

Health Protection Policy Toolkit

Health as an Essential Component of
Global Security

Second Edition



The Commonwealth



GIG
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Cymru
Public Health
Wales

This is the second edition of the health protection policy toolkit completed for the Commonwealth Health Ministers Meeting 2017

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Summary and key messages

Health as an essential component for global security

This toolkit forms a major component of Commonwealth work addressing health as an essential component of global security a growing field which has progressed significantly since the first edition of the toolkit. The second edition is summarised and prefaced with the key messages detailing how health systems and global security both complement one another and are essential to one another's success.

A One Health Vision

Strengthened governance for public health systems is a common good for all to ensure global security and enable sustainable wellbeing

Key Messages

1. Health is a question of global and national security - weak health systems present serious risks to global security.
2. Global security is only as strong as our weakest link. The well-being of all depends upon the health of our most vulnerable.
3. Public health systems are a 'common good' - that create a CommonHealth for the Commonwealth.
4. Public funding of a minimum of 5% to 6% of GDP is recommended to sufficiently resource protection, prevention, promotion and people-centred services.
5. Investment in health systems necessitates active leadership and financial commitment by heads of government.



6. This commitment brings policymakers benefits, gaining favour among voters, which provide political benefits both at the outset and through long standing electoral support.
7. Health has an important role in global security as part of cross-sector policy and legislation for emergency preparedness and resilience, including for violence, climate change and migration.
8. National health security from 'cradle to grave' instils within the population a collective feeling of population security and sustainable support that creates stability and security for wider economic and social development and peace.
9. A plan for One Health education and workforce mobility facilitates scaling up and strengthened responses to emergencies.
10. Digital systems are a key for 'One Health' strong efficient health systems and global security.

The economic case for Global Security and Health

Maintaining a healthy and productive population with good social protection systems builds resilience, fuels economies and contributes to preventing civil unrest and extremism.

Macroeconomic studies have shown positive correlations between reduction in mortality and economic growth. Data from 100 countries over a 20-year period showed that a **one-year increase in life expectancy raises worker productivity and correlates with a 1.43 per cent increase in economic growth rate**. Analysis of data between 1970 and 2000 also attributes about 12 per cent of economic growth in low- and middle-income countries to a reduction in the rates of adult mortality.

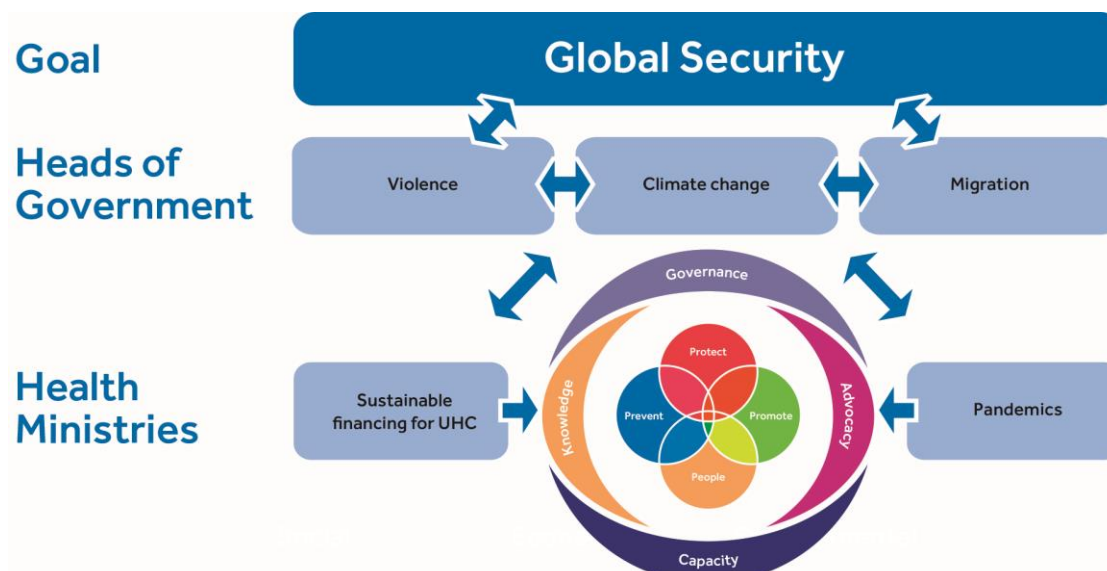
The Zika virus outbreak was projected to lead to a loss of US \$3.5 billion and fiscal losses of up to US \$420 million in the Latin American and Caribbean region in 2016 alone, with some affected countries expected to lose over 1% of their GDP.

Disease outbreaks are often unpredictable and tend to cripple economies by reducing productivity within countries and by causing wider restrictions on travel and trade. By 2015, the Ebola Virus Disease outbreak resulted in the loss of an estimated 12 per cent of the combined GDP in the worst affected countries.

The World Bank estimates that US\$ 3.4 billion annually is required to build a global pandemic preparedness system. The expected benefit is at least \$37 billion per year with economic rates of return ranging from 50 to 123 per cent per annum, depending on disease risk.

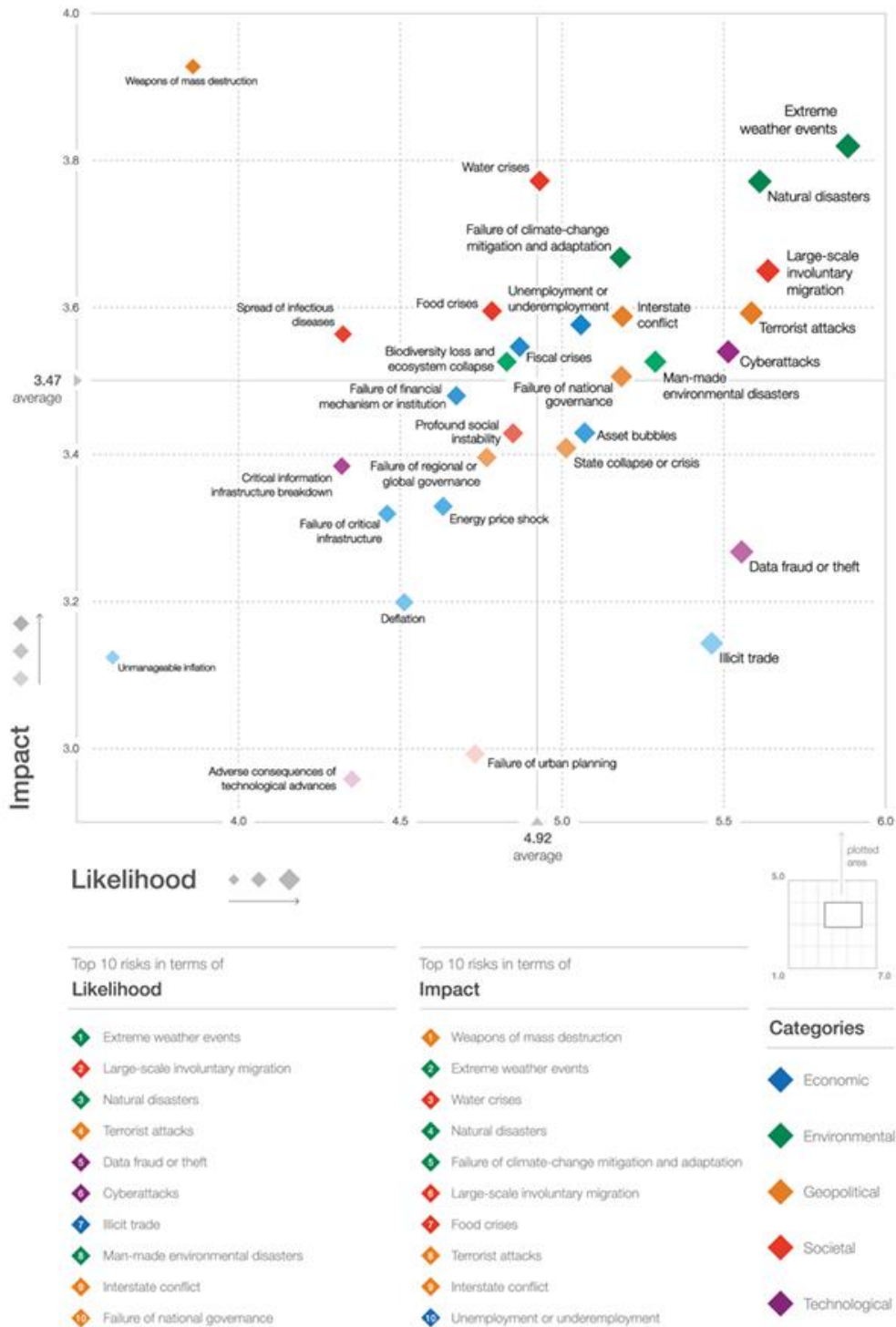
Health as a question of global and national security

The diagram below illustrates where the components of Global Security sits in relation to Heads of Government and Health Ministries. It demonstrates how the theme for the Commonwealth Health Ministers Meeting 2017 covers key components at each level.



The Global Risks Landscape

The figure below, from the World Economic Forum Global Risks Report for 2017, illustrates the prominence of health related risks such as infectious disease amongst the highest ranked global risks (WEF 2017).



Defining health and security

No universally agreed definitions exist for addressing health and security due both to the wide range of organisations involved spanning the health and security sectors and the relatively short time over, which these sectors have been considered as systems which need to work together.

Human Security

The UN Commission on Human Security defines ‘Human Security No universally agreed definitions exist for addressing health and security due both to the wide range of organisations involved spanning the health and security sectors and the relatively short time over, which these sectors have been considered as systems which need to work together.’ as:

“...to protect the vital core of all human lives in ways that enhance human freedoms and human fulfillment. Human security means protecting fundamental freedoms - freedoms that are the essence of life. It means protecting people from critical (severe) and pervasive (widespread) threats and situations. It means using processes that build on people’s strengths and aspirations. It means creating political, social, environmental, economic, military and cultural systems that together give people the building blocks of survival, livelihood and dignity.” (CHS: 2003: 4)

Three essential freedoms have been described (PAHA, 2012); freedom from fear, freedom from want, freedom to live in dignity (PAHA, 2012). These freedoms should be people-centered, focus on individuals and communities not states, multi-sectoral, comprehensive, context-specific, prevention-oriented and relevant areas to the areas of: economic, food, health, environmental, personal, community, and political.

Global Security

Has been defined by the Cambridge dictionary as: *“protection of the world against war and other threats”*.

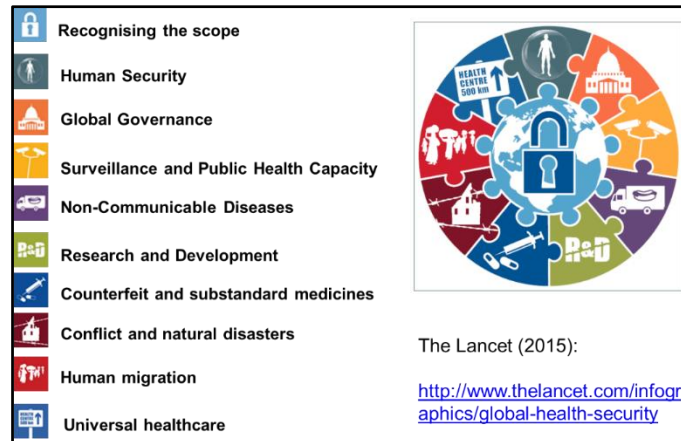
Global security has a global focus, exists at the level of populations, groups or states level, but has no respect for borders, is the responsibility of states and international organisations, requires cooperation, collaboration and partnership working and the passage of information.

Health Security has been defined as *“essentially the protection from threats to health”* (Heymann, 2015).

Global Health Security

“.....a shared responsibility that cannot be achieved by a single actor or sector of government. Its success depends upon collaboration among the health, security, environment and agriculture sectors.” (GHSA, 2016)

Components of Global Health Security



Why health contributes to global security

Pandemics

- Increasing extent and speed of global travel, and spread of urban living raises risks of a fast spreading and globally devastating pandemic.
- Emerging diseases and international outbreaks of infectious disease are hard to predict. Neither Ebola nor Zika were identified as global health security risks in the short-term prior to being declared public health emergencies of international concern.
- The recent lessons from pandemic infections, highlight the vulnerabilities of all of us and the risks of fragmented and weak health systems for early detection and response.

Climate Change

- *'Climate change is the biggest global threat of the 21st century'* (Lancet UCL 2009)
- The Rockefeller Foundation - Lancet Commission on planetary health called for improved governance to aid integration of social, economic and environmental policies and to create, and synthesise the application of interdisciplinary knowledge to strengthen the health of the planet. **'Tackling climate change could be one of the greatest global health opportunities of the 21st century'** (Lancet 2015).
- The health system plays a significant role in reducing risks, strengthening preparedness, response and recovery and ultimately minimising harm to human security, including; Food security and safety, Water security and safety, Increases in heatwaves, floods and disasters, and Impacts upon Non-Communicable Diseases (NCDs).

Disasters

- Natural and human related disasters, including Climate Change and Communicable Disease related, are increasing in severity, frequency and unpredictability. Wider health security issues include extremism, terrorism including deliberate release attacks and the health consequences of mass human displacement as a result of war, famine or natural disasters.
- There is a need to use projections and scenarios based on risk assessment, ensuring health system strengthening is a core component of emergency preparedness, not just response.
- Health can play a stronger role here. The Sendai Framework for Disaster Risk Reduction 2015-2030 outlines clear targets and priorities for action to prevent new and reduce existing risks.

Migration

- There are an estimated 1bn migrants globally, mostly for work and study, including 250m international migrants. The UNHCR estimate that worldwide there are 65m people displaced by conflict and a further 10m or more stateless people living without a nationality.
- In 2015 the Commonwealth Heads of Government noted migration can deliver economic and social benefits to member states.

- Health plays a key role in recovery and integration with access to services a key factor.
- The Colombo Declaration (CMA, Feb 2017) recognises the investment case for protecting the health of migrants. Ensuring access to services that enable prompt recognition of infectious disease can protect the health of vulnerable and marginalised groups and host populations.

Violence

- Addressing risk factors and interventions for the prevention of all forms of violence, including Gender Based Violence, can help in the wider development of resilient societies including Countering Violent Extremism (Bellis TBP2017).
- Rule of law and criminal justice approaches are often insufficient whilst prevention could be more effective (Bhui 2012, Challengren 2016, Bellis TBP2017).
- Primary prevention activities include education, health services, social engagement, cultural awareness, and personal development programs which are often less discriminatory than standard measures. Strengthening links between health systems across regions in conflict or fragile states can help to create wider social stability and civil paths to peace (Bojicic-Dzelilovic 2009, Sen 2011).

A Systems Framework for Healthy Policy

The Commonwealth Systems Framework for Healthy Policy (SFHP) provides a sustainable approach to implementing UHC. The SFHP is structured around eight components, four core and four enablers.

Governance: *public health legislation; policy; strategy; financing; organisation; quality assurance; transparency, accountability and audit.*

Knowledge: *surveillance, monitoring and evaluation; research and evidence; risk and innovation; dissemination and uptake.*

Protection: *International Health regulations (IHR) and co-ordination; communicable disease control; emergency preparedness; environmental health; climate change and sustainability.*

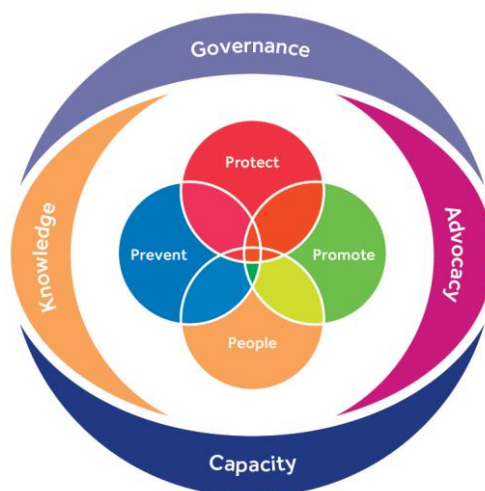
Promotion: *inequalities; environmental determinants; social and economic determinants; resilience; behaviour and health literacy; life-course; healthy settings.*

Prevention: *primary prevention: vaccination; secondary prevention: screening; healthcare management and planning.*

People-centred care: *primary health care; secondary health care; tertiary health care and rehabilitation.*

Advocacy: *leadership and ethics; community engagement and empowerment; communications; sustainable development.*

Capacity: *workforce development for public health, health workers and wider workforce; workforce planning: numbers, resources, infrastructure; standards, curriculum, accreditation; capabilities, teaching and training.*



The order of priorities will depend on specific context of each country dependent on factors including nationally identified risks, available resources and health system capacity. Each of these

components have a role to play in developing an effective system wide strategy for to deliver sustainable health systems.

