Urban Resilience Sector Guidance:
Health

Pandemic outbreaks, natural disasters, rising non-communicable diseases, and a host of other interrelated challenges strain the ability of cities to provide quality health services to urban dwellers. USAID's Vision for Health Systems Strengthening 2030 articulates this challenge, and related opportunities, through the lens of "resilience."

To be resilient, health systems must be flexible enough to adjust resources, policy, and focus in response to constantly emerging challenges. By referring to both shocks and stressors, USAID recognizes the need to build resilience to acute, time-bound events such as disease outbreaks, as well as to longer-term dynamics such as protracted population displacements, weak government authority or legitimacy, population pressure, social exclusion, and climate variability.

-USAID Vision for Health Systems Strengthening 2030

This document is a companion to the USAID Urban Resilience Technical Guidance. It aims to support USAID staff and implementing partners to integrate activities that strengthen urban resilience into health programming, and to layer, sequence, and integrate health and health systems functions with other domains of urban resilience across sectors. This guidance includes:

- an overview of challenges and opportunities when working on health and urban resilience;
- descriptions of USAID's urban resilience building blocks;
- key questions to identify and assess opportunities;
- strategies to strengthen urban resilience and examples;
- Monitoring, Evaluation, Research and Learning (MERL) approaches and illustrative performance indicators;
- key resources for additional support; and,
- a toolkit to identify and assess opportunities.

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Urban resilience refers to the ability of urban systems to mitigate, adapt to, and recover from shocks and stressors in a manner that reduces chronic vulnerability while positively transforming towards sustainable, equitable, and inclusive development.

Urban systems include people, communities, infrastructure, the natural environment, and cultures, norms, and policies in cities and towns.

Shocks and stresses include those from climate change as well as other sources such as rapid urbanization or conflict.

Health resilience refers to the ability of people, households, communities, systems, and countries to mitigate, adapt to, and recover from shocks and stresses, in a manner that reduces acute and chronic vulnerabilities and facilitates equitable health outcomes.

CHALLENGES AND OPPORTUNITIES

Urban areas face numerous shocks (acute natural or human-made events) and stresses (chronic, slow to emerge or cyclical challenges) that impact health at both the individual and population level. These challenges—such as climate change, conflict, and pandemic outbreaks—are dynamic, often affect health in multiple ways, and may exacerbate existing inequities (e.g., gender, socio-economic, racial, and ethnic).[1] For instance, climate change can create new breeding grounds for infectious diseases like dengue or malaria,[2] contribute to sea level rise, and increase the risk and severity of extreme floods, droughts, and heat waves – all have health consequences[3] and may more severely impact marginalized groups. COVID-19 similarly underscored the multifaceted impacts of health shocks on cities and their residents. These included overwhelmed health systems, reduction in routine childhood immunization and tuberculosis (TB) case identification, and increased risks for gender-based violence (GBV). Rapid urbanization and increased population density in most lower and middle income countries over the coming decades, notably across sub-Saharan Africa, underscores the need to support stronger,more resilient cities as enabling environments for improved health outcomes.

While many shocks and stresses also affect rural areas, urban environments face unique challenges as summarized below:

- Communicable and waterborne diseases can spread more rapidly in urban areas given their population density, and the impacts of hazards such as severe flooding and polluted air from industrial activities have the potential to affect a larger number of people, particularly those already marginalized (e.g., girls and women, gender-diverse individuals, ethnic minorities, and those living in poverty).
- Significant intra-urban inequities, reflected in the large number of urban residents living in informal settlements with poor access to quality services, contribute to poor health outcomes even where overall averages may appear strong.[4]
- Urban health systems struggle to coordinate across public, private, and informal networks of service providers. Informal settlements and low income urban neighborhoods in particular face low access to formal health services, and low quality or unqualified health services from private sector service providers (clinics and pharmacies).

While population and infrastructure density presents and compounds certain challenges, urbanization also provides opportunities. Examples include:

- Higher utilization of digital technology and services, including digital financial services. Research has shown that access to mobile money, for example, increases household resilience to shocks[5].

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[1] The 2022 World Health Assembly issued a resolution calling for more action and resources to build the resilience of urban areas to health emergencies. https://apps.who.int/gb/ebwha/pdf_files/WHA75/A75_ACONF2-en.pdf

[2] https://www.who.int/globalchange/resources/country-profiles/PHE-country-profile-Indonesia.pdf

[3] https://www.sciencedirect.com/science/article/pii/S2212095520301176

[4] https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-019-6674-8

[5] Risk Sharing and Transactions Costs: Evidence from Kenya's Mobile Money Revolution - American Economic Association (aeaweb.org)

- Coordinated efforts to improve access to basic services, including by adopting a systems approach[6] and addressing social determinants of health (e.g., gender, racial, socioeconomic and other inequalities), can help urban health systems better reach marginalized individuals. This coordination can take the form of greater integration between different municipal government sectors (e.g. health, education, and infrastructure) or between municipal governments and civil society stakeholders.
- Cities often enable women, particularly those with higher levels of education, to access jobs that provide more autonomy and income, leading to more balanced household power dynamics.[7] This rebalancing may in turn reduce gender-related barriers to care seeking and increase household investment in health services.[8]
- Cities offer opportunities to build resilience in the health system by diversifying the availability of health service providers[9], attracting a wider range of expertise and knowledge exchange and providing opportunities for task shifting and task sharing.
- Cities are the locus of the growing youth populations, with up to 70% of population in sub-Saharan Africa and Asia under the age of 30[10]. This presents an opportunity as youth bring innovative thinking, tenacity and tech savvy to tackle complex health problems.

