

Integrated Pest Management (IPM) in Health Care Facilities Project

Project Newsletter: 2014

Welcome to the Summer edition of the *IPM in Health Care Facilities newsletter*, published by the **IPM in Health Care Facilities Project**—a partnership of the Maryland Pesticide Network and Beyond Pesticides in collaboration with Maryland Hospitals for a Healthy Environment (MD H2E). The Project enables and facilitates transition to safe pest management practices at Maryland health care facilities. This newsletter is part of the Project's outreach effort to share information with Maryland health care facilities interested in effective pest management that protects patients, residents, staff and visitors from unnecessary exposure to pesticides.

Facilities participating in the Project's Partnership Program agree that IPM prioritizes pest prevention and non-chemical interventions as key components to **greening** their facilities. Under an IPM approach, only least-toxic pesticides are used as a last resort for pest management. This approach is especially important for patient and long-term care populations, which are especially vulnerable to chemical-intensive pest control methods that can cause or exacerbate the very diseases and conditions that they are being treated.

Feel free to contact us to learn more about how you can improve patient, staff and visitor safety by reducing pest complaints and toxic chemicals in your facility—with no increase in cost.

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Success Stories: Our Past Award Winners

In 2010, the IPM in Health Care Facilities Project launched a Sustainable Pest Management awards program for partner facilities that achieve a high level of integrated pest management (IPM) at their institutions. Facilities are recognized for their adoption of practices that incorporate preventive practices that eliminate the use of hazardous pesticides, protecting the health of patients, staff, and the environment. The project's award winners to date are: Springfield Hospital Center (2010), Johns Hopkins Bayview (2011), University of Maryland Medical Center (2012), and Howard County General Hospital (2013).

The award winning partner facilities have fully embraced a defined IPM approach to pest management and have implemented a model IPM policy, with procedures in place that prevent pests and eliminate the need for pesticides.

As a result of the IPM coordinator's leadership at each facility, the sites have transitioned to a system that prevents pests rather than simply reacts to a crisis problem. They have advanced their communication and cooperation between departments so pest-conducive conditions can be efficiently identified and eliminated.

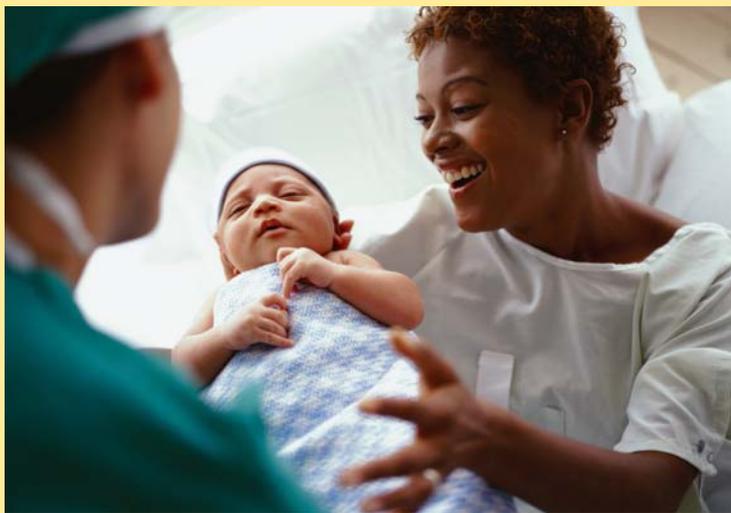


Many of the pesticides commonly used in health care facilities are known to contribute to cancer, neurological disorders, problems with reproduction, birth defects, liver and kidney damage. Certain pesticides have also been lined to eye irritation, respiratory problems such as asthma, headaches, nausea, and learning disabilities in children.

Understanding the Pesticide Risk

It is essential that hospitals maintain a clean environment free of pests and crucial that patients, staff, and visitors are protected from exposure to pesticides. Understanding the dangerous effects associated with pesticide exposure is paramount to managing facilities that serve people who are at elevated risk of pesticide-induced illnesses, given their health status.

Many of the pesticides commonly used in health care facilities are known to contribute to cancer, neurological disorders, problems with reproduction, birth defects, liver and kidney damage. Certain pesticides have also been lined to eye irritation, respiratory problems such as asthma, headaches, nausea, and learning disabilities in children. Hospital patients who have compromised immune and nervous systems, respiratory illness, the elderly, infants and children, and those who have a sensitivity to pesticides are particularly vulnerable to the toxic effects of pesticides. Patients taking certain medications may also have heightened reactions to pesticides.



