

Kenya GHSA 5-year Roadmap (2015-2020)

PREVENT

AMR					
GHSA Goal		GHSA Objective	GHSA 5-Year Target		
Prevent Avoidable Epidemics		Preventing the emergence and spread of antimicrobial drug resistant organisms and emerging zoonotic diseases and strengthening international regulatory frameworks governing food safety.	Support work being coordinated by WHO, FAO,OIE to develop an integrated and global package of activities to combat antimicrobial resistance, spanning human, animal, agricultural, food and environmental aspects (i.e. a one-health approach), including: a) each country has its own national comprehensive plan to combat antimicrobial resistance; b) strengthen surveillance and laboratory capacity at the national and international level following agreed international standards developed in the framework of the Global Action plan, considering existing standards and; c) improved conservation of existing treatments and collaboration to support the sustainable development of new antibiotics, alternative treatments, preventive measures and rapid, point-of-care diagnostics, including systems to preserve new antibiotics.		
Year	Key Milestones	US Government Activity	Host Government Activity	Other Activity (e.g. NGO, other governments, multilaterals)	
1	Develop a national comprehensive plan to combat antimicrobial resistance in human and animal health	CDC- Technical assistance to MOH; USAID - Technical assistance to MALF and MOH; DoD - technical assistance to MOH	Develop & implement with USG interagency workgroup	To be determined	
1	Identify and strengthen AMR laboratory capacity				
1	Develop plan for functional multisectoral national surveillance system for monitoring AMR				
1	Increase reporting to national surveillance systems for human and animal health				
1	Strengthen the infection prevention and control capacity and policy				
2	Assessment of national consumption and prescription patterns for antibiotics in humans and livestock completed				
2	Develop laboratory action plan for national and county AMR surveillance				
2	Develop an IPC training plan for pre-service curricula				
2	Develop key AMR messages for stakeholders				
3	Standards for safe and appropriate use of antibiotics in livestock husbandry are established				
3	Conducted training and mentorship for national and county laboratories on AMR (human and animal)				
3	Monitor antimicrobial stewardship adherence across sectors				
3	Develop, review and approve the proposed draft Policy Strategy and implementation plan				
3	Scaled up AMR surveillance to other county hospitals and veterinary laboratories				
3	Scaled up training for hospitals, county teams, and TOTs on IPC/HAI				
3	Implement AMR communication strategy				
4	Disseminated National AMR Strategy, Policy and implementation plan for Kenya	CDC- Technical assistance to MOH; USAID - Technical assistance to MALF			
4	Identify three of the seven WHO priority AMR pathogens,	USG Kenya Technical assistance to MOH			
4	Established at least one reference laboratory capable of identifying at least three of the seven WHO priority AMR	CDC- Technical assistance to MOH			
4	Scaled up training for hospitals, county teams, and TOTs on IPC/HAI				
5	Implemented National AMR plan for detection and mitigation				
5	Integrated surveillance framework for AMR for both human and animal health is established	CDC- Technical assistance to MOH; USAID - Technical assistance to MALF and MOH			
5	Enhanced laboratory capacity for AMR surveillance in human and animal health				
5	Communication strategy for IPC and AMR/HAI is fully implemented	CDC- Technical assistance to MOH			