While there are opportunities to strengthen urban resilience through health sector programming, many of the factors that contribute to the health of urban populations lie outside the health sector. This includes, for instance, the quality and comprehensiveness of other basic services (e.g., water, solid waste management and drainage, and transportation), legal and social protection services (e.g., to address GBV), environmental factors (e.g., air pollution) and social infrastructure (e.g., housing, employment, and education).[11] The cross-sector collaboration and linkages between systems described in this guidance document are thus key to building resilience and improving the health of urban residents.

FIVE BUILDING BLOCKS TO URBAN RESILIENCE

USAID's **Urban Resilience Technical Guidance** identifies five building blocks to improve urban resilience. These approaches, combined with attention to cross-cutting issues (e.g., gender, socio-economic inequalities) can be applied in a targeted way to health programming, as well as across sectors and programmatic focus areas to increase the overall resilience of urban systems to shocks and stresses in support of health outcomes:

1. **Inclusive Planning** - Deploy inclusive, evidence-based planning that accounts for future risk
2. **Governance** - Strengthen urban governance

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[6] A systems approach uses analytic tools and methodologies that seek to understand how systems function, evolve, behave, and interact with their environment and influence each other. Read more about how USAID supports sustainable development via deeper and effective collaboration with local partners through local systems. https://www.usaid.gov/policy/local-systems-framework ; https://www.usaid.gov/local-capacity-strengthening-policy

[7] https://www.brookings.edu/wp-content/uploads/2016/07/female-labor-force-participation.pdf

[8] https://www.oecd.org/dac/gender-development/45704694.pdf

[9] Although greater availability of providers (including specialists) in cities does not always translate to better service access, particularly for marginalized populations including the urban poor.

[10] https://www.un.org/ohrlls/news/young-people%E2%80%99s-potential-key-africa%E2%80%99s-sustainable-development

[11] https://www.adb.org/sites/default/files/publication/149164/urban-climate-change-resilience-synopsis.pdf; https://www.ipcc.ch/site/assets/uploads/2018/02/WGIIAR5-Chap8_FINAL.pdf

3. **Finance** - Strengthen financial management capacity and unlock financial capital
4. **Social Capital** - Build and strengthen networks of relationships and bonds within and across communities
5. **Natural Capital** - Restore and protect the natural systems that can contribute to resilience

Application of these building blocks to the health sector should be inclusive of the actors (people and institutions) and address the factors (infrastructure, finances, policies and environmental conditions) at the heart of the resilience of urban systems. In other words, the approach should be tailored to the specific local context to respond to specific needs and conditions.

KEY QUESTIONS TO IDENTIFY AND ASSESS OPPORTUNITIES

"The health of a population is a critical dimension of the resilience of a society."[12] In the context of urban environments and growing urbanization, the onset of hazards — whether natural or human-made, immediate or protracted — can significantly impact the health outcomes of urban residents. USAID, partners, and country practitioners should intentionally consider how shocks and stresses could undermine efforts to equitably improve population health and health system performance in urban spaces. They can then identify strategic opportunities to improve systems resilience and contribute to achieving sustainable urban health outcomes.

Annex I is a toolkit of illustrative guiding questions to understand the urban context and identify opportunities in a given urban system to strengthen health resilience. The questions are grouped by four components: (1) underlying risks to urban health outcomes, including social determinants of health, and how well existing assets (e.g., institutions and resources) address these risks; (2) key policies, processes, actors (individuals, organizations, institutions and networks), and relationships underlying urban systems; (3) levers of change and potential integration opportunities; and (4) health-seeking behaviors that facilitate use of health-related services.

Where relevant, these questions can be integrated into existing measurement, assessment, and learning tools and processes[13] for health, and into USAID specific documents (e.g., annual Operating Plans) to mainstream resilience and improve programming.

APPROACHES TO STRENGTHEN HEALTH AND URBAN RESILIENCE

Below are five strategies that can be used to strengthen urban resilience through USAID health programming, followed by illustrative activities. These strategies, combined with addressing cross-cutting factors (e.g., gender, ethnic and socio-economic status), can help inform activity design and the implementation of health approaches with the goal of urban resilience. These approaches correspond with the five urban resilience building blocks described above: Inclusive Planning, Governance, Finance, Social Capital, and Natural Capital. They also correspond to the "absorptive, adaptive, and transformative" capacities described by USAID's Vision for Health System Strengthening 2030 — absorbing shocks and stresses through mitigating responses, adapting to better respond to changing contexts, and transforming to address structural impediments to health system performance.

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[12] Eckersley, R., 2010. Population health– a forgotten dimension of social resilience. In: R. Eckersley and S. Cork, eds. Resilience and Transformation: preparing Australia for uncertain futures (1-216, 115). Collingwood: Csiro Publishing.

