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PRE-SEASON DEPLOYMENT OF IN2CARE® MOSQUITO STATIONS TO CONTROL *AEDES AEGYPTI* POPULATION IN THE WEST VALLEY REGION OF SAN BERNARDINO COUNTY, CALIFORNIA

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ABSTRACT. The recent geographic expansion of *Aedes aegypti* poses a significant global public health challenge. In California, these invasive mosquitoes are now present in over 300 cities across 25 central and southern counties. The In2Care® Mosquito Station, which uses biological control agents to target *Aedes* mosquitoes, has shown promise when integrated into existing integrated vector management strategies. This study evaluated the impact of pre-season deployment of In2Care stations on *Ae. aegypti* populations. Two cohorts were established: 1 with 17 sites deploying stations pre-season (April–November), and another with 15 sites deploying during peak season (July–November), maintained during 2022–2024. Monthly BG-2 Sentinel trap data showed a significant reduction in *Ae. aegypti* abundance at pre-season In2Care sites: from 31.2 mosquitoes/trap-night in 2022 to 20.1 in 2023 and 13.2 in 2024, with a year-to-year reduction of 34–36%. Peak-season In2Care sites showed a 24–36% reduction in mosquito abundance four weeks post-deployment. Pre-season In2Care sites maintained 22–34% lower mosquito abundance than peak-season sites. These results demonstrate that early deployment of In2Care stations prior to the mosquito season significantly reduces *Ae. aegypti* populations and reinforces the existing integrated vector management programs.

KEY WORDS *Aedes aegypti*, California, integrated vector management, In2Care Mosquito Station

INTRODUCTION

Recent geographic expansion of *Aedes aegypti* (L.) pose a significant public health challenge in many regions globally (Kraemer et al. 2015, Roiz et al. 2024). In California, these invasive mosquitoes are fast spreading since their first detection in 2013 (CDPH 2023). The expansion of *Ae. aegypti* is significant because of its role as a primary vector for diseases such as dengue, chikungunya, and Zika (Ding et al. 2018). As of May 2, 2025, the California Department of Public Health (CDPH) reported the presence of *Ae. aegypti* in 25 counties across the state, indicating continued geographic expansion of this invasive vector species (CDPH 2025). In 2024, California recorded a total of 18 locally acquired dengue cases, marking a significant increase from the first 2 such cases documented in 2023 (CDPH 2024). This sharp increase highlights the growing risk of autochthonous transmission and underscores the need for proactive vector surveillance and control strategies. Existing integrated vector management (IVM) methods often struggle to effectively manage *Ae. aegypti* populations because of their cryptic breeding habitats, therefore necessitating the need for innovative tools.

Mosquito control districts implement IVM strategies that combine multiple evidence-based interventions to sustainably reduce mosquito populations and mitigate the risk of vector-borne disease transmission (CDPH, 2023). Surveillance serves as the foundation of IVM, involving routine monitoring of adult mosquito populations using mosquito traps such as BG sentinel traps to detect invasive *Aedes* mosquitoes, alongside larval habitat inspections to identify and target breeding sources. Source reduction remains a key pillar, supported by public education campaigns that promote the elimination of standing water and habitat modifications that hinder larval development. Where appropriate, targeted larval control is conducted through the application of biological larvicides such as *Bacillus thuringiensis israelensis* de Barjac and the deployment of larvivorous fish (mosquitofish) in standing waters. In recent years, novel tools like the In2Care® Mosquito Station—leveraging autodissemination of larvicides and entomopathogenic fungi—have been incorporated into IVM programs to target *Aedes* populations more effectively. In areas with persistent *Aedes* activity but cryptic breeding sites, biological control methods such as sterile insect technique (SIT) and In2Care Mosquito Stations are employed to suppress mosquito populations. Community engagement is integral to IVM, with vector control agencies responding to service requests and conducting targeted outreach through educational initiatives, public events, and multilingual communication efforts. Interventions are primarily guided by data-driven approaches, including spatial-temporal analyses, to optimize timing and geographic targeting. Furthermore, mosquito control districts collaborate with local public health authorities and regional vector control agencies to ensure coordinated, timely responses, particularly during periods of increased transmission risk.