Zoonotic Diseases				
GHSA Goal		GHSA Objective		GHSA 5 year target
Prevent Avoidable Epidemics		Preventing the emergence and spread of antimicrobial drug resistant organisms and emerging zoonotic diseases and strengthening international regulatory frameworks governing food safety.		Adopted measured behaviors, policies and/or practices that minimize the spillover of zoonotic diseases from lower animals into human populations.
	Key Milestones	US Government Activity	Host Government Activity	Other Activity (e.g. NGO, other governments, multilaterals)
1	Multi-sectoral coordination mechanism is strengthened for zoonotic disease prevention in coordination with the Kenya	DoD CTR/CBEP	Develop & implement with USG interagency workgroup	To be determined
1	Enhanced IDSR linkage for surveillance and response to zoonotic events	CDC- USAID Technical assistance to MOH, MALF, KWS, DOD		
1	Begin development of map of high risk human/animal interfaces	CDC- Technical assistance to MOH; USAID technical assistance to MOH, MALF, DVS		
1	Determine burden and risk of priority zoonotic diseases	CDC- Technical assistance to MOH; USAID - Technical assistance to MALF		
2	Implement research projects on priority diseases that impact human health	DoD CTR/CBEP		
2	Develop contingency plans for priority zoonotic diseases	CDC- Technical assistance to MOH; USAID technical assistance to MOH, MALF, DVS		
2	Initiate priority livestock policy reforms	USAID technical assistance to MALF, DVS		
2	Monitor the burden of zoonotic diseases/pathogens through ongoing sentinel and population-based surveillance	CDC- Technical assistance to MOH; USAID technical assistance to MOH, MALF, DVS, KWS		
2	Establish VIL based surveillance for sudden deaths and abortions and hemorrhagic disease	CDC- Technical assistance to MOH		
2	Develop coordination and communication One Health structures /guidelines for county levels	CDC- Technical assistance to MOH; USAID technical assistance to MOH, MALF, DVS, KWS		
3	Mapping of high risk/animal interfaces completed	USAID; DoD CTR/CBEP		
3	Develop a protocol of data sharing between One Health human and animal sectors	CDC- Technical assistance to MOH; USAID		
3	Package of OH "risk reduction" measures targeting high risk practices and behaviors that enable spillover validated and	technical assistance to MOH, MALF, DVS, KWS		
3	Establish in-country diagnostic capacity for the five priority zoonotic diseases	CDC- Technical assistance to MOH		
4	Rollout of OH curriculum across participating schools ongoing	CDC- Technical assistance to MOH; USAID technical assistance to MOH, MALF, DVS, KWS		
4	Facilitate the acquisition, field trials and registration of available vaccines for priority zoonotic diseases	CDC- Technical assistance to MOH		
5	Implement existing priority disease prevention/control strategies(rabies, RVF and brucellosis)	CDC- Technical assistance to MOH; USAID		
5	Establish 20 new county One Health Units	technical assistance to MOH, MALF, DVS, KWS		
5	OH workforce trained in accordance with national zoonotic disease prevention needs and graduated			
5	Adopt measured behaviors, policies and/or practices that minimize the spillover of zoonotic diseases from lower animals into human populations.			

Biosecurity and Biosafety				
GHSA Goal		GHSA Objective	GHSA 5 year target	
Prevent Avoidable Epidemics		Promoting national biosafety and biosecurity systems	A whole-of-government national biosafety and biosecurity system is in place, ensuring that especially dangerous pathogens are identified, held, secured and monitored in a minimal number of facilities according to best practices; biological risk management training and educational outreach are conducted to promote a shared culture of responsibility, reduce dual use risks, mitigate biological proliferation and deliberate use threats, and ensure safe transfer of biological agents; and country-specific biosafety and biosecurity legislation, laboratory licensing, and pathogen control measures are in place as appropriate.	
	Key Milestones	US Government Activity	Host Government Activity	Other Activity (e.g. NGO, other governments, multilaterals)
1	Strengthen national laboratory biosafety and biosecurity system (human and animal sectors)	DoD CTR/CBEP	Develop & implement with USG interagency workgroup	To be determined
1	Develop a bio risk management system process, including new tools	CDC- Technical assistance to MOH; USAID technical assistance to MALF		
1	Align BS&S curriculum with OH teaching core competencies			
2	Develop appropriate standards, guidance and norms relating to biorisk management			
2	Established biosafety/biosecurity course at University of Nairobi	USAID; DoD CTR/CBEP		
2	Prepare a comprehensive inventory and reporting of laboratories (including those that store pathogens) engaged in microbiological activities (human, animal, environment laboratories). Inventory will be incorporated to Master Facilities	CDC- Technical assistance to MOH; USAID technical assistance to MALF		
2	Implement good waste management practices in select labs	CDC- Technical assistance to MOH		
3	Modernize laboratory facilities to meet international standards for function and security aligned with OIE and WHO	DoD CTR/CBEP (other source funding) Completion of renovations to multiple KEMRI labs.		
3	Update records of all facilities engaged in microbiological activities	CDC- Technical assistance to MOH; USAID		
3	Evaluate the inventory control reporting system for efficiency and improvement	CDC- Technical assistance to MOH		
3	Biorisk management training implemented in 30% of relevant labs			
4	Develop biosafety and biosecurity curriculum for health training institutions			
4	Disseminate biosafety guidelines to relevant institutions	CDC- Technical assistance to MOH; USAID technical assistance to MALF		
4	Implement biorisk management SOPs			
4	Provide a modern, secure zoonotic lab and office complex	DoD CTR/CBEP		
5	Implement the updated guidelines in human and animal labs	CDC- Technical assistance to MOH; USAID technical assistance to MALF		
5	Good waste management practices in 100% of targeted labs	CDC- Technical assistance to MOH		
5	University pre-service laboratory training implemented in accordance with BS&S needs	USAID technical assistance		
5	Biorisk management training implemented in 90% of relevant labs	CDC- Technical assistance to MOH		