[13] Including Mission Operational Policies and Health Implementation Plans

1. **Inclusive Planning:**
    - *Identify and prioritize risks to public health.* Successfully building an equitable and resilient system requires identifying potential risks, with a focus on specific risks to marginalized or vulnerable groups; assessing and prioritizing those risks based on established criteria (e.g., severity, potential impact of interventions); working with local partners to identify overlapping risk priorities; and making investments and policy interventions that can help prepare for and mitigate those risks. Preparedness is a key determinant of resilience, but not every scenario can be fully addressed with the limited funds available and given institutional or political obstacles. Prioritization is critical, as are efforts to coordinate actions with other sectors and priorities in order to amplify impact. Importantly, risks come from a variety of places within and beyond the healthcare sector and so a broad, creative view is beneficial. Additionally, risks are not static. Risk assessments and risk mitigation action plans should be regularly updated and adapted by third parties such as community groups and international experts as needs shift.
    - Create inclusive and transparent processes. Engage stakeholders across the health system and in health-affecting sectors to help identify and manage risks.[14] Constructively engaging a broad range of stakeholders who are invested over the long term, and giving each group an opportunity to participate and contribute, can enhance overall system resilience. For instance, representative civil society groups, especially those that uplift the voices of youth, marginalized groups, and those in vulnerable situations can play an important advocacy role— identifying gaps and holding officials accountable for quality and timely responses in the health care sector. Including stakeholders in a structured and formalized way and accounting for their interest, is important for effective change management and for sustainable systems change.
    - *Intentionally identify areas to strengthen programming linkages to address determinants of health.* It is well understood that health is influenced by a number of interrelated factors, including social determinants of health such as gender, income inequality, housing, and nutrition and environmental determinants such as air and water quality and exposure to toxic chemicals. Economically and socially disadvantaged individuals are likely to have limited access to resources needed for better health. Addressing "upstream" determinants of health, particularly for marginalized populations, will improve "downstream" health outcomes.
2. **Governance:** *Apply a systems and political economy approach to understand the local system (e.g., key actors, policies, resources, structures/processes, etc.) in order to identify opportunities for policy change and areas of collective action across traditionally siloed sectors.*[15] For instance, poor housing, unsafe transportation options, inadequate flood control measures, and other aspects of a built environment can influence the prevalence of threats like asthma, mental health, injuries from vehicular accidents, GBV risk, and cardiovascular diseases. The concentration and heavy use of physical and social infrastructure in urban areas can heighten the risk and impact of such complex, cross-sectoral causal pathways. Conducting political economy analyses and mapping connections is an important step in identifying upstream investments in partnership with municipal governments (including opportunities for domestic revenue generation) that can help reduce stress on health systems and therefore enhance overall health resilience and generate improved health outcomes.[16]

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[14] As recommended by the WHO, this effort can include building "institutionalized mechanisms for whole-of-society engagement." https://www.who.int/publications/i/item/WHO-UHL-PHC-SP-2021.01

[15] https://usaidlearninglab.org/collective-action-usaid-programming

[16] USAID's Blueprint for Global Health Resilience (pp.8-12) offers an excellent summary of how health intersects with several other sectors.

3. **Finance:**
    - *Pool or braid resources from different sectors or sources.* Combining health resources with non-global health program (GHP) funding expands the scope of activities to influence health. USAID earmarks can be met within a broader set of activities that strengthen the health system and connect to other areas of urban service delivery, capacity, and supply chain. It is often possible to pool or braid resources from different sectors or sources in order to fund a specific resilience initiative; and each funding stream can serve a different purpose or address a different programmatic element.

A review found several examples of innovative USAID health programs that have integrated resilience programming and measurement approaches into their activities, including the Integrated Health Systems Strengthening IDIQ (IHSS IDIQ); Momentum Integrated Health Resilience (MIHR); Local Health Systems Sustainability Project (LHSS); Country Health Information Systems and Data Use (CHISU); Breakthrough Action; and Health Systems Strengthening Accelerator (HSSA). There are also examples of cross-sectoral programming that can absorb health funds and work towards integrated goals, e.g. the CATALYZE and Asia Resilient Cities activities.

In addition to mechanisms there are also opportunities within each Global Health Program funding element that can be directed towards urban resilience activities. These elements include: HIV/AIDS, Tuberculosis, Malaria, Pandemic and Other Emerging Threats, Other Public Health Threats, Maternal and Child Health, Family Planning and Reproductive Health, Water and Sanitation, and Nutrition (see Guidance on the Definition and Use of the Global Health Programs Account for more details). Partners may include traditional stakeholders such as national government health authorities and civil society organizations, and also municipal governments, and the private sector as applicable to the local context. Integration across portfolios and funding streams should also be considered. This includes exploring opportunities to utilize GHP funds in conjunction with Development Assistance (DA) and Economic Support Funds (ESF).

- Leverage USAID resources to enable municipalities and health systems to access private finance in order to achieve health and urban resilience objectives. The scope and scale of investment needs in cities for the health sector and for health-affecting services is so massive that it is important that USAID and other development partners leverage additional, private dollars, including through catalytic investments. There is significant cross-Agency expertise on private sector engagement (PSE) and the PSE Hub houses technical expertise and resources. There are a variety of different forms of PSE depending on the local landscape and public health needs and assets.

For instance, in areas where significant funding gaps prevent the supply of healthcare and other services from meeting significant, rising demand for said services, government partners and USAID missions may wish to explore public-private partnerships (PPP) for urban health resilience. Urban areas - due to level of demand, scale of investments, relative strength of provider networks and investment ecosystem - may be particularly well suited for PPPs. However, PPPs are no silver bullet and their success depends on significant local capacities and institutions.

Blended financing also offers an opportunity to not only unlock additional private or philanthropic funding but to tap funding streams that can do different things, enabling programming to be more flexible, innovative, and comprehensive – all important qualities for projects that seek to build resilience. One example of a blended financing facility is the USAID-funded Samridh facility to support the COVID-19 response in India. Another example is the Utkrisht development impact bond for maternal health in India which enabled catalytic USAID funding to bring in more resources and engage with private health facilities. The U.S. International Development Finance Corporation (DFC) has helped mobilize private investment in healthcare and health-affecting sectors. Examples include, an equity investment in an impact fund in Nepal that invests in healthcare and other sectors, and a loan guarantee to improve the reach of home healthcare services in India. The Catalytic Fund of the Community Health Roadmap – a collaboration between country governments and traditional donors, private funders, and global health leaders including USAID, the World

Bank, the WHO, the Bill and Melinda Gates Foundation, and others – provides "modest but quick injections of flexible funding to Ministries of Health to directly support community health projects that would either unlock more funding, address bottlenecks, introduce innovation, or have some other catalytic effect."