The Systems Framework for Health Policy underpins the Commonwealth Health Protection Policy Toolkit, which takes forward the Health Protection component of the Framework. A number of other useful Commonwealth resources are listed below.

- **Sustainable financing:** Sustainable resources for Universal Health Coverage.
- **Reducing all forms of Violence:** Violence prevention action plan and policy toolkit.
- **Digital health systems strengthening:** Transforming the sustainability of delivering Universal Health Coverage.

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Health Protection Policy Tool Kit: health system strengthening for health security

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1. Purpose

The purpose of this toolkit is to provide a comprehensive and practical resource for policy makers and planners responsible for strengthening regional, subnational, national and global health protection as part of an overall health system. It is based on the Health Systems Policy Framework endorsed by the Commonwealth Secretariat and is presented as a suggested framework for use across the 53 member countries, to be tailored to needs identified in-country, enabling and empowering them to coordinate and organise their own health protection services.

2. The need for the toolkit

Health protection, as part of wider health system strengthening, facilitates the provision of high quality health services to national populations. These services can prevent and manage disease outbreaks and illness associated with pathogens and environmental hazard exposures, and increase resilience in coping with other extreme events and emergencies linked with the ever-changing realities of an interconnected world. Individual health security is the basis for better community health; in developing national policies, which are designed to protect the national population, this toolkit indicates how governments will also fulfil their obligations under the International Health Regulations (IHR).

The renewed drive by the international community to achieve Universal Health Coverage (UHC), as outlined in the Sustainable Development Goal 3 (SDG 3), has led to increased recognition that health protection is an integral part of providing quality health care to populations. It aligns with the need for health system strengthening through preventing health hazards, detecting outbreaks or extreme events and responding appropriately to the identified health threats. The unpredictable nature of health challenges from the adaptive microbial world, challenges faced by antimicrobial resistance as well as the occurrence of extreme climate change events calls for a robust health protection strategy as part of health system strengthening to ensure global safety and security.

In addition to the loss of lives and increased disability caused by weak health protection arrangements, there may be significant economic impacts. For example, Severe Acute Respiratory Syndrome (SARS) was first reported in Asia in February 2003. In a few months, the disease spread to more than two dozen countries in North America, South America, Europe, and Asia, before the outbreak was contained. A total of 8,098 people were infected worldwide leading to 774 deaths. The economic cost of the SARS pandemic was estimated to be at least US\$ 30 billion in the Far East alone (WHO, 2003).

The Ebola virus outbreak, which started with its index case in Guinea and subsequently spread to nine other countries, claiming over 11,000 lives, is estimated to have led to an economic loss of 12 per cent of the combined GDP of the worst affected countries in 2015 (Games & Vickers, 2015). As of April 2015, the World Bank Group estimated that GDP losses for these countries rose to US\$ 2.2 billion in 2015: US\$ 240 million for Liberia, US\$ 535 million for Guinea and US\$ 1.4 billion for Sierra Leone, with considerable expense since that time. The economic and human costs of the next pandemic could be much greater. Estimates suggest that an airborne, Spanish flu-like outbreak today would kill more than 33 million people in 250 days. Estimates of the cost of a severe outbreak could be as much as 5% of global GDP - or US\$ 4 trillion (World Bank 2016).

Disasters continue to exact a heavy toll on the well-being and safety of persons, communities and countries. In the past 10 years over 700 thousand people have lost their lives, over 1.4 million have been injured and approximately 23 million have been made homeless as a result of disasters. Overall, more than 1.5 billion people have been affected by disasters in various ways, with women, children and people in vulnerable situations disproportionately affected. The total economic loss was more than \$1.3 trillion. In addition, between 2008 and 2012, 144 million people were displaced

by disasters. Disasters, many of which are exacerbated by climate change and which are increasing in frequency and intensity, significantly impede progress towards sustainable development (Sendai Framework for Disaster Risk Reduction 2015 -2030 UNISDR).

Outbreaks and extreme events have repeatedly highlighted inadequacies of health systems and lack of clear coordination mechanisms. Reviews and evaluation of the existing international framework of health protection have been conducted in response to concerns about the response to the 2013-15 Ebola Virus Disease outbreak. These include:

- The Report of the Ebola interim Assessment Panel (WHO, 2015)
- The Advisory Group on Reform of WHO's work in Outbreak and Emergencies: First Report (WHO, 2015)
- The Report of the Review Committee on the Role of the International Health Regulations (2005) in the Ebola Outbreak and Response (WHO, 2015)
- The report of the Harvard-LSHTM Independent Panel on the Global Response to Ebola (Moon, et al., 2015)
- United Nations Secretary-General High-Level Panel report on the Global Response to Health Crises (UN, 2016)
- InterAction Council Chairman's report on the High-level Expert Group Meeting: Global Responses to Public Health Emergencies and Ensuring Global Health Security (InterAction Council, 2015)

Mandate for International Action

UN Sustainable Development Goals (SDGs)

Transforming our world: the 2030 Agenda for Sustainable Development is a plan of action for people, planet and prosperity and includes 17 Sustainable Development Goals (SDGs) with 169 targets. The SDGs were agreed by member states of the UN in September 2015 and aim to end poverty and hunger, combat inequalities, build peaceful, just and inclusive societies, protect human rights, promote equality and ensure the lasting protection of the planet. SDG 3 is to ensure healthy lives and promote well-being for all at all ages and includes 13 specific health-related targets.

International Health Regulations

The International Health Regulations, or IHR (2005), represent an agreement between 196 countries including all WHO Member States to work together for global health security. Through the IHR, countries have agreed to build their capacities to detect, assess and report public health events. WHO plays the coordinating role in IHR and, together with its partners, helps countries to build capacities. IHR also includes specific measures at ports, airports and land crossings to limit the spread of health risks to neighbouring countries, and to prevent unwarranted travel and trade restrictions so that traffic and trade disruption is kept to a minimum.

Sendai Disaster Risk Reduction Framework

The Sendai Framework for Disaster Risk Reduction 2015-2030 was adopted at the Third UN World Conference in Sendai, Japan, on March 18, 2015 and is the successor to the Hyogo framework for action 2005-2015. The Goal of the Sendai Framework is to prevent new and reduce existing disaster risks through the implementation of integrated and inclusive measures that prevent and reduce

hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience.

Four out of the seven global targets in the Sendai Framework are directly related to health, including reducing disaster mortality and the number of affected people, disaster damage to critical infrastructure and disruption of basic services, including health facilities. Effective implementation of the Sendai Framework requires enhancing cooperation between health authorities and relevant stakeholders and increasing public and private investment in the field of disaster risk reduction, including through encouraging technology and solution-driven research, and enhancing multi-hazard early warning systems.

<http://www.unisdr.org/we/coordinate/sendai-framework>

The International Health Regulations provide a legislative framework for an effective global public health system. This toolkit acknowledges that health protection is one component of an effective public health system. If designed and developed in a coordinated and interconnected way, then each system component should complement and enhance the other; the whole is greater than the sum of its parts. All countries, regardless of their state of health development, can benefit from regular assessment of their health protection services. Where this reveals gaps or weaknesses the need to strengthen health protection should not occur in isolation since effective health protection is dependent on other parts of the health system. The WHO provides joint external assessment tools for IHR capacity (see Annex 5: WHO Joint External Evaluation Tool) and this toolkit is intended for planning policy. As such it is complementary to the legislation of the IHR. Each country will have different policy requirements to translate from the toolkit and associated materials and checklists.

Mandate for Commonwealth Action

The Statement from the Commonwealth Heads of Government Meeting (CHOGM, November 2015) - Under the Public health issues (Statement 32):

Heads recognised the importance of tackling communicable and non-communicable diseases, including malaria. They underlined the importance of routine immunisation programmes. Heads reaffirmed their commitment towards making the complete eradication of polio a global priority. Heads called on the Commonwealth at large to support the strengthening of policies for universal health coverage in order to build strong and resilient health systems that will, in turn, enable better responses to public health threats and emergencies, as well as to address the increasing burden of communicable and non-communicable diseases. Heads also called for continued promotion of collaborative research into communicable and non-communicable diseases, as well as collective Commonwealth action to advocate for global health security and the reduction of all public health threats, including the global imperative of addressing antimicrobial resistance.

<http://thecommonwealth.org/sites/default/files/newsitems/documents/CHOGM%202015%20Communiqué.pdf>

Commonwealth Secretariat Strategic Plan (Objective 3.1) - Strengthen national frameworks and policies to improve health outcomes.

http://thecommonwealth.org/sites/default/files/page/documents/ComSec%20Strategic%20Plan%202013_2017.pdf

Ministerial Statement of the Commonwealth Health Ministers Meeting (CHMM, May 2015) -

Learning lessons from the Ebola crisis, Ministers encouraged all members of the Commonwealth to collaborate to build strong and resilient health care systems and urged the Secretariat to facilitate the co-ordination between countries. Ministers also agreed that health security and access to universal health coverage would be an appropriate theme for the 2016 Commonwealth Health Ministers Meeting.

<http://thecommonwealth.org/media/news/commonwealth-health-ministers-meeting-2015-ministerial-statement>

Ministerial Statement of the Commonwealth Health Ministers Meeting (CHMM, May 2016) -

Ministers noted increasing health security and Universal Health Coverage (UHC) challenges: in view of recent emerging and re-emerging infectious disease outbreaks, such as Ebola, malaria, TB, yellow fever, HIV and AIDS, they acknowledged the threat to health security and affirmed the importance of UHC as a key building block. Climate Change disasters noted as increasing in impact and frequency - whilst environmental health issues continue especially with rapid urbanisation. The recent outbreak of Zika, which was at the time confirmed in the Americas with the potential to reach new regions, highlighted the need to strengthen health systems to ensure resilience.

Health security important for global security: ministers recognised the importance of health security as a bridge to peace and stability, and the role that the health sector can play in strengthening global security, including preparedness and responses to public health threats and disasters.

Impacts of climate change on health: ministers noted the 'One Health' approach to promote sustainable well-being for all. They welcomed the use of multi-risk assessment, multi-sectoral and multi-national policy responses to address climate change, control infectious diseases, as well as enable sustainable policy that benefits social, environmental and economic well-being, in particular for the 31 Commonwealth small state members. Sustainable financing, including adaptation funds, were recognised as key to addressing the impacts of climate change on health. Ministers also committed to taking a 'One Health' approach to antimicrobial resistance.

Ministers noted that antimicrobial resistance (AMR) is a major threat to global health, as well as an economic and security threat, and welcomed the Independent Review on AMR. They committed to making AMR a global priority at the United Nations General Assembly in September 2016.

Ministers welcomed the launch of the Commonwealth Health Hub established with a view for enabling capacity on policy for health, as well as sharing innovative solutions for health systems, including eHealth, sustainable investment and financing, research and workforce development.

Ministers also agreed that 'Sustainable Financing of UHC as an Essential Component for Global Security Including the Reduction of All Forms of Violence' would be an appropriate theme for the 2017 Commonwealth Health Ministers Meeting.

https://www.thecommonwealth-healthhub.net/chmm2016_statement/

A One Health and Planetary Wellbeing vision

There are a number of different movements looking at how health is linked to the world that we live in, and how we can improve the health of humans and animals whilst protecting ecosystems. Two movements that have grown in popularity recently are 'Planetary Health' and 'One Health'.

The concept of Planetary Health has been defined by The Rockefeller Foundation-Lancet Commission on planetary health as "the achievement of the highest attainable standard of health, wellbeing, and equity worldwide through judicious attention to the human systems-political, economic, and social-that shape the future of humanity and the Earth's natural systems that define the safe environmental limits within which humanity can flourish."

The Planetary Health approach allows us to think about ensuring that today's actions to increase health and life expectancy do not negatively impact on the health and life expectancy of future generations. It recognises the need to use the earth's resources in a sustainable manner to protect them for future generations and therefore ensure better equity of health across time. The aim of this approach is to create policy change that better balances human advancement with environmental and biodiversity sustainability.

One Health emphasizes the interconnectedness of animal, environmental and human health, and has become a fundamental part of health security (Karesh, 2014). The definitions and boundaries of One Health are blurred, however, the concept refers to integrated approaches to health and wellbeing by preventing risks and mitigating the effects of crises that originate at the interface between humans, animals and their various environments (VWB/VSF, 2010; Victor G, 2015). The goal of One Health is to encourage collaborative, cross-sectoral, multidisciplinary working - locally, nationally, and globally - to achieve the best health for people, animals, and our environment.

One Health has important roles in many components of health protection including communicable disease control and environmental health systems. However, its strongest value is through using it as an approach to enhance resilience across the system; taking a One Health approach to include human, animal and plant health as part of a planetary health approach.

Prevention is also part of One Health, for example, legislation, use of alternative chemicals, facility build and process, regulation and enforcement, development control (influence rural/urban planning process to minimise exposure potential). A One Health approach ensures coordination with health professionals.

Relevance to Sustainable Development and the Global Goals

Planetary health relates to many of the 17 Global Goals for sustainable development. Most development activities aim to achieve the ultimate aims of 'no poverty' and 'good health and wellbeing' by achieving goals such as 'zero hunger', 'clean water and sanitation', 'decent work and economic growth'.

The pursuit of the SDGs often neglects the environmental impacts, and how these may affect future generations. Progress on protecting the environment will be an important component for achieving the Global Goals, helping to secure gains achieved in life expectancy and health. Action on protecting the environment also needs to ensure protection of biodiversity, for example through cross-sectoral issues such as sustainability of fish supplies which could decrease the number of people at risk of under nutrition due to the combined effects of climate change and other environmental factors.

The concept of planetary health aligns with basing development activities on the principles of the goals for 'affordable and clean energy', 'Industry, innovation and infrastructure', 'sustainable cities and communities', 'responsible consumption and production', 'climate action', 'life below water', and 'life on land' in order to achieve good health and wellbeing. The

planetary approach also aims to make progress towards the goal of 'reduced inequalities', both for current populations and for future generations.

3. Development of the Toolkit

The Commonwealth Secretariat commissioned Public Health Wales to produce a ‘framework’ for Public Health Protection that “can be applied across the Commonwealth and beyond, in order to strengthen the sustainability of delivering Universal Health Coverage”. The toolkit is the response to this request and has been designed to fit the Commonwealth health protection structure illustrated on page 20 within the wider Commonwealth Health Systems Policy Framework. Attempts have been made to minimise duplication between sections of the toolkit, which could be reframed according to a given national setting.

The process of developing the toolkit is summarised below:

1. Initial structure developed by the Commonwealth Secretariat

The outline for the toolkit was developed using the Commonwealth Health Systems Strengthening Framework. Health protection components include IHR and Coordination, Communicable disease Control, Emergency Preparedness, Environmental Health and Climate Change and Sustainability. Enabling Components included Governance, Advocacy, Capacity and Knowledge

2. Public Health Wales established a working group to provide draft content for each section

The Public Health Wales working group included Consultants in Public Health, Microbiology, Environmental Health Protection, Communicable Disease Surveillance, Epidemiology and Communications. The working group provided an outline of content and priorities for each section of the toolkit, based on literature reviews and expert opinion.

3. Initial draft presented to the Commonwealth Advisory Committee on Health (CACH)

The draft was shared with members of the CACH, which has representation from all the regions of the Commonwealth. It was presented during the Committee’s meeting in December 2015.

Guidance was received aimed at ensuring that the toolkit can be applied across the different regions of the Commonwealth; feedback from members on specific points was incorporated in redrafting of the toolkit.

4. Feedback from Commonwealth technical expert in Sierra Leone

The first draft was also shared with the Commonwealth Technical Health Systems Strengthening Specialist in Sierra Leone for feedback on its potential application in the country.