Autodissemination is an *Aedes* mosquito control strategy that leverages the behavior of gravid females to locate and visit multiple breeding sites. In this method, egg-laying *Aedes* mosquitoes are contaminated with insect growth regulators (IGRs), which they subsequently transfer to cryptic and hard-to-reach larval habitats, effectively reducing offspring survival (Gaugler et al. 2012). The In2Care Mosquito Station is an example of an autodissemination device designed to target container-breeding *Aedes* mosquitoes by exploiting this natural behavior (Buckner et al. 2021). The In2Care Mosquito Station, a novel tool that utilizes biological control agents to target *Aedes* mosquitoes, has shown promise in reducing *Aedes* populations (Buckner et al. 2017; WHO, 2000). At its core, the In2Care Mosquito Station functions as a discreet, self-contained unit strategically placed in areas of high mosquito activity, such as residential neighborhoods, parks, and urban environments. Its design incorporates multiple intervention mechanisms aimed at disrupting the mosquito life cycle and minimizing mosquito breeding and survival. The Station contains the larvicide, pyriproxyfen, that targets mosquito larval development, but harmless to humans. Pyriproxyfen is an insect growth regulator (IGR) that interferes with the metamorphosis of juvenile *Aedes* mosquitoes, preventing their development into adults capable of transmitting the dengue virus (Yadav et al. 2019). A recent systematic review assessing the effectiveness of pyriproxyfen found its highly effectiveness in controlling the immature stages of *Aedes* mosquitoes, and to a smaller degree adult *Aedes* populations (Hustedt et al. 2020). Another crucial feature of the In2Care Mosquito Station is the inclusion of a biological control agent, the fungus *Beauveria bassiana* (Bals.-Criv.) Vuill., which infects adult mosquitoes upon contact, ultimately leading to their death. When mosquitoes enter the In2Care Mosquito Station, they come into contact with the fungal spores, which adhere to their bodies and initiate infection. Over time, the spores germinate and penetrate the mosquito's cuticle, leading to death within a few days (Snetselaar et al. 2014).

Several studies have demonstrated the potential of the In2Care Mosquito Stations in controlling *Ae. aegypti* populations in various settings. Buckner et al. (2021) reported that the In2Care Mosquito Stations effectively reduced *Ae. aegypti* populations and were deemed particularly useful in areas lacking sophisticated mosquito control programs in Florida. The study also suggested that while In2Care Mosquito Stations are beneficial, their practicality might be limited in large areas (>20 ha) without additional control methods. In the West Valley region of southern California, Su et al. (2020) reported that the In2Care Mosquito Stations attracted *Ae. aegypti* and *Culex quinquefasciatus* (Say), with the latter species predominating at much higher larval densities in the trap reservoirs. Field-collected larvae and pupae from the stations showed complete inhibition of adult emergence. Furthermore, the In2Care Mosquito Stations retained high levels of residual larvicidal, pupicidal, and emergence inhibition activity even after they were retrieved from the field (Su et al. 2020). Generally, the success of In2Care Mosquito Stations depends on deployment strategies, environmental factors, and integration with other mosquito control methods.

Overall, a growing body of work indicated that the In2Care Mosquito Stations can be an effective tool in reducing *Aedes* populations by targeting multiple life stages, especially when utilized along with existing IVM strategies (Buckner et al. 2017, Salazar et al. 2019, Su et al. 2020, Buckner et al. 2021, Paris et al. 2023). Its integration into broader mosquito control strategies may enhance its effectiveness in various environmental settings. While prior studies have demonstrated the effectiveness of In2Care Mosquito Stations in suppressing *Ae. aegypti* populations even using low deployment densities in areas with low mosquito abundance (e.g., McNamara et al. 2024), evidence regarding their efficacy in high mosquito density settings remains limited. This study provides an opportunity to test whether similar levels of vector suppression can be achieved in regions with elevated mosquito abundance. We hypothesize that the sustained, pre-season deployment of In2Care stations will significantly reduce *Ae. aegypti* populations, even in high mosquito density environments. To evaluate this, we assessed the impact of In2Care Mosquito Stations—deployed as part of an IVM strategy—on *Ae. aegypti* abundance in the West Valley region of southern California. In this area, In2Care Stations have been utilized since 2021 (Su et al. 2020), with structured pre-season deployment initiated in 2022.

MATERIALS AND METHODS

Study area

This study took place in the West Valley Mosquito and Vector Control District (WVMVCD), located in southwestern San Bernardino County, California (Fig. 1). Covering an area of 544 sq km, the District serves over 600,000 residents across Chino, Chino Hills, Montclair, Ontario, Rancho Cucamonga, Upland, and adjacent unincorporated areas. The region experiences a semi-arid climate, characterized by hot summers and mild winters. Summer temperatures (June to September) can reach up to 43°C, whereas winter temperatures (December to February) drop as low as 5°C, with annual rainfall averaging 381 mm. The mosquito season primarily occurs in the summer, with *Ae. aegypti* populations peaking between July and September (Birhanie et al. 2025).