4. **Social Capital:** *Invest in the social connections that improve local capacity to respond to shocks and stresses.* In response to prioritized risks in an urban area, USAID can support efforts that build community social connectedness and response capacity to prepare for and respond to sudden shocks (like a flood) and longer-term stresses (like worsening extreme heat and air pollution). Social capital includes improving social connectedness through adaptive and transformative policy interventions, e.g. a community civil society organization's capacity to deliver services and coordinate with municipal, provincial/state, or national government entities; community based emergency response capacities and associated community based institutions; and operational norms through the urban health system that facilitate community and private sector engagement. Community health workers can also support health outcomes by connecting fellow community members with municipal services, facilitating community dialogues around health challenges, and advocating for health related interventions related to air quality, water and sanitation access, and the built environment.
5. **Natural Capital:** *Invest in environmental assets.* Program design and implementation should deliberately seek to build or protect natural capital assets. These assets could include abundant shade to provide cooler temperatures and green spaces that can act to absorb rainfall and environmental pollutants. Urban forests, for example, can improve air quality, boost mental health, and lower heat related mortality. Green river corridors can act as a buffer to reduce risks from flooding and absorb excess nitrogen from urban environments that can lead to eutrophication of water bodies and toxic algal blooms. Like all infrastructure, green assets that facilitate good health must be maintained to maximize their efficacy. This includes sustainable operations and funding plans (with adequate local public financial management mechanisms) and regular reviews to test and, if necessary, upgrade assets. There are strong enough linkages between biodiverse green infrastructure within cities and health for one research team to suggest that funding for biodiverse urban spaces should be considered as an investment in public health.[17]

ILLUSTRATIVE ACTIVITIES

Based on the initial analysis and identification of urban resilience opportunities, specific activities can be identified and incorporated into the health sector or cross-sector programming to advance four strategies to build resilience. The following table presents an illustrative (non-comprehensive) set of activities USAID and its partners can take. Although the activities are framed broadly and with an emphasis towards efforts that have wider health systems and sustainability impact, they can be incorporated and tailored into any global health program with funding from any source (e.g., programs focused on Maternal Child Health & Nutrition (MCHN), Family Planning & Reproductive Health (FP/RH), TB, HIV, Infectious Disease / Global Health Security (ID/GHS), Malaria, Health Systems Strengthening (HSS) etc.). A number of the activities below are assessments - these can provide valuable insights, help identify gaps and opportunities for investment and action, and enable prioritization.

Table 1. Illustrative Approaches to Strengthen Urban Resilience through Health Investments

[17] Marselle, M.R., Lindley, S.J., Cook, P.A. *et al.* Biodiversity and Health in the Urban Environment. *Curr Envir Health Rpt* 8, 146–156 (2021). https://doi.org/10.1007/s40572-021-00313-9

Strategy	Example activities
1. Dynamically manage risks	• Conduct an inventory of risks to morbidity and mortality in the targeted urban area(s), building on existing assessments wherever possible (e.g., disaster risk assessments, gender analysis, inclusive development analysis, climate risk assessments, vulnerability assessments) as well as historic data, current conditions, and future projections. Target and tailor assessments to specific geographic areas and groups, including but not limited to those based on age, gender, ethnicity, or socio-economic status and extract lessons from recent system failures. • Identify risks and solutions to strengthen the health supply chain (e.g., urban distribution centers or platforms for quickly addressing supply gaps faced by nearby providers) and assess healthcare labor force needs. • Conduct a spatial analysis to understand the distribution of risks and assets across the urban area relative to the distribution of vulnerable populations. • Facilitate a public engagement process to identify causes of illness, intersections with other sectors and services, health needs and concerns, and other topics that impact a risk assessment. • Engage key local stakeholders including, importantly, local urban government officials and urban residents (including marginalized and vulnerable residents), in conversations to compare identified risks with local priorities. • Build the capacity of municipal public health officials to identify and manage risks by investing in an integrated disease surveillance system and creating an intra-urban data collection and management plan based on realistic assessment of conditions (e.g., reliable and timely data that can be collected through existing processes or collected with minimal additional effort). Data systems can be designed to monitor risks and impacts for sub-groups of the population, particularly marginalized and vulnerable groups. Data systems can also be integrated with routine health information systems to enable policymakers, program managers, and other relevant stakeholders to use the information in a timely and effective manner.
2. Engage broad group of health system stakeholders	• Map urban health actors,[18] noting patterns and types of relationship among actors, including patterns of inclusion/exclusion and where power/influence reside. By understanding who is a part of the system and who is not, we can identify which actors should be engaged with one another (and potentially with USAID) to galvanize change.

[18] Several mapping methodologies exist; first determine the goal of generating a stakeholder map first and then identify the right tool to use. One potential mapping approach to consider is a social network analysis (SNA). SNA aims to map, measure, and analyze social relationships between people, teams, and organizations. It explores patterns and types of relationship between actors, where these actors (which may be individuals, groups or organizations) are visually represented in a network map by structural nodes, and relationships (ties or links) and influence between these nodes.