5. Health Protection Experts Meeting

The second draft of the toolkit was shared with global health and health protection experts for feedback; a meeting of the experts was held at the Commonwealth Secretariat in February 2016. Discussion points included:

- Cross-sectoral approach
- Potential role of the Commonwealth Knowledge Hubs
- Resource mobilisation
- Leadership and advocacy
- Health Systems Policy Frameworks and need for legislation
- Feedback on the toolkit included the following recommendations:
- Restructuring the toolkit to indicate core, intermediate and advanced requirements for health protection

- Emphasis on meeting International Health Regulations (2005) requirements through the use of the toolkit

6. Feedback from Sierra Leone

In February-March 2016, the draft toolkit was shared with the Ministry of Health and Sanitation (MOHS) in Sierra Leone for further feedback and possible application on the ground in the recovery period following the Ebola virus outbreak.

The Health and Education Unit and the Technical Assistance Unit of the Secretariat undertook a follow up mission to Sierra Leone in March 2016. During the mission, meetings were held with the Ministry of Health and Sanitation (MOHS) on priorities and technical assistance to Sierra Leone.

A workshop was held on inter-sectoral collaboration and partner coordination with representatives from various organisations and global health actors in Sierra Leone. Feedback on the use and content of the toolkit was provided through exercises facilitated by the Public Health Wales Executive Director of Public Health Services and the Director General of East, Central and Southern African Health Community (ECSA- HC). The toolkit was used to assess health protection capacities in the country.

The outcomes of the mission to Sierra Leone included a request for further technical assistance for its work on health system strengthening towards Universal Health Coverage, as well as a draft health protection policy document that has been sent to the Chief Medical Officer in Sierra Leone for initial review.

7. Presentation to CACH and Commonwealth Health Ministers' Meeting (CHMM) Chair representative on progress and update on the Health Protection work

The updated toolkit was shared with CACH members for further comments and feedback at their meeting in March 2016. Progress was noted and the updated document was well received with further suggestions made.

8. Finalised for the Commonwealth Health Ministers Meeting (CHMM) in May 2016 focused on Global Health Security

The theme for the 2016 CHMM was 'Health Security and access to Universal Health Coverage'.

9. Further feedback from Expert Group in August 2016

<https://www.thecommonwealth-healthhub.net/hp-and-hss-for-uhc-and-gs/>

10. Updating and incorporation of Expert feedback (April 2017) for CHMM 2017

11. Next steps: involve further piloting of the toolkit with countries in order to strengthen national policies for health protection.

Wider application:

This process of developing a policy toolkit is being applied across health and education- piloting within countries and development of a generic, flexible policy tool.

This can be applied to other sectors and may be used in drafting legislation. It may also be further developed to enhance cross sector work.

4. Health security challenges, opportunities and priorities

4.1 Communicable diseases and antimicrobial resistance

Globally, the number of deaths due to communicable diseases fell from 12.1 million in 2000 to 9.5 million in 2012 and the percentage of all deaths due to infectious diseases decreased from 23% to 17% (WHO, 2015).

Despite the progress in reducing the global burden of communicable diseases spurred by the Millennium Development Goals, Malaria, Tuberculosis (TB), HIV and the Neglected Tropical Diseases (NTDs) remain a challenge for the global community (WHO, 2015).

Global plans to achieve Sustainable Development Goal (SDG) 3 targets on communicable diseases include:

- Reducing the annual number of people newly infected with HIV by 90% and the annual number of people dying from AIDS-related causes by 80% (compared with 2010) (UNAIDS, 2014)
- 90% reduction in TB deaths (WHO, 2015)
- 90% reduction in global malarial mortality rates (WHO, 2015)
- 90% reduction in the number of people requiring interventions against NTDs (WHO, 2015)

In the African, South-East Asia and Eastern Mediterranean regions communicable diseases are still a leading cause of death; these three regions account for 81% of all deaths due to infectious and parasitic diseases in the world (WHO, 2015). In 2015, there were an estimated 429,000 malaria deaths and 1.8 million TB deaths (1.4 million HIV-negative and 0.4 million HIV-positive) (World Malaria Report 2015; Global TB Report WHO 2016). In 2015, there were an estimated 10.4 million new (incident) TB cases worldwide; 5.9 million men, 3.5 million women and 1.0 million children. People living with HIV accounted for 1.2 million (11%) of all new TB cases (Global TB Report WHO 2016). The challenge of curbing the spread of infectious disease is compounded by socioeconomic, environmental and ecological factors as well as rapidly increasing antimicrobial resistance.

Antibiotics and other antimicrobials have revolutionised medicine over the last 100 years, dramatically reducing morbidity and mortality from infectious disease. Microbes develop resistance to medications, resulting in fewer treatment options, or even none at all. Extensively resistant organisms such as TB, for which no treatment is effective, already exist. This has direct health effects including increased mortality and illness as well as indirect consequences such as reduced productivity, greater costs of illness and reliance on more expensive treatments (where these exist). The impacts of this are seen across all medical specialties including neonatal care, adult medicine, oncology, transplants and surgery.

Antimicrobial resistance (AMR) is expected to lead to the death of 300 million people over the next 35 years and the world's GDP will be 2 to 3.5% lower than it otherwise would be in 2050 (Commonwealth, 2016). This means that between now and 2050 the world can expect to lose between 60 and 100 trillion US\$ worth of economic output if antimicrobial drug resistance is not tackled. Global GDP is estimated to be 0.5% smaller by 2020 and 1.4% smaller by 2030 with more than 100 million people having died prematurely (O'Neill, 2014). One of the most fundamental aspects of AMR is the strong association it has with modern livestock rearing (Centre for Global Health Security, 2014).

The problem of emerging antimicrobial resistance is compounded by the lack of new antimicrobials coming to market, the so-called 'discovery void'. It is therefore essential to preserve the efficacy of existing antibiotics. Tackling antimicrobial resistance is broader than simply looking for new treatment options. Member State policies must include vaccination against infectious disease,

improved diagnostics, antibiotic stewardship and education of both the public and healthcare workers.

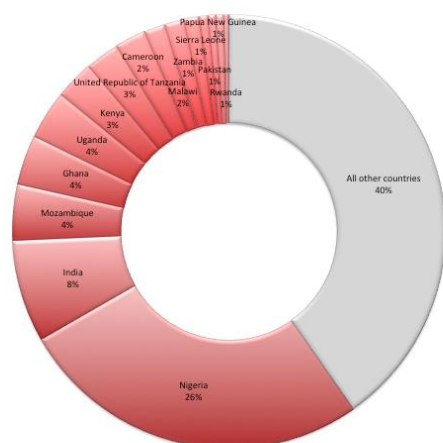
See our recent policy brief on Antimicrobial Resistance and Health Systems Strengthening for further information: <https://www.thecommonwealth-healthhub.net/policy-briefs/>

There are many communicable diseases placing a health burden on the populations and health systems of Commonwealth countries. All present important challenges to be addressed, however some deserve particular mention either due to significance of the burden they place or the unique opportunities currently available for elimination and in some cases eradication. For this reason, special mention is made of Malaria, HIV, TB and Polio.

Malaria

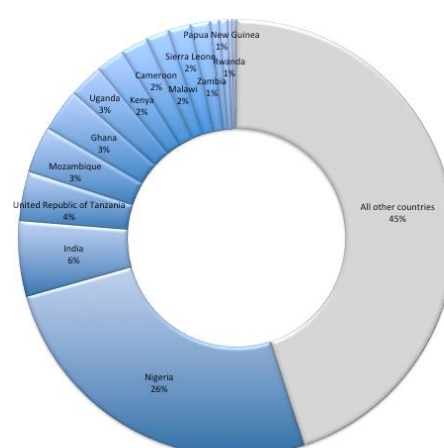
In 2015 an estimated 212 million cases of Malaria occurred worldwide. More than a quarter of these cases were in Nigeria alone, and of the 13 highest burden countries, 8 are Commonwealth countries. An estimated 429,000 deaths from malaria occurred in 2015, the majority (70%) of which are estimated to be in children aged under 5 years. Seventy-five percent of all deaths occur in 13 countries, of which 7 are Commonwealth countries. However, increased malaria prevention and control measures are dramatically reducing the malaria burden in many places. Global malaria incidence and death rates decreased by 41%, and 62% respectively, between 2000-2015 (World Malaria Report 2015).

Proportion of Global Total* : Estimated number of malaria cases; WHO 2013



Source: WHO 2013
Note: latest available data used. *Data not available for all countries.

Proportion of Global Total* : Estimated number of malaria deaths; WHO 2013



Source: WHO 2013
Note: latest available data used. *Data not available for all countries.

Sri Lanka is a good example of this success. In September 2016, the WHO certified Sri Lanka malaria-free, a remarkable public health achievement for a country that was among the most affected countries in the mid-20th century. Effective surveillance, community engagement, health education, and increased support for the country's anti-malarial campaign were essential to success. Since October 2012, there has been no locally-transmitted case of malaria in Sri Lanka. The country's efforts are now focused on preventing re-introduction of malaria and continued strengthening of its health system (SEAR Press release, 05 SEPT 16; Annual Report 2015 Anti-malaria Campaign; Malaria Free Sri Lanka, WHO 2016).

Like TB, malaria is preventable and curable, and the Sustainable Development Goal for 2030 has been set for a 90% reduction in malaria incidence and mortality rates globally, as compared to 2015 (Global technical strategy for Malaria, WHO 2015). Effective interventions known to prevent infection include: the use of insecticide-treated bed nets; indoor residual insecticide spraying; intermittent chemoprevention (drug treatment) in pregnancy; as well as environmental measures. In 2016 WHO recommended the first malaria vaccine (known as RTS,S) be tested in large-scale pilot studies. Vaccinations are due to begin in 2018 (Malaria vaccine: WHO 2016).

TB

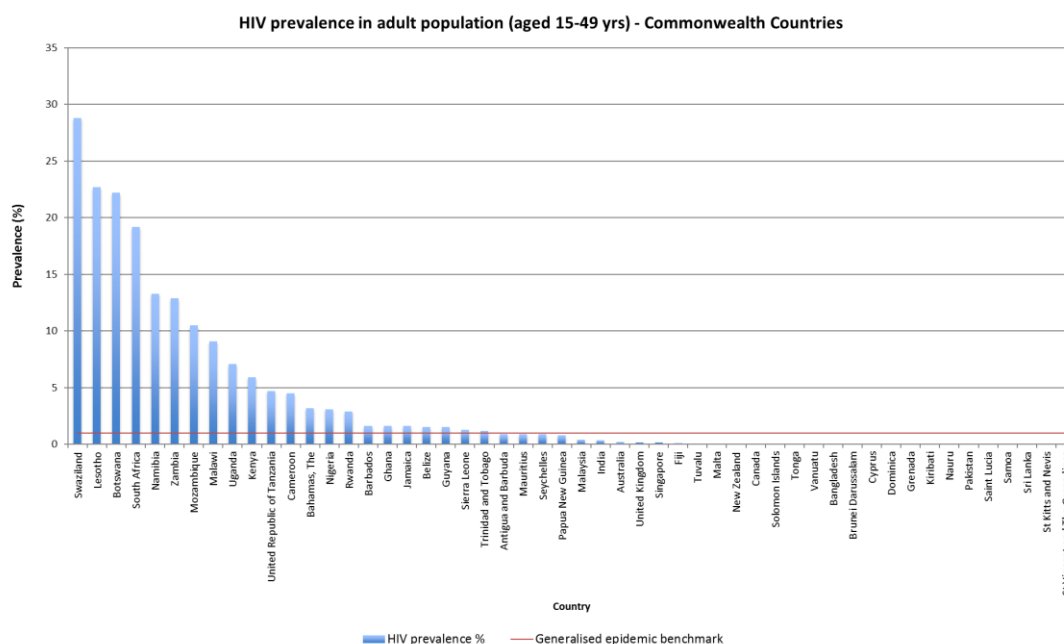
Tuberculosis (TB) is one of the top 10 causes of death worldwide, and in 2015 10.4 million people fell ill with TB and 1.8 million people died. TB is also a leading killer in HIV positive people, with 35% of HIV deaths due to TB in 2015 (Global TB Report WHO 2016). The top twenty high burden countries for TB account for 83% of the global total. These countries include: Bangladesh, India, Kenya, Mozambique, Nigeria, Pakistan and South Africa (Discussion paper WHO 2015). In fact, just six countries accounted for 60% of new infections in 2015, four of which were Commonwealth countries (Global TB Report WHO 2016). Bangladesh has the highest estimated number of multi-drug resistant (MDR) TB cases in the world, and six other Commonwealth countries rank within the top twenty high MDR-TB burden countries. When we consider HIV associated TB, 11 of the top 20 high TB/HIV burden countries are Commonwealth countries (Discussion paper WHO 2015).

However, TB is curable and preventable, and as such one of the targets of the Sustainable Development Goals is to end the global TB epidemic. The WHO End TB Strategy, approved by the World Health Assembly in 2014, calls for a 90% reduction in TB deaths and an 80% reduction in TB incidence rate by 2030, compared with 2015. In 2016, four diagnostic tests were reviewed and recommended by WHO, and others are expected in 2017. Nine drugs are in advanced phases of clinical trials, and 13 vaccines are in the pipeline (Global TB Report WHO 2016). However, further scientific research, action on risk factors, better ways to scale-up service delivery, and innovative financing mechanisms, will be required to achieve these goals.

HIV

Seven countries* hold 50% of the global burden of HIV, and six of these are Commonwealth countries; in all, Commonwealth countries account for 64% of the global burden (CIA World Factbook 2017; UNAIDS Country reports; aidsinfo.unaids.org). However great progress has been made in the past 15 years to control the HIV/AIDS epidemic, with millions of lives saved (Wang et al., 2015; AIDS by the numbers WHO 2016). Prevention and treatment has resulted in a reduction in the number of new infections per year by over 1 million, from 3.2 million in 2000, to 2.1 million in 2015. A reduction in the cost of treatment, from around \$10,000 per person per year in 2000 to \$100 per person per year in 2015, and massive investment in the HIV/AIDS response, has enabled 18.2 million people to commence antiretroviral therapy, as compared to less than 1 million on treatment in 2000. Interventions to prevent mother to child transmission has resulted in a considerable reduction in the numbers of children newly infected, from 490,000 in 2000 to 150,000 in 2015 (AIDS by the numbers WHO 2016).

*Number of people living with HIV (UNAIDS 2015 estimates): South Africa 7M; Nigeria 3.5M; India 2.1M; Kenya 1.5M; Mozambique 1.5M; Uganda 1.5M; Zimbabwe 1.4M



The Commonwealth Secretariat has long supported efforts to curb the HIV epidemic, through high-level advocacy, policy development and strategic guidance. Recent work has included reports for health ministers on priorities and strategies for addressing HIV/AIDS in the post-2015 era, and addressing gaps in resource allocation in relation to HIV and TB co-infection. The Secretariat’s current focus on Universal Health Coverage, also seeks to facilitate action towards ending the HIV/AIDS epidemic, as part of the Sustainable Development Goals.

To achieve the goal to end the AIDS epidemic as a public health threat, world leaders have agreed to meet a set of global targets by 2020 as part of UNAIDS Fast-Track strategy (World AIDS Day report 2014 UNAIDS). These include: Increasing the number of people on antiretroviral therapy to 30 million; increasing the number of condoms procured to 20 billion; and increasing the annual investment for the HIV/AIDS response to \$26 billion USD. Ultimately, the global target is for: 90% of people living with HIV knowing their HIV status, 90% of people who know their status to receive treatment and 90% of people on HIV treatment to have suppressed viral load at a level that maintains a strong immune system and prevents transmission, by 2020. Better use of existing prevention and treatment methods, together with new technologies and innovative financing mechanisms, will be required to meet these ambitious aims.

