

# Chapter 14

## Territorial Management of Health Promotion: The Dengue Epidemic Case in Perú



Edwin Peñaherrera Sánchez

### Health Status

The year 2015<sup>1</sup> had the highest dengue epidemic activity out of the last 25 years in Peru. A total of 34,273 cases were reported by epidemiological week 31, including both probable and confirmed cases. This exceeded the number of cases reported for all of 2014. In 2015, the dengue epidemic stretched out over the largest geographic area since 1990, involving 18 departments and 269 districts with dengue transmission. The department of Piura alone reported 1517 cases by epidemiological week 22<sup>2</sup>, including both probable and confirmed cases. By epidemiological week 30, 22,101 more cases were reported in 2015 than in 2014 by the same week. This is three times as many cases as in 2014<sup>3</sup>.

A total of 35 deaths occurred due to confirmed dengue diagnosis in Peru, of which 22 occurred in Piura and 1 in Tumbes. Eight other probable dengue deaths also occurred in Piura<sup>4</sup> Because of this, the regions of Piura<sup>5</sup> and Tumbes<sup>6</sup> were declared to be in a health emergency, and the immediate intervention of the National Health Strategy for the Control of Vector-Borne Diseases was sought. This office, staffed by personnel from the General Directorate of Health for the People DGSP,

---

<sup>1</sup>Méd. César Bueno Cuadra Jefe de Equipo de Vigilancia Epidemiológica en Salud Pública. MINSA 2015. Boletín epidemiológico. Volumen 24—Semana Epidemiológica N° 31.

<sup>2</sup>Dirección General de Epidemiología. MINSA 2015. Informe Ejecutivo N° 131 (SE 31-2015)—Seguimiento situación actual del dengue en Piura 2015.

<sup>3</sup>Lic. Susan Mateo Lizarbe. Dirección General de Epidemiología. MINSA 2015. Boletín epidemiológico. Volumen 24—Semana Epidemiológica N° 30.

<sup>4</sup>Lic. Susan Mateo Lizarbe. Ob-cit.

<sup>5</sup>DS N° 008-2015-SA, que declara en Emergencia Sanitaria a la Región Piura.

<sup>6</sup>DS N° 005-2015-SA, que declara en Emergencia Sanitaria a la Región Tumbes.

E. Peñaherrera Sánchez (✉)  
Universidad Peruana Cayetano Heredia, Lima, Peru  
e-mail: [edwinpenaherrera@gmail.com](mailto:edwinpenaherrera@gmail.com)

its initials in Spanish; note that, except for the Ministry of Health, all abbreviations will be given according to their Spanish initials), the General Directorate of Environmental Health (DIGESA), the General Office of Communications (OGC), the General Office for Planning and Budget (OGPP), the General Directorate of Epidemiology (DGE), and the National Institute of Health (INS), was responsible for drafting the National Plan for Chikungunya Fever Response, Peru, 2015.

## Problem Situation Identified

Traditionally, a dengue epidemic is defined by the Ministry of Health (MoH) once it has analyzed the case report sent by the regional health installations, following the biomedical approach predominant in the health sector. Then the MoH issues a state of alert, decides what measures to take, and communicates with the local authorities for actions needed. The regional president and the local governments organize their response based on the alert, and the MoH spearheads the response activities. This chapter describes a different approach to dengue epidemic response based on the health promotion paradigm. Health promotion moves beyond the biomedical approach to focus on the social determinants of health behind diseases. The experience of the fundamental leadership role of the General Directorate of Health Promotion in responding to the dengue epidemic in Northern Peru and how this directorate contributed to its control will be described.