	• Analyze system capacity constraints and risks (identified in the risk and asset assessment) against the strengths and capacities of system actors.[19] • Conduct a political economy analysis to identify potential levers and obstacles to change, and better understand social determinants of health. • Identify allies in planning, budgeting, and administrative centers of local and national bodies who share a systems perspective and can advance non-traditional partnerships to build resilience. For instance, local officials might work to align public infrastructure investments with health needs and population trends. • Strengthen engagement between community and local government to improve community health programs. • Develop a private sector engagement plan, including potential financing to leverage private investment, if assessment suggests a promising role for private providers to address service capacity constraints. • Identify existing cross-sector coordination efforts and document their effectiveness, transparency, and potential as models for replication or adaptation.
3. Invest in assets and capabilities that improve local capacity to respond to shocks and stresses	• Conduct inventory of existing resilience assets and capacities, map these against prioritized risks to identify gaps. Including communications and financial channels, such as usage of digital technology and digital financial services/mobile money. • Build a medium-term health resilience investment plan for USAID activities that outlines priority investments over the next 3-5 years, including both planned and funded investments and as-yet unfunded needs. Integrate this plan with sector strategies, spending plans, other donor activities, and government counterpart plans or strategies.. • Strengthen the ability of local public health officials to rapidly deploy public health messaging in the event of a shock (e.g., to reduce the spread of disease after a flood) by building messaging templates, training officials in effective public health communication techniques, and creating emergency messaging plans. • Build the emergency response capabilities of urban leaders by conducting tabletop exercises which are: "discussion-based sessions where team members meet in an informal, classroom setting to discuss their roles during an emergency and their responses to a particular emergency situation."[20] • Build physical assets (e.g., green infrastructure) to mitigate risks like flooding or extreme heat (e.g., shade trees, community forests and green belts, water retention ponds and restored wetlands, cooling stations, roof painting) and leverage private or civic partners in the design and maintenance of these assets, as applicable.

[19] Health Systems Assessment. https://www.hfgproject.org/the-health-system-assessment-approach-a-how-to-manual/

[20] U.S. Department of Homeland Security. (2021, October 12). Exercises | Ready.gov.

	• Build early warning systems and link with complementary municipal planning and budgeting mechanisms. Link early warning systems to health systems and ensure that key information and resources reach end users.
4. Intentionally strengthen programming linkages with other sectors	• Aligned with a Health in All Policies approach, undertake health assessments of non-health activities/sectors (e.g., housing) to better understand the impacts on and connections with health and maximize co-benefits. For instance, a health impact assessment of transportation patterns and investments could identify opportunities for active transportation investments that improve health and reduce congestion. • In collaboration with stakeholders in other sectors, identify non-health indicators that are meaningful and relevant to proposed health projects and enlist partners to track and report on these. • Involve local stakeholders from other sectors in health systems strengthening activities and strategic planning, and ensure health sector input in conversations in other sectors (e.g., informing governance or education initiatives).

Program Highlights: Health and Urban Resilience

While there are challenges to integrating resilience into health programming (such as fragmented information systems that inhibit integrated monitoring of activities and results and competing priorities for government partners), there are also successful examples. There are an increasing number of programs taking a cross-sectoral, integrated approach to health and resilience in urban areas. Here we highlight a few recent and ongoing USAID projects at the intersection of health and resilience.

The Building Healthy Cities program (2017-2022) applied a complex systems strengthening approach to build a new vision for healthy urban planning. It worked in four smart cities[21] – in India, Indonesia, Nepal, and Vietnam – as testing grounds for planning approaches. By mapping system stakeholders, policy levers and obstacles, and urban health needs and opportunities, the program focused on leveraging system interactions to mobilize consensus for action. In Indore, India, the program helped galvanize cross-sector action on clean air, health education, transportation, and food safety. In Makassar, Indonesia, the program helped facilitate demand for systems change across multiple key stakeholder bodies related to solid waste, flood and wastewater management, and child nutrition. In Da Nang, Vietnam, the program focused on solid waste management and food safety.

[21] The definition of a "smart city" varies by country context, but in general includes cross-sectoral coordination and use of technologies and data to manage municipal services and address long term goals.

One promising area for improving health resilience in collaboration with other sectors is air pollution. Launched in 2021, Clean Air Catalyst is a flagship program to combat air pollution by working with local communities to "better understand local pollution sources and identify, test, accelerate, and scale solutions for cleaner, healthier air." Launched in November 2021, Nepal's Air Pollution project utilizes health, Democracy, Human Rights, and Governance (DRG), and education funding and approaches. Similarly, the Cleaner Air and Better Health grant opportunity, recently launched by USAID's India Mission with environment funds, aims to "strengthen air pollution mitigation and exposure reduction systems in selected regions of India, contributing to a cleaner environment and healthier population." Collectively, these programs to address air pollution demonstrate the intersectoral nature of many resilience challenges and the strong appetite of partner governments and other development partners to address risks to urban health resilience through an integrated approach that goes beyond the limits of a narrowly defined health sector.

The Asia Resilient Cities activity, awarded in 2022, was designed as a cross-sectoral investment to build urban resilience in secondary cities. It is fully integrated across all sectors (health, education, democracy and governance, environmental resilience, and economic growth) and funding streams in order to maximize opportunities to address urban challenges. The activity will collaborate closely with municipal governments and other local stakeholders to identify needs and formulate sustainable approaches to build resilience into the future.

The Fast Track Cities activity (2018-2023) is implemented under the USAID-UNAIDS agreement and is funded with HIV Global Fund Technical Assistance resources, and includes interventions linked to several urban resilience building blocks (e.g., inclusive planning, governance, finance, and social capital). Its primary objective is to accelerate city responses towards attaining HIV prevention and treatment targets to end the AIDS epidemic by 2030.[22] The activity collaborates closely with city mayors and other local government officials, the Global Fund, and USAID Missions to identify programmatic priorities. Work plans and activities included under the activity are aligned to and support existing national, district and municipal HIV-related plans, and take into account programs supported by the United States President's Emergency Plan for AIDS Relief (PEPFAR), the Global Fund, and other partners and stakeholders. This activity is currently in its final year, and is focused on sustainability and transition of activities to city and national governments.