Polio

Polio (poliomyelitis) cases have decreased by over 99% since 1988, from an estimated more than 350 000 cases worldwide, to 37 reported cases in 2016 (polioeradication.org). This reduction is the result of a global effort to eradicate the disease through mass childhood vaccination programmes. Today, polio remains endemic in only 3 countries; Afghanistan, Nigeria and Pakistan. In 2016, 4 cases of wild-type poliovirus infection were reported in Nigeria, 20 cases in Pakistan and 13 cases in Afghanistan. It is estimated that a failure to eradicate polio from these last remaining areas could result in as many as 200 000 new cases every year, within 10 years, all over the world (Annual Report 2015, GPEI 2016). In May 2015, the 68th World Health Assembly adopted a landmark resolution to eradicate polio, urging all member states to fully implement and finance the Polio Eradication & Endgame Strategic Plan 2013-18. This plan sets out a framework for polio eradication including objectives around enhanced surveillance; immunization systems strengthening; and bio-containment of virus stocks. One major objective is the transition to inactivated polio vaccine (IPV) and withdrawal of oral polio vaccines (OPV), in order to eliminate circulating vaccine-derived poliovirus (which can occur in under-vaccinated areas). The use of oral polio vaccine is expected to be phased out by 2019-2020 (Polio Eradication & Endgame Strategic Plan 2013-18). Polio eradication is now within our reach, and a final concerted effort could make this goal a reality.

Continued investment to ensure high immunization coverage and improved surveillance, will be required to fully eradicate poliovirus and remove the burden of polio from future generations.

4.2 Emergencies and Disasters

Emerging diseases and international outbreaks of infectious disease are hard to predict; neither Ebola Virus Disease nor Zika virus were identified as global health security risks in the short term prior to being declared Public Health Emergencies of International Concern. There is a need to use projections and scenarios based on risk assessment, ensuring health system strengthening as a core component of emergency preparation, not just response.

Wider health security issues include extremism, terrorism including deliberate release attacks and the health consequences of mass human displacement as a result of war, famine or natural disasters. None of these global risks have well-functioning mechanisms of global governance to ensure preparedness and response.

4.3 Climate Change

Climate change is widely acknowledged as one of the greatest public health threats of this century. Human health has depended on flourishing natural environments and systems, as well as wise stewardship of those systems. However, they are being degraded to an extent unprecedented in human history. Environmental threats to human health are characterised by uncertainty and unpredictability. This requires urgent, transformative action to protect both present and future generations.

According to WHO estimates, climate change will cause an additional 250,000 deaths per year between 2030 and 2050 (WHO, 2014). Direct health effects of climate change include a change in the pattern of respiratory and cardiovascular diseases and mortality due to rising global temperatures (Costello, et al, 2009; Robine, 2008). There is also a projected increase in the frequency and change in the epidemiology of diarrhoeal diseases and vector-borne infectious diseases such as malaria (IPCC, 2007).

In 2000, climate change was responsible for an estimated 6% of global malaria cases, approximately 2.4% of global diarrhoea, and was implicated in 154,000 deaths (Foresight, 2011). Projected health effects of climate change include rising global temperatures, which could increase regional levels of pollutants, as well as potentially reducing crop yields and hence increasing malnutrition (Foresight, 2011). Changing rainfall patterns causing localised droughts are likely to increase the occurrence of diarrhoea, while an increase in extreme weather and coastal flooding would be likely to lead to increased mortality, both from the event and from ensuing outbreaks of infectious disease (Foresight, 2011).

Health impacts of climate change: Human Health: Impacts, Adaptation, and Co-Benefits
(WHO, 2014 b)

Direct impacts
<ul style="list-style-type: none"> • Heat and cold • Floods and storms • Ultraviolet radiation
Ecosystem mediated impacts
<ul style="list-style-type: none"> • Vector-borne diseases <ul style="list-style-type: none"> ○ Malaria ○ Dengue ○ Tick-borne diseases • Food and water-borne diseases • Cholera • Various parasites, bacteria and viruses • Air quality
Human system mediated impacts
<ul style="list-style-type: none"> • Nutrition • Occupational Health • Mental Health • Violence and conflict

The Rockefeller Foundation - Lancet Commission on planetary health has called for improved governance to aid the integration of social, economic and environmental policies as well as the creation, synthesis and application of interdisciplinary knowledge to strengthen the health of the planet (Lancet 2015). The commission calls for the redefinition of prosperity to focus on improved health and quality of life for all, together with respect for the integrity of natural systems. This will allow societies to address the drivers of environmental change by promoting sustainable and equitable patterns of consumption and reducing population growth.

Surface temperature is projected to rise over the 21st century under all assessed emission scenarios. It is very likely that heat waves will occur more often and last longer, and that extreme precipitation events will become more intense and frequent in many regions. The oceans will continue to warm and acidify, and the global mean sea level will rise. Climate change will amplify existing risks and create new risks for natural and human systems. Risks are unevenly distributed and are generally greater for disadvantaged people and communities in countries at all levels of development (IPCC 2014).

Globally, the number of reported weather-related natural disasters has more than tripled since the 1960s. Every year, these disasters result in over 60,000 deaths, mainly in developing countries. Rising sea levels and increasingly extreme weather events will destroy homes, medical facilities and other essential services. More than half of the world's population lives within 60 km of the sea. People may be forced to move, which in turn heightens the risk of a range of health effects, from mental disorders to communicable diseases. Increasingly variable rainfall patterns are likely to affect the supply of fresh water. A lack of safe water can compromise hygiene and increase the risk of diarrhoeal disease, which kills approximately 760,000 children aged under 5, every year. In extreme cases, water scarcity leads to drought and famine. By the late 21st century, climate change is likely to increase the frequency and intensity of drought at regional and global scale.

Floods are also increasing in frequency and intensity, and the frequency and intensity of extreme precipitation is expected to continue to increase throughout the current century. Floods contaminate freshwater supplies, heighten the risk of water-borne diseases, and create breeding grounds for disease-carrying insects such as mosquitoes. They also cause drownings and physical injuries, damage homes and disrupt the supply of medical and health services.

Rising temperatures and variable precipitation are likely to decrease the production of staple foods in many of the poorest regions. This will increase the prevalence of malnutrition and under nutrition, which currently cause 3.1 million deaths every year.

As well as direct and eco-system related impact, changes to climate are expected to have important public health impacts mediated by human behaviour. These relationships are more complex and harder to predict though some researchers suggest there could be severe adverse effects on lifestyle behaviours and health outcomes and this may be especially so in countries that have already experienced considerable increases in temperatures over recent decades (Stamatakis 2013).

Adaptation and mitigation are complementary strategies for reducing and managing the risks of climate change. Substantial emissions reductions over the next few decades can reduce climate risks in the 21st century and beyond, increase prospects for effective adaptation, reduce the costs and challenges of mitigation in the longer term and contribute to climate-resilient pathways for sustainable development. Many adaptation and mitigation options can help address climate change, but no single option is sufficient by itself. Effective implementation depends on policies and cooperation at all scales and can be enhanced through integrated responses that link adaptation and mitigation with other societal objectives (IPCC 2014).

A number of positive health impacts can be expected to occur due to policies aimed at tackling climate change. Assessments of mitigation strategies in four domains – household energy, transport, food and agriculture, and electricity generation – suggested that actions to reduce greenhouse-gas emissions often, although not always, entail net benefits for health (Lancet 2009).

Health Co-Benefits (Lancet 2009)

Summary of the scenarios considered in four sectoral assessments

Key domains for action	Main health outcome(s) affected	Approx.reduction in burden of disease (DALYs/million)
Household energy		
Housing-related energy efficiency (UK)	Lung Cancer Cardiovascular disease Acute and chronic respiratory disease Winter/cold-related deaths	850
Clean-burning cookstoves (India)	Acute lower respiratory tract infection Ischaemic heart disease Chronic obstructive respiratory disease	12,500
Urban land transport		
Lower carbon and more active transport (UK)	Ischaemic heart disease, cerebrovascular disease, dementia, breast cancer, lung cancer, colon cancer, diabetes, depression, road traffic injuries	7,400
Lower carbon and more active transport (India)	Ischaemic heart disease, road traffic injuries, cerebrovascular disease, lung cancer, diabetes, depression	13,000
Food and agriculture		
Lowering consumption of animal products (UK)	Ischaemic heart disease	2,900
Lowering consumption of animal products (Brazil)	Ischaemic heart disease	2,200
Low-carbon electricity generation		
Low-carbon fuels/ technologies (EU)	Cardiopulmonary mortality, lung cancer, occupational mortality	100
Low-carbon fuels/ technologies (China)	Cardiopulmonary mortality, lung cancer, occupational mortality	550
Low-carbon fuels/ technologies (India)	Cardiopulmonary mortality, lung cancer, occupational mortality	1,500

Awareness that mitigation strategies can have benefits in other sectors such as health, is important in advocating for more cost-effective policies. The box above shows a summary of the scenarios

considered in the four sectoral assessments. Scenarios were conducted in countries with a range of income levels, the results show greater benefits in lower income countries, indicating the potential that more sustainable policy making may also be more equitable.

4.4 Digital Health

With estimates that more people now have access to a smart phone than clean drinking water, it is clear that digital health needs to be embraced by all parts of a public health system and health protection is no exception.

The Commonwealth Secretariat has been working with international experts in telecommunications and infrastructure development to develop key messages for policy makers to provide support for the digitisation of health systems. Digital health covers all aspects of health systems but due to the speed and data driven nature of the field it is of particular relevance to health protection.

Key recommendations for digital health and health security

- 1. Global security:** Digital Health systems will enable real time detection and response as well as co-ordination across and between government.
- 2. Risk Preparedness:** support emerging data platforms for Global Early Warning Systems and Risk Preparedness for pandemics via multi-stakeholder, research, development, coordination and collaboration, with private sector leadership.
- 3. National strategies and Road Maps:** national leaders must set out a definitive plan which generates commitment and builds momentum, clarifies priorities and sets credible timescales, taking financing and sustainability into consideration. Leaders must create political will through advocacy for national digital and mobile health strategies at the highest level of cabinet for a “one government approach”, in partnership with business, civil society and multilateral organisations.
- 4. Governance:** mainstreaming potential digital applications across the Commonwealth health systems policy framework to strengthen governance for digital health.
- 5. Sustainability:** delineate low-cost and transformational digital technology interventions to realise the potential of digital health platforms to provide rapid information for planners and practitioners on cost-effective measures to ensure health gain. Digital Health attracted \$4.2 billion in venture capital funding in 2014 alone (up 125 percent over in 2013).
- 6. Work-force capacity:** online learning resources and tools as well as smart technology to significantly scale up the health workforce.
- 7. Knowledge management and platform Interoperability:** Promote cross-industry standardization and interoperability, policy, trade, legal and regulatory efforts in advancing innovation in, and access to, essential medicines and digital health technologies in developed and developing countries.
- 8. International programme delivery:** Transform programme delivery through more efficient digital systems, brokering a collective and multi-stakeholder platform for digital health with indicators for measurement consistent with and in support of the SDGs. Thematic innovation tracks should be prioritised, linked to SDG Goal 3 as demanded for: maternal and child health; HIV/AIDS, Tuberculosis, Malaria; Non-communicable diseases, antimicrobial resistance (AMR), universal health coverage and emerging threats of pandemics such as Ebola virus in west Africa and Zika virus in the Caribbean and Americas.

See: <https://www.thecommonwealth-healthhub.net>

4.5. Health of Migrants, refugees, displaced, stateless and trafficked people

There are an estimated 1 billion migrants globally, mostly for work and study, including 250 million international migrants. The UNHCR estimate that worldwide there are 65 million people displaced by conflict, of whom 21 million are refugees, and a further 10 or more million are stateless people, living without a nationality. Others may be displaced through climate change and other environmental disasters. There are no UN estimates on people trafficking. Whilst the Commonwealth Heads of Government note that migration can deliver economic and social benefits to member states, these groups can have difficulty accessing health services through administrative, cost, geographical and other barriers.

Despite popular belief to the contrary, the WHO reports that there is no systematic association between international migration and disease transmission. The majority of migrants are young and healthy, and have less chronic illness than general populations. However, certain subgroups can have increased or specific health needs as a consequence of their experiences before, during or after migration, their country of origin, ethnicity, cultural practices, age, gender or socioeconomic circumstances. Specific health risks including psychosocial trauma, violence and accidental injuries, poor/overcrowded social and living conditions, and limited access to adequate water and sanitation. Continuity of care for non-communicable diseases is often inadequate. Female migrants may experience heightened risk of sexual violence, inadequate access to reproductive health services and elevated maternal mortality risk.

The Ministerial Colombo Declaration on Migrant Health (Feb 2017) recognises the investment case for protecting the health of migrants: planning for migrant, displaced, stateless, trafficked and refugee populations is essential in the planning of basic services as well as healthcare services and health protection systems. Ensuring access to services that enable prompt recognition of infectious disease can protect the health of vulnerable and marginalised groups and host populations.

Areas for Commonwealth collaborative action to strengthen global health security

1. Case for investment on Health Security
2. Risk assessment/ Scenarios
3. Advocacy on Antimicrobial resistance (AMR) and links to the UN resolution and Global Health Security Agenda
4. One-Health initiative
5. Health Security as a bridge to peace and stability as part of the Commonwealth Secretariat cross-sector approach.
6. Strengthening governance through legislation and policy by providing policy tools.
7. Forge networks, peer to peer learning, develop leadership and aid workforce capacity.
8. Capacity for policy leadership and skill development of senior officials in developing and implementing policy for health security (e.g. working with the UN University)

*Determined at the Commonwealth expert meeting on global health security-
<https://www.thecommonwealth-healthhub.net/areas-for-commonwealth-collaborative-action-to-strengthen-global-health-security/>*

4.6. Tools and resources for identifying health protection policy priorities

In identifying the priorities for health protection, member states may wish to draw on resources summarising the burden of disease at country and regional level prepared by the Commonwealth Secretariat and the World Health Organisation.

Global Health Observatory Data Repository - This contains an extensive list of indicators, which can be selected by theme or through a multi-dimension query functionality. It is the World Health Organisation's main health statistic repository.

Weblink - <http://apps.who.int/gho/data/node.imr>

Commonwealth Health Hub Global Burden of Disease database - This is an interactive resource using standardised country data to map the burden of diseases. It may be used for priority setting at the national, regional and global level.

Weblink - <https://www.thecommonwealth-healthhub.net/practice-centre/view-country-profiles/>

5. Health system strengthening

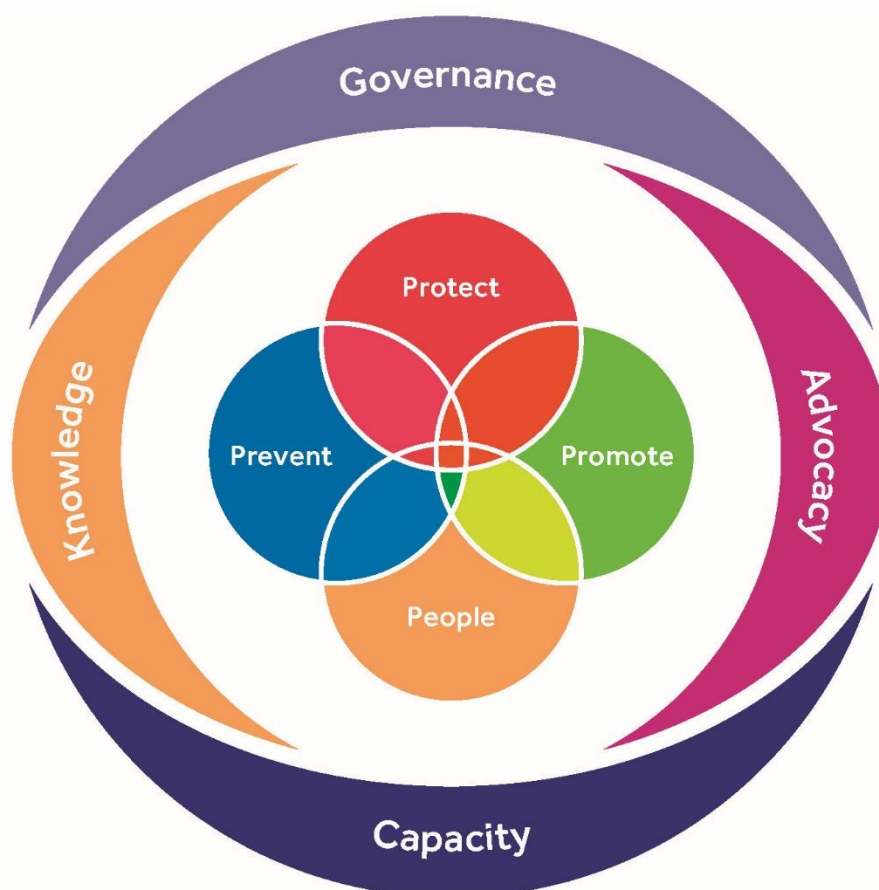
This toolkit builds on the Commonwealth Health Systems Policy Framework to support the sustainable delivery of Universal Health Coverage (Nurse et al., 2016). The key components of the framework include health protection as one of the core services. This toolkit is structured around the main domains of the health systems framework, which are outlined in the diagram below.

