

A Systems Approach to Urban Health and Wellbeing has come of age in Latin-America and the Caribbean

Manuel Limonta

1. The Latin American and the Caribbean region has one of the highest urbanization rates in the world
2. Access to health services, epidemiologic transition and chronic non-communicable diseases, training and distribution of human resources in health, inequalities in health, and financing health systems are among the most important health challenges.
3. El Salvador started in 2010 the implementation of a profound reform of the health system which has led to significant health improvements. That has triggered the establishment of the Salvadoran Urban Health Model
5. The New Model of Urban Health in El Salvador is inspired by the systems approach and has potential to be exemplary for the entire LAC region.
6. ICSU ROLAC has played the role of facilitator in all these developments together with the participants mentioned. Also, our Secretariat has worked with this Urban Health initiative with the orientation and alignment of our ICSU Health and Wellbeing Program applied to our region.



About the author

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He is a member of the Academy of Sciences of Cuba, the Academy of Sciences of the Caribbean and of the World Academy of Sciences (TWAS). November 2015 he was elected Vice President of TWAS to serve Latin America and the Caribbean. He graduated as Dr. in medicine at the Medical University of Havana Cuba (1968), specialization in hematology (1979) and a P.hD, from the National Institute of Hematology and Immunology (IHI) of Cuba. He was the founder and the first General Director of the Center for Biological Research of Cuba, as well as the Founder and first General Director of the Center for Genetic Engineering and Biotechnology (CIGB) of Cuba. He was the Director of the group of six Cuban researchers who achieved Interferon in 1981, which is considered the first product of Cuban Biotechnology that achieved the cycle of research, development, production and commercialization. He was the founder and Chief Editor of the Cuban Journal of Biotechnology. He is currently a member of the editorial board of that magazine and on the board of several other scientific journals.

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Latin America and the Caribbean region has one of the fastest urbanization rates in the world. Hundreds of mid-sized cities are emerging. More than 80% of the region's population lives in cities. In Venezuela, Argentina, Uruguay, Brazil and Chile more than 90% of the countries' population is urban. 30% of the population of Latin America and the Caribbean do not have access to health care. 74 million people do not have adequate sanitation and less than 20 per cent of wastewaters and sewage is treated, leading to serious health risks (UN Habitat 2012).

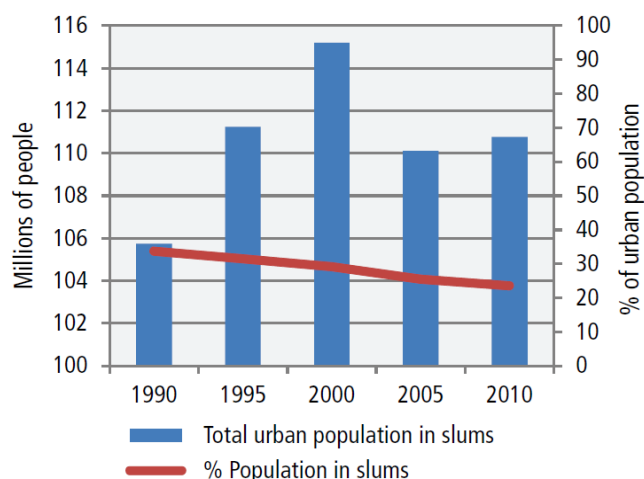


Figure 1: Urban slum population trends, 1990-2010
UN Habitat 2012

In 2012 an estimated 111 million people lived in slums and Latin America is home to cities that are among the most unequal and unsafe in the world. Latin American cities are leading in being the most murderous cities on earth, with cities in El Salvador, Honduras, Mexico and Guatemala leading the charts (UN Habitat 2012). The World Economic Forum on Latin America (2016) estimates that the number of people who are living with a non-communicable disease (NCD) is over 200 million. NCDs are associated with 79% of all deaths. 35% of deaths caused by NCDs are premature, i.e., they occur between 30 and 70 years of age.

\$21.3 trillion in economic losses in low- and middle-income countries could be caused by NCDs over the next two decades. The five of the most important health challenges include: 1. Access to health services, 2. Epidemiologic transition and chronic non-communicable diseases, 3. Training and distribution of human resources in health, 4. Inequalities in health, and 5. Financing health systems.