MONITORING, EVALUATION, AND LEARNING (MEL)

An Activity MEL Plan (AMELP) is one of the most important opportunities to ensure that resilience measurement is incorporated at the activity level and relevant indicators directly link to a result (outputs or outcomes) within the activity's logic model.[23] With resilience focused activities that share a common link - such as operating within the urban health sector - a portfolio approach can also be considered which would guide the measurement of their collective impact by building a MEL plan around the activities as a portfolio instead of a single activity. Such a portfolio approach can then be more effectively connected to high-level objectives set forth in a CDCS or other relevant strategy.

When designing a MEL framework for urban based health activities, it is essential to recognize the different epidemiologic and demographic profiles within the targeted geography, as well as unique, context-specific challenges requiring support. Such particulars will likely require customized indicators and disaggregates. If a portfolio approach is being utilized, data collection processes that allow for harmonizing data and reporting across awards will also be needed. MOMENTUM, a global partnership for health and resilience, has created the MOMENTUM MEL Framework which offers a roadmap for organizing these elements. It is organized

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[22] The new UNAIDS Global AIDS Strategy for 2021-2026 recognizes the key role of cities and urban settings in ending AIDS and is included as a cross-cutting issue in all areas of the Strategy.

[23] Recommendations on how to integrate resilience into activity level programming can be found in the Resilience in Activity Design and Implementation Discussion Note.

into five streamlined components: (1) theory of change, (2) learning agenda, (3) measurement, (4) analysis and synthesis, and (5) dissemination and data use.

When considering the context of a local system, it is recommended to use and embed complexity-aware approaches[24] during all phases of programming. As an example, USAID ADS 201 encourages context monitoring beyond activity specific monitoring needs, i.e. tracking changes in macro-fiscal, social, or political contexts. These approaches are better suited for generating evidence in complex and adaptive environments, where cause-effect relationships are uncertain and agreement on problems and solutions is low. Such approaches, like contribution analysis, can help implementers understand why the observed results occurred and tease apart the roles played by the intervention and external factors. Outcome harvesting can provide practitioners with a systems-oriented perspective on the factors that contributed to anticipated and unanticipated outcomes. USAID staff should consider using these approaches in conjunction with and to address performance monitoring blind spots (unintended consequences, alternative causes for observed outcomes, and feedback loops).

Below is a table of illustrative indicators (Table 2) that can be used to measure and track progress of a Mission's health sector investments and the contributions of those investments to the resilience of a given urban context. Resilience related indicators measure resilience capacities among local stakeholders, shocks and stresses, and well-being outcomes. While progress on these indicators does not guarantee progress towards resilience, the indicators can nevertheless be used to support the approaches and strategies described above. The indicators are drawn from a mix of Standard Foreign Assistance Indicators as well as custom indicators backed by literature and practice, including from the World Health Organization's (WHO) Global Health Observatory that USAID has used to track health results in developing countries.

Another useful resource is USAID's Health Systems Strengthening Compendium of Indicators. This resource contains a repository of indicators that USAID staff and host country counterparts can use to track progress against, and generate evidence to learn from health investments and inform future programming. The proposed indicators (Table 2) focus on key strategic issues at the intersection of urban resilience and health. All person-level indicators (e.g., number of people gaining access to a basic drinking water service as the result of USG assistance) should be disaggregated by sex and other relevant factors (e.g., age, ethnicity).

Table 2. Illustrative Indicators

Urban Health and Resilience Focus Area	Proposed Indicator	Indicator Type
Improved Continuity of Care	Average of the service gaps between: a) ANC1 and ANC4; b) DPT1 and DPT3*, in USAID-supported districts	Standard
Increased financial risk protection	Percentage of people enrolled in USAID-funded financial protection schemes in USAID project catchment areas	Standard
Quality Improvement	Overall service utilization rate among USAID-supported facilities implementing quality improvement (QI)	Standard

[24] https://usaidmomentum.org/wp-content/uploads/2020/12/CAM-Guide-Final-2020_12_16_508.pdf ; https://usaidlearninglab.org/sites/default/files/resource/files/dn_-_complexity-aware_monitoring_final2021_1.pdf

Health-affecting Service Delivery Outcomes	Number of people gaining access to a basic drinking water service as the result of USG assistance	Standard
	Number of people gaining access to a basic sanitation service as the result of USG assistance	Standard
Integrated Health Strategy and Governance	National or sub-national health strategy including priorities and actions by non-health sectors *developed*	Custom
	National or sub-national health strategy including priorities and actions by non-health sectors *implemented*	Custom
Enhanced Surveillance and Response	Percentage of health centers that perform tasks pertaining to the surveillance, detection, and reporting of key health risks originating from natural or human-made sources	Custom
	Existence of *and* adherence to documented procedures to ensure operational preparedness for crisis response, particularly among agencies with health and health-affecting portfolios	Custom
Climate Resilience	EG.11-5: Number of people supported by the USG to adapt to the effects of climate change	Standard
	EG.11-6: Number of people using climate information or implementing risk-reducing actions to improve resilience to climate change as supported by USG assistance	Standard
	EG.11-4 Amount of investment mobilized (in USD) for climate change adaptation as supported by USG assistance	Standard

Climate Mitigation	EG.12-4 Amount of investment mobilized (in USD) for clean energy as supported by USG assistance	Standard
	EG.12-6 Greenhouse gas (GHG) emissions, estimated in metric tons of CO2 equivalent, reduced, sequestered, or avoided through clean energy activities supported by USG assistance	Standard
	EG.12-7 Projected greenhouse gas emissions reduced or avoided from adopted laws, policies, regulations, or technologies related to clean energy as supported by USG assistance	Standard

