

# Community participation in *Aedes aegypti* control: a sociological perspective on five years of research in the health area “26 de Julio”, Havana, Cuba

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## Summary

**OBJECTIVE:** Effective dengue prevention and *Aedes aegypti* control is a priority for the Cuban health authorities. To enhance effectiveness, strategies oriented towards a more active involvement of communities in control activities are being tested. This paper presents a sociological perspective on a pilot project conducted in the health area “26 de Julio” (La Havana) in 1999–2004.

**METHODS:** Instrumental case study based on an exhaustive content analysis of project documents and on observations of a sociologist.

**RESULTS:** The context and the pilot project are systematically described and an analysis of the evolution of the underlying concept of community participation is provided. The pilot experience was a dynamic process influenced by self-reflection of the research team, feedback from research partners and changes in the epidemiological context (provoked by two dengue outbreaks during the study period). Community participation evolved from being just one component in *Aedes aegypti* control directed by the health staff into a learning and empowering process for the people. This change in the concept of participation was reflected in different aspects of the pilot project such as the learning and evaluation processes.

**CONCLUSION:** Empirical evidence from 5 years of research in the particular context of Cuba showed that moves towards community-based *Aedes aegypti* control are feasible. However, in order to be successful, community-based dengue prevention should be a social learning process, implying a transfer of power and responsibilities to local people. Actions undertaken must be oriented towards creating local capabilities, strengthening existing structures and organizations and promoting group work for learning participation from participation itself.

**keywords** Community participation, Sociology, *Aedes aegypti* control, Dengue, Cuba

## Introduction

Dengue is a vector-borne arboviral disease that causes extensive morbidity and mortality. Epidemics are widespread and have been reported in the Americas, Southeast Asia and the Pacific (Guzmán & Kourí 2003). Annually, 50 to 100 million cases of dengue fever (DF) and 250 000 to 500 000 of dengue hemorrhagic fever (DHF) are reported worldwide (Gibbons & Vaughn 2002).

Control of the vector has been the only global measure available to diminish dengue transmission (Guzmán & Kourí 2002). In particular contexts, epidemiological surveillance of febrile syndromes has been promoted for avoiding epidemics (PAHO 1994). Outside epidemic peri-

ods, the recommended method for *Aedes aegypti* control in the past, applications of insecticides targeting the adult mosquito has been largely replaced by measures aiming at the elimination of larval habitats. Although this strategy proved to be successful in many countries, sustaining the required costly, large and vertically structured programs remains a major problem. Thus, community-based source reduction programs have been put forward as the solution for achieving efficient and sustainable vector control (Gubler & Clark 1996).

However, this strategy faces the difficulty of involving people in decision-making, planning, implementation and evaluation of activities. Even though some efficacy of community-based strategies has been demonstrated in

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countries such as Puerto Rico (Winch *et al.* 2002), Honduras (Leontsini *et al.* 1993), Mexico (Lloyd *et al.* 1992) and Brazil (Chiaravalloti Neto *et al.* 2003), the expected outcome has not yet been achieved (Espino *et al.* 2004; Winch *et al.* 1992).

Elaborating effective approaches to dengue prevention and *Aedes* control is one of the priorities of the Cuban health authorities. Dengue prevention has been organized through the combination of four components: vector control - the most important one -, surveillance of febrile syndromes of unknown aetiology, international sanitary control and health education. The vector control program was established in 1981 in response to the largest epidemic of DHF ever in the Americas; it is vertically structured and involves thousands of field workers in charge of both larval source reduction and adult mosquito control (Kourí *et al.* 1989).

In the late 1990s, the Cuban health authorities perceived a risk of dengue epidemics due to changes in the epidemiological and economic situation of the country. The outbreak in Santiago de Cuba in 1997 (Kourí *et al.* 1998) provided evidence that the vector control program encountered difficulties to sustain the success reached during the 1980s. This was subsequently confirmed by the 2000 and 2001–2002 epidemics in Havana City (Peláez *et al.* 2004). It was thus decided to introduce changes in the *Aedes aegypti* control strategy and to pursue more active involvement of the population. Pilot projects were developed by the Pedro Kourí Institute of Tropical Medicine (IPK) to try out different approaches. Among these, an innovative pilot intervention study in the health area “26 de Julio” in Playa Municipality, Havana City, showed promising results (Sánchez *et al.* 2005).