Study design

Each year, WVMVCD conducts extensive weekly mosquito surveillance across its jurisdiction, deploying 60–80 Biogents Sentinel-2 (BG-2) traps to monitor invasive *Aedes* mosquito activity. To evaluate the effectiveness of pre-season versus peak-season In2Care deployments against mosquito population, two cohorts were established: sites that received In2Care Mosquito

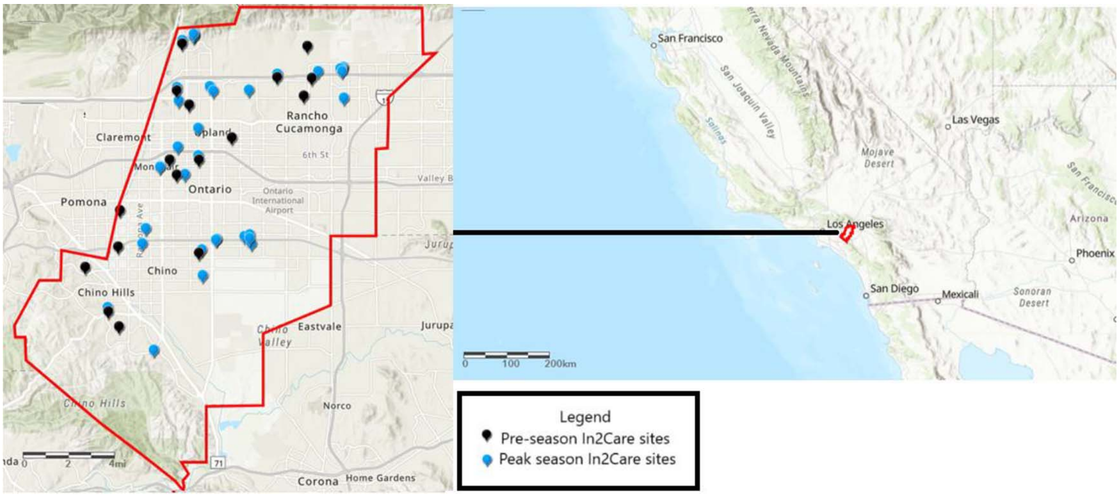

Fig. 1. Study area – the West Valley Mosquito and Vector Control District and location of the pre-season (black pins) and peak season (blue pins) In2Care® Mosquito Stations.

Stations prior to the mosquito season (i.e., pre-season deployment cohort) and sites that received In2Care stations during the peak season (peak-season deployment cohort).

Pre-season deployment cohort

A total of 17 pre-season In2Care deployment sites were randomly selected (2–3 sites per City) to serve as pre-season cohort. These sites were selected using historical data and received In2Care Mosquito Stations prior to the mosquito season. In2Care Mosquito Stations remained operational from April to November in 2022, 2023, and 2024. Monthly surveillance data were collected throughout the study period using BG traps to monitor mosquito activity. One of the 17 pre-season In2Care study sites opted out of receiving In2Care Mosquito Stations in 2024 and was therefore excluded from the analysis. The homeowner chose to opt out of the program because they believed that mosquito numbers had declined and no longer saw the need for continued intervention. This, however, provided an opportunity to assess the potential impact of discontinuing In2Care deployment on the mosquito population. None of the study sites were treated with pesticide during the study period.

Peak-season deployment cohort

During the mosquito season, residents experiencing mosquito bites would submit service requests. In response, state-certified technicians would inspect potential breeding sites, and if no mosquito breeding was found, BG-2 traps would be deployed to monitor mosquito activity. When invasive *Ae. aegypti* counts exceeded the threshold of 20 mosquitoes per trap-night, In2Care Mosquito Stations were strategically installed at the site. Mosquito activity was then monitored weekly for 4–8 weeks following In2Care deployment to assess the impact of the intervention. A total of 15 sites that received In2Care Mosquito Stations during the peak season (July–September) were selected to serve as peak-season cohort. Peak-season In2Care cohort was maintained until November each year between 2022 and 2024.

In2Care Mosquito Stations deployment

Annually, the District deployed a total of 420 460 In2Care Mosquito Stations (In2Care BV, Wageningen, the Netherlands) throughout its jurisdiction, pre-season and peak season combined, each year between 2022 and 2024. In2Care Mosquito Stations were deployed at residential areas with high-risk *Aedes* hotspot or active *Aedes* sites, with 1 In2Care mosquito station per residence (on average 400 sq m [0.04 ha]). All the neighborhoods included in this study had the same population density, sociodemographic makeup and comparable lot size. As part of our IVM strategies, we first inspected sites with historical high *Aedes* counts or with mosquito nuisance complaints from the public for any potential mosquito breeding site. If mosquito breeding habitats were detected, appropriate control measures (ranging from source reduction, biological control (e.g., mosquitofish) to pesticides would be applied. If no mosquito breeding site was detected, then BG-2 trapping would be conducted, and In2Care Mosquito Stations would be installed if *Ae. aegypti* counts exceed the threshold. Homeowners would be contacted to receive their consent to host the In2Care on their properties. After receiving consent, trained technicians would deploy the In2Care Mosquito Stations in the front yard of the property. The Mosquito Stations were strategically placed in shaded or semi-shaded areas around homes. During setup, the In2Mix sachet—containing biocides, odor tablets, and gauze—was thoroughly shaken to ensure maximum adherence of biocides to the gauze. All In2Care Mosquito Stations were serviced every four weeks in accordance with the label requirements (In2Care, 2020). Detailed procedures have been published elsewhere (Su et al. 2020).