Immunization				
GHSA Goal		GHSA Objective		GHSA 5 year target
Prevent Avoidable Epidemics		Reducing the number and magnitude of infectious disease outbreaks.		A functioning national vaccine delivery system – with nationwide reach, effective distributions, access for marginalized populations, adequate cold chain, and ongoing quality control – that is able to respond to new disease threats.
	Key Milestones	US Government Activity	Host Government Activity	Other Activity (e.g. NGO, other governments, multilaterals)
Year 1	Complete Measles Control Strategic Plan 2015-2020	CDC- Technical assistance to MOH USAID- Technical assistance (not GHSA funded)	Develop & implement with USG interagency workgroup	GAVI
Year 1	Assess feasibility of an electronic immunization registry			
Year 1	Conduct assessment Implementation of joint vaccinations			
Year 1	Procuring antigen specific specimen carriers			
Year 1	Conduct national immunization review			
Year 2	Develop an animal vaccination plan for zoonotic diseases			
Year 2	Develop and implement a AEFI registry			
Year 2	Acquire rabies vaccine and post exposure prop			
Year 3	Increase vaccination coverage of animals of critical zoonosis in high risk areas			
Year 3	Train country health teams on VPD surveillance and outbreak response			
Year 4-5	Continue to increase vaccination coverage of animals of critical zoonosis in high risk areas			
Year 5	Meet immunization coverage targets			

DETECT

Laboratory Systems				
GHSA Goal		GHSA Objective		GHSA 5-Year Target
Detect Threats Early		Developing and deploying novel diagnostics and strengthen laboratory systems.		Real-time biosurveillance with a national laboratory system and effective modern point-of-care and laboratory-based diagnostics.
	Key Milestones	US Government Activity	Host Government Activity	Other Activity (e.g. NGO, other governments, multilaterals)
Year 1	Acquire technology and improve capacities of laboratories to conduct surveillance of priority diseases in humans and animals	CDC- Technical assistance to MOH; USAID technical assistance; DoD CTR/CBEP	Develop & implement with USG interagency workgroup	To be determined
Year 1	Strengthen national public health Quality Management System (QMS)	CDC- Technical assistance to MOH; USAID technical assistance to MALF		
Year 1	Identify public-private partnerships to support a comprehensive specimen transport system	CDC- Technical assistance to MOH		
Year 2	Facilities in high disease outbreak probability areas provided with sample collection supplies, sample packaging materials, personal protection equipment			
Year 2	Conduct lab training of trainers (TOTs) for counties			
Year 2	Roll out integrated National EQA program			
Year 3	Establish agreement between Kenya ministries of Health (MOH) and Agriculture with the identified international reference labs	CDC- Technical assistance to MOH; USAID technical assistance to MALF		
Year 3	Implement and monitor field-test point-of-collection diagnostics appropriate for screening outbreak specimens	CDC- Technical assistance to MOH		
Year 3	Enroll ten labs in the SLIPTA program			
Year 3	Sub-county level lab staff enrolled in basic microbiology training			
Year 4	Linkage established between MOH/ MALF with international labs	CDC- Technical assistance to MOH; USAID technical assistance to MALF and MOH		
Year 5	County facilities able to improve capacity to meet diagnostic and confirmatory laboratory requirements for priority diseases	CDC- Technical assistance to MOH		
Year 5	Increase in number of public health labs able to conduct drug resistance testing		World Bank	
Year 5	Ability of laboratories to respond to outbreaks and other public health threats timely	CDC- Technical assistance to MOH; USAID technical assistance to MALF and MOH		
Year 5	Timely delivery of specimens to referral hubs and improved result reporting		To be determined	