Our objective was to systematically describe and critically analyze the changes that occurred in the approach to community participation in *Aedes aegypti* control in this pilot project. A systematization of what has been done and learned during this experience is needed in order to (re)orient future strategies at local and national levels. The lessons learnt may prove to be relevant in other settings.

To this end, we used Rifkin’s (1996) theoretical framework for assessing community participation. It illustrates how community participation can be understood and achieved in health programs. Within a target-oriented frame, participation is considered as a means to the end of health improvements. It is a way to mobilize community resources to support health services and health interventions. Involvement of people is passive and activities are decided upon, designed and planned by health professionals. Evaluation of success or failure is based on quantification of changes in health status. By contrast, in the empowerment frame, participation is seen as an end in

itself. The aim is to enable local people to take power over decisions which affect their lives and their health. In this perspective, community participation is understood as a dynamic process in which people, through learning and involvement, gain access to and control over health care resources. Involvement of people is active and based on community initiatives. The evaluation focuses on how people perceive and achieve social change. Data are mainly gathered with qualitative methods.

### Methods

The pilot study was analyzed as an instrumental case study. According to the typology proposed by Stake (1995), instrumental case studies examine one or more particular cases to provide insights into an issue in contrast to intrinsic case studies, where the researcher has an interest in the case itself.

The case is built on an exhaustive content analysis of project documents. All documents produced by the different institutions and actors involved between March 1999 and March 2004 were analyzed. These comprised: research proposals, minutes of workshop and community meetings, descriptions of research tools, action plans, teaching materials, official reports on activities, progress reports, presentations, scientific papers of the research team and the Annual Health Situation Analysis (HSA) conducted by family doctors from 26 de Julio health area. Documents were collected from the Cuban Ministry of Health, the Social Research Group from IPK, The Municipal Unit of Hygiene and Epidemiology, the 26 de Julio health area, and the People’s Council #4 from Playa municipality.

Additional information was brought by participant observation conducted by one of the author’s (DP) who worked as a sociologist in the research team. Her observations focused on community life, participation in community activities, interactions between outsiders and local people, and changes in project characteristics.

Based on Rifkin’s (1996) framework, a qualitative content analysis was performed. The examination of the data focused on identifying signs of changes in the conception of community participation over time and on the strengths and weaknesses of the project in relation to community participation. However, the analysis was also inductive, other categories emerging from the documents. These were thus iteratively scrutinized for these emerging categories, which were added to the framework.

Analysis of the data was mainly performed by the principal investigator during thesis work towards a Master’s in Disease Control (Pérez 2004). This research was part of the learning and reflection process on the

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participatory approach developed. Researchers with different backgrounds provided further inputs in the analysis.

## Results

The case study encompasses the description of the pilot project in its context. Main research stages, the changes in the context related to dengue and the adjustments in the national approach to dengue prevention are described as well as the evolution of the underlying concept of community participation.

### Community participation at the beginning of the pilot project

In 1999 community participation was just a tool in support of the control measures undertaken by the vector control program. People were requested to allow house visits and indoor spraying in cases of an epidemic. *Aedes aegypti* campaign staff also encouraged people to practice source reduction, sometimes taking coercive measures (fines). Although there was an explicit recognition that something had to be done by people themselves for achieving or maintaining success, community participation thus was mostly conceived as citizens executing activities proposed by the control program. These activities were irregularly promoted through mass communication campaigns.

### Brief description of the pilot project

The pilot project encompasses two main stages separated by a reflection period on the results achieved in the first stage. Two epidemics disrupted and influenced the project.

*First stage of the pilot project.* The pilot project took place in 26 de Julio health area, which has 27,030 inhabitants on 4.5 km<sup>2</sup> and is covered by one *policlínico* and 47 health centres run by family doctors. It is part of the municipality of Playa, located in the western side of Havana City, and geographically coincides with *Consejo Popular* (CP) n° 4.<sup>1</sup> Playa municipality was selected by the Ministry of Health because it had one of the highest *Aedes* infestation level in

<sup>1</sup>The CP (*Consejo Popular*) is an intermediate government structure between the municipality and the lowest structure of the local government: the *circunscripción*. It covers a significant volume of services and productive activities. This structure is integrated by the representatives of the *circunscripciones* and community organizations in the area. CP's collaborate with the health areas in managing and monitoring regular health activities. The health areas and the administrative structures do not necessarily coincide geographically.