Public Health can be described as *the art and science of organising collective efforts to:*

- **Protect** health
- **Prevent** disease
- **Promote** wellbeing and empower
- **People-centred** health services

*Based upon evidence based **knowledge** and enabled by good **governance**, **advocacy** and the **capacity** to ensure fair, secure and sustainable health and wellbeing for all.*

A Health Systems Policy Framework



An overview of terms used in Health Systems Policy Framework:

1. **Governance:** public health legislation; policy; strategy; financing; organisation; quality assurance: transparency, accountability and audit.
2. **Knowledge:** surveillance, monitoring and evaluation; research and evidence; risk and innovation; dissemination and uptake.
3. **Protection:** IHR and co-ordination; communicable disease control; emergency preparedness; environmental health; climate change and sustainability.
4. **Promotion:** inequalities; environmental determinants; social and economic determinants; resilience; behaviour and health literacy; life-course; healthy settings.
5. **Prevention:** primary prevention: vaccination; secondary prevention: screening; healthcare management and planning.
6. **People:** primary health care; secondary health care; tertiary health care and rehabilitation.
7. **Advocacy:** leadership and ethics; community engagement and empowerment; communications; sustainable development.
8. **Capacity:** workforce development for public health, health workers and wider workforce; workforce planning: numbers, resources, infrastructure; standards, curriculum, accreditation; capabilities, teaching and training.

This framework provides a high-level comprehensive overview of the main policy components for health system strengthening for health protection. They are neither exhaustive nor exclusive. A description of each of the headings follows and the summary graphic below (reproduced on the cover page) illustrates the main components of a health protection service.



This toolkit provides a detailed description of the core, intermediate and advanced components for establishing, modernising and evaluating health protection services within the context of Universal Health Coverage and health system strengthening. Each Member state will have policies and services at a different level of development, perhaps within the same component. The toolkit therefore serves to enable and empower countries to coordinate and shape their own health protection services in collaboration with regional partners and third party stakeholders.

6. Health protection in the Commonwealth

Health Protection: A Commonwealth definition

Health protection is a term used to encompass activities that ensure robust health security at local, national and global level. These activities aim to protect the public from avoidable health risks and minimise impacts on health where exposures cannot be avoided. This includes the establishment and strengthening of services and systems that cover:

- Communicable Disease Control
- Emergency Preparedness and Response
- Environmental Health
- Climate Change and Sustainability, Adaptation and Mitigation

Health protection is coordinated at global level through the International Health Regulations (IHR). It includes strengthening wider health systems including governance, knowledge, advocacy and capacity and incorporates the roles of mainstream health systems in prevention and early detection and treatment of disease, via people-orientated services, which work with other sectors outside health to promote health and wellbeing in all services.

The World Health Organization (WHO) defines public health security as “the activities required, both proactive and reactive, to minimise vulnerability to acute public health events that endanger the collective health of national populations. Global public health security widens this definition to include acute public health events that endanger the collective health of populations living across geographical regions and international boundaries (WHO, 2007).”

For each member state, the regional context, as well as the needs of individuals in the country will inform the priorities at national level. For the purpose of this toolkit, the following components of health protection are used:

1. International Health Regulation (IHR) and co-ordination

This includes strategic planning and co-ordination of health protection services including:

- Communicable disease control, emergency preparedness and environmental health
- Service modernisation to address emerging challenges and cross-cutting issues, for example, climate change
- Coordination, implementation and governance processes established with national and international partners to contribute to global health security including reporting.

2. Communicable disease control

- Local, regional, national and international co-ordination and advice
- Development or adaptation of protocols and guidance for high risk communicable diseases

- Investigation and management: diagnosis; quality assurance and co-ordination of public health laboratories; active surveillance and monitoring; treatment of cases; contact tracing and outbreak investigation
- Control and response: public education and awareness; preventive action, for example, vaccination; training on infection control; isolation and containment
- Evaluation: applying learning to improve co-ordination, delivery responses, protocols, guidance and training.

3. Emergency preparedness

- Co-ordination, roles and responsibilities established with other agencies, sectors and at international, national, regional and local levels
- Assessment of risks, identification of priorities and development of risk registers
- Development of plans for emergency situations such as pandemic influenza; infectious disease outbreaks; natural disasters, for example, earthquakes; extreme weather events, for example, floods, fires, heat/cold; other environmental events threatening human health; mass gatherings; and deliberate attacks or industrial events, for example, chemical, biological, radiological and nuclear
- Planning for primary prevention; early warning systems; emergency responses; business continuity
- Short and long-term follow-up including effects of contamination; physical and mental health impacts; and methods of evaluation
- Testing and revising plans, incorporating lessons into future training and protocols.

4. Environmental health

See also Annex 6 - Key Components of a Comprehensive Environmental Health Service

Proactive and reactive action to mitigate harm and benefit to health from environmental determinants:

- Local, regional, national and international co-ordination and advice to maximise sanitation, safety, security and quality
- Development or adaptation of protocols and guidance to manage public health risks from different environmental hazards (for example, chemical, physical, radiation, noise) in different scenarios and environmental media (air, soil, water, food)
- Aspects of the built environment such as home safety and transport-associated injuries
- Prevention, for example, legislation, use of alternative chemicals, facility build and process, regulation and enforcement, development control (influence rural/urban planning process to minimise exposure potential).
- Preparation, for example, multi-agency planning and training, robust notification and alert arrangements, public warning systems
- Detection and alert, for example, operator controls, environmental sampling and monitoring, effective alert systems
- Response, for example, risk assessment, risk management, risk communication to break environmental health source-pathway-receptor linkages

- Recovery, for example, ongoing health assessment and epidemiological follow-up, clean-up and investigation of the root cause of an incident or problem to prevent recurrence
- Evaluation: applying learning to improve co-ordination, delivery responses, protocols, guidance and training

5. Climate change and sustainability

Assess health impacts and provide advocacy and policy advice on risks to health and strengthen relevant public health functions to support:

- Adaptation planning and strengthening of health resilience
- Cross-sector sustainability and mitigation planning that benefits health, the economy and the environment. Including safe roads and green spaces that promote active transport, building design, reduction of unhealthy food energy, for example, clean cook-stoves
- Linking environmental health determinants and benefits with health promotion

The content and relationships between these five components, as well as the role of governance, knowledge, advocacy and capacity, are shown in the outline below.

The tool is not a ‘one size fits all’ offer. It is anticipated that countries will identify policy development areas in response to their own settings and needs, the current state of development of their public health systems, the available resources (financial and human) and national priorities. Each country will have a different starting point, acknowledging that countries bear unique characteristics such as size, population and economic development. It is not prescriptive; recognising that each country will want to adopt specific service elements mindful of the prevailing social and cultural norms as well as identified priorities based on need.

7. A suggested 10-point roadmap for action

The following roadmap for health protection policy development is provided:

1. Governance

Support country national policy and legislation for:

- Implementation of IHR
- Strengthening of Health Systems to enable Health Security
- Financing national health systems plan
- Ensuring accountability and coordination

2. Advocacy

- Strengthen leadership and link to delivering the Sustainable Development Goals (SDGs)
- Communications plan for emergency preparedness/ rapid responses and engagement of communities, service providers and the public

3. Knowledge

- Mapping and risk assessment of potential health hazards
- Ensure adequate surveillance and monitoring
- Invest in research and development

- Leverage information, communication and mobile technologies for real-time coordination

4. People

Training and workforce development in:

- Early detection and reporting of, and response to, infectious diseases and non-communicable hazards

5. Protection

Build and develop components of Health Protection as part of Health System Strengthening:

- Communicable diseases control and laboratories
- Emergency planning and preparedness
- Environmental health
- Climate change and sustainable development

6. Prevention

- Vaccination against common infectious diseases and screening programmes

7. Promotion

- Establishing cross-sector collaboration to work on environmental determinants of health

8. Capacity

- Building health system resilience through scaling up infrastructure and workforce development

9. Collaboration

- Identify national collaboration mechanisms and focal points to work with regional and global partners such as the WHO IHR focal points

10. Universal Health Coverage

- Develop longer term policies for health system strengthening including plans to address non-communicable diseases
- Establish cross-sector links to deliver the Sustainable Development Goals

8. Health Protection Planning Toolkit

8.1 Health Protection Components

For each section, a column is provided for use in applying the tool, which may be for identifying priority areas or ranking / appraising current status of each item in the tool. Suggested applications include rating each item from one to ten, priority setting (ranking priority areas by number) for use in-country or use as a checklist of policies that already exist. Considerations might include risk, current capacity and public health impact in the local context. This column is headed 'status' as an example in the tables below. Once completed, this tool could be revisited to evaluate service improvement over time. This is a flexible framework for identifying areas for assessment and to influence planning, depending on in-country priorities. Areas identified as priorities to take forward and other areas (e.g. weaknesses) in an assessment process) can then be summarised into an initial draft national policy or planning document and further developed into an action plan.

8.1.1 Governance

International Health Regulations (IHR) and Coordination

The WHO provides joint external assessment tools for IHR capacity (see Annex 5: WHO Joint External Evaluation Tool) and this toolkit is intended for planning policy. It can be used to develop policy and planning informed by the assessment findings provided by the Joint External Evaluation. As such it is complementary to the WHO tool.

Core requirements	Status	Intermediate requirements	Status	Advanced requirements	Status
<i>National legislation, policy and financing</i>					
Self-assessment of compliance with IHR core capacities with independent and transparent scrutiny using IHR checklists (see resources)		Full implementation of IHR to reflect an all hazards approach		National legislation and regulation for sustainability and environmental protection (see also emergency preparedness, environmental health and governance sections)	
Review and revise national legislation to enable fulfilment of IHR obligations		Review and revise national legislation and regulation for public health protection as part of wider public health legislation		Publish key elements of national/domestic IHR-related legislation	
Adopt policies which identify national structures and responsibilities		Simulation exercises (table top/skill drill/full scale)		Resources committed to meet requirements beyond country's borders	

Allocate adequate funds to meet for IHR requirements for National Focal Point (NFP) functions and IHR core capacity strengthening		Environmental legislation and regulation		
Evaluation and monitoring of current health hazards including biological (infectious disease, zoonosis and food safety issues), chemical, radiological and nuclear sources		Health and safety legislation and regulation		
Review after acute public health events		Occupational health legislation and regulation		
Coordination and Communication				
Designation of IHR NFP accessible at all times to communicate with WHO IHR Contact point		Strengthen institutional capacity to implement revised IHR in line with anticipated recommendations of 2016 World Health Assembly		Annual updates on status of IHR implementation to stakeholders across all relevant sectors
Ensure the IHR NFP meets WHO guidance				An active IHR web site/page in place
Provide WHO with annually updated contact details				Implementation of additional roles and responsibilities of IHR NFP functions
Surveillance				
Identify chain of responsibility and communication for notification and response to public health risks		Structure of system roles and responsibilities defined through health policy and legislation		Evaluation of surveillance systems and sharing of country experiences with the global community
Make available a list of priority disease conditions and case definitions for surveillance				Arrangements with neighbouring countries to share surveillance data and control of public health events of international concern
Designation of a specific unit for surveillance of public health risks				Support use of digital Health systems to enable real time detection and response as well as co-ordination across and between government

Define clear structures, roles and responsibility for reporting through communities, laboratories and clinics to IHR NFP through to WHO					
Response					
A national Infection Prevention and Control (IPC) policy or operational plan is available		A national programme for protecting health care workers is established including occupational health services		IPC measures and their effectiveness are regularly evaluated and the findings published	
Public health emergency response mechanisms are established		Policies on antibiotic stewardship are provided		A monitoring system for Antimicrobial Resistance (AMR) has been implemented and data on magnitude and trends are available	
Resources for rapid response during public health emergencies are accessible					
Case management guidelines are available for priority epidemic prone diseases					
A programme for disinfection, decontamination and vector control is established					
Preparedness					
Public health risks and resources are mapped		Development of national, intermediate and community/primary public health emergency response plans for identified priority hazards		The national risk profile and resources are assessed regularly to accommodate emerging threats	
Multi-hazard national, subnational and agency public health emergency preparedness and response plans are developed		Development of appropriate national stockpile of resources and capacity to support operations		Publication of national, subnational and regional risk assessments Support emerging digital data platforms for Global Early Warning Systems and Risk Preparedness for pandemics via multi-stakeholder,	

				research, development, coordination and collaboration, with private sector leadership.	
Risk Communication					
A risk communication plan is developed including multi-level/multi-faceted risk reporting		Risk communication plan implemented or tested through simulation exercise or an actual emergency and updated annually		Results of an evaluation of risk communicating efforts during a public health emergency shared with global community	
Policies and guidelines are developed on the management of information during a public health emergency					
Human Resources					
Assessment of human resources and training needs to meet IHR requirements		Periodic assessment of workforce and training needs		Specific programme and budget is allocated to train workforce for country relevant hazards	
Health workforce development policies and plan in place		Periodic update of the workforce development plan			
Laboratory					
A national plan of action that includes essential functions and minimum standards for licensing/registration		National laboratory quality standards/guidelines are available and regularly updated		All diagnostic laboratories are certified or accredited according to national standards adapted from international standards	
Identification of laboratory National Focal Point for coordinating services		Network of national and/or international laboratories established			

8.1.2 Communicable Disease Control

Strategic planning and co-ordination of health protection services, including communicable disease:

- Local governance and public health laws

- Local, regional, national and international co-ordination and advice
- Identification of priority diseases / conditions / events as per IDSR (or relevant regional guidance)
- Develop or adapt protocols and guidance for identification and management of priority communicable diseases
- Control and response: public education and awareness; preventive action, for example, vaccination; work training on infection control; isolation and containment

Core requirements	Status	Intermediate requirements	Status	Advanced requirements	Status
Organisation of health protection services to include the following:					
Agreed working arrangements with Ministry of Health (or equivalent) to ensure effective delivery of public health services		Policies and procedures for antimicrobial stewardship		Identify and develop expertise for Scientific and Expert Advisory Committees and boards	
Communicable disease control services at regional, subnational and national governmental levels for public, animal and environmental health		Medicines management for health protection		Specialist communicable disease services, for example; vector-borne disease, responsive to identified communicable disease priorities	
Capability to investigate suspected incidents and outbreaks		Periodic evaluation of the working arrangements with the Ministry and the organisation of communicable disease services		Establishment of an infectious diseases service combining specialist health protection, microbiology and infectious diseases	
Development of case-based reporting		Agreement of arrangements for investigation and control of healthcare-associated infections and outbreaks			
Tracing and monitoring of exposed contacts					
Reporting mechanism for priority diseases, conditions and events of public health concern					
Infection prevention and control (IPC) services					
Vaccination and immunisation services / programmes (see also enabling					

components: Health Promotion and Prevention)					
Epidemiological surveillance (see also enabling components: Knowledge and Surveillance)					
Decontamination services (healthcare setting and community)					
Policies and standard operating procedures for local health protection services					
Review/assessment of port health services					
Laboratory and Clinical Infectious Disease Services					
National assessment of laboratory and clinical requirements		Quality assurance and validation for laboratory services in place		National standards for microbiological investigations	
Diagnostic and public health microbiological laboratory services including specialist and reference testing in place		Laboratory information management systems in place		Capital investment in automation	
Clinical microbiology and infectious diseases services in place		Toxicology services in place		New diagnostic methods and technologies including molecular services and next generation sequencing	
Standard operating procedures for laboratory and clinical services in place		Food, water and environmental analytical services in place		Evaluation systems and applied learning to improve co-ordination, delivery responses, protocols, guidance and training	
Effective laboratory biosafety and biosecurity systems and procedures in place					