There is a dengue epidemic in Northern Peru every year during the rainy season because rain water is deposited in all kinds of containers: used tires, flower vases at home or in cemeteries, tubs, and bottles, for example. Natural water containers allow for the growth of *Aedes aegypti* from larvae into adults. Moreover, in rural areas of Tumbes and Piura, there is a lack of piped potable water systems, so people need to store water in large containers at their homes. In spite of MoH reminders to the population to clean containers regularly and keep them tightly covered with lids, the precautions are not always taken owing to household and work chores that families are involved in on a daily basis. This form of water storage facilitates the presence of larvae and their rapid evolution into adult mosquitoes.

Part of the problem, as highlighted earlier, lies with the MoH's predominantly biomedical approach, which prioritizes health care and recovery for cases detected. Preventive actions are basically aimed at providing information to the population regarding risks and measures to take, on the one hand, and door-to-door spraying for abatement to eliminate live mosquitoes, on the other hand. In the first case, the approach appeals to the cognitive process on the assumption that having knowledge is enough for people to change their behavior and adopt self-care practices, but this is known to be insufficient. In the second case, there is certainly a positive impact on the population because live mosquitoes are eliminated; however, larvae in containers are not killed off, so the epidemic is not controlled. Another issue with spraying is the fact that house visits are conducted during working hours, and because of this, many houses do not get sprayed and become mosquito-transmission foci.

## The Intervention

In contrast to previous years, in 2015 the dengue epidemic was accompanied by high mortality, which led to a declaration of emergency in the regions of Piura and Tumbes. As in years before, the DGE was responsible for the intervention, with the participation of other general directorates, particularly DGSP, which is responsible for health services; and the DG for health promotion is responsible for interagency coordination. Both of them drafted a plan of action. The DGSP focused on door-to-door spraying, ensuring early detection of cases and prompt and adequate care of symptomatic cases. The DG for Health Promotion designed a plan centered in the framework of territorial management of health promotion as approved by the MoH Policies and Procedures (ROF 2015).

Territorial management and governance allow for the determination of individual and collective responsibilities, as well as the guidelines needed from distinct government agencies and levels to address the profound causes of health inequity. In this way, they contribute to the establishment of synergies among government sections within the wheels of political, economic, and social power, with the goal of dealing with social determinants behind health inequities.

The DG for Health Promotion proposed a plan of action centered on strengthening regional and local government leadership, as well as active involvement of other government agencies responsible for addressing social determinants that promote dengue spread, such as education, housing, economy, tourism, and the civil society at large, through community leaders. The DG for Health Promotion appointed a public health and health promotion psychologist, who in turn appointed an 11-person team made up of teachers, communicators, physicians, and nurses, organized in teams of 3 or 4 people. These teams deployed to the regions of Tumbes and Piura, and their mission was to help organize the local and regional emergency committees (COER) to prepare concerted action plans. The multidisciplinary nature of these teams was crucial to design intervention strategies that extended beyond the biomedical approach, and the conducted activities among the distinct sectors, including community participation. At the same time, at headquarters, a high commissioner was appointed for each region, with the goal of coordinating actions with their corresponding regional health offices (DIRESAs). The commissioned physician, aware of the limitations of the biomedical approach and of the potential for health promotion deriving from interagency actions, decidedly supported the work of the DG for Health Promotion team. This was a very important technical and political decision (Fig. 14.1).

The space approach places, in the center of activity planning, interagency and intergovernmental coordination and social participation as strategic axes to improve life conditions, leading to better health and ultimately contributing to individual and collective development in an integral manner. The design and implementation of public policies, based on the health promotion approach, are central aspects of the designed strategies (establishment of interagency alliances, preparation of concerted actions, and community participation are central aspects of the designed strategies) (Fig. 14.2).