Year 5	Ability for sub-counties to provide preliminary confirmation of outbreaks
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| TO BE DETERMINED |

Year 5	Epi and lab data linked at IDSR and animal surveillance reporting system		
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Surveillance				
GHSA Goal		GHSA Objective		GHSA 5-Year Target
Detect Threats Early		Launching, strengthening and linking global networks for real-time biosurveillance.		Strengthened foundational indicator- and event-based surveillance systems that are able to detect events of significance for public health, animal health and health security; improved communication and collaboration across sectors and between sub-national, national and international levels of authority regarding surveillance of events of public health significance; improved country and regional capacity to analyze and link data from and between strengthened, real-time surveillance systems, including interoperable, interconnected electronic reporting systems. This can include epidemiologic, clinical, laboratory, environmental testing, product safety and quality, and bioinformatics data; and advancement in fulfilling the core capacity requirements for surveillance in accordance with the IHR and the OIE standards.
	Key Milestones	US Government Activity	Host Government Activity	Other Activity (e.g. NGO, other governments, multilaterals)
Year 1-5	Annually evaluate the early warning system component of the indicator based surveillance	CDC- Technical assistance to MOH; USAID	Develop & implement with USG interagency workgroup	To be determined
1	Strengthen foundational indicator and event-based surveillance systems	Technical assistance		
1	Strengthen capacities and gaps in current animal health surveillance systems			
1	Build capacity for Port Health Services at Point of Entries (POE)			
1	Educate POE health workers and stakeholder on border health security issues			
1	Review existing reporting tools in DHIS, IDSR and OIE systems	CDC- Technical assistance to MOH; USAID		
2	OH national surveillance strategy is agreed upon by all stakeholders	technical assistance to MALF		
2	Train 10 counties on community-based surveillance	CDC- Technical assistance to MOH		
2	Train counties on MSoS reporting of all health events			
2	Assess utilization of IHR decision making instrument and document findings at national level			
2	Assess status of event based surveillance in the country	CDC- Technical assistance to MOH; USAID		
2	Evaluate existing surveillance at POEs and Identify and list conditions and PHEIC for surveillance at POEs	technical assistance to MALF, County DVS		
2	Train 20 counties on community-based surveillance	CDC- Technical assistance to MOH		
3	Train 100% of health officers at POEs on surveillance	CDC- Technical assistance to MOH; USAID		
4	Train 30 counties on community-based surveillance	technical assistance to MALF		
4	Develop technical guidelines on non- disease PHEICs	CDC- Technical assistance to MOH; USAID		
5	Train 47 counties on community-based surveillance	technical assistance		
5	Strengthened surveillance systems to support IDSR and IHR			
5	Established system of tracking/monitoring PHEICs globally and timely information sharing			