At least 100 million people in the region are exposed to air pollution above the limits recommended by the World Health Organization (WHO). Land-based transport is the greatest cause of air pollution in the cities of Latin America and the Caribbean. Others are coal and heavy oil-fueled power stations, and industrial production. Annual average PM10 levels (2000-2004) also exceeded the WHO's recommended maximum in most cases and the concentrations even exceeded the standard set by cities themselves (Greene J and Sánchez S 2012).

The case of air pollution shows that urban health issues are highly interconnected. Better understanding how they are interconnected and aiming at issues which are systemically linked, promises the co-benefits from more efficient and effective policy measures. Promoting a systems approach to Urban Health in the region has therefore been one of the main goals of the International Council for Science's Regional Office for the region (ICSU ROLAC). Urban Health is one of ICSU ROLAC's priority areas and the office has been active since its recent move from Mexico to El Salvador.

The ROLAC office moved to El Salvador in August 2016, and in October 2016, a first workshop was conducted with the Ministry of Public Health of El Salvador (MINSAL) and the Ministry of Public Works.

The workshop was attended by 340 participants including distinguished representatives of the Government as ministers, advisers, representatives of the educational system, authorities of the National University, associations involved in environmental and health research, and a significant percentage of college students who were very interested in the subject.

One of the findings of the workshop was the lack of inter-sectoriality. That reason encouraged ICSU ROLAC to begin establishing and coordinating a working group on Urban Health. The Vice minister for Health of El Salvador, together with the Vice Minister of Science and Technology, held a meeting with the ROLAC Office to encourage the work of different ministries and other organizations coordinated by ICSU ROLAC to create synergies and face the work of Urban Health in El Salvador.

On March 20, 2017, under the coordination of ICSU ROLAC, the first national Urban Health Working Group meeting was held. It was attended by Vice Ministers, Directors and Advisors of key institutions in the country, to expose existing programs, gaps and challenges in the area of Urban Health and to establish a line of action for the implementation of a New Urban Health Model in El Salvador.

The Urban Health Working Group is composed of the following institutions:

- Vice Ministry of Science and Technology
- Ministry of Health
- Ministry of Environment and Natural Resources
- Ministry of Public Works
- Ministry of Justice and Public Security
- Vice Ministry of Housing and Urban Development
- COAMSS OPAMSS
- National University of El Salvador
- Director of Transportation
- Ministry of Education
- Secretary of Culture
- National Institute of Sports of El Salvador
- National Institute of Youth
- National University of El Salvador.
- Environmental Impact (Media).



Figure 2: On June 19, 2017 the Ministry of Health officially launched the new Urban Health model in El Salvador. Participants of the high-level meeting included the Chinese Embassy in El Salvador, and the Technical Secretary of Planning of the Presidency Lic. Alberto Enríquez.

The working group has made important progress, such as the consolidation of an official National Matrix with information on the programs currently being carried out by the different ministries in the area of Urban Health in El Salvador, in order to work on these programs in an integrated way among all ministries.

In the words of the Minister of Health, Dr. Violeta Menjívar, “the main objective of the Urban Health Model is to reduce social exclusion, protect and restore the environment, promote human development and build a healthier city for all.” The New Model of Urban Health is being implemented in the country and will have an important impact at the regional level where it can be the starting point for other countries in the region to replicate this example of integrated governance for health pioneered by El Salvador.



During its launch, it was stated that the core of Salvadoran Urban Health Model starts on what has been coined as “Good living” which can be attained by implementing public policies which positively affect the individual, the family and the community. The model then presents seven dimensions: coexistence, mobility, environment, society and wellbeing, habitat and infrastructure, governance and integration, and education and culture. Finally, the model encloses its actioning within three main strategies: social participation, inter-sectoriality, and intra-sectoriality.

It is important to highlight that the Salvadoran Urban Health model was conceived within the context of El Salvador’s health reform which began in 2010, restated health as a fundamental human right. The country initiated a profound and innovative reform of the health system, setting in motion a road map towards Universal Access to Health, breaking geographical, economic and technological barriers to guarantee the right to health of the population, by strengthening the public health system (Menjivar 2016).

Dr. Manuel Limonta, Regional Director of the International Council for Science (ICSU), explained that the Urban Health Model of El Salvador was created on a scientific approach inspired by the systems approach to urban health and wellbeing under ICSU, and based on the previous work done by the MINSAL. He announced that ICSU ROLAC in conjunction with the TWAS World Academy of Sciences an International Urban Health Workshop in September 2017, would organize the Second Urban Health Workshop in El Salvador, which eventually was attended by Young Scientists from poor countries of Latin America and the Caribbean, addressing the theme of Urban Health. Such workshop was planned by all members of the Urban Health Working Group.