Identify areas for provision in-country or agreement for provision from partners and neighbours					
Effective and accessible occupational health services for laboratory staff					
Effective health and safety policies and procedures					

8.1.3 Emergency Preparedness and Response

Strategic planning and co-ordination of health protection services, including emergency planning and response:

- Co-ordination, roles and responsibilities established with other agencies across all sectors and at international, national, regional and local levels
- Assess risks, identify priorities and develop/improve risk registers (internal organisation and external multi-agency) and management
- Develop plans for emergency situations such as: infectious disease outbreaks (including outbreaks of emerging pathogens); natural disasters, for example, earthquakes; extreme weather events, for example, for floods, fires, heat/cold; mass gatherings; industrial accidents; deliberate attacks including radiation, environmental, biological or chemical
- Plans should include:
 - Primary prevention; early warning systems; emergency responses according to severity; business continuity, short and long-term follow-up including for contamination and physical and mental health/wellbeing impacts; evaluation methods and process
 - Clear leadership and management structures
- Test and improve plans, incorporate lessons into future training and protocols

Core requirements	Status	Intermediate requirements	Status	Advanced requirements	Status
Health emergency planning and response services to include					
Evaluation of previous responses to major incidents, outbreaks, emergencies and civil contingencies with impacts on human health		Generic (and disease specific) outbreak plans to include communications plans and sample community messaging (see also Communications)		Memoranda of mutual understanding (mutual aid agreements) with external agencies where appropriate to secure access to necessary knowledge, skills and assets	
Regional, subnational and national level outbreak reporting		Provide and undertake training and exercising according to frequency requirements		Scientific and advisory services to support civil protection response	
Risk assessment of hazards, threats and vulnerabilities		Identification and training of national, subnational and regional emergency management teams		Media and rumour management surveillance systems (see also Communications)	
National, subnational and regional coordination and command structures and facilities within an agreed framework to ensure emergency services and other agencies involved work together effectively		Access to enhanced rapid diagnostic testing and chemical analysis services		Strategic assessment of long term health threats (see also Climate change and sustainability)	
Rapid emergency response deployment capabilities at regional, subnational and national level		Preparation of an all-staff skills matrix for identification of key personnel for emergency preparedness and response		Enhanced and targeted public health surveillance linked to healthcare and environmental health services	
Policies, procedures and guidance to assure compliance with legislation for civil protection		Business continuity planning and processes, compliance, asset protection (people, financial, buildings and equipment) and reputational management		Transparent review processes including independent advisory groups, government-led public inquiries, local public inquiries and judicial reviews	
Access to stockpiles of priority drugs, personal protective equipment (PPE), vaccines, reagents, chemical toxin antidotes and radiation emergency supplies					
Emergency immunisation strategies					

Effective communication strategies with public, national and international stakeholders, agencies and partners (see also Communications)					
Longer term policy objectives:					
<ul style="list-style-type: none"> • Impact assessment with a view to adopting the Sendai Framework for Disaster Risk Reduction 2015-30 					
<p>The United Nation World Conference for Disaster Risk Reduction in its outcome document for the Sendai Framework stated that <i>'It is urgent and critical to anticipate, plan for and reduce disaster risk in order to more effectively protect persons, communities and countries, their livelihoods, health, cultural heritage, socioeconomic assets and ecosystems, and thus strengthen their resilience.'</i></p> <p>The health commitments of the Sendai Framework include:</p>					
<ul style="list-style-type: none"> • enhancing the resilience of national health systems through training and capacity development 					
<ul style="list-style-type: none"> • strengthening the design and implementation of inclusive policies and social safety-net mechanisms, including access to basic health care services towards the eradication of poverty 					
<ul style="list-style-type: none"> • finding durable solutions in the post-disaster phase to empower and assist people disproportionately affected by disasters, including those with life-threatening and chronic diseases, including recovery and mental health 					

8.1.4 Environmental Health (see also Annex 6)

Assess, monitor, plan and deliver action to mitigate harm and benefit health, from environmental determinants including:

- Air, soil, food, water and sanitation, vector and pest control: safety, security and quality
- Built environment including: housing, urban and rural planning, noise and transport
- Occupational health
- Chemical, biological, physical and radiation hazards

Environmental protection services to include the following:

Core requirements	Status	Intermediate requirements	Status	Advanced requirements	Status
Legislation and policies (incorporating environmental/health standards) to protect public health from chemicals, poisons and other environmental hazards including those associated with the physical environment		Multi-agency plans to [proactively] manage and [reactively] respond to public health risks associated with identified environmental health priorities		Robust environmental health surveillance and intelligence	
Competent and resilient workforce informed by defined workforce competency requirements and compliant with specified minimum training standards		Environmental health training programme, tailored to service and population health needs		Identify and develop expertise for Scientific/Expert Advisory Committees and boards	
Inspection, regulation and enforcement services		Enquiry and incident response capabilities (comprising environmental public health field epidemiology investigation; sampling, monitoring and analytical capabilities and expertise; risk assessment; data and risk interpretation; and risk management)		Enhanced enquiry and incident response services; detailed service specification outlining multi-agency co-ordination and delivery standards	
Responsive intervention services to protect against the adverse health effects of acute and chronic exposure to		Risk and crisis communications expertise		Co-ordinated environmental hazard sampling and monitoring programmes	

chemicals, poisons and other environmental hazards				
Environmental health services for zoonotic / vector borne diseases		Regular environmental hazard/health burden assessments in defined areas/populations		Enhanced capabilities to provide expert advice and practical support
Waste management including disposal/movement of hazardous waste		Defined roles and hazard/scenario plans through active participation in emergency preparedness, planning and exercising		Established mutual aid arrangements to increase capacity and resilience
Environmental health at ports including food and animal feed control and sampling, disinfection, sanitation, safe transport of food stuffs pest and vector control and management of shipping waste		Action to reduce environmental inequities and linked health inequalities		Continuous service quality improvement through regular audits
		Health improvement action - promoting health and sustainable communities		Development and utilisation of risk assessment tools such as Health Impact Assessment, to assess positive and negative impacts on wellbeing and quality of life in addition to direct impacts of environmental hazard exposure
		Continuous advocacy for and leadership to enable environmental health through policies and legislation		Integration of environmental health in housing development, planning/development control processes, community regeneration and climate change/sustainability agendas
				Communication strategies around identified priorities aimed at stakeholders - consumers, commercial interests (business relationship management), policy makers

8.1.5 Climate Change and Sustainability

Assess health impacts and provide advocacy and policy advice on risks to health supported by relevant public health functions

Core requirements	Status	Intermediate requirements	Status	Advanced requirements	Status
Commission or undertake research on the impacts of climate change on population health		Collate, analyse and interpret data and scientific evidence to inform risk assessments and communications as well as co-ordinated, prioritised and appropriately targeted advice and action		Support cross-government to sustain efforts at monitoring and building resilience against impact of climate change on health	
Understanding of health impacts associated with climate change effects		Develop multi-agency mitigation and adaptation plans for each identified risk		Cross-sector sustainability and mitigation plans that benefit health, the economy and the environment	
Control strategies and emergency plans for locally identified priority hazards		Surveillance of impacts on public health		Agreed policies for land use	
Ongoing programme of risk assessment of the major human health impacts of climate change at national, subnational and regional level for a given area/population		Established environmental health service and competent workforce and the most appropriate governmental tier for delivery		Agreed policies for management of water resources	
Establish/strengthen institutional capacity to manage issues of climate change and health		Training and exercising in preparation for and response to impacts of climate change		Safe roads and green spaces that promote active transport	
		Promoting healthy food energy, for example, clean cook-stoves		Environmental design of buildings	
				Research, evaluation, review and audit to assess effectiveness of interventions and mitigation plans	

8.2 Enabling Components

8.2.1 Governance

Financial Resources - financial capacity for the administrative, workforce and informational systems needed to deliver Universal Health Coverage and reflecting current and future public health priorities within a particular population:

- Sustainable financing sources and systems that protect public health services
- Clear roles, responsibilities, outcomes and accountability of organisations delivering public health functions
- Sufficient capacity to deliver services, functions and operations

Core requirements	Status	Intermediate requirements	Status	Advanced requirements	Status
Develop strategies for sustainable funding - mixed sources (public and private; domestic and external)		Innovative financial models (sources of funding, allocation and control of costs, and procurement, for example, managed service contracts)		Fair trade agreements	
Effective stewardship of financial resources		Effective financial governance including ethical management of financial resources		Donor coordination linked to national strategic financial planning	
Minimisation of direct cost to user					

Quality Assurance - all services aim to be evidence-based, integrated, person-centred high quality and safe

Core requirements	Status	Intermediate requirements	Status	Advanced requirements	Status
Transparent and accountable processes are in place to improve outcomes and monitor processes to ensure effective, efficient, equitable, accessible, acceptable, safe and sustainable services		Performance management systems		Review of quality assurance systems and frameworks	
Measurement of service and financial performance		Audits for quality improvement			
		Attainment of approved and validated accreditation systems			

		Health protection action for quality improvement in healthcare settings including safety, for example, reduction of surgical site infection and detection, prevention and management of healthcare associated infections			
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8.2.2 Knowledge

Surveillance, Monitoring and Evaluation - the continuous, systematic collection, analysis and interpretation of health-related data needed for the planning, implementation, and evaluation of public health practice. Information can be used to:

- Serve as an early warning system for impending public health emergencies
- Document the impact of an intervention, or track progress towards specified goals
- Monitor and clarify the epidemiology of health problems, to allow priorities to be set and to inform public health policy and strategies
- Evaluate process and outcomes to continuously improve practice
- Integrate into national health information systems

Core requirements	Status	Intermediate requirements	Status	Advanced requirements	Status
Defined objectives and case definitions for surveillance systems		Integrated surveillance communicable disease systems at regional, subnational and national level to include plans for routine analysis of data and detection of signals and trends		Electronic Integrated Disease Surveillance and Response (e-IDSR) implementation	
Evaluation of existing surveillance and response systems against validated framework		Increased and motivated skilled workforce including risk assessment and epidemiology		Sentinel surveillance and monitoring	
Enhanced surveillance in response to specific incidents or in planning for mass gathering events.		Development and maintenance of an information asset register		National, subnational, regional, and local health protection intelligence linked to population demographics, health service data and public health indicators	
Targeted surveillance to support national priorities for public health		Monitoring of surveillance quality		Case identification and reporting	

programmes, for example, vaccine preventable diseases, sexually transmitted infections, blood borne viruses, healthcare associated infections and antimicrobial resistance, and vector borne disease				
Clear escalation policies and procedures for reporting identified exceedances		Information governance including 'duty to share'		Prevalence surveys of antimicrobial use
Timely and responsive alerts to enable prompt and effective system-wide responses				Increased and motivated skilled workforce including mathematical biology and bioinformatics, and analysis and graphics
				Effective data management systems
				Core indicator set supporting targets and milestones
				Linkage to other data including wider determinants and behavioural risk factors.
				Benchmarking at regional, subnational and national level to enable comparison within and between countries
				Geographic Information Systems (GIS)
				Surveillance systems utilising digital platforms

8.2.3 Research and innovation for health protection

Quantitative and qualitative research and evaluation on inequalities, health determinants, causes, risk factors, patterns and interventions; knowledge to assist planners for priority setting, especially:

- Burden of diseases
- Identification of future risks, scenarios and projections
- New technologies and interventions
- New ways of applying existing technologies and interventions
- Economic analysis
- Systems analysis - to identify key effective areas to tackle problems and to intervene

Core requirements	Status	Intermediate requirements	Status	Advanced requirements	Status
Promote research and community based innovation to find solutions for complex public health challenges		Effective research governance including ethics review boards/institutions		Diverse research capacity	
Linked to an evidence service (policies, interventions and services)		Linked as part of established public health institutes		Framework for generating and reviewing research topics	
Identify risks and opportunities, feasibility and impact on health inequalities				Effective stewardship of intellectual resources including policies on intellectual property	
Research strategy for public health protection including:				Application and meaningful use of E-health for monitoring and surveillance (e-IDSR), management and treatment, public information and research	
Etiological research					
Interventional/treatment research					
Epidemiological research					
Operational research					

8.2.4 Advocacy

Communications - strategic actions to influence others to shift opinion, initiate positive change, and address the underlying factors that contribute to a healthier community, be it at the individual, (for example, personal behaviours affecting health), household or population level, including for policy and legislation; often involves partnership working and building solidarity with other organisations to achieve common goals. Includes:

- Leadership, shared values and an ethical framework
- High level collaboration
- Community engagement and empowerment
- Clear and effective communications adapted for policy makers, planners and practitioners with options, risks, costs and anticipated outcomes
- Understandable information to enhance uptake of messages:
 - to enable planning by policy makers and planners
 - to empower and inform communities and the public

Core requirements	Status	Intermediate requirements	Status	Advanced requirements	Status
Agreed roles and responsibilities, within and across organisations, including media training for senior staff		Establishment of multi-agency warning and informing planning groups		Disease specific outbreak communications plans, for example, Ebola Virus Disease	
Health protection communications strategies, plans and public information materials, designed and produced with the involvement of relevant stakeholders		Involvement of the media and community representatives in warning and informing groups		Incident specific outbreak communications plans, for example, flooding	
Communications and engagement informed by the needs of the public, national and international stakeholders, agencies and partners, as well as the media		Campaigns, involving both communications and community engagement work, to influence personal behaviours that can protect health, for example, vaccination		Involvement of the media and community representatives in the exercising of communication systems	
Communication strategies, policies and procedures to alert, inform, advise or		Communications and engagement strategies appropriate to the		Risk assessed communications and engagement that balances the need	

brief the public, partners, policy makers and elected representatives		anthropological contexts of the community		to provide information with the need to avoid causing undue alarm	
Public information materials in accessible formats, for example, multi-lingual, easy read and large print		Adoption of an evaluation framework to be applied to all communications, engagement and campaign work to guide future initiatives		Exercising of communications systems to ensure they are fit for purpose in the event of an outbreak or incident	
Public information on the impact of health protection incidents widely available in a range of formats including web, digital/social media, and printed format - so that the public are aware of the action they need to take				Statutory consultee status providing expert advice, response and assessment of public health impacts to statutory strategic planning processes and policy consultations	
Communications to counter misinformation and reduce stigma				Media and rumour management surveillance system	
Communications as a standing agenda item at all incident and outbreak meetings, with communications representation present				System resilience for public and professional communications during emergencies	
				Shared learning and best practice on communications and engagement campaigns between organisations internationally	
				Horizon scanning to ensure all new media and all new communications techniques, for example, social marketing, are considered in the delivery of communications plans and strategies	

8.2.5 Capacity: workforce planning and organisational development

Capacity for the administrative, workforce and information systems needed to deliver Universal Health Coverage and which reflect current and future public health priorities within a particular population

Workforce Development - establish roles and responsibilities and align training requirements for different elements of the public health workforce, including:

- Public health workers (leaders, specialists, professionals, scientists and practitioners including community health workers) - leadership and expertise across all public health functions: providing leadership, strategic expertise, priority setting, change management and influencing skills to embed public health approaches within governance and implementation processes at national and local levels
- Health workers - prevention, protection and promotion: health promoting health care settings (primary health care; secondary health care; tertiary health care and rehabilitation); educate and empower patients with health promoting skills; integrated person-centred evidence based care, screening, vaccination, reporting re IHR; wider advocacy and partnership roles
- Wider workforce - health promotion and governance: partnership work at national policy and community planning levels to create supportive healthy environments -examples of other sectors include: finance, education, work, the police, agriculture, the environment, housing, transport, social care, the private and voluntary community sector; provide education and messages tailored according to the role they can play and mainstreamed into training programmes
- Public health management - applying public health leadership and management with skills of assessment, cost-effectiveness, prioritisation and planning to improve the quality, safety, effectiveness and efficiency of health service delivery

Core requirements	Status	Intermediate requirements	Status	Advanced requirements	Status
Public health workforce development plan to ensure effective leadership for health protection (strategic and operational)		Defined titles and roles of health and wider public health workforce, staff whose work role includes public health, in the wider health system and public services		Development of bioinformatics curriculum and capability bridging epidemiology and microbiology	
Defined titles and roles of <u>core</u> public health workforce, staff whose primary work role is public health, in the local country public health system		Training and ongoing professional development of wider public health workforce		Close linkage between training and professional development of all components of core public health workforce to ensure shared approach and transferability of competence	