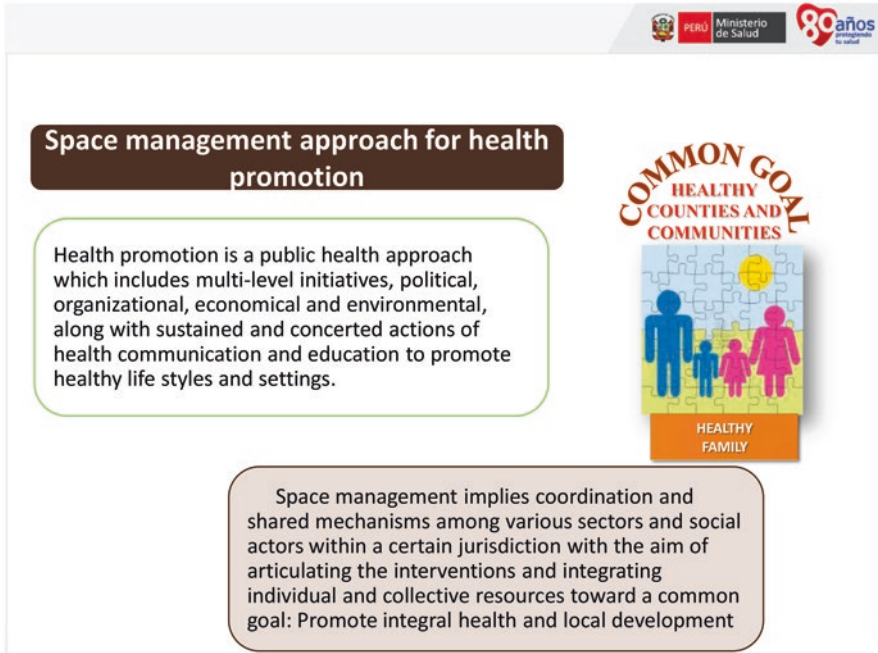
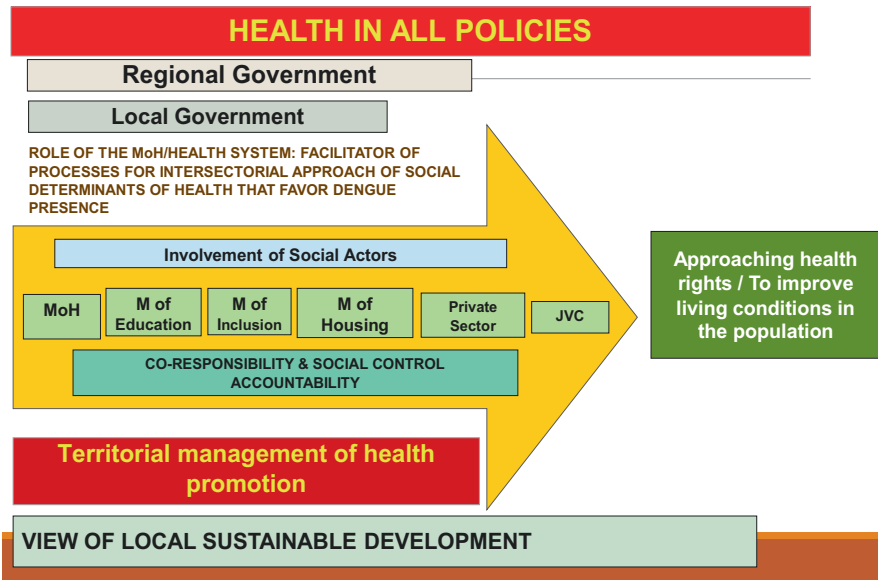


Fig. 14.1 Territorial management approach to health promotion (Source: Author)



E. Peñaherrera, 2015; personal report

Fig. 14.2 Health in all policies (E. Peñaherrera, 2015; personal report)

In close coordination with the health promotion team, high commissioners worked on two fronts, one with the DIRESA and health networks through meetings with the Emergency Operational Committee (COE by its Spanish initials), the other through intersector activities in coordination with the regional and provincial COEs. Local governments and local sectors have participated on this front, with responsibilities within their functions and areas of competence for epidemic control. In both cases, permanent coordination levels were established in conjunction with the community, which organized into community neighborhood boards (JVC).