Reporting				
GHSA Goal		GHSA Objective		GHSA 5-Year Target
Detect Threats Early		Strengthening the global norm of rapid, transparent reporting and sample sharing in the event of health emergencies of international concern.		Timely and accurate disease reporting according to WHO, OIE, and FAO requirements.
	Key Milestones	US Government Activity	Host Government Activity	Other Activity (e.g. NGO, other governments, multilaterals)
1	National framework for international reporting of animal diseases, including zoonotic disease	USAID technical assistance to MALF	Develop & implement with USG interagency workgroup	To be determined
1	National framework for sharing biological and behavioral surveillance data with in-country stakeholders across all sectors in place	USAID technical assistance to MALF and MOH		
2	National reporting of zoonotic disease events compliant with OIE and WHO standards ongoing	USAID technical assistance		
2	Evaluate electronic systems for bi-directional flow of data from the national and county levels			
3	Expansion of information in flow from initial 5 to 10 counties			
4	Evaluation and enhancement of electronic system			

Workforce Development

GHS A Goal		GHS A Objective		GHS A 5-Year Target	
Detect Threats Early		Training and deploying an effective biosurveillance workforce.		A workforce including physicians, veterinarians, biostatisticians, laboratory scientists, and at least 1 trained field epidemiologist per 200,000 population, who can systematically cooperate to meet relevant IHR and Performance of Veterinary Services (PVS) core competencies.	
	Key Milestones	US Government Activity	Host Government Activity	Other Activity (e.g. NGO, other governments, multilaterals)	
1	Progress towards targets in the workforce development plan.	DoD CTR/CBEP, DoD USAMRU-K	Develop & implement with USG interagency workgroup	To be determined	
1	Develop IMPACT curriculum	CDC- Technical assistance to MOH			
1	Review and launch FELTP Strategic Plan 2014 – 2019				
1	Conduct Public Health training needs assessment for the County and National level health personnel	CDC- Technical assistance to MOH; USAID			
1	Identify gaps and develop strategic plan across key stakeholders for the Kenya health workforce to meet IHR and PVS	technical assistance to University of Nairobi, Moi University, MOH, MALF			
1	Develop training curricula for Pre service training for medical and veterinary students				
2	Facilitate joint training, investigations and response activities with neighboring countries				
2	Implement the Basic, intermediate and advance level epidemiology through the FELTP and university training platforms	CDC- Technical assistance to MOH			
2	Recruit up to 10 IMPACT fellows				
2	In-service training for select cadre of animal and human health professional in requisite One Health Skills	USAID technical assistance			
2	Train relevant personnel in Field Epidemiology via the FELTP program.	DoD CTR/CBEP			
3	Integrate IHR collaboration in East African Community draft health protocol	CDC- Technical assistance to MOH; USAID technical assistance to EAC			
4	Evaluation and strengthening of workforce training program	CDC- Technical assistance to MOH; USAID			
5	One Health workforce has been trained in accordance with national strategic plan	technical assistance			

RESPOND
Emergency Management

GHS A Goal		GHS A Objective		GHS A 5-Year Target	
Respond Rapidly and Effectively		Developing an interconnected global network of EOCs and multi-sectoral response to biological incidents.		Every country will have a public health Emergency Operations Center (EOC) functioning according to minimum common standards; maintaining trained, functioning, multi-sectoral rapid response teams (RRTs) and "real-time" biosurveillance laboratory networks and information systems; and trained EOC staff capable of activating a coordinated emergency response within 120 minutes of the identification of a public health emergency.	
	Key Milestones	US Government Activity	Host Government Activity	Other Activity (e.g. NGO, other governments, multilaterals)	
1	Develop a draft policy for emergency management in the health sector	CDC- Technical assistance to MOH	Develop & implement with USG interagency workgroup	To be determined	
1	Develop national framework for Emergency Operations Centre				
1	Conduct risk assessments to identify high risk areas for disease outbreaks and other public health events				
1	Response to zoonotic disease outbreaks strengthened				
1	Review national regulations and laws enabling public health emergency management and define the mission of public health EOC	CDC- Technical assistance to MOH; USAID technical assistance			
1	Conduct one emergency preparedness tabletop or other exercise				
1	OH "preparedness" framework for a multi-sectoral rapid response capabilities in EOCs developed				
2	Stand up national EOC	CDC- Technical assistance to MOH; USAID			
	Conduct at least one emergency preparedness tabletop or other exercise	technical assistance			
2	OH "preparedness" framework for a multi-sectoral rapid response to reports of disease "outbreaks" implemented				
3	Mapping of resources for emergency preparedness and response				
3	Conduct at least one emergency preparedness tabletop or other exercise	CDC- Technical assistance to MOH; USAID			
3	Sustained OH "preparedness" for multi-sectoral rapid response to reports of disease "outbreaks"	technical assistance			