Indicator Table Sources: The indicators above are recommendations based on review of the following sources: the Standard Foreign Assistance Master Indicator List (US Dept. of State); USAID's Blueprint for Global Health Resilience; Measure Evaluation, Health Systems Strengthening—A compendium of Indicators; World Government Summit, Making Health Systems Resilient: An action plan for the next decade; USAID's 2022 Climate Change Standard Indicator Handbook

Evaluation

USAID uses impact and performance evaluations to understand the characteristics and outcomes of USAID's activities, improve effectiveness, and make decisions about current and future programming.[25] ADS 201 describes requirements for evaluations, and the USAID Evaluation Toolkit provides guidance for planning, managing, and learning from evaluations. The choice to conduct an impact and/or performance evaluation for an activity, portfolio, or project depends on its purpose, i.e., it should be made based on the question that must be answered or knowledge gap that must be filled.

A single evaluation can be designed to use multiple methods based on the purpose of the evaluation and the questions to be answered. The evaluation approach (experimental, quasi-experimental, or non-experimental) and data collection process (desk review, key informant interviews, surveys) should be determined by the evidence needed to fulfill the purpose of the evaluation. Other considerations should include: complexity, cost, data availability, rigor, and contextual limitations.

Evaluation of the Strengthening Ethiopia's Urban Health Activity

USAID/Ethiopia designed the SEUH activity to improve the quality of urban health services, strengthen capacity of regional health bureaus, and promote intersectoral collaboration on urban health challenges. The evaluation investigated four questions including to what extent the activity's implementation processes and strategies were effective and to what extent the activity's strategies and interventions were sustainable. The Mission conducted a mixed-methods evaluation involving document review, key informant interviews, and focus group discussions. Additional secondary data analysis was conducted on monitoring data from the activity and Ethiopia Demographic and Health Survey data.

KEY RESOURCES

Below is a curated list of USAID strategies and selected external resources that can provide assistance, guidance, and inspiration for incorporating urban resilience into health programming.

USAID Strategies and Resources

- Building Resilience to Recurrent Crisis: USAID Policy and Program Guidance
- USAID Vision for Health System Strengthening 2030
- Health System Strengthening Resources
- Public Sector Systems Strengthening (PS3) Project (Tanzania): Case Briefs
- Climate Change Impacts on Human Health and the Health Sector
- Considerations to Integrate Climate Change Mitigation and Adaptation into Health System Programming
- Promoting Health Resilience

[25] See ADS 201

- Agency Approach to HIV and Optimized Programming
- USAID Vision for Action in Digital Health
- UrbanLinks
- ResilienceLinks
- ClimateLinks

Selected External Resources

- Building health systems resilience for universal health coverage and health security during the COVID-19 pandemic and beyond (WHO)
- Resilient Health Systems Program (GFDRR - World Bank)
- Pathway to Universal Health Care: Three priorities for stronger, more resilient, more inclusive health systems (World Bank)
- What Is Health Resilience and How Can We Build It? (Annual Review of Public Health)
- Building resilient health systems in Africa beyond the COVID-19 pandemic response (BMJ Global Health)
- Making Health Systems Resilient: An action plan for the next decade (World Government Summit)
- Strengthening health systems resilience: key concepts and strategies (World Health Organization: European Observatory on Health Systems and Policies)
- Public financial management related questions: the health financing progress matrix: Country Assessment Guide (World Health Organization)

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ANNEX I: A TOOLKIT TO IDENTIFY AND ASSESS OPPORTUNITIES

This toolkit provides an opportunity to consider strategic investments in urban resilience with health funding. It can be used as a decision analysis tool to design health programming through an urban resilience lens. It can also be integrated into existing health assessment tools and processes. The questions are grouped by four components:

1. Underlying risks to urban health outcomes, including social and environmental determinants of health, and how well existing assets (for example, institutions and resources) address these risks;
2. Key policies, processes and actors (individuals, organizations, institutions and networks), including the relationships and capacities in the urban systems (relates to inclusive planning, governance, and finance building blocks);
3. Levers of change and potential integration opportunities (relates to inclusive planning, social capital, and natural capital building blocks); and
4. Health-seeking behaviors that facilitate use of health-related services.

Risks and Assets

Risks

Inclusive Planning	• What specific urban area(s), communities, and institutions have the greatest vulnerability to shocks and stresses posing health risks? What norms and inequalities put them at risk? How do the risks manifest? • What existing risk assessments relating to resilience and health are available for the targeted urban area(s)? • What health-affecting sectors and factors – e.g., water and sanitation, air quality, transportation, housing – present the greatest risks for urban health and/or opportunities for improving public health?
Governance	• Who are the authorities responsible for the targeted urban areas, and are their roles and responsibilities clearly delineated and well understood? What are existing 'power relationships' within the community, and how do those influence inclusion/exclusion from planning, program participation, and benefits of health programs?
Finance	• What financial or economic shocks (e.g., inflation, exchange rate instability) pose the biggest risks for health in the targeted urban area(s)? How do these shocks differentially affect groups in the community?
Social Capital	• Which demographic and other groups (e.g. internal and/or temporary migrants), and targeted urban area(s) are the most vulnerable? How have past shocks impacted these populations living in vulnerable situations? How did their social connectedness support or hinder their recovery? Were there weak social capital ties? What power dynamics limit the participation of these groups in informal and formal efforts to improve the community?

	• What chronic stresses – e.g., income inequality, gender inequality, insufficient transportation services, housing instability, poor-quality water and sanitation services – present significant risks for health?
Natural Capital	• What nature-based shocks (e.g., flooding, extreme heat, pandemics) pose the biggest risks for health in the targeted urban area(s)?