Mosquito surveillance

Monthly mosquito activities were monitored at all study sites using BG-2 traps. Trapping was done between February and November each year between 2022 and 2024. Traps were set in the afternoon and retrieved the following morning. Traps were powered by 12V rechargeable batteries and typically operated for a 24-h period. Traps were supplemented with BG lure (artificial human scent) and dry ice containing bucket placed above them to attract mosquitoes. Traps were set typically under trees or shrubs in the afternoon, at least 10 m away from the In2Care Mosquito Stations, and picked up the following morning. Captured mosquitoes were identified to species level under a microscope by trained laboratory technicians using morphological keys (Meyer and Durso 1998). The number and species of mosquitoes in the traps would then be recorded.

Statistical analysis

All recorded data were entered into Microsoft Excel and analyzed using SPSS version 20 (SPSS, Inc., Chicago, IL, USA). To compare *Ae. aegypti* abundance between pre-season and peak-season In2Care sites, the mean monthly number of *Ae. aegypti* per trap-night were calculated for each cohort. Additionally, for the pre-season cohort, the mean monthly mosquito abundance per trap-night was compared across three years: 2022, 2023, and 2024. Similarly, temporal trend of *Ae. aegypti* at peak-season sites was followed up and compared between 2022, 2023 and 2024. The study hypothesized that sustained pre-season deployment of In2Care Mosquito Stations at historically high-risk *Aedes* hotspots would lead to a progressive reduction in *Ae. aegypti* populations over time.

Prior to statistical analysis, data normality was assessed using the Shapiro–Wilk test. Repeated measures ANOVA were then conducted to evaluate differences in mosquito abundance across years within the pre-season cohort, and between the pre-season and peak-season cohorts. Statistical significance was set at $P < 0.05$ for all analyses.

RESULTS

Pre-season In2Care sites

Aedes mosquito activity in the pre-season In2Care Mosquito Station sites was compared across the years 2022, 2023, and 2024 (Fig. 2). The mean number of *Ae. aegypti* per trap-night significantly decreased from 31.2 mosquitoes per trap-night (95%CI = 22.3–40.1; df = 2; $P < 0.05$) in 2022 to 20.1 (95%CI = 11.9–28.3) and 13.2 (8.3–18.2) mosquitoes per trap-night in 2023 and 2024, respectively. Monthly trends indicated a consistently lower abundance of *Ae. aegypti* at sites

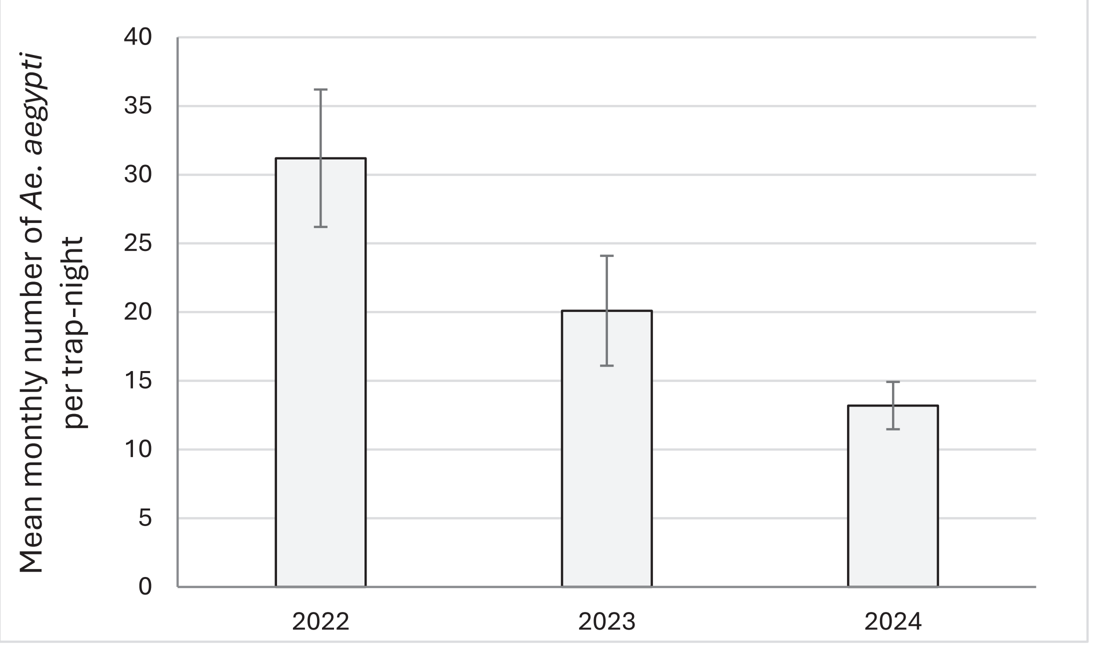

Fig. 2. Mean (±SE) monthly number of *Ae. aegypti* mosquitoes per trap-night at sites with the pre-season In2Care Mosquito Stations for 3 consecutive years, 2022, 2023 and 2024. (The difference in the means between the three years was significant, ANOVA, $P < 0.05$). [Error bars are included in the graph].