The following strategic actions were taken:

- (a) Setting up of district emergency committee (district COE)
- (b) Preparation of an intersector work plan
- (c) Identification of volunteers in district
- (d) Social mobilization of community
- (e) Dissemination of messages throughout mass media

## Strategies

Recognition of three important aspects in the relationship between the dengue and the chikungunya epidemics was the starting point for the design of strategies:

1. Social determinants (living conditions in the population) are factors that favor disease occurrence, such as the epidemic of dengue and chikungunya vectors.
2. The social determinant approach requires a shared commitment (co-responsibility) among social sectors and actors. Because of this, public health does not rely exclusively on actions performed by the MoH.
3. Regional and local governments are the natural leaders on site, and as such, they are called on to plan actions in their territory to address dengue-associated social determinants. These actions will be closely coordinated with various sectors, with the society at large, and with community leaders. The MoH shall provide all the technical assistance as the agency responsible for people's health (Fig. 14.3).

The following were the main strategies adopted:

- Articulate actions among sectors and the local and regional government to identify and eliminate potential foci for mosquito reproduction in neighborhoods and homes. These actions may involve recycling points, recycling houses, trash disposal areas, tire disposal areas, cemeteries, and water storage and flower vases in homes, among other mosquito reproduction sites.
- Create awareness among community leaders and the community at large to actively support the identification and elimination of potential mosquito reproduction foci.
- Prepare an intersectoral work plan of joint actions with local government, government sectors, local institutions, community representatives, and nongovernment organizations (NGOs) in schools and neighborhoods, with the active involvement of neighbors.



E. Peñaherrera, 2015; personal report

**Fig. 14.3** Local government—wellness and social equity. E. Peñaherrera, 2015; personal report

- Prepare a work plan to perform joint actions with the Regional Education Directorate (DREL), with local units of education management (UGEL), and with directors of educational institutions within the intersectoral plan of the Ministries of Health and Education, to confront dengue and chikungunya.
- Provide technical assistance and advice to DIRESA and local and regional governments.

## Activities Conducted

Advocacy actions conducted by the technical health promotion teams at central and local levels with local officials led the Piura and Tumbes Regional Government to declare their regions under a health emergency. This political decision resulted in the preparation of an intersectoral plan, which was signed and endorsed by the involved social actors.

Each sector assumed responsibilities for the results proposed in the regional plan and in accordance with their institutional mandate. In this way, during the intervention, the health promotion team provided technical assistance for the following activities:

- Incidence and coordination meetings to favor intrasectoral articulation, with the participation of general directorates of communications, health promotion, environmental health, national defense, and epidemiology at every participating Regional Health Directorate (DIREASAS);

- Incidence meetings with mayors, governors, and officials of the various sectors at regional, provincial, and local levels to activate the COE;
- Definition of key communication messages to be disseminated among the population, jointly designed by the high commissioners and the DIRESA teams;
- Technical assistance and support to the DIRESAs during intersectoral meetings and weekly coordination to assess the progress of each sector's commitments;
- Technical assistance and support to the DIRESAs to inform the community about dengue and measures to control its spread, also to highlight the importance of allowing designated personnel access into homes;
- Identification, selection, and training of community and university volunteers in coordination with the DIRESA health teams;
- Technical assistance to the coastal district municipality of Los Organos, in preparation of the technical details for water and sewage projects;
- Development of advocacy actions at health installations to assign personnel to health promotion actions, who received oversight from the national level team assigned to the area;
- Actions of political incidence with local companies to support and fund educational activities and volunteer mobilization (house-to-house educational sessions);
- Implementation of information campaigns at cemeteries, house-to-house educational sessions, parades, among other actions aimed at schoolchildren, teachers, college students, community agents, and civil society organizations, to create awareness regarding the emergency situation and the main prevention measures;
- In coordination with Regional Health Directorate, joint actions with Health Universities Network in Piura, to select and train students from colleges and other higher education institutes to conduct health education activities in their communities;
- Technical assistance to the micronetworks and health establishments for training members from religious organizations, educational institutions, social organizations, civil associations, county police, national police, workplaces, markets, hotels, and restaurants in self-care practices to decrease the probability of vector incidence;
- Technical assistance to school teachers to help them draft programs or projects related to learning self-care practices for dengue and chikungunya prevention;
- Technical assistance to educational institutions (IIIEE) for the implementation of a peer surveillance strategy. Through this strategy, students become responsible for verifying and using the checklist and ensuring adequate water storage at the homes of their assigned school mates.