Havana City and presented a high risk of imported dengue cases from endemic countries. Among the 9 health areas of Playa, 26 de Julio was selected after discussion with the local health authorities mainly because it had the highest *Aedes* infestation level in the municipality, with *Aedes aegypti* present since 1992 despite intensive control efforts.

The pilot project was elaborated by a multidisciplinary research team from IPK<sup>2</sup>. It consisted of designing and evaluating an intervention for improving integral *Aedes aegypti* control through community participation. A quasi-experimental study with a control area was proposed. The health area Ana Betancourt was selected as the control site. The aim of the research was to assess the effectiveness of the intervention in terms of changes in knowledge, attitudes and practices of the population and vector reduction. Short, middle and long term indicators were established for the evaluation.

The community was defined in terms of the population settled down in the CP. Participation was understood as involving people in decision-making, planning, implementation and evaluation. Three aspects were considered essential for achieving success: adapt the intervention to the population's characteristics, capacity building at local level and sensitize people to a health problem which is not their priority (even in the case of outbreaks, dengue is not usually perceived by people as a major threat (Suarez *et al.* 2005)).

The first stage of the pilot project was divided into three phases: formative research (Sánchez *et al.* 2004), intervention and evaluation. The intervention focused on strengthening intersectoral coordination at CP level through capacity building. The role of the research team was to promote community participation, to provide technical advice in implementation of the activities and to monitor resource utilization and participation of the population in the process. A before/after evaluation and a comparison with a control area, one year after the project implementation, showed that the intervention had been successful in terms of vector reduction. Changes in knowledge, attitudes and practices of the population on dengue control were also observed (Sánchez *et al.* 2005).

*The epidemics.* Between September and December 2000, a small outbreak of 138 confirmed cases of dengue fever occurred in La Havana (PAHO 2000). On June 2001, a second epidemic started affecting all municipalities of the capital. During its course, 12,889 cases of dengue fever and 78 of dengue hemorrhagic fever were reported (Peláez *et al.* 2004). A huge, centrally organized and

<sup>2</sup>It was composed of sociologists, psychologists, economists, social communicators, epidemiologists, ecologists and entomologists.

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managed social communication and mobilization campaign to boost vector control was launched from January 2002 onwards. Called the *Intensive Campaign*, it stopped transmission in 70 days (Peláez *et al.* 2004). The campaign involved people at all levels: the head of the state, governmental and political bodies, community organizations, sectors and households. All activities were accompanied by a strong top-down community mobilization. Grassroots organizations encouraged householders to apply source reduction measures within their houses and in neighbouring areas. This practice started to be called “*autofocal*” (self destruction of foci) by the management of the *Intensive Campaign* and became the corner stone in the discourse on community participation in Cuban dengue prevention and control.

The epidemics and the *Intensive Campaign* had a strong influence on the project. Indeed, the latter’s focus was on mobilization, not on aiming at capacity building in the communities. As such, it was at odds with the community-based approach the research team was trying to develop. Furthermore, the intensity of the campaign, with its reliance on the practice of *autofocal*, created strong pressure from formal leaders at local level and this challenged the research team’s messages.

*Reflection period.* For the sake of presentation this period is presented separately. In practice, it started by the end of the first stage of the pilot project and continued during the epidemics. As we will see, due to the importance attributed by the researchers to this period, the permanent reflection on the research process became a full component within the second stage of the pilot project.

The pilot project was critically analyzed by the researchers for defining future orientations. The main conclusion reached was that community participation was not achieved in the way it was defined and hoped for in the research proposal. While the population was active in implementation, it was not involved in decision-making, planning and evaluation. This was attributed to coordination at CP not being sufficiently decentralized to allow such an involvement. Another problem identified was the insufficient level of motivation, interest and involvement of family doctors and other health staff.

