

# Perceptions of Field Workers and Community Leaders Regarding Vector Control Activities in Urban Vadodara: Excerpts from the Field

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## Abstract

**Background:** A T a e i a e l A i • A e A { a e l [ i A ] ~ a i a e l A o ^ A e l c o A } i [ a h { A a } A [ ~ i A & [ ~ } c i ^ A e ~ ^ e c a } \* A e l l A • ] @ ^ i ^ o A [ - A @ ~ { a e } A i e ^ e A , a c o P l a s m o d i u m f a l c i p a r u m h { [ i c a e l a c ^ A a ^ i } \* A o i • @ e A V @ ^ A [ ~ c a i ^ a e \ A ] ; [ ] [ i c a [ ] • A e i ^ A ~ a c ^ A e l a e i { a } \* A a } A ~ i a e e } A e i ^ a e • e A e l c o [ ~ \* @ c o ^ A V i a e } A T a e l a e i a e l U e o ^ A { ^ A , a e A l a e ~ } & @ a h a } A F J I F a c [ A - & ~ • A [ ] A W i a e } A T a e l a e i a e l

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**Results:** A U @ [ i c e \* ^ A [ - A { a e } ] [ , ^ i A , a e A ^ c i a e l c h e } [ ] \* A e l l A & a e i a e l A [ - A c ^ c [ i A & [ ] c i [ i h a • c e e - e A c o [ ~ \* @ A a e c a e l a e i a e l a [ - & [ { [ a i c a ^ a e } a h { a e i c o l a e } & ^ A [ - A ^ ~ a ] { ^ } c o A , a e A • a e c i • a e c [ i e A V @ ^ A a i • & ~ • • a [ ] • A @ i • @ i a ~ c o ^ a h a e l A ^ a h - [ i A i ^ - i ^ o ^ A i c i a e i a } \* e k a e c c ^ c i [ ] A i ^ ~ a i ^ a h [ ] A a e i c h [ - A ^ } a i ^ i } \* A a i a e } & @ h c [ A h ~ i a h i l l ^ \* a e l h ^ o , a e \* ^ A i a } ^ A , a c o A c [ i { A , a e c i a a i a e i } a e \* e A U } A e c o i a i [ - A c o ^ A & [ { { ~ } a c ^ A i a e a i • A , ^ i ^ A e , a e i a e [ - A c ^ c [ i A & [ ] c i [ i h a e e & c i c a c a ^ a e A e l { [ • c h } [ ] ^ A , ^ i ^ A e , a e i a e a e [ ~ c h e } c i e l a e i c a e l a e & c i c a c a ^ a , @ i ^ A i ^ o • A c o e } A @ a e - A , ^ i ^ A e , a e i a e a e [ ~ c h { ~ i & ^ A i a ~ & c i [ ] A e e & c i c a c a ^ a e A P a e l A [ - A c o ^ A & [ { { ~ } a c ^ A i a e a i • A , ^ i ^ a e , a e i a e [ - A O O h e e & c i c a c a ^ a - i h c ^ c [ i h a i ] ^ A a i a e • A e

**Conclusion:** A V @ ^ i h a e e } A ~ i ^ A } c h } ^ a h c [ h a } & i a e o ^ A c e e - A • c i ^ } \* c o A e } a h ^ } a e c h a c i a e h a ~ a e , • A - [ i A c ^ c [ i A & [ ] c i [ i h e e & c i c a c a ^ e Q } c i e A ^ } a e i c { ^ } a e l h & [ e [ i a i } a e c i [ ] a , a c o A c o ^ A O } \* a } ^ a i a } \* A e } a h U e } a e c e c i [ ] a i a e } & @ h e } a h c i a e i a } \* A [ - A c o ^ A a i ~ ^ i ^ } c h , [ i ^ h a e a i ^ o • @ [ ~ ] a h a ^ A & [ ] • a i a ^ a e

**Keywords:** Malaria; Vector control; Qualitative study; Field notes

## Abbreviations

FGD: Focus Group Discussion; IDI: In-depth Interviews; IDSP: Integrated Disease Surveillance Project; IEC: Information, Education and Communication; MOH: Medical Officer Health; MPO: Modified Plan of Operation; NMEP: National Malaria Eradication Program; NVBDCP: National Vector Borne Disease Control Programme; P  
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T e