## **Results Obtained with Intersectoral Participation**

### *Tumbes*

- Thirteen local governments performed actions promoting neighborhood participation for dengue and chikungunya prevention.
- All of the districts with the highest aedic index promote and participate in vector rearing site elimination activities in their areas.

- Thirteen space agreements are in place with country officials and strategic allies for the recovery of shops that are closed, empty, or unwilling to collaborate with the elimination of vector rearing site.
- Active participation of the sectors involved in the intersectoral plan is at 100%.
- All of the homes were visited for educational or fumigation activities.
- One hundred schools individuals schools participate in the collection and elimination of mosquito rearing sites in coordination with the Educational Management Unit (UGEL) and its county.
- Three selective campaigns were launched to collect and eliminate mosquito rearing sites or containers conducted by public and private workplaces from 13 districts.
- There are 850 teachers involved in promoting self-care practices for dengue and chikungunya control at their schools and activating the febrile system at all 214 IIEEs.
- There are 430 active school patrols promoting and supervising health practices for dengue and chikungunya control in 214 IIEEs.
- There are 214 associations of parents of school children trained in the promotion of health practices and the elimination of mosquito rearing sites in their own jurisdictions.
- A total of 476 social organizations and neighborhood committees in all 13 districts participate in and promote activities for the elimination of mosquito rearing sites in their own neighborhoods.
- A total of 168 JVCs promote health practices among families, sending out notifications about risks and febrile cases in their own jurisdictions.
- Some 382 community health agents from all 4 micronetworks participate in the promotion of health practices for dengue and chikungunya control and in the recovery of shops that are closed, empty, or unwilling to collaborate with vector rearing site eliminations.

## *Piura*

- 1500 families use water storage containers properly in their own care.
- All educational institutions in five priority districts conducted learning sessions or learning projects on dengue and chikungunya
- 1500 college students have been trained.
- 200 college students participated actively as volunteers in community activities in the priority districts.
- 1171 teachers were trained to develop teaching content, including in connection with dengue and chikungunya, as well as in prevention for educational institutions.
- 2742 students were trained to serve as school guards at IIEEs in the Luciano Castillo Colonna health subregion in Sullana, the Morropon-Chulucanas Network, Piura Network, and Castilla district.
- Two research projects were launched in connection with self-care practices and settings in priority locations and were submitted by medical school students from the Universidad Nacional de Piura.



- The local UGEL in Sullana issued Directive 04-2015-UGEL SULLANA-DAGP to conduct a dengue prevention and control campaign among the school population in the province of Sullana.
- Talara and Los Organos Counties issued guidelines to sanction people who interfere with dengue prevention activities.