The Second International Urban Health Workshop was held in San Salvador, El Salvador on 28-29 September, 2017. The activity was organized by ICSU ROLAC, the World Academy of Science (TWAS), the Ministry of Health of El Salvador, and ICSU ROLAC’s Urban Health Working Group. The workshop aimed to facilitate and encourage the interaction of successful experiences and ties of cooperation among the participants of the event. That workshop also represented a great opportunity to show the Salvadoran model with other countries of the region, which was perceived as pioneering.

The workshop has facilitated the participation and interaction at the national and regional level of the participants, emphasizing the importance of facing the Urban Health situation from an integral, multidisciplinary, and interinstitutional approach.

On July, it was decided to run a pilot test in San Salvador, since it is the capital of El Salvador, and it accounts for a 27.19% of the country’s population, that is 1,773,557 inhabitants (DIGESTYC 2016). From the 14 municipalities of San Salvador, 7 were selected in order to run a pilot test. It was at this stage, by mid October, when the Pan American Health Organization introduced an “**Action Tool for Healthy Cities**”, which was presented in different workshops in order to train the trainers of the seven municipalities selected for the pilot test. The objective of the workshop and the tool itself was to provide guidance to take action measures to promote healthy cities, municipalities and communities; and to do so, it provides questions to consider, key activities, examples and resources to help with the health promotion communities.

In El Salvador, the tool is expected to be used to implement the Urban Health Model and its Implementation Plan (MINSAL 2017). The core of the model is to promote what has been labeled as “Good Living” in El Salvador through strategies of social participation, inter-sectorality and intra-sectoriality. “Good Living” embraces the following dimensions: coexistence, mobility, environment, society and wellbeing, habitat and infrastructure, governance and integration, and education and culture.

Since the Salvadoran Urban Model comprises all the previous mentioned dimensions, each of the seven municipalities chosen for the pilot test, selected different issues that directly caused a negative impact within their communities, in order to tackled them and bring about a change of paradigm, through the inter-sectoral and intra-sectoral approach which this model proposes.

The ROLAC Secretariat has provided support to all the workshops and it has also accompanied them closely. The execution of these workshops within the communities moves the Salvadoran Urban Health Model from theory to practice, engaging the citizens of the cities in which the systems approach is applied.



Figure 3: 7 Municipailities selected as pilot sites for the Urban Health Model in El Salvador.

By means of the Urban Health Model it has been possible to align the work of the entire country, through the ministries which belong to the working group; and also, to encourage the interest of governmental actors in the subject. In addition, common citizens and members of the communities have begun to get involved in the program.

The ROLAC has envisioned short, middle and long-term goals. In the short term, it has been already possible to attain a diagnostic of the urban health state in El Salvador, the creation of a working group, and a national matrix of programs currently carried out by ministries in the area of Urban Health in El Salvador. In the middle term goal, it has been possible to have an implementation plan which is in its early execution. In the long term, it is expected to obtain transformational change in urban health. It is worth mentioning that what has been achieved so far has been the result of coordination, management and integrated governance by taking a systems approach.

Looking into the future ROLAC plans to organize a Central American Workshop in which the model can be introduced to the region. That will be an opportunity to establish links of cooperation and association with the countries of the region, creating the base for a larger initiative with countries from the entire LAC region.

Other global regions begin to show an interest in the Urban Health Model. ROLAC has been invited to present the model at “Future Earth Health Knowledge-Action Network Workshop” in Xiamen, China on Dec. 2-4, 2017, at the 9th Session of the World Urban Forum in Kuala Lumpur, Feb. 7-13, 2018, and in Guatemala at the Symposium of Urban Health Policies May 18, 2018. The Chinese Academy of Science has invited representatives of ROLAC and the Urban Health Working Group from El Salvador to present the Urban Health Model at a Belt and Road symposium which will be held Oct 16-18, 2018 in China.

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- See also San Salvador Urban Health Model (in Spanish): <https://youtu.be/XUzbvvHeYR0>



The *Urban Health and Wellbeing: a Systems Approach* (UHWB) programme, is a global science programme, of the International Council for Science (ICSU). The vision of the programme is: cities functioning as integrated complex systems which sustainably provide benefits for the health and wellbeing of its residents. It aims at (1) promoting and coordinating research, (2) developing and identifying data needs, (3) building and strengthening capacity and (4) communicating new knowledge.

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