At this stage, in order to improve their skills in guiding participatory processes, some of the research staff were trained in popular education (Freire 1972; Preisswerk 2004) and participatory action research (de Koning & Martin 1996; Kemmis & McTaggart 2000). Interacting with research partners, the research design was also revised.

*Second stage of the pilot project: moving a step forward.* The second stage of the research started on January 2003. Capacity building at local level and strengthening intersectoral collaboration at the CP level were maintained as essential components. However, a complementary strategy focusing on family doctors and on establishing community working groups at *circunscripción* level was defined. These groups would be in charge of managing the vector control activities in their areas. The actions undertaken targeted four participatory processes: capacity building, social communication, behavioral change and participatory evaluation.

This stage is characterized by a permanent adaptation of the project design and activities to the context and is therefore not clearly divided into phases. A start-up workshop was organized by the IPK team with ten family doctors from three *circunscripciones*. The individual and collective benefits and harms of participating in the project were discussed with each of them. All had the opportunity to join and/or abandon the project at anytime. The workshop objectives were to: a) define the design of the new stage of the project in a participatory way; b) define responsibilities for each participant in all project tasks; and c) provide skills to family doctors for developing their own participatory projects. Participation was not defined beforehand by the IPK team. The concept and “*what it would mean*” for the actors involved was discussed and agreed upon in the initial workshop. Participation was understood as a dynamic learning process based on people’s experience. This concept encompasses taking responsibilities, involvement in decision-making and ownership towards the project.

At the end of the workshop, family doctors from one of the *circunscripciones* decided to conduct the annual routine Health Situation Analysis (HSA) based on a participatory diagnosis with a community group composed of eight to ten formal leaders from the *circunscripción*. Likely, the subsequent action plan was elaborated participatively. Family doctors from the two other *circunscripciones* started their participatory HSA once they felt ready for applying the acquired knowledge and skills into practice. Due to the participatory process, the action plans in each *circunscripción* differed from one other.

To summarize the case, in the first stage of the pilot project emphasis was put on awareness raising and on increasing risk perception and the knowledge of the population on dengue and its vector. This shows an imbalance toward participation as a means. In the second stage, the purpose was to have the community take over control of the matter.

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## Discussion

A possible limitation of the case study could originate from biases in the documents. But exhaustive content analysis of the documents from many different sources produced over a long time period allows to reduce the effects of these biases, if any. Possible biases in the analysis are limited by the inductive approach and the self reflection process conducted, including exchanges with an external sociologist (PL).

What mainly differentiates this paper from other published studies on community based vector control is the special attention given to the process of change within the strategy itself rather than on the measurement of endpoints and impacts defined in advance. The latter has been the common way of assessing community-based approaches' effectiveness and usefulness (Chiaravalloti Neto *et al.* 2003; Leontsini *et al.* 1993; Lloyd *et al.* 1992; Lloyd *et al.* 1994; Winch *et al.* 2002). But these studies limit themselves to simple descriptions of the program and/or the interventions and to assessing impact and do not provide much information on how to achieve and move forward in designing and implementing community-based interventions. The only exception we are aware of is Oliveira & Valla (2001). They used narratives of an experience with popular mobilization during the 1986–1991 dengue epidemics in Rio de Janeiro for presenting their findings. Without devaluating the importance of assessing impact, our paper shows that a descriptive process evaluation applied to the research practice is scientifically legitimate and produces other kinds of useful knowledge.

Although in the two stages achieving community participation was clearly defined as a process of transfer of responsibilities in vector control to local actors and the

idea of participation as a means and end by itself was clearly expressed, the concept of participation and what it meant during the second stage of the research was quite different from the starting point in 1999. One explanation for this could be that the first stage was basically designed to improve participation in the vertical control program. Participation evolved between the two stages as the result of a rigorous analysis of the difficulties experienced by the research team in the first stage on the one hand and of the social mobilization process created during the epidemics on the other hand.

Table 1 summarizes the changes and differences observed between the two stages of the pilot project. From these changes, a number of lessons for designing participatory community-based vector control programs in Cuba were derived by the research team, some of which might prove to be useful for implementing sustainable community-based dengue control programs in other settings.