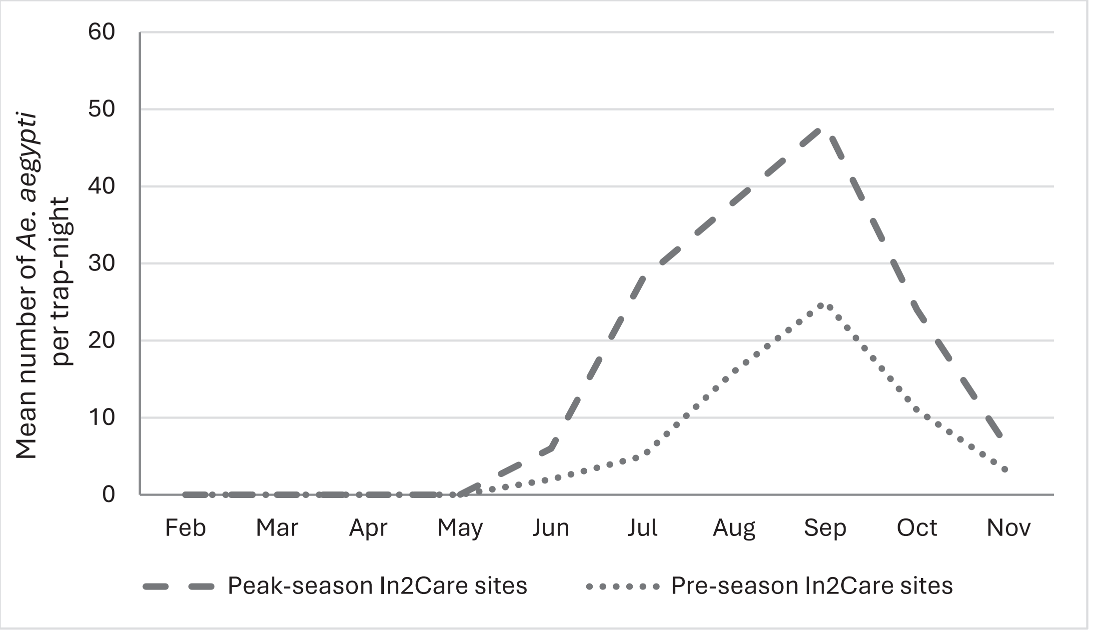

Fig. 3. Monthly average aggregated *Aedes aegypti* per trap-night at peak-season In2Care sites and pre-season In2Care sites (data aggregated from 2022–2024).

that received In2Care Mosquito Stations pre-season compared to those that received just during the peak season (Fig. 3). Data from the site that discontinued pre-season In2Care deployment site showed a 53% increase in mosquito abundance compared to the period when In2Care was actively in use, suggesting a potential rebound effect following the cessation of the intervention (Fig. 4). Overall, there was a 34–36%

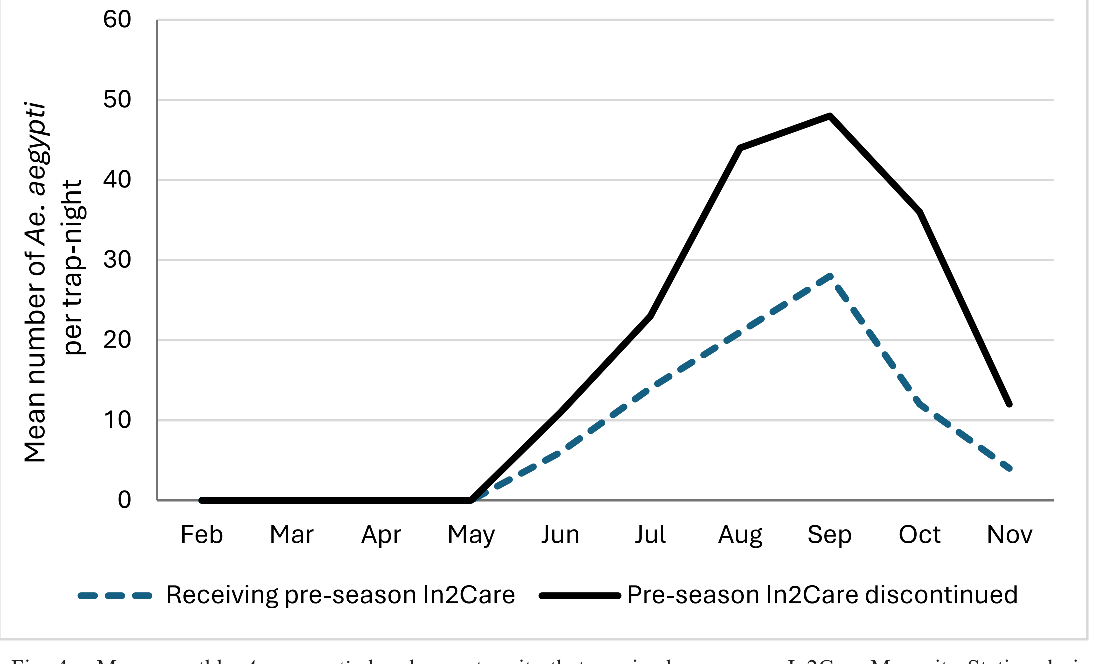

Fig. 4. Mean monthly *Ae. aegypti* abundance at a site that received pre-season In2Care Mosquito Station during 2022–2023 compared to post-discontinuation in 2024.