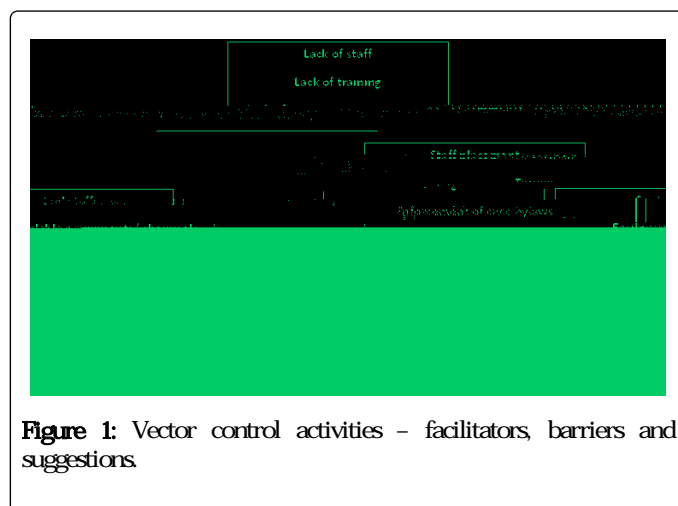
current scenario

**Manpower:** The single post of insect Collector was vacant, with almost half the sanitary inspector, supervisor and field worker posts being vacant. FGDs with field workers revealed shortage of functionaries at their level, which was bound to worsen owing to retirements and vacant posts. Field supervisors also mentioned this as one of the main causes of decreased quality of work. This led to multiple work being done by single person.

“We have to do many activities right from official work to picking up the dirt”

Such was the report from the malaria inspectors too, who experienced this problem firsthand, with there being 4 inspectors looking after 13 wards of the city. This, as per them, led to substandard work on field. Frequent transfers of sanitary inspectors also exaggerated this condition, with more time being consumed to train freshly appointed candidates. Similar problem was voiced by the biologist and the insect collector.

The Medical Officer Health (MOH) mentioned the administrative policy for cutting down expenses, which led to lack of recruitment of new staff. The vertical staffing pattern of urban malaria scheme was considered as one of the causes of inadequate manpower.



**Figure 1:** Vector control activities – facilitators, barriers and suggestions.

**Availability of commodities:** Availability of machinery, fogging equipment was adequate on the whole. All the field workers, supervisors and inspectors were satisfied with the functioning of the older machines. They however, mentioned that functioning would be much smoother if the number of machines for each activity were to increase. The insect collector did not get the equipments as per requirement and was concerned about the quality of products received.

Insecticides such as Abate and Fenthion supplied by the Government of Gujarat are indented in April, based on the previous years consumption. The flow of these occurs through the Corporation which procures the required insecticides from the Capital. They are supplied twice or thrice a year, with no shortage being faced anytime.

There was adequate Chloroquine supply, with no 'stock outs' in any of the dispensaries till date.

Contradictory to these findings, one of the literature review studies shows that malaria elimination was difficult due to lack of sufficient commodities for vector control [12].

**Training of workers:** There was no training given to the field workers or malaria inspectors any time during their working period. Insect collector was trained only once at the time of recruitment, while field supervisors were trained once for around 3 days. It was assumed by the biologist that training was not required by the field workers because they were guided by field supervisors in day-to-day activities. Training was the 'felt need' of all the cadres interviewed, with the MOH being aware of the need of training and refresher courses.

**Vector control activities:** The heart of anti-malaria efforts, vector control activities are the responsibility of every cadre of workers. Vector control activities, are the mainstay of a good malaria control programme [13].

The biologist who is the main functionary in conducting these vector control activities mentioned that anti-larval measures by chemical methods are the main vector control activities.

“If Antilarval activities are done 100%, there is no need for anti adult measures”

Sanitary inspectors also believed that source reduction is the best, as mentioned in their FGD. Major and minor engineering methods, biological control, treatment, active and passive surveillance are other activities. Antilarval activities, intradomestic (house-house visits) and peri-domestic (treatment of holes, pits, fountains etc are done weekly). Biological measures such as Gappi and Gambusia fish and *Bacillus thuringiensis* (biolarvicide) are used. Fogging with 2% Pyrethrum is done in places where microscopically confirmed cases were reported. Fogging is done in 50-100 houses surrounding the house of confirmed malaria and 200 houses surrounding house of confirmed dengue and chikungunya cases.

Field workers and supervisors map all breeding places along with regular check on tanks, coolers and air conditioners to check for mosquito breeding. Abate is used in breeding places.

Malaria inspectors take daily attendance of field workers, cross-check and supervise their activities on field and perform minor engineering procedures and biological measures. They help prepare spray solution for fogging Temephos for intra-domestic spray and Fenthion for peri-domestic spray.

Fogging is done in areas surrounding houses where confirmed cases are notified; information of which is taken from private hospitals by the workers.

The insect collector looks for and collects mosquitoes from areas guided by the biologist. This is done on a daily basis, with 12 houses being examined for 15 minutes each – 2 houses where cows and buffaloes are reared, 2 where goat and sheep are reared, 2 with no such cattle and the remaining 6 being selected randomly.

**IEC activities:** Monsoon being the malaria transmission season, June is acknowledged as Malaria Eradication Movement Month. Pamphlets on malaria awareness are displayed and distributed, puppet shows in slum areas and schools (above 5<sup>th</sup> Standard) are organized, announcements on malaria information are organized in religious places along with important malaria messages printed on dairy pouches and income tax papers. Electronic media and radio are used for IEC activities. Slogans are used to capture attention, such as

“Where there is water, there are larvae, where there are larvae, there are mosquitoes, where M there - ” M



implementing civic bylaws and interdepartmental co-ordination. Only half of the Community leaders were aware about vector control activities and IEC activities in their area.

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