Ensure close linkage between training and professional development of core and wider public health workforce		Field epidemiology training programme to build outbreak investigation and response, surveillance and other capacity		Training and on-going professional development of Public Health microbiology and clinical scientific workforce to build laboratory surveillance and response capacity	
Training and on-going professional development of core public health workforce					

Workforce Planning - the systematic identification of the number and skill sets of individuals required to most effectively and efficiently deliver the health protection function, and ensuring that these individuals are available

Core requirements	Status	Intermediate requirements	Status	Advanced requirements	Status
Develop and implement a public health workforce strategy for local country needs		Predict and mitigate the impact of attrition, retirement, and migration on workforce		Ensure flexibility in the core workforce to allow transfer of competence- to address changes in workforce needs in the longer term	
Defined titles and roles of core public health workforce required to deliver health protection		Incorporate public health workforce planning in the wider health system and public services			
Ensure flexibility in the core workforce to address acute surge and emergency requirements					
Identify the infrastructure required to facilitate the delivery of health protection					

Standards, Curriculum and Accreditation - of individuals in the workforce or at organisational level: develop core standards based upon the framework areas and incorporate into relevant curricula and accreditation processes. Improve systems in health training institutions and universities for easy upgrade of curriculum to meet present and coming healthcare needs

Core requirements	Status	Intermediate requirements	Status	Advanced requirements	Status
Review existing curricula for the core public health workforce to incorporate		Develop and monitor occupational standards to provide a benchmark for		Develop and implement a quality improvement framework to identify	

this framework to ensure consistency and transferability of competence		assessing performance of individuals and organisations		the quality assurance, quality management and quality control systems for the regulators and providers of this training	
Develop an overarching skills and knowledge framework to meet local country need for the delivery of the health protection function		Review existing curricula for the <i>wider</i> public health workforce to incorporate this framework to ensure consistency and transferability of competence			

8.2.6 Prevention and promotion for health protection

Public health **promotion** requirements include:

- Addressing inequalities in gender, socioeconomics, age, ethnicity, disability, minority groups, geographic, cultural, language and literacy
- Prioritising populations at high risk of key health problems
- Progressive universalism at policy level and for structural and systems approaches
- Health literacy and behavioural change through developing individual skills and integrated community centred approaches to address risk factors and promote positive health behaviours through national policy and legislation including:
 - Drugs and alcohol
 - Sexual health
 - Injury prevention
- Reducing risk and promote healthy environments for the following, emphasising co-benefits with reference to climate change (as outlined in the Environmental health section):
 - Air, soil, food, water, sanitation, housing, noise, transport, rural and built environments
 - Chemical, environmental, biological and radiation hazards

Requirements for **prevention** delivered through people centred services:

- Re-orientating health services with larger roles for primary and secondary prevention, through the delivery of people-centred and integrated primary health care services
- Promoting continuous improvement of infection prevention and control standards as well as the provision of specific services
- Providing information for the public and public health workers about diseases, risk reduction, treatments and services including guidelines and educational materials
Specific services include:
 - Vaccination and immunisation (see below)
 - Screening (see below)
 - Sexual health (see below)
 - Diagnostic including point-of-care and self-testing
 - Partner and contact notification and treatment
 - Behavioural change
 - Infection prevention and control
 - Antimicrobial advice
- Campaigns targeted at vulnerable and marginalised groups
- Promotion and support for community health worker (CHW) programmes
- Effective service delivery maximising access and minimising delay to test or treatment as well as cost to the user

- Vaccination and immunisations programmes supported by:
 - Performance and monitoring of immunisation programmes
 - Collate, analyse and interpret uptake data linking this to epidemiological data and notifications of vaccine preventable diseases
 - Specialist advice and support to providers of immunisation programmes including vaccine use for public health response to single cases (reactive vaccination)
 - Support to or provision of training for providers of immunisation programmes
 - Support or undertake investigations and management of adverse vaccine-related incidents
 - Advice and guidance on the use of community or mass vaccination in response to an incident
 - Institutional strengthening to advise public health staff on vaccine introduction and monitoring and evaluation
- Screening for communicable and non-communicable diseases and environmental hazards that present a health protection risk such as:
 - Sexually transmitted infections
 - Blood borne infections
 - Cervical cancer screening using human papilloma virus primary testing

9. Additional Health Protection Resources

RESOURCES	WEBLINKS
International Health Regulations	
International Health Regulations (2005)	http://apps.who.int/iris/bitstream/10665/43883/1/9789241580410_eng.pdf
IHR Publication database: includes checklists for evaluation and updates on the IHR	http://www.who.int/ihr/publications/list/en/
National IHR Focal Point guide	http://www.who.int/ihr/English2.pdf
IHR Joint external evaluation tool	http://apps.who.int/iris/bitstream/10665/204368/1/9789241510172_eng.pdf
Communicable Disease Control	
WHO Global Strategy for Containment of Antimicrobial Resistance	http://apps.who.int/medicinedocs/index/assoc/s16343e/s16343e.pdf?ua=1
Getting Ahead of the Curve A strategy for combating infectious diseases (including other aspects of health protection)	http://antibiotic-action.com/wp-content/uploads/2011/07/DH-Getting-ahead-of-the-curve-v2002.pdf
Communicable diseases alert for mass gatherings	http://www.who.int/csr/resources/publications/WHO_HSE_EPR_2008_8c.pdf?ua=1
Communicable diseases surveillance and response system	http://www.who.int/csr/resources/publications/surveillance/WHO_CDS_EPR_LYO_2006_2.pdf
Health Protection Regulations 2010 Toolkit	http://www.cieh.org/policy/health-protection-regulations-toolkit.html
Emergency Preparedness	
Strengthening health-system emergency preparedness Toolkit for assessing health-system capacity for crisis management	http://ec.europa.eu/chafea/documents/health/leaflet/who-toolkit.pdf
Sendai Framework for Disaster Risk Reduction 2015-2030	http://www.preventionweb.net/files/43291_sendaiframeworkfordrren.pdf
WHO Emergency Response Framework	http://apps.who.int/iris/bitstream/10665/89529/1/9789241504973_eng.pdf?ua=1

RESOURCES

Emergency Preparedness Toolkit for Community Health Centres & Community Practice Sites

United Nations High Commissioner for Refugees (UNHCR) Emergency Handbook

Epidemic Preparedness and Response in Refugee Camp Settings - Guidance for Public health officers

EMDAT - the International disaster database, centre for research on the epidemiology of disasters

Floods in the WHO European Region: health effects and their prevention.

Environmental Health

Environmental Health Criteria

Tools for assessing chemical risk

WHO/ IPCS Harmonization Project

Guidelines on the prevention of toxic exposures

A toolkit for monitoring and evaluating household water treatment and safe storage programmes

Guidance on the development of educational and training curricula

Guidelines for evaluation of environmental Health Services

WHO (2015) Strengthening health security by implementing the International Health Regulations 2005, WHO, Geneva

WHO (2005) International Health Regulations (2005)

WHO (2008) Closing the Gap in a Generation: Health Equity through Action on the Social Determinants of Health. Final Report of the Commission on Social Determinants of Health.

WEBLINKS

http://www.cidrap.umn.edu/sites/default/files/public/php/343/343_toolkit.pdf

<https://emergency.unhcr.org/>

<http://www.unhcr.org/4f707f509.html>

<http://www.emdat.be/>

http://www.euro.who.int/_data/assets/pdf_file/0020/189020/e96853.pdf

http://www.who.int/ipcs/publications/ehc/ehc_numerical/en/

<http://www.who.int/ipcs/methods/harmonization/en/>

<http://www.who.int/ipcs/methods/harmonization/en/>

http://www.who.int/ipcs/features/en/prevention_guidelines.pdf?ua=1

http://apps.who.int/iris/bitstream/10665/76568/1/9789241504621_eng.pdf?ua=1

<http://eric.ed.gov/?id=ED432476>

<http://www.euro.int/en/publications/abstracts/environmental-health-services-in-europe-5.-guidelines-for-evaluation-of-environmental-health-services>

www.who.int/ihr/en/

<http://www.who.int/ihr/publications/9789241596664/en/>

http://apps.who.int/iris/bitstream/10665/43943/1/9789241563703_eng.pdf

RESOURCES

Geneva: WHO

UNISDR (UN International Strategy for Disaster Reduction) (2015) Sendai Framework for Disaster Risk Reduction 2015-2030.

IPCC (2012) Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation. A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change [Field, C.B., Barros, V., Stocker, T.F., Qin, D., Dokken, D.J., Ebi, K.L., et al. (eds.)]. Cambridge University Press, Cambridge.

Chartered Institute of Environmental Health

The Royal Environmental Health Institute of Scotland

International Federation of Environmental Health

Environmental Health Australia

Environmental Health Association of Ireland

New Zealand Institute of Environmental Health

Society of Environmental Health, Singapore

Malaysian Association of Environmental Health

Climate Change and Sustainability

Using Climate to Predict infectious diseases outbreak: A Review

Health and climate change toolkit for project managers

Assisting vulnerable coastal communities

Climate Change and Water: IPCC Technical Paper VI

Adaptation practices, options, constraint and capacity: Fourth Assessment Report of the IPCC

WEBLINKS

www.preventionweb.net/files/43291_sendaiframeworkfordr ren.pdf

https://www.ipcc.ch/pdf/special-reports/srex/SREX_Full_Report.pdf

<http://www.cieh.org/>

<http://www.rehis.com/>

<http://www.ifeh.org/>

<https://www.eh.org.au/>

<http://www.ehai.ie/>

<http://www.nzieh.org.nz/>

<http://soceh.org.sg/>

<http://www.maeh.org.my/>

<http://www.who.int/globalchange/publications/en/oeh0401.pdf?ua=1>

<http://www.who.int/globalchange/resources/toolkit/en/>

<http://coastalclimateblueprint.org.au/>

<http://ipcc.ch/pdf/technical-papers/climate-change-water-en.pdf>

<https://www.ipcc.ch/pdf/assessment-report/ar4/wg2/ar4-wg2-chapter17.pdf>

RESOURCES

Impacts, Adaptation and Vulnerability: Fourth Assessment Report of the IPCC

Human Health: Impacts, Adaptation, and Co-Benefits: Fifth Assessment Report of the IPCC

Sendai - links to report as well as related materials

WHO systematic reviews on health impacts of climate change including flooding and drought

Intergovernmental Panel on Climate Change (IPCC)

Health of Migrants, refugees, displaced, stateless and trafficked people

Economic

UPMC Infectious Disease Cost Calculator

The Impact of Infectious Diseases on the Development of Africa

WEBLINKS

https://www.ipcc.ch/pdf/assessment-report/ar4/wg2/ar4_wg2_full_report.pdf

https://www.ipcc.ch/pdf/assessment-report/ar5/wg2/drafts/fd/WGIIAR5-Chap11_FGDall.pdf

http://www.unisdr.org/files/43291_sendaiframefordrren.pdf

<http://www.wcdrr.org/resources>

<http://currents.plos.org/disasters/article/dis-13-0001-health-effects-of-drought-a-systematic-review-of-the-evidence/>

http://www.euro.who.int/_data/assets/pdf_file/0020/189020/e96853.pdf

<http://www.ipcc.ch/>

https://www.ipcc.ch/pdf/assessment-report/ar5/wg2/WGIIAR5-Chap11_FINAL.pdf

http://www.ipcc.ch/publications_and_data/publications_and_data_reports.shtml

<http://www.idcostcalc.org/contents/about/cost-of-ID.html>

<http://www.who.int/migrants/en/>

<http://www.euro.who.int/en/health-topics/health-determinants/migration-and-health/migrant-health-in-the-european-region/migration-and-health-key-issues>

http://rd.springer.com/referenceworkentry/10.1007%2F978-0-387-78665-0_66

RESOURCES**Other Resources and Guidance related to Health Protection****WHO Ebola Recovery Tool Kit****UK Health Protection regulation toolkit****The MAPS toolkit: mHealth assessment and planning for scale****Global Health Observatory Data Repository****Commonwealth health hub Global Burden of Disease database****Global Health Security Agenda: Pilot Assessment of the UK****Guidance for Public Health Interventions for Repatriation****UNHCR's Essential Medicines Policy and Guidance 2013****Responding to a poliovirus outbreak: for a new polio outbreak in a polio-free country****WEBLINKS**<http://www.who.int/csr/resources/publications/ebola/recovery-toolkit/en/><http://www.cieh.org/policy/health-protection-regulations-toolkit.html>http://apps.who.int/iris/bitstream/10665/185238/1/9789241509510_eng.pdf<http://apps.who.int/gho/data/node.imr><https://www.thecommonwealth-healthhub.net/practice-centre/view-country-profiles/>https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/456984/IndependentReport_GHS_acc.pdf<http://www.unhcr.org/4f7080349.html><http://www.unhcr.org/527baab09.html><http://www.polioeradication.org/Portals/0/Document/Resources/PolioEradicators/1a.PolioOutbreakGuideline20150220.pdf>

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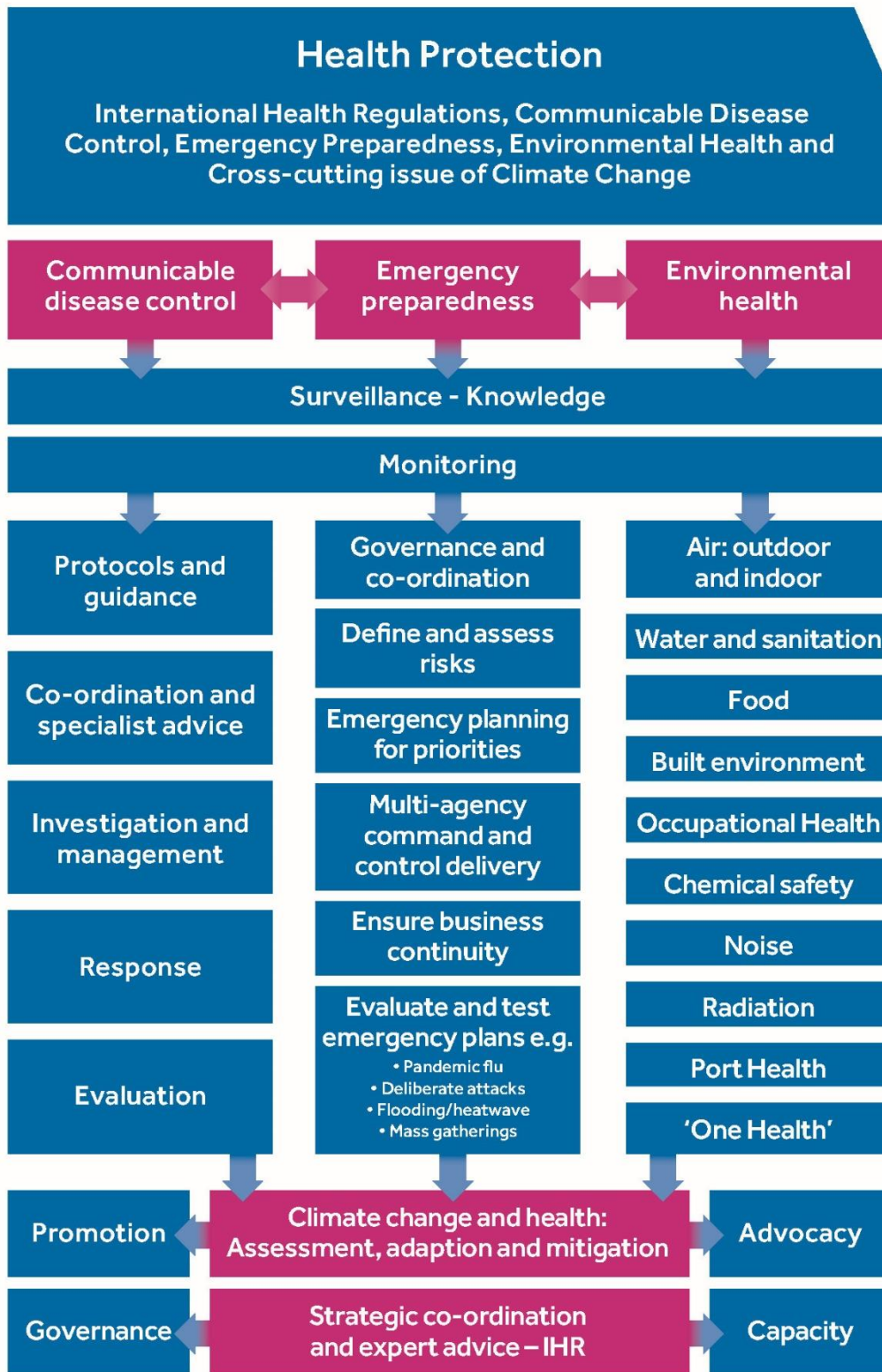
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Annex 1 - an overview of health protection services



Annex 2 - Applying the Commonwealth Health Protection Policy Toolkit to strengthen policy and health systems

Using the Toolkit

The value of this Toolkit is only derived from its practical application. A Workbook and Workshop have been developed and tested in the field on a visit to Sierra Leone. The Workbook comprises the central section of the Toolkit (section 8 of this document) together with an introduction, which is reproduced below. The Workshop is an adaptation, based on learnt experience, of a 3-day Workshop led by the Commonwealth Secretariat in Sierra Leone.