## Community stakeholders

In both stages the main stakeholders identified were local leaders, representatives of different sectors, family doctors and the so-called "community". In the first stage, the latter was defined in terms of geographical terms and viewed as a "homogeneous group". This did not allow a proper understanding of all the different stakeholders, of their problems and different educational and social backgrounds, of conflicts of interest and communication problems within the community. In the second stage, distinctions were made among stakeholders. For instance, during the process, the research team felt the need to adapt the communication strategies to the socio-economical levels of the different neighbourhoods of 26 de Julio.

**Table 1** Changes in the conception of community participation during the pilot project on community involvement in the *Ae. Aegypti* control. Playa, Havana, Cuba

Dimensions assessed	1st stage of the project	2nd stage of the project
Concept of community	Geographical, homogeneous population	Heterogeneity of stakeholders
Target population	27 000 inhabitants at once	1000 inhabitants
Learning process	Transmission of knowledge	Sharing of experiences and collective construction of knowledge
Outcome measures	Entomological indices	Idem + changes in participatory processes
Evaluation	Knowledge, attitudes, practices	
Research documents	Focused on impact	Impact + participatory process evaluation
Resource allocation	Mainly academic reports and publications with focus on impact	Idem + publications focused on the process.
Research team	Centralized decision-making	A larger amount of detailed and extensive field documents
Leadership	Narrowly defined	Participatory decision-making based on needs
Ethical issues	Paternalist	Extended definition. Local actors included
	Low concern about ethical issues	Shared with local staff
		Ethical issues clearly expressed and monitored

### Levels of implementation and organizational set-up

The evaluation of the first stage indicated that the coordination group at CP level was too far from the population and covered too many people. This limited the possibilities of involving people in decision-making and planning of activities. Decisions were taken at CP level and communicated to the population for execution. Working at the *circunscripción* level was the solution adopted in the second stage. This level was identified as the lowest possible existing structure for sectors and community organizations to work together. In Cuba, it is the level where people can express their concerns with daily life problems and where a number of solutions can be found. However, because all problems cannot be solved at this level, a link was kept with the CP allowing for broader intersectoral actions to take place.

In the second stage, a reinforcement of the role of the primary health care services in dengue prevention and control occurred. A new approach to the role of family doctors as health leaders in their own communities emerged. Thus, family doctors were provided with skills in order to improve their capacity to work with the population.

Rather than creating additional external structures, interventions at local level should be inserted in the pre-existing social structures, organizations and institutions. However, the level of implementation of activities should be as close to people as possible in order to involve them in the decision-making process. In dengue control, links should be maintained with higher level structures for solving problems which can not be addressed by the community alone and that require intersectoral collaboration.

### Learning process

Building capacities and skills at the local level was the main activity conducted for achieving results in both stages. The learning process was, however, very different. In the first stage, learning was conceived on the traditional pattern of knowledge transmission. In the second stage, learning was conceived as the construction of common knowledge among all the project actors (including the researchers). Experience of the participants was central to the process. The qualitative and participatory diagnosis used in the HSA clearly illustrates this move. The role of the “trainers” was to guide and coordinate the process while learning from the participants. Defining with the actors a common concept of participation that could be achieved, measured and improved also illustrates the shift of conception in the learning process.

Achieving community participation is a dynamic and complex process that entails continuous learning from present and past experiences. This learning process should concern all stakeholders involved (local people, implementers, researchers, etc.). The ability to work in teams is essential. Therefore, these actors should have the necessary skills. Indeed, attitudes towards participation and communication skills of the researchers/implementers are critical in the process. Consequently, capabilities should be created among these staff before involving them in these kinds of interventions and guidelines and tools for interacting with people should be made available.

### Evaluation and indicators

In both stages outputs were quite similar: people trained, group work strengthened, responsibilities were defined, action plans designed and executed, local communication strategies and means were developed. However, some important changes were introduced in the measured outcomes and in the evaluation process.

In the first stage, the impact of the intervention was measured through the changes observed in the levels of infestation of *Aedes aegypti* and through KAP (knowledge, attitudes and practices) surveys. In the second stage, the importance of measuring changes in individual and household behaviour through observation and in the participatory strategy at the local level was recognized. In this latter evaluation process, special attention was given to qualitative measurements. The assessment focused on the commitment, responsibility and autonomy of the different stakeholders involved. Self criticism of the research team was considered essential in the evaluation process.