## **Critical Assessment of Process and Results Obtained**

- When evaluating the success factors of this intervention in the Tumbes and Piura regions, the first aspect to take into consideration is the fact that the health promotion intervention was conducted with a health promotion approach in the space administration, as approved by the new 2015 policies and procedures of the MoH. This fact was essential for success because intersectoral coordination was, for the first time, a general directorate responsibility.
- Having a nonphysician professional in charge of the DG of Health Promotion also contributed to the success of the project because clear guidelines were provided to the technical teams to ensure intersectoral coordination and community participation became a priority.
- The territorial management approach defined by the DG of Health Promotion considered social determinants to be a central aspect, and this necessarily implied joint coordination with other sectors for those activities they needed to conduct to confront the dengue and chikungunya epidemics.
- The regional and the local government were persuaded to take on a leadership role, bringing other sectors together and obtaining commitments from the corresponding sector based on formal agreements. These were supervised and monitored by the regional and central health promotion teams, which resulted in adequate supervision and in making needed adjustments.
- From the start it was clear that the number of symptomatic cases would not decrease without coordinating activities with other sectors. Strategies implemented aimed at all times to strike a balance between patient care and recovery and addressing social determinants using the territorial management approach to health promotion.
- Activating the COE was critical because it allowed for the participation of local sectors and agents, both to design a joint plan and to conduct and monitor said plan.
- The territorial management approach to health promotion was an essential factor in containing the dengue epidemic and the onset of chikungunya in Northern Peru.

## **Intervention Aspects That Need Improvement**

- In Peru, multisectoral committees have long existed to confront problems that need to be approached from different sectors. However, their impact is limited because there are as many committees as problems to deal with. In the long run,

this in itself renders the committees unoperational. In this particular case, the dengue epidemic occurs in areas where the mosquito lives on a permanent basis. Because of this, officials should design health policies facilitating self-care practices among the population. For instance, they should strengthen community organizations by training their leaders and ensuring that they, in coordination with their county and their communities, adopt self-care practices, such as periodic disposal of unused containers, placing protective screens in their windows, not leaving water in flower vases during visits to cemeteries, avoiding water pots at home, and covering water containers. Setting up a new COE every year to confront the dengue epidemic proved to be inconvenient and a waste of time and resources. In terms of budget investment, it is expensive to fumigate or deploy personnel for weeks at a time from the central level to regions, including travel expenses. In addition, there is a risk of people dying. A multisectoral committee, no longer an emergency committee but a permanent one, would be more beneficial.

- During interventions, we should have taken the opportunity to talk about social determinants of diseases as part of the agenda, using the media or other spaces. This debate is important because it allows everyone to focus on two central aspects of public health: first, the fact that health is intrinsically linked to people's living conditions, such as having access to water, a decent job, and access to quality education and health services, and second, the fact that social determinants cannot be approached from the health sector only. In dengue, having water for human consumption inside the home without having to store it in containers, for example, would decrease vector population and proliferation. Interventions in the housing sector speak for themselves.

## Results<sup>7</sup>

1. Between the week prior to the intervention and the last week of the intervention performed by the national health promotion team, there was a significant reduction in the number of probable and confirmed dengue cases in the Tumbes and Piura regions. In the Tumbes region, the number of cases fell from 431 cases identified in week 23 to 233 cases identified in week 26 (46% decrease). In the Piura region, the number of cases dropped from 1374 cases in week 23 to 690 cases in week 46 (50% decrease)
2. The sustainability of these strategies contributed to the reduction in the number of probable and confirmed cases all the way to week 30 in the engaged regions post intervention. In Tumbes, the number of cases decreased by up to 89% (from 431 in week 23 to 48 in week 30), and in Piura by up to 93% (from 1374 in week 23 to 107 in week 30) (Table 14.1)

---

<sup>7</sup>Lic. Susan Mateo Lizarbe. Dirección General de Epidemiología. MINSA 2015. Boletín epidemiológico. Volumen 24—Semana Epidemiológica N° 30.

