid development of implementation science to manage the roll-out and evaluation of complex interventions, and a simultaneous investment in the synthesis of existing evidence is necessary if we are serious about achieving effective translation of research into practice in Australia. There is a profound lack of knowledge of implementation science in Australia. The National Institute of Clinical Studies program is funded as the premier program in this field, but its training program in the area of implementation science is rather piecemeal and limited. To overcome this would require several national centres of excellence in implementation science; some to focus on biomedical science, some on clinical sciences, and some on Public Health. There also needs to be increased funding to support more formal mechanisms to synthesize evidence and develop it to policy and practice-ready status. Current investment focuses on Cochrane group which is both primarily focused on clinical trials and has a narrow view of the potential recipients beyond the clinical workforce.

5. The next generation of prevention research is placing equal importance on building the architecture for disease prevention (eg community capacity) as it will on delivering single programs or events. The Victorian Health Department is building on the success already seen in applying this approach to test an explicitly system-based approach to the prevention of chronic disease. The model, the Victorian Prevention Community Model, includes a cluster randomised controlled trial of a system-based intervention in 12 'prevention areas' with matched comparison areas. Using system thinking in the design of obesity prevention has great promise but the approach is in its infancy and has never been tested at the population level in a controlled environment. Governments and other funding bodies need to be prepared to be bold - lining up behind these initiatives to ensure the maximum scientific benefit is gained.

6. Many Public Health platform technologies eg cohort studies, generate large amounts of rich data and biological collections (serological, genetic etc) essential for future research and often accessed by other fields of health and medical research. However, such platforms require long-term commitment and funding if they are to assist in tracking the development of population health and illness over the longer period. Thus a priority is the need for long term investment in studies that generate profiles of population health and illness status. Built as a large, population level study such a cohort can begin to examine these new questions about the effectiveness of the presence and degree of different aspects of a prevention system. The previous NHMRC enabling grants provided a funding mechanism for such cohort studies, but this has now been discontinued. Another way to support such long term studies is to provide funding mechanisms to build capacity for future generation researchers.

QUESTION 4: How can we optimise translation of health and medical research into better health and wellbeing?

ToR 4 The relationship between business and the research sector, including opportunities to improve Australia's capacity to capitalise on its investment in health and medical research through commercialisation and strategies for realising returns on Commonwealth investments in health and medical research where gains result from commercialisation.

ToR 8 Opportunities to improve national and international collaboration between education, research, clinical and other public health related sectors to support the rapid translation of research outcomes into improved health policies and practices. This will include relevant international comparisons.

ToR 9 Ways in which the broader health reform process can be leveraged to improve research and translation opportunities in preventative health and in the primary, aged and acute care sectors, including through expanded clinical networks, as well as ways in which research can contribute to the design and optimal implementation of these health reforms.

ToR 10 Ways in which health and medical research interacts, and should interact, with other Government health policies and programs; including health technology assessments and the pharmaceutical and medical services assessment processes.

ToR 11 Ways in which the Commonwealth's e-health reforms can be leveraged to improve research and translation opportunities, including the availability, linkage and quality of data.

Research funding must necessarily encompass the breadth of research, from concept to implementation and beyond, in order to maximise translation of research outcomes to policy and practice. As already identified, the synthesis of evidence itself needs to be directly funded if this is to inform priority setting for future funding initiatives. Public Health research by its nature fosters research translation, as demonstrated by distinguishing characteristics of Public Health research as follows:

1. Provides a systems approach: frequently the conduit for implementation of basic and clinical research. Public Health research often complements the clinical research, for example a randomized controlled trial which has demonstrated efficacy may require evidence of effectiveness in a real-world context for effective translation (for example cohort studies and data linkage studies). Public Health additionally provides the expertise for evaluation post implementation. Public Health addresses the complete definition of health as promulgated by the WHO, and hence encompasses health more broadly than any other health research area.

2. Focuses on prevention and necessarily adopts a long term view: For example evidence suggests that damage to the ova (egg cells in a woman) can influence more than one successive generation; we know that traumatised children can become parents who traumatise their children; diseases subject to smoking may take decades to manifest. The longer term view is critical for translation.