Success Stories: Our Past Award Winners *continued...*

Changes and Outcomes

An effective IPM policy and program requires focus on inter-departmental communication and staff education about pesticides and preventive practices. Transition to this strategy results in quicker response times to issues and real solutions to specific pest issues. For example, Justin Graves, Sustainability Manager at UMMC explains: *"The Department of Safety (which manages our IPM contract) is now in constant communication with EVS [Environmental Services], Food services, and nursing to work to mitigate the problems that could lead to pest infestations. The Safety Department provides timely feedback to the affected areas as to what they should be doing to remove the sources of food and habitat for pest."*

Another change at UMMC, which Mr. Graves described, was *"One of our retail establishments put their trash in a temporary holding area outdoors before it was moved to the main municipal waste dumpster. Working with EVS, we have changed the expectation and process so this trash is taken directly to the municipal waste compactor. This will permanently eliminate the food source for potential rodents."* This holding area provided an ideal food source for potential rodents. Rather than using conventional pest control methods, which would have relied on the use of toxic rodenticides, the increased communication and awareness of preventive measures allowed for an IPM solution.

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Staff Awareness

Health Care Facility pest management is a team effort. A successful IPM program requires staff participation. In a successful IPM program, all staff contribute to pest sightings and help eliminate pest-conducive conditions.

"It was difficult in the beginning because everyone was used to someone spraying... but once we were educated on the benefits of not spraying toxic pesticides we learned that if you get rid of the pest's food, water, and shelter, you don't have as many pests."

-Winnie Barnes, Springfield Hospital Center

A pest management technician usually services a facility once a week. While the technician practicing IPM makes non-toxic recommendations for pest prevention and eradication and uses least-toxic products only as a last resort, staff play an

active role in identifying pests as well as preventing pest problems. After Springfield Hospital Center implemented an IPM approach to pest management, Winnie Barnes, Housekeeping Supervisor at Springfield, said *"It was difficult in the beginning because everyone was used to someone spraying and taking care of the problem; but once we were all educated on the benefits of not spraying toxic pesticides we learned that if you get rid of the pest's food, water and shelter, you don't have as many pests."* She explained that education on risks associated with pesticides and safer preventive measures resulted in, *"greater awareness with staff as well as patients."*



Rick Candy, Director of Environmental Services at Johns Hopkins Bayview, also spoke about the importance of education and awareness saying *"Absolutely, we are very proactive in working with the staff on pest control and teaching them why certain practices are used."*

Success Stories: Our Past Award Winners *continued...*

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Mr. Candy explained that making these types of changes and acting *“preventively versus being reactive”* resulted in *“establishing a drain care program with routine maintenance to prevent drain and fruit fly infestations.”*

As a result of the Project’s initial walk-through at Springfield Hospital Center, the Project team noted that buildings on the campus provided access points for pests to enter buildings. Ms. Barnes, Housekeeping Supervisor, explained that, *“One of the major proactive measures we took was the caulking that was done throughout the hospital by our maintenance department, which took a lot of time. Springfield has also installed new entrance doors that seal out rodents and insects, and include tinted the glass so there is less light to attract them.”*

In our interview, Ms. Barnes also noted one of the other long-term changes at Springfield, *“Alice Gunner, the director of the Food Service Center and her staff have done and continue to do an excellent job of getting all the food and other materials out of the*



cardboard boxes and on the shelves, and getting the boxes out of the building as soon as possible.” Rather than storing food or dry good in cardboard boxes, as many hospitals do, Springfield removes items and stores them on metal shelving off the floor. Not only can roaches enter a facility hidden in cardboard, but boxes also create habitat for many pests and make cleaning more difficult.

“Simply reducing the amount of toxic pesticides that patients, staff, vendors, and visitors are exposed to is one of the most important outcomes of our IPM Program.”

-Justin Graves, UMMC



In addition to pest management, partner facilities recognize significant added benefits as an outcome of their IPM approach. Mr. Candy says that *“having a proactive and preventive IPM program at Bayview is important so drastic measures do not have to be used in order to eliminate an infestation or other residual problems to the environment.”*

UMMC’s Ms. Graves states that, *“Simply reducing the amount of toxic pesticides that patients, staff, vendors, and visitors are exposed to is one of the most important outcomes of our IPM program. The health impacts of