**Table 14.1** Probable and confirmed dengue cases per department, Perú (week 30, 2015)

Department	Epidemiological week																														Total	%
	1-15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30																
Piura	3920	1203	1190	1461	1439	1498	1489	1517	1374	1175	886	690	562	335	203	107	19,049	56.1														
Tumbes	2633	377	392	446	517	405	372	354	431	377	288	233	186	156	112	48	7327	21.6														
Loreto	1383	75	62	46	38	23	42	30	53	39	35	30	15	18	23	6	26,376	77.6														
La Libertad	157	25	62	57	71	109	107	169	235	188	161	123	147	131	91	41	1874	5.5														
Lambayeque	261	25	42	63	33	26	52	45	49	83	50	50	32	11	1	0	823	2.4														
Madre de Dios	393	46	47	52	31	19	16	27	25	16	14	12	7	3	4	1	2697	7.9														
Ucayali	463	13	14	9	11	12	5	9	13	11	7	10	10	16	20	9	632	1.9														
Junín	286	12	16	15	11	9	6	20	10	13	21	15	18	11	12	2	477	1.4														
San Martín	184	12	20	32	18	29	19	10	17	16	18	13	11	7	11	1	1109	3.3														
Cajamarca	44	7	2	6	13	8	13	12	13	17	8	11	10	15	4	1	184	0.5														
Huánuco	122	5	1	6	4	5	3	0	1	4	1	0	1	1	0	0	154	0.5														
Ancash	0	0	1	3	5	14	4	11	19	35	15	7	15	6	8	0	338	1.0														
Ayacucho	0	1	2	4	1	16	17	32	12	12	5	6	12	6	4	4	134	0.4														
Amazonas	7	0	0	0	2	4	6	3	7	2	3	2	2	3	0	4	45	0.1														
Cusco	2	0	0	0	1	1	2	11	3	4	2	3	0	1	2	1	179	0.5														
Lima <sup>a</sup>	3	0	0	0	0	0	1	0	0	2	1	2	5	5	1	1	21	0.1														
Pasco	14	0	0	0	0	1	0	3	0	0	0	0	0	0	0	0	18	0.1														
Ica	0	0	0	0	0	0	0	0	2	0	2	1	0	0	0	0	39	0.1														
Research cases <sup>a</sup>	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	3	0.0														
<b>Total</b>	<b>9873</b>	<b>1801</b>	<b>1852</b>	<b>2200</b>	<b>2195</b>	<b>2179</b>	<b>2154</b>	<b>2253</b>	<b>2264</b>	<b>1994</b>	<b>1517</b>	<b>1208</b>	<b>1033</b>	<b>726</b>	<b>496</b>	<b>226</b>	<b>33,971</b>	<b>100</b>														

Source: Epidemiological Bulletin (Lima) 24 (30)

Dengue cases were not confirmed in those locations at that moment (investigation to confirm)

## Analysis of Results

Results published in the MoH epidemiological bulletin reflect the positive effect of a multilevel intervention using the health promotion space approach. Using this approach, we were able to strengthen the local and regional government leadership. The role of the DG for Health Promotion team was crucial to promoting the empowerment of both the officials and the community as well.

The high commissioners acknowledged the strategic role played by the health promotion team when they prioritized the active participation of all social actors, mainly the governor and the county and district mayors. Their leadership was crucial to the intervention because their communities responded to their appeal and listened to their message, even more so than to the MoH. In Peru, the MoH at the central level cannot issue guidelines to other sectors that are under the jurisdiction of the regional government.

The political decisions and commitment of higher officials at the national, regional, and local levels have been the crucial factors.

- The MoH is the office that declares states of health emergency and assigns a budget for interventions;
- The MoH appoints high commissioners in each region.
- The DG for Health Promotion defines the space administration approach for health promotion as the core of interventions and appoints a multidisciplinary team to provide technical assistance in each of the affected regions;
- Governors of the Piura and Tumbes regions activate the regional COE and lead intersectoral activities;
- Mayors in the prioritized districts activate the local COE and provide permanent monitoring of implemented activities; they have a budget and human and logistical resources to address dengue epidemics;
- Principals at schools and heads of institutions of higher learning allow health personnel to train teachers and conduct educational workshops to deal with the dengue epidemic (Fig. 14.4).