Assets

Inclusive Planning	• Are there incentives for diverse groups to work together to address these stresses and shocks? Do groups have equitable input into discussions and decision-making; if not, what imbalances exist?
Governance	• Are there lessons from recent system breakdowns in the targeted area or similar geographic areas that can inform local resilience efforts?
Finance	• How well are existing resources (and planned investments) aligned with the identified risks? Do budgets reflect the needs of marginalized groups?
Social Capital	• What existing social strengths/assets – such as knowledge-based assets, social capital or technological capacities– can the urban area, its health system and associated sectors, and its population and communities build on in order to better mitigate and manage shocks? • What are the trusted knowledge sources and communications channels? What is the access to/use of services and technologies such as digital communications, mobile phones, and digital financial services (even in countries with lower digital service usage, access in urban settings may be high)? • Under what circumstance are social capital ties currently strong or strengthened (e.g. meetings, festivals, etc.)? •
Natural Capital	• What existing nature-based strengths/assets can the urban area, its health system and associated sectors, and its population and communities build on in order to better mitigate and manage shocks? • How might improvements in natural capital, (e.g., forestation reducing flood risk and heat stress, urban biodiversity, nature conservation spaces for aesthetics and spiritual health/connections) lead to better health outcomes?

Key policies, processes and actors

Inclusive Planning	• What is the composition of the market for health services and products in the targeted urban area(s)? How well does the market meet the needs of marginalized groups (e.g., women, socio-economic and ethnic minorities, youth)? • How do private sector actors (e.g, health providers, organizations, institutions and networks) respond and adapt to shocks and stresses? How do private sector actors work with the public sector to plan for and mitigate potential future crises? • How are civil society, NGOs and communities engaged in planning and implementation and how do they benefit from health policies, services and programs (e.g., social and behavior change)? • What opportunities are there for vulnerable populations to fully participate in the policymaking and accountability processes that would influence/impact responsiveness of the health system or urban resilience?
Governance	• What role do public, nonprofit, and (formal and informal) private providers play and what are their relative strengths and weaknesses? What dynamics govern the relationships among them (e.g., referral patterns and accreditation)? • How centralized or decentralized is public health planning? What level of autonomy do subnational authorities have to set their own priorities and advocate for funding largely set at the national level? Which public agencies and what levels of government are responsible for public health and how might their roles intersect or overlap? Describe how these roles and relationships present conflicts. • How do informal systems for health adapt differently from formalized public systems to stresses and shocks?
Finance	• How does the health budget cycle process facilitate and include input from the communities they serve, including marginalized groups? Does it allow for input from municipal health authorities and urban public health service delivery units? • What is the existing financial management capacity and how effective are related processes and policies across key administrative units?
Social Capital	• How do key actors communicate, coordinate, and collaborate on key areas and programming of relevance and importance? How effective is communication, coordination and collaboration across sub-national and national level? • To what extent does civil society – for instance community-based health equity advocates, professional networks of health care professionals, civil society organizations that represent the interests of marginalized groups –

	play a role in informing and shaping public health decisions? What role can they play in strengthening urban health resilience?

Levers of Change and Integration Opportunities

Inclusive Planning	• What level of autonomy and resources do local leaders have to address shocks or stresses directly impacting their communities in a timely and locally-responsive fashion? How are marginalized groups engaged?
Governance	• Has the urban area where USAID is partnering articulated resilience priorities, whether or not they are framed in those terms? Have these priorities been extended to, or implemented by, other sectors that are associated with or impact health? If not, why not? • What lessons from local, national, and regional collaborations across sectors can be learned from and leveraged to strengthen urban resilience? • What governance capacities need to be built in the health system to strengthen urban resilience? • What levers or opportunities are there for civil society to have input into resilience priorities and to hold local leaders accountable in their response to shocks or stresses? • What are effective and sustainable mechanisms or processes to integrate local, community, sub-national, national, and regional voices, priorities, and contributions into USAID's health system strengthening efforts? What are effective and sustainable mechanisms or processes that enable the participation of private sector, civil society, and public organizations in developing locally-led solutions to improve high-performing health care, especially for poor and vulnerable populations? • What opportunities exist to collaborate and coordinate with other sector partners in order to strengthen urban resilience? • Where, how, and by whom are decisions about health system priorities (e.g., service delivery, social and behavior change programming) made and what can support decision makers in considering a more integrated view of the factors affecting urban health outcomes?
Finance	• How can humanitarian and development investments to mitigate the effects of and respond to shocks and stresses be sequenced and integrated to make cities more resilient to future shocks and stresses? How can these investments lead to sustainable urban resilience in the future? • What are the possible co-benefits to non-health sector partners of investing in the resilience of urban health systems? Can engaging other sector partners strengthen these co-benefit opportunities?

HEALTH BEHAVIORS AND SERVICE USE

- What are the health seeking behavior and behavioral influencers of various groups within a given targeted urban area?
- How do young people access healthcare and what opportunities are there to engage with youth organizations and networks to improve access to needed care?
- What are the health access barriers encountered by different population groups? What are the key drivers of these barriers?
- What are the individual (e.g., knowledge, attitudes), interpersonal (e.g., role in decision-making) and community factors that influence health behaviors?
- What structural factors (e.g., gender-based power dynamics, economic inequality, stigma and discrimination based on age, ethnic status, etc.) contribute to health behaviors and access to and use of services?
- What are the social drivers that contribute to health behaviors and access to and use of services?
- How effective are systems for individuals to assert and maintain their rights to access health care and adjacent services that affect health (e.g., water)?