Workbook

Introduction

The workbook is subdivided into sections starting with the Core components of health protection (Governance, Communicable Disease Control, Emergency Planning and Preparedness, Environmental Health and Climate Change and Sustainability), Followed by enabling components including Financial Resources, Quality Assurance, Surveillance Monitoring and Evaluation, Research and Innovation, Advocacy and Communications, and Workforce Planning and Development.

Each section is further subdivided into three principal columns: Core, Intermediate and Advanced requirements. These identify the elements expected of each component of health protection with the requirements increasing depending on the state of development of health protection in the country.

To facilitate practical use of the tool additional columns headed 'Status' are included. The simplest application of the tool would be to use it as a checklist of policies that already exist and the 'Status' column marked with a tick or a cross. The 'Status' column could also be used to identify and/or rank priority areas for policy or planning action, for example, rating each item or ranking priority areas from one to ten. Once completed, this tool could be revisited to evaluate service improvement over time.

This is a flexible framework for identifying areas for assessment and to influence planning, depending on in-country priorities. Areas identified as priorities to take forward or weaknesses to be addressed can then be summarised into an initial draft national policy or planning document and further developed into an action plan.

Workshop

Workshop structure

- Day 1: morning - Workshop sessions 1 and 2
- Day 1: afternoon - Workshop session 3
- Day 2: morning - Workshop session 3 continued
- Day 2: morning - Workshop session 4
- Day 2: afternoon - Workshop session 5

Day 3: morning - Workshop session 5 continued

Day 3: afternoon - Workshop session 6

Day 3: afternoon - Close workshop

Sessions interspersed with plenary briefings/presentations on global e.g. Sustainable Development Goals and local matters e.g. state of the nation.

Workshop session 1

Welcome and Introductions:

- Overview of workshop
- Objectives
- Participant introductions

Introduction and Context setting:

- Health Systems Strengthening
- The need for the Toolkit, how it was developed

Notes: outline Global Burden of Disease

- Roadmap for Health Protection Services

Notes: introduce Toolkit, explain Roadmap

- The Health Protection Policy Toolkit

Notes: highlight contents of Toolkit

Workshop session 2

Group work 1:

Participants identify regional/national/subnational health protection priorities and responses using the Roadmap as a guide and the Overview of Health Protection services as a reference resource

- Country priorities
- Current capacity / resources

Followed by plenary feedback and discussion on priorities

Workshop session 3

Group work 2:

Using the Toolkit to allocate sections between groups or choose priority areas based on previous discussion

Considerations

- Identify policy areas already in existence (in whole or part)
- Highlight current gaps/areas where policy is required - *use the Overview of Health Protection services as a guide*
- Identify priority areas/gaps for development
- Identify priority areas to link to universal health coverage provision

Workshop session 4

Plenary feedback and discussion on priorities - discussion points

- Existing legal and policy framework

- Good practices (past and present)
- Challenges

Notes:

- *Aim to reach consensus on health protection policy priorities*
- *Identify linkages/commonalities with existing Health Protection services*
- *Consider workshop conclusions in the context of global health security and national obligations to achieve the Sustainable Development Goals*

Workshop session 5

Group work 3:

Using the outputs from sessions 3 and 4 start action planning for selected priority areas/gaps for development using the Action Planning Workbook

Workshop session 6

Plenary discussion:

Using the outputs from session 5 and reviewing original priorities identified in session 2 agree:

- Next steps - how are you going to take this work forward
- Commonwealth Secretariat role

Debrief on Toolkit and workshop:

- Suggestions for amendments/improvements or additions to the Toolkit
- Reflections and Feedback on the workshop

Close workshop

Annex 3 - Planning template

Governance

Principal actions	Partners and Resources	Delivery timescale
To achieve full compliance with IHR		

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Principal actions	Partners and Resources	Delivery timescale
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To develop long-term plans for sustainable funding for health protection		
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Principal actions	Partners and Resources	Delivery timescale
<p>To develop transparent and accountable processes for monitoring service and financial performance</p>		

Advocacy - including communications and collaboration

Principal actions	Partners and Resources	Delivery timescale
<p>To develop a national communications strategy for health protection informed by the needs of the public, national and international stakeholders, agencies and partners, as well as the media</p>		

Principal actions	Partners and Resources	Delivery timescale
To identify national collaboration mechanisms and focal points to work with regional and global partners		

Knowledge - including surveillance, research and evaluation

Principal actions	Partners and Resources	Delivery timescale
To develop an organised health intelligence service that includes effective surveillance for health protection within 5 years		

Principal actions	Partners and Resources	Delivery timescale

Capacity - workforce planning and organisational development and infrastructure

Principal actions	Partners and Resources	Delivery timescale
To develop and implement a national workforce strategy for public health to include training and workforce development		
To develop a plan of investment in the infrastructure necessary to secure resilient health protection services		

Principal actions	Partners and Resources	Delivery timescale

Protection 1: communicable disease control

Principal actions	Partners and Resources	Delivery timescale
To develop an organised health protection system for communicable disease control that connects human, animal and environmental health		

Protection 2: emergency preparedness and response

Principal actions	Partners and Resources	Delivery timescale
To develop legislation for emergency preparedness and response and establish and test national and subnational coordination and command structures and facilities that can respond effectively to threats		

Protection 3: environmental health

Principal actions	Partners and Resources	Delivery timescale
To develop legislation and regulation for environmental health protection and inspection and enforcement arrangements to assure compliance		

Prevention - role of people centred services

Principal actions	Partners and Resources	Delivery timescale
To develop effective prevention strategies and organised services to protect population health		

Promotion

Principal actions	Partners and Resources	Delivery timescale
To develop effective health promotion strategies and organised services to address the determinants of health applicable to health protection including:		
<ul style="list-style-type: none">• inequalities in gender, socioeconomic status, age, ethnicity, disability, minority groups, geography, culture, language and literacy• behavioural/lifestyle effects, for example, drugs, alcohol, sexual health, injury prevention		

Principal actions	Partners and Resources	Delivery timescale

Universal Health Coverage (UHC)

Principal actions	Partners and Resources	Delivery timescale
1. To develop longer term policies for health system strengthening including plans to address non-communicable diseases and 2. To establish cross-sector links to deliver the Sustainable Development Goals		

Annex 4 - Example of resources breakdown from Public Health Wales for delivering Health Protection Services

The financial costs and staffing described here are illustrative. They are not intended to describe the correct or ideal quantity or allocation of resources. Health protection services (excluding microbiology) provided by Public Health Wales serve a population of 3.1 million in a high income country. Microbiology services are provided by Public Health Wales to approximately 75% of the population of Wales. Some specialist and reference services are provided to other health systems within the United Kingdom and in return Public Health Wales relies on laboratories in other UK countries for some of its services.

Health protection services

Service overview: core health protection services (communicable disease control, emergency preparedness and response and environmental health) and communicable disease surveillance and specialist services and programmes including TB and respiratory diseases, vaccination and immunisation, zoonoses, blood borne viruses, sexual health, antimicrobial resistance, health care associated infections, substance misuse and accident prevention

Staff (figures for year 2016-17)

90 directly employed staff (78 full time equivalents) broken down as follows (number per 100,000 population served):

23 (0.75 per 100,000 population) in communicable disease surveillance including health care associated infections

19 (0.6 per 100,000 population) in communicable disease control and emergency preparedness and response

5 (<0.2 per 100,000 population) in environmental health

11 (0.35 per 100,000 population) in vaccination and immunisation

11 in informatics

remainder in other programmes or administrative roles

Finance (figures for year 2016-17)

Pay £4.6m

Non Pay £1.8m

Total Annual Budget £6.4m

Microbiology services

Service overview: laboratory diagnostic services, infection management services, support to health protection teams in relation to outbreaks and community infection control and specialist services and programmes including in-country and some UK specialist and reference facilities

Staff (figures for year 2016-17)

348 directly employed staff (314 full time equivalents) broken down as follows (number per 100,000 population served):

174 (7.25 per 100,000 population) healthcare scientists

34 (1.4 per 100,000 population) medical

109 (4.5 per 100,000 population) other clinical services

remainder in administrative roles

Finance (figures for year 2016-17)

Pay £15.4m

Non Pay £6.3m

Total Annual Budget £21.7m

Total health protection staff employed by Public Health Wales: 438 (392 full time equivalents)

Total pay costs £20m

Total non-pay costs £8.1m

Total Annual Budget £28.1m

Annex 5 - WHO Joint External Evaluation Tool - International Health Regulations (2005)

The Joint External Evaluation Tool - International Health Regulations (2005) is intended to assess country capacity to prevent, detect, and rapidly respond to public health threats independently of whether they are naturally occurring, deliberate, or accidental. The purpose of the external evaluation process is to measure country specific status and progress in achieving the targets. This will require a sustainable and flexible process to allow for additional countries and regular evaluation visits. The first time the external evaluation is conducted, it will establish a baseline measurement of the country's capacity and capabilities. Subsequent evaluations are necessary to identify progress made and ensure any improvements in capacity are sustained.

Joint external evaluations share a number of important features, including: voluntary country participation; a multi-sectoral approach by both the external teams and the host countries; transparency and openness of data and information sharing; and the public release of reports. It also refers to the joint process during an external evaluation (envisioned to take place approximately every five years) where a team of national experts first prepares a self-assessment supplied to the external team prior to the on-site visit, and the external team uses the same tool for their independent evaluation, working together with the national team in interactive sessions.

The external evaluation allows countries to identify the most urgent needs within their health security system, to prioritize opportunities for enhanced preparedness, response and action, and to engage with current and prospective donors and partners to target resources effectively. Transparency is an important element in order to attract and direct resources to where they are needed most.

Process

The first stage of the evaluation is a country survey completed by the country using self-reported data for the various indicators on the joint external evaluation tool. This information is then given to the joint external evaluation team comprised of national and international subject matter experts. Review of this self-assessment data provides the team members with a baseline understanding of the country's health security capabilities. These subject matter experts will then visit the country for facilitated in-depth discussion of the self-reported data as well as structured site visits and meetings organized by the host country. The evaluation team will use findings of various relevant evaluation and assessments like World Organisation for Animal Health: Performance of Veterinary Services (OIE PVS) pathway, monitoring and evaluation of disaster risk reduction and others.

After conducting the evaluation visit, the evaluation team will draft a report to identify status levels for each indicator, as well as an analysis of the country's capabilities, gaps, opportunities and challenges. This information will be shared with the host country and, with permission of the host country, various other stakeholders, in order to facilitate international support of country implementation efforts; share best practices and lessons learned; promote international accountability; engage stakeholders; and inform and guide IHR implementation both in the host country and internationally.

The tool was developed to provide an external mechanism to evaluate a country's IHR capacity for ensuring health security. This tool draws on the original IHR core capacities and incorporates valuable content and lessons learned from tested external assessment tools and processes of several other multilateral and multi-sectoral initiatives that have supported the building of capacity to prevent, detect, and respond to infectious disease threats.

http://apps.who.int/iris/bitstream/10665/204368/1/9789241510172_eng.pdf

Annex 6 - Key Components of a comprehensive environmental health service

A comprehensive environmental health service relies on a combination of ensuring a range of basic general skills within the workforce allied with specialist subject areas. Environmental health services are more than regulatory, they employ a range of tools including education to mitigate against adverse human health outcomes and secure sustainable public health.

Skills and knowledge

Communication skills; so that public health messages can be transmitted effectively and are understood

Ability to carry out research and establish an evidence base to support interventions

An understanding of the legal frameworks and the role of law to secure compliance with established norms and standards

An understanding of the principles of better regulation, the needs of those who are regulated and with whom there is interaction including business

Knowledge of environmental stressors that impact on public health and an understanding of the human physiology of how such stressors impact on individuals

An understanding of practical issues such as relevant construction technology so as to be able to address sanitation and hygiene of buildings

Components of a comprehensive environmental health service - areas of practice

1. Emissions to air and air quality outside the home

- Monitoring air quality and identifying and measuring air pollutants
- Emissions to air from fixed sources - monitoring and controlling
- Controlling emissions from transport
- Global air pollution and air quality issues
- Approaches to improving air quality

2. The aquatic environment and safe water

- Water and health - safe drinking water monitoring and surveillance
- Water and risks (supplies)
- Safe waste water disposal and sanitation
- Surface water quality monitoring and assessment
- Interventions and emergencies
- Emerging global issues - water management as part of climate change adaptation

3. Safe production of food and issues around nutrition

- Climate changes, global food production and international trade in foodstuffs
- Food and food chain security
- Implementation of international food and port control systems
- Food safety, hygiene and quality controls
- Preventative approaches to food safety
- Preservation of food
- Monitoring food quality and safety
- Regulatory compliance, inspection and regulation

4. Waste Management and related issues

- Collection and disposal of solid waste
- Managing waste arisings
- Hierarchy of waste management
- Disposal techniques
- Movement/shipments of waste
- Managing particular problems (including hazardous and electronic waste)

5. Communicable diseases

- Identification of communicable diseases and infectious agents
- Investigation of the sources of disease
- Identification of environmental sources and sources of transmission
- Surveillance systems
- Implementing systems of control

6. Pest Management and vector control

- Pest management as a public health issue
- Vector control using the different techniques
- Rodents
- Insects
- Stored food pests
- Provision of integrated pest management
- Pests in housing
- Pests in food premises

7. Housing and the residential environment

- Housing as a determinant of health, hazards in and around the home - identification of risks including indoor air quality
- A system of assessing housing conditions, identifying deficiencies and risks and an ability to regulate or provide strategies to mitigate or reduce those risks

8. The work environment

- Identifying hazards and risks in different working environments
- Mitigation of risk
- Managing health and safety in the workplace
- Occupational hazards and disease
- Regulation and health and safety
- Investigation of incidents, dangerous occurrences and accidents

9. Noise and vibration

- Measurement and ability to control noise at source and prevention of sound transmission
- Noise mapping
- Planning out noise problems
- Noise as a problem in different settings including transport

10. Land use and contaminated land

- Contaminated land
- Potential hazards
- Prevention of contamination

- Identifying contaminated land
- Securing remediation
- Provision of environmental impact assessment as a technique to mitigate adverse environmental impacts of developments

11. Capacity to apply and manage environmental health in extreme events and emergencies

- Emergency planning and environmental health
- Environmental health management in health protection in emergencies and extreme events such as heatwaves, cold weather, floods, drought, windstorms, volcanoes, earthquakes, preparedness, early warning, response and recovery

12. Environmental Health at ports (air and sea) and borders

- Implementation of International Health Regulations
- Environmental health at airports including disinfection
- Disease control
- Aircraft as food premises
- Foodstuff smuggling - Imported food (both legal and illegal)?
- Environmental health at sea ports
- Infectious diseases
- Ship sanitation
- Health Declaration
- Imported food (legal and illegal)
- Ships' waste at sea ports
- Water supplies

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