3	Finalize contingency plans(pre-outbreak and outbreak control plan) for priority zoonotic diseases
4	Trained rapid Response teams at all levels on IDSR, IHR, Rapid Response to PHEICS

4	A plan for management and distribution of national stockpiles developed	CDC- Technical assistance to MOH; USAID technical assistance		
4	Sustained OH "preparedness" for multi-sectoral rapid response to reports of disease "outbreaks"			
5	National stockpile for responding to PHEICS established	CDC- Technical assistance to MOH; USAID technical assistance		
5	National capacity for OH "preparedness" in place			

Linking PH and Law Enforcement

GHSA Goal		GHSA Objective	GHSA 5-Year Target		
Respond Rapidly and Effectively		Developing an interconnected global network of EOCs and multi-sectoral response to biological incidents: Promote establishment of public health EM programs, including EOCs; trained, functioning, multi-sectoral rapid response teams, with access to a real-time information system; and capacity to attribute the source of an outbreak.	In the event of a biological event of suspected or confirmed deliberate origin, a country will be able to conduct a rapid, multi-sectoral response, including the capacity to link public health and law enforcement, and to provide and/or request effective and timely international assistance, including to investigate alleged use events.		
	Key Milestones	US Government Activity	Host Government Activity	Other Activity (e.g. NGO, other governments, multilaterals)	
1	Identify country-specific public health, law enforcement, and other official entity roles, responsibilities, statutes, authorities, standing agreements, standard operating procedures, capacities, and expertise for the identification and response to biological threats	CDC- Technical assistance to MOH	Develop & implement with USG interagency workgroup	To be determined	
1	Conduct a Joint Investigations Workshop for public health, law enforcement, and other sectors (agriculture, veterinary, customs, and ports-of-entry) to address multi-sectoral response				
2	Linkages between law enforcement and public health determined				
5	Kenya is able to conduct a rapid and multi-sectoral response to emergencies				

MCM and Personnel Deployment

GHSA Goal		GHSA Objective	GHSA 5-Year Target	GHSA 5-Year Target	
Respond Rapidly and Effectively		Improving global access to medical and non-medical countermeasures during health emergencies.	A national framework for transferring (sending and receiving) medical countermeasures and public health and medical personnel among international partners during public health emergencies.		
	Key Milestones	US Government Activity	Host Government Activity	Other Activity (e.g. NGO, other governments, multilaterals)	
1	Identify staff who will form the core of an emergency medical logistics organization and requiring MCM mobilization.	CDC- Technical assistance to MOH; USAID technical assistance	Develop & implement with USG interagency workgroup	To be determined	
1	Evaluate Country logistics and operational plans to store and distribute MCMs				
1	Determine Country Regulations and Requirements for Importation of MCM under emergency use authorization				
2	National preparedness plans for use of non-medical counter-measures involving zoonotic disease (available through regional stockpiles) developed				
3	Capacities and skills required for implementation of National preparedness plans for use of non-medical counter-measures involving zoonotic disease (available through regional stockpiles) strengthened				
4	Capacities and skills required for implementation of National preparedness plans for use of non-medical counter-measures involving zoonotic disease (available through regional stockpiles) sustained				
5	Capacities and skills required for implementation of National preparedness plans for use of non-medical counter-measures involving zoonotic disease (available through regional stockpiles) met				
5	A national framework for transferring medical and non-medical countermeasures and public health, and medical personnel among international partners during public health emergencies implemented	CDC- Technical assistance to MOH; USAID technical assistance to MALF and other stakeholders			