($P < 0.005$) year-to-year reductions in *Ae. aegypti* mosquito abundance at sites that received In2Care Mosquito Station prior to the mosquito season.

Peak-season In2Care sites

Mosquito activity at sites that received In2Care Mosquito Stations during the peak season was compared before and after In2Care placement in 2022, 2023 and 2024 (Fig. 5). The mean number of *Ae. aegypti* per trap-night at sites that received In2Care Mosquito Stations during the peak season decreased by 24–36% four weeks after deploying the In2Cares. Additionally, the mean number of *Ae. aegypti* per trap-night at pre-season In2Care sites was 22–34% lower than the peak-season In2Care sites (Fig. 6).

DISCUSSION

Our study demonstrated that the pre-season deployment of In2Care Mosquito Stations significantly reduced *Ae. aegypti* populations. Over the years, sites with pre-season In2Care placement experienced a 34–36% annual reduction in mosquito abundance. Notably, three consecutive years of In2Care deployment led to a 58% population decline in mosquito abundance, from 31.2 mosquitoes per trap-night in 2022 to 13.2 in 2024. This study is the first to assess In2Care's impact in high-density mosquito areas. Consistent with our findings, a study in Manatee County, Florida, reported a 57% reduction in *Ae. aegypti* populations using In2Care Mosquito Stations alone compared to an IVM site (Buckner et al. 2021). Prior research has also highlighted the value of In2Care Mosquito Stations as a crucial component of IVM strategies for controlling invasive *Aedes* mosquitoes (Buckner et al. 2017, Su et al. 2020. Buckner et al. 2021, Paris et al. 2023).

Our data also highlighted that discontinuation of the In2Care Mosquito Station at 1 of the pre-season deployment sites was associated with a 53% increase in *Ae. aegypti* abundance compared to the period when the intervention was in-place (Fig. 5). This observed resurgence in mosquito abundance following cessation of treatment underscores the potential role of the In2Care Mosquito Stations in maintaining suppressed vector populations and indicates the importance of sustained deployment for long-term mosquito control. Our findings align with those of other field studies that have documented similar resurgence in mosquito populations after the withdrawal of autodissemination-based interventions. For example, Buckner et al. (2021) reported that cessation of In2Care deployment led to a rapid rebound in adult *Ae. aegypti* populations, emphasizing the need for sustained application to achieve lasting control effects. These observations highlight the importance of program continuity and adequate coverage to sustain the benefits of autodissemination-based vector control.

The present study also reported a 24-36% reduction in *Ae. aegypti* population four weeks after the