Attaining successful community participation implies adapting strategies to local situations, and to the conditions and capabilities of the communities. Therefore there can be no blueprints or simple recipes for achieving community participation in dengue control. Each situation is unique. Whatever the strategies, the focus should be on empowering people at local level and not on dengue control per se. This has methodological implications: participatory process evaluation should be considered a central tool for implementing community-based projects.

The method used to analyze the project that underlies this paper illustrates this role. Basically it is a case study based on a qualitative content analysis of project documents and a continuous reflection process on this content. As we have shown, it helped to understand why, how and in which context the research was conducted and evolved and offered a lot of insights into the topic of community-based vector control in the peculiar context of Cuba.

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Results are also currently being applied in another Cuban municipality.

### Research documents

Process documentation increased over time. Six times more documents from the field were produced during the second stage. Consequently, viewpoints and opinions from the local actors started to be expressed more frequently. Changes were noticed in the language and expressions used in reports that reflected the appropriation of concepts and values discussed during the initial workshop. The documents were more detailed and extensive and started to offer all the necessary information to understand the logic and the dynamics of the implementation process.

### Resource allocation and mobilization

In both stages the intention to mobilize local resources existed and some of the project's financial resources were distributed at local level. In the first stage the distribution of the materials was centralized by the coordinator of 26 de Julio health area. In the second stage, needs were assessed in a more decentralized way. The allocation of the resources was decided by the family doctors, who are considered part of the community, and no longer by the representatives of the health area alone.

### Research team and project leadership

The project was conducted by a research team. The pilot character of the project demanded this. In the first stage, the team was narrowly defined as the IPK staff. In the second stage, a researcher was understood as a person who was involved in guiding, planning, executing, and evaluating the project. Thus, the research team included actors who did not fulfil the traditional requirements of the researcher. In this sense the project leadership was shared. The latter approach increased acceptance of the project, ownership and commitment of the stakeholders involved and therefore sustainability.

### Ethical issues

Ethical aspects associated with participation started to be clearly expressed from the reflection period onwards by the IPK team. Potential ethical problems were understood in terms of creation of false expectations in the population; manipulation of people's needs, behaviour and attitudes; implementation of non sustainable structures or activities, and creation of conflicts of interest among stakeholders involved. Participation was viewed as a result of motiva-

tion and free will of people and more attention was given to the respect of people's decisions and interests in relation with project execution.

Many of these characteristics of community-based interventions are already known and have been discussed extensively by scholars and practitioners (Morgan 2001; Zakus & Lysack 1998). For instance, Krishna, Uphoff & Esman (1997) stress the need for adapting strategies to local contexts, Lysack (1996) deconstructs the concept of community, and Khanlou & Peter (2005) discuss ethics in participatory action research. What is important for our purpose is that these lessons were not derived from theoretical frameworks prescribing "what should be community participation" but from fieldwork, practice and a continuous reflection process on the experience. Practice is the corner stone for achieving community participation. Difficulties will always be found in implementation and practical solutions will always have to be sought.

### Conclusions

Empirical evidence from 5 years of research in the particular context of Cuba showed that moves towards community-based *Aedes aegypti* control are feasible. However, in order to be sustained, community-based dengue prevention should be a social learning process, implying a transfer of power and responsibilities to local people. In this sense, the actions undertaken must be oriented towards creating local capabilities, strengthening existing structures and organizations and promoting group work for learning participation from participation itself.

From a disease control point of view, this concept will ensure a better insertion of the *Aedes aegypti* vector control in the social, cultural, politic and economic environment. From a scientific point of view, this concept opens a large field of research: participatory, qualitative and emphasizing a process of learning from past errors. Finally, if community based vector control is to remain the way forward: unless we document what works and what does not, and why, we will fail to overcome the uncertainty surrounding the usefulness of community-based vector control, and to eventually achieve the results expected from it.

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D. Pérez *et al.* **Community participation in *Aedes aegypti*****Participation de la communauté au contrôle de l'*Aedes aegypti*: une perspective sociologique basée sur une recherche de cinq ans dans la zone de santé '26 de Julio' à La Havane à Cuba**

**OBJECTIF** La prévention effective de la dengue et le contrôle de l'*Aedes aegypti* sont une priorité pour les autorités cubaines de la santé. Afin d'augmenter l'efficacité, des stratégies dirigées vers une participation plus active des communautés dans les activités de contrôle ont été examinées. Cet article présente une perspective sociologique sur un projet pilote menée dans la zone de santé '26 de Julio' à La Havane en 1999–2004.

