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Using health prevention lens to build community resilience in a changing climate

In recent years, changes to the climate have become blatantly apparent, as have the associated impacts on human health and wellbeing. Current responses to extreme events and climate risk are not sufficient to climate change as one of many drivers for disaster risk and vulnerabilities. As climate change is driving the frequency and severity of natural hazards it will lead to increased demand on disaster management capabilities. Conventional linear approaches to risk management that were once successful in addressing problems are ill-suited in solving the complex interactions between the physical environment and public health. There is a need for innovative strategies to develop the next generation of workforce to reduce disaster risks and complement disaster response activities. The environmental health profession needs to change the approach to become effective practitioners for the future. Urgently, we need to start developing the capacity of our communities to adapt to their changing environment and transitioning to new ways of thinking and doing.

New approaches to disaster risk management have shifted away from solely response and recovery, to also include prevention, mitigation and preparedness in the disaster cycle. Importantly, these new approaches encompass a focus on reducing present risks and preventing new risks as well as building resilience to these risks. Yet, globally, most governments are still prioritising disaster response and recovery in providing temporary results at a very high cost. Disasters are not natural but are socially constructed events within an existing vulnerable community where a natural hazard then becomes a disaster. The most effective way of addressing the risks posed by climate change, hazards and disasters is to lessen the underlying factors causing vulnerability. Environmental health prevention can be utilised as this is very similar to the understanding of the 'new' public health movement.

Climate health risks are the result of a dynamic interaction of hazards, exposure and vulnerability. The compounding and cascading nature of these risks can impact on health, social, economic and other systems. Developing effective strategies in health will require a systematic understanding of which individuals or populations are vulnerable, and how different pathways contribute to their vulnerability. This supports the value of system-base understanding for risk management and response options targeted towards maintaining population health. A core function of the environmental health professional is to prevent impacts on human health and prevent impacts on the environment. The profession has an advanced understanding of the complex social and particularly, the environmental determinants affecting community health. These determinants of health are similar to the understanding required of vulnerability and risk reduction. Environmental health profession must broaden their work functions to have a more proactive role with the focus of prevention in the full disaster risk management cycle.

There are commonalities and considerable overlaps of the health impact pathways of climate change and climate-sensitive disasters. It makes operational and technical sense to link these approaches together. Having a understanding of systemic risks would inform effective and efficient strategies leading to a similar outcome for both approaches. Both approaches also have similar goals to reduce vulnerability, build resilience and with links sustainable development. The environmental health profession should take this integrated approach for a robust approach in strengthening the health system which is key strategy of adaptation in health. In this context, climate change adaptation should be a subset within disaster risk reduction in which both are embedded into decision making of development.

There needs to be a shift in thinking from "managing disasters" to be more proactive responses by "reducing disaster risks and building resilience" by using a health prevention lens. The prevention principles play a central role for public health preparedness to minimise health impacts, especially in the face of scientific uncertainty. A preventative approach is needed in managing the risk manifestations of hazard, exposure, and vulnerability while also building the capacity of the exposed community to adapt to changing conditions. Instead of focusing exclusively on emergency response, prevention also has been proven to be an effective approach for managing human health risks and is well known with the field of environmental health. This also provides an opportunity to learn and transform the system for a long-term recovery. Environmental health should also feature for long-term recovery to assist shifting the system out of a vulnerable state. There will a greater emphasis on transformational change to build resilience in the community and other systems. Transformation is achieved

when adaptation programmes alter the fundamental approaches to be better prepared for cascading health risks by addressing the root causes of vulnerability. The community has a lot to lose if their vulnerability is not addressed but have the most to gain if prevention is used to reduce the impact of disasters.

The most effective way to prepare communities for disasters is by taking a comprehensive and holistic systems approach. Additionally, taking a complex adaptive thinking approach understands the manifesting of complex, compounding and cascading risk factors as well as enabling the development of effective strategies to achieve a desired outcome. The tools used in health prevention can also be employed to apply risk reduction strategies to address the upstream root causes of vulnerability. Using a preventative risk-based approach would be an effective tool for assessing the health risks of climate change and related disasters. The profession not only has the ability, but also has the responsibility, to communicate these health risks, including the opportunities to advance policy in this area. Finally, the profession is uniquely positioned with interfaces between environment and health risks as well as between government and local communities. This is the only profession in Australia that provides population health protection to the community at the local level and could assist in driving bottom-up community resilient approaches. These local level actions are necessary components of comprehensive risk reduction strategies and environmental health prevention should have this role in this changing climate.