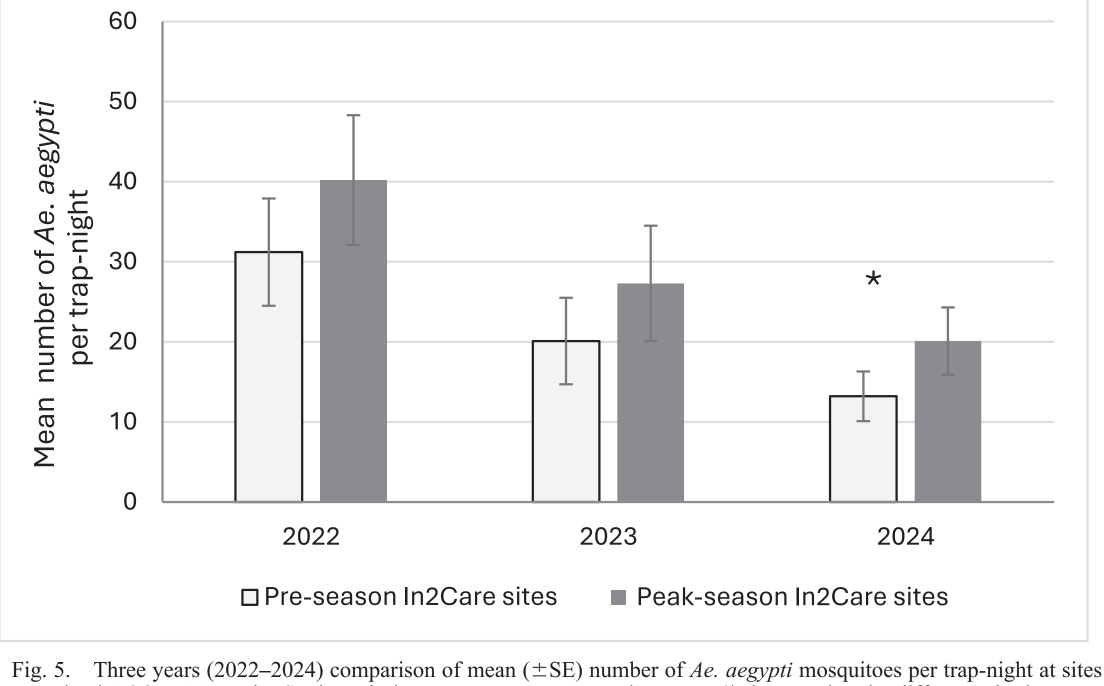

Fig. 5. Three years (2022–2024) comparison of mean (±SE) number of *Ae. aegypti* mosquitoes per trap-night at sites that received In2Care Mosquito Stations during pre-season versus peak season. (* denotes that the difference in the mean number of *Ae. aegypti* per trap-night between pre-season and peak season was significant for 2024, $P < 0.05$, ANOVA). [Error bars are included in the graph].

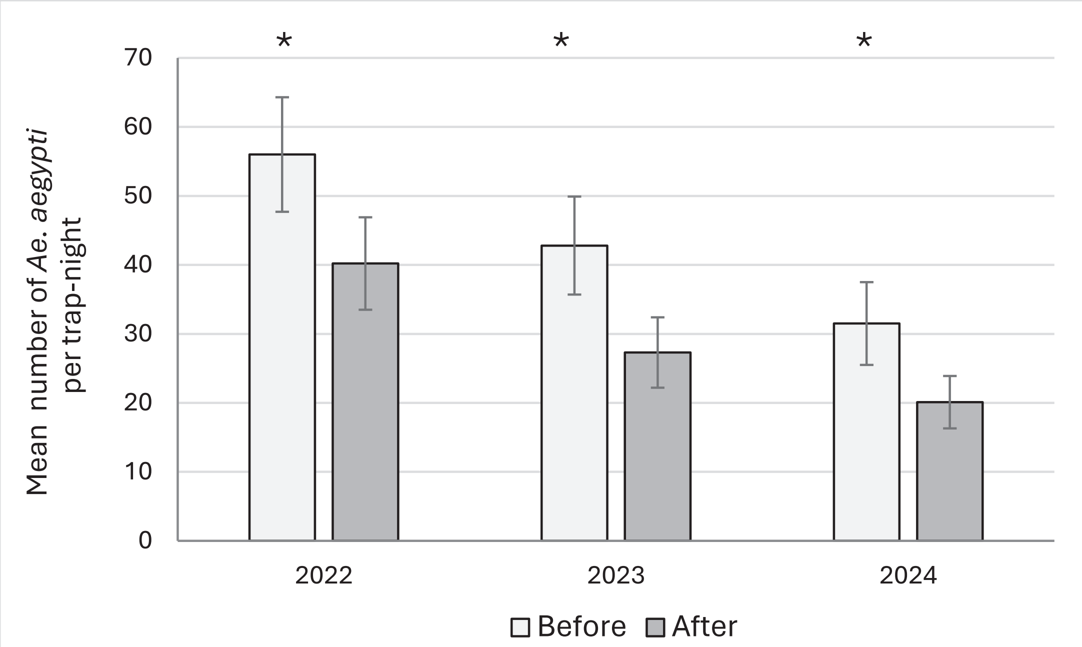

Fig. 6. Mean (±SE) number of *Ae. aegypti* per trap-night before and after deployment of In2Care Mosquito Stations in the peak season in 2022, 2023 and 2024. (* indicates that the difference between the means was significant, ANOVA, $P < 0.05$). [Error bars are included in the graph].

deployment of In2Care Mosquito Stations during the peak season. This suggests the added value of utilizing In2Cares as part of the IVM strategies to suppress *Aedes* population. Interestingly, installing In2Cares prior to the mosquito season offered an additional 22–34% reduction in *Aedes* populations when compared to the peak-season deployment (Fig. 5). Deploying In2Cares while the mosquito population is low and breeding sites are limited would attract more female *Aedes* mosquitoes to lay eggs with less competition with other natural breeding habitats. This optimizes the efficacy of In2Care Mosquito Stations as mosquitoes autodissemination the insecticide pyriproxyfen to other breeding sites. As a result, *Aedes* larvae are not only controlled inside the station, but also in other cryptic breeding sites in the vicinity. Su et al. (2020) depicted that In2Care Mosquito Stations served as an effective component of an IVM strategy, acting as an “egg sink” by attracting gravid females and preventing the emergence of adult mosquitoes. The study highlighted the potential of In2Care Mosquito Stations to complement existing control measures.