**MÉTHODES** Étude de cas instrumentale basée sur une analyse exhaustive du contenu des documents du projet et sur les observations sociologiques.

**RÉSULTATS** Le contexte et le projet pilote sont systématiquement décrits et une analyse de l'évolution du concept fondamental de la participation de la communauté est fournie. Les résultats montrent que l'expérience pilote était un processus dynamique influencé par une autoréflexion de l'équipe de recherche, une réponse en retour des partenaires de la recherche et les changements dans le contexte épidémiologique (provoqués par deux épidémies de dengue au cours de la période d'étude). La participation de la communauté a évolué à partir d'un composant simple dans le contrôle de l'*Aedes aegypti* dirigé au départ par le personnel de santé vers un apprentissage et un processus de renforcement du pouvoir de la population. Ces changements dans le concept de la participation se sont reflétés dans différents aspects du projet pilote tels que les processus d'apprentissage et d'évaluation.

**CONCLUSION** L'évidence empirique de 5 ans de recherche dans le contexte particulier de Cuba a montré qu'une évolution vers un contrôle de l'*Aedes aegypti* basé sur la communauté était réalisable. Cependant, afin d'être efficace, la prévention contre la dengue basée sur la communauté devrait être un processus social d'apprentissage impliquant un transfert de pouvoir et de responsabilité à la population locale. Les actions entreprises doivent être orientées vers la création de capacités locales, le renforcement des structures et organisations existantes et la promotion du travail de groupe pour une participation à l'apprentissage à partir de la participation elle-même.

**mots clés** Participation de la communauté, sociologie, contrôle de l'*Aedes aegypti*, Dengue, Cuba

**Participación comunitaria en el control de *Aedes aegypti*: una perspectiva sociológica sobre cinco años de investigación en el área sanitaria del "26 de Julio", en la Habana, Cuba**

**OBJETIVO** La prevención efectiva del dengue y de *Aedes aegypti* es una prioridad para las autoridades sanitarias cubanas. Se están probando estrategias que buscan involucrar activamente a las comunidades en las actividades de control, con el fin de aumentar su efectividad. Este artículo presenta la perspectiva sociológica de un proyecto piloto conducido en el área de salud del "26 de Julio" (La Habana) entre 1999–2004.

**MÉTODOS** Estudio de caso instrumental basado en un análisis de contenido exhaustivo de los documentos del proyecto, así como en observaciones de un sociólogo.

**RESULTADOS** Se describe sistemáticamente el contexto y el proyecto piloto, y se realiza un análisis de la evolución del contexto subyacente en la participación comunitaria. Los resultados demuestran que la experiencia piloto fue un proceso dinámico, influenciado por la auto reflexión del equipo de investigadores, las observaciones de compañeros investigadores y cambios en el contexto epidemiológico (provocado por dos brotes de dengue durante el período de estudio). La participación comunitaria evolucionó de ser simplemente un componente más en el control de *Aedes aegypti* dirigido por el personal sanitario, al aprendizaje y un proceso de fortalecimiento de las personas. Este cambio de concepto en la participación se vio reflejado en diferentes aspectos del proyecto piloto, tales como los procesos de aprendizaje y evaluación.

**CONCLUSIÓN** La evidencia empírica de 5 años de investigación en el contexto particular de Cuba demostró que es posible el cambio hacia un control de *Aedes aegypti* basado en la comunidad. Sin embargo, para tener éxito, es necesario que la prevención del dengue basada en la comunidad sea un proceso de aprendizaje social, que implica una transferencia de poder y responsabilidades a las personas locales. Las acciones que se lleven a cabo deben estar orientadas a la creación de capacidades locales, fortalecimiento de estructuras y organizaciones existentes, y a la promoción del trabajo en grupo, para un aprendizaje participativo mediante la acción.

**palabras claves** Participación comunitaria, Sociología, control de *Aedes aegypti*, Dengue, Cuba