3. Includes an intersectoral perspective: Increasingly, intersectoral relationships are being recognized and present implications for translation of research. For example the links

between education and health, between health and imprisonment, between conflict and health, etc. Examples include research in the built environment, ex-prisoner cohort studies and research in drug addiction.

4. Engages the community: As we have stated, there needs to be avenues for community participation in the initiation, conduct and application of research. However it is also important that any community participation around contentious issues which are open to influence from vested interests must be deliberative and the participants must be well informed. There are a number of vehicles for doing this from citizen councils such as NICE has to deliberative methods such as citizen juries.

5. Includes a global perspective: In addition to the consideration of global equity (recently recognized by the World Economic Forum as a major world threat), Public Health research addresses the potential for threats to Australians of infectious diseases, of medical tourism, etc., and studies the health of immigrants including cultural challenges. It also builds collaborations for international research. Again the translational implications, which may include benefits or drawbacks for developed and/or developing countries require a broad understanding across the global spectrum. Developed countries like Australia have a responsibility to translate the lessons learnt from the disease/development double burden cycle for adoption in lower- and middle-income countries and so reduce the expected double burden as some of the worlds largest countries go through rapid transition in their economies.

6. Commonly includes collaboration with government agencies linked to policy: Government collaboration requires increased recognition within the funding process. Policy and government personnel are often not valued as CIs in research applications because of a lack of track record in terms of publications and research grants, but provide linkages for policy translation and reflect the policy perspective during inception of the research, hence providing more expedient translation in the longer run. Assessing effectiveness of policy is another frontier worthy of more attention.

7. Addresses all components of the translation process including identification of the problem across the population, understanding the implications of change, addressing barriers to uptake, monitoring use, evaluating outcomes and subsequently identifying best evidence for ongoing implementation and/or the need for redevelopment.

8. Provides core competencies within Public Health education programs which directly address translational principles. Education fundamental to Public Health training addresses an understanding of the hierarchy of evidence; development of systematic reviews; statistical methods of meta-analysis; an understanding of research design and its implications for evidence; includes both quantitative and qualitative research methods; and includes an understanding of health policy and resource allocation. The Master of Public Health is therefore potentially the primer for translation of research knowledge into community practice including the development evidence-based guidelines and models of care.

Most scientific research requires the skills developed through Public Health programs to effectively translate to health benefits in the community. Conversely, the impact of many interventions is diminished by the lack of surveillance and evaluation which would identify the potential for improved translation.

Current literature suggests that there is a need to better understand the translation process. There are the simple models of translation where benefits are immediate and tangible, but there are some very complex translational challenges, such as food labelling, where the challenge is not limited to conveying an understanding of the implications of combined food additives for example, but is further challenged by vested commercial interests which are not easily disputed where research is insufficiently funded. Using sophisticated and evidence-based models of translation and encouraging a broader environmental view may require a separate component of research funding. Additionally, given the traditional recognition and rewards for researchers are based on high impact factor publications and competitive grants, a major shift in focus needs to occur so that implementation research and demonstrated positive impacts on communities is given weight along with publication of research in journals.

We would therefore argue that the funding and support for Public Health research is inadequate (16% for funding in 2012) compared with clinical medicine and basic science, given not only its breadth and arterial translational capacity, but also its importance for the quality of health systems. Many Public Health interventions become invisible whilst effective (e.g. screening and vaccination programs) but evidence of the lack of these programs paints a very different picture to the health we take for granted. Similarly the enhancement of Public Health education and increased support for Public Health Centres of Excellence will serve to facilitate translation of research to the community and lead to more effective health care and a stronger health care system. We are unable to identify, let alone learn from, many of the successes that may amount to 'natural experiments' because of this lack of funding (eg urban development, shift in food composition, taxation changes, shifts in indigenous health policy, and so on)

This submission was prepared in consultation with the 24 CAPHIA member universities who have a shared interest in maintaining high quality research and academic standards in the education and development of Public Health practitioners and researchers.

Please contact me for any more information you may require, and we are happy for our submission to be made public.

Yours sincerely,

Professor Catherine Bennett, on behalf of the CAPHIA executive and member institutions

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