While our study compares the effect of pre-season versus peak-season In2Care Mosquito Station deployments on *Ae. aegypti* abundance over a three-year period (2022-2024), it is important to acknowledge that weather variability may also influence mosquito populations. Notably, 2024 experienced higher temperatures and greater rainfall compared to the previous two years (see Supplementary Figure S1)—conditions typically conducive to increased mosquito activity. Despite these favorable environmental conditions, mosquito counts at In2Care sites remained consistently low, suggesting that the intervention continued to effectively suppress mosquito populations even under elevated climatic pressures.

Several studies have confirmed the efficacy of In2Care Mosquito Stations as part of the IVM strategies in different settings. For instance, a study in St. Augustine, Florida, found out an 80% reduction in *Aedes* oviposition post-In2Care deployment, compared to pre-In2Care deployment (Khater et al. 2022). In contrast, a study in Hawaii recounted no significant reduction in *Aedes* egg or adult counts following 12 weeks of two In2Care Mosquito Station placements per participating household (Brisco et al. 2023). However, larval source campaigns revealed a large quantity and variety, in terms of both type and volume, of water sources around their study sites. These sources likely served as competing oviposition sites for *Aedes* females that visited the In2Care Mosquito Stations. Such abundance of competing oviposition sites likely reduced the chances of pyriproxyfen transfer to ovicups and, therefore, reduced the chances to observe emergence rate reduction. To address such situations, our study and routine IVM approach in the District involved deploying In2Care Mosquito Stations only after thorough inspections confirmed the absence of detectable breeding sites. This approach ensured that the any remaining mosquito sources were likely confined to hidden or cryptic habitats. This might have increased the likelihood of attracting ovipositing mosquitoes to the In2Care Mosquito Stations and the chances of pyriproxyfen transfer resulting in mosquito population suppression in the present study.

In2Care Mosquito Stations have also been shown to suppress other non-*Aedes* mosquito populations. A previous study in the present study area indicated that In2Care Mosquito Station attracted *Ae. aegypti* and *Cx. quinquefasciatus*, with the latter species predominating at much higher larval densities in the Mosquito Stations (Su et al. 2020). Field-collected larvae and pupae from the In2Cares showed complete inhibition of adult emergence. A recent study in Florida reported that a significantly higher mean percentage of *Cx. quinquefasciatus* egg rafts laid in an In2Care Mosquito Station compared to alternative ovicups in semi-field experiments, which demonstrated that the In2Care Station is an attractive oviposition site for gravid *Cx. quinquefasciatus* females (Buckner et al. 2025). Similarly, another study in Wake County, North Carolina, reported a 65.5% ($P = 0.0812$) mean reduction in *Ae. albopictus* (Skuse) females at In2Care houses following In2Care Mosquito Stations deployment (Figurskey et al. 2022). Future studies should explore the additional benefits of In2Care Mosquito Stations beyond *Ae. aegypti*, including potential impacts on other important vector species such as *Cx quinquefasciatus.*

To further test the efficacy of low In2Care Mosquito Station density deployment, a recent study deployed In2Care stations in Gainesville, Florida, at a density of 3 stations per acre (4,046.8 sq m) over a period of two years in the presence or absence of ground larvicidal applications. The deployment of such low numbers of stations combined with the low level of *Ae. aegypti* collected in trapping resulted in no measurable impact on *Ae. aegypti* and *Cx quinquefasciatus* adult or immature abundance suggesting that the low-density deployment of In2Care stations in low mosquito density environments was insufficient to reduce *Ae. aegypti* and *Cx. quinquefasciatus* abundance within treatment areas (McNamara et al. 2024). This is to be expected since the recommended number of In2Care Mosquito Stations per acre according to the manual (In2Care 2020) and US Environmental Protection Agency (EPA 2022), for optimal efficacy, is approximately 10 stations per acre, which equates to 1 station per 400 sq m. In our study, we followed the manufacturer's manual and deployed 1 In2Care Mosquito Stations per residence (~400 sq m) for optimal efficacy, with a maximum of 1 per house.

The present study had some limitations. Primarily, the absence of control sites with no In2Care stations was evident. Since WVMVCD is a government agency that provides local support for mosquito and vector control to its residents, we were unable to deny service for some homeowners when mosquito counts were over threshold. However, the utilization of three years data for pre- and peak season deployed In2Cares allowed us to present long-term efficacy of In2Care Mosquito Stations. This study is the first to generate data on the impact of pre-season In2Care deployment prior to the mosquito season to suppress mosquito abundance throughout the mosquito season.

In conclusion, the findings of this study reinforce the effectiveness of pre-season deployment of In2Care Mosquito Stations in significantly reducing *Ae. aegypti* populations. The consistent year-to-year decline in mosquito abundance, culminating in a 58% reduction over three years, highlights the long-term benefits of this intervention when applied as part of the IVM strategies.

These results align with previous studies, further supporting the role of In2Care Mosquito Stations as a valuable tool in IVM strategies. Given the growing challenges posed by invasive *Aedes* mosquitoes and the risk of *Aedes*-borne diseases, incorporating additional innovative tools such as In2Care Mosquito Stations as a key component of IVM programs can provide a sustainable and effective approach to mosquito population control.

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