## Intersectoral Activities

- Commitments by various sectors and institutions present were generated in each region, allowing each to take over its own responsibilities in accordance with its functions
- Activities were articulated with representatives of the Minister of Internal Affairs and with the national police to provide security to teams conducting house-to-house fumigation, to persuade households that declined participation,



**Fig. 14.4** The regional governor of Piura and DG of Health Promotion supervise campaigns by university volunteers to deal with dengue

to help in the fumigation of vehicles entering the region, and to keep tourists informed.

- Participation of community organizations was promoted with the Ministry for Development and Social Inclusion, involving soup kitchens and organizations preparing meals (in Spanish, these are called *vaso de leche*). The goal was to get these organizations to perform self-care practices and to highlight the importance of self-care practices in connection to dengue.
- Fumigation activities at restaurants and hotels in the region, in addition to the provision of useful information to their workers and guests, were coordinated with the regional chamber of commerce.
- Fumigation and campaigns in cemeteries, particularly during Father’s Day, were coordinated with the Peruvian Society for Public Welfare.

Activities coordinated by the high commissioners and the team from the Health Promotion General Directorate and the local health team saw high turnouts, motivating local officials and engaging the directors of health installations to assign full-time personnel to implement these activities to create awareness and motivate social participation among JVCs and teachers from schools and institutions of higher learning (Fig. 14.5).



**Fig. 14.5** The regional governor of Piura, MoH, and other regional and local health authorities make a public commitment to implement actions to deal with dengue

## Conclusions

1. Health promotion is a public health approach that prioritizes multilevel initiatives that are political, social, environmental, economic, and community-oriented in nature. These initiatives aim at addressing social determinants that influence practices and settings that are part of people's everyday lives.
2. The space administration approach, in addition to the health promotion approach, is a conceptual and operational paradigm that highly favors the PAHO health strategy in all policies. This approach highlights the responsibility that every government sector has in reversing the living conditions that lead to disease outbreaks.
3. Although the biomedical model is effective at preventing or identifying, at an early stage, disease epidemics and providing timely and quality health care, it does have limitations when it comes to addressing living conditions influencing the spread of the dengue vector and the spread of other diseases.
4. Participation of the education sector (i.e., schools and institutions of higher education) is essential for starting a discussion on the importance of recognizing that living conditions affect people's health, and to address this, we need an interdisciplinary approach, not just one that largely relies on health professionals.

## Lessons Learned

1. Political decisions at the central level, commitment by higher officials, intra- and intersectoral coordination, competent health teams, and empowerment of the population are necessary strategic elements in addressing social determinants of health in an intersectoral manner.

2. It is not possible to generate widespread participation of government sectors, civil society, and communities without the leadership of local and regional governments.
3. The role of the health sector is crucial to providing technical assistance to other sectors in facing dengue epidemics (not necessarily for the purpose of leading operational actions in field) and to highlighting the importance of addressing the social determinants of health behind it.
4. It is important to appeal to the Ministry of Economy and Finances so that they recognize that public health requires a larger budget than what is currently available. Without an adequate budget, the possibilities of conducting successful and sustainable interventions are limited.
5. Professionals in health and other sectors, in local and regional governments, require a training process that will allow them to learn about the positive implications that the space administration approach has for confronting social determinants of health.

## Bibliography

- Cuadra B, Augusto C (2015) Jefe de Equipo de Vigilancia Epidemiológica en Salud Pública. MINSA 2015. Boletín Epidemiológico 24(31)
- Dirección General de Epidemiología (2015) MINSA 2015. Informe Ejecutivo N° 131 (SE 31-2015)—Seguimiento situación actual del dengue en Piura 2015
- DS N° 005-2015-SA (2015) que declara en Emergencia Sanitaria a la Región Tumbes
- DS N° 008-2015-SA (2015) que declara en Emergencia Sanitaria a la Región Piura
- Mateo Lizarbe S (2015) Dirección General de Epidemiología. MINSA 2015. Boletín epidemiológico 24(30)
- Op. Cit. (2015) Mateo Lizarbe, Susan
- Reglamento de Organizaciones y Funciones, ROF (2016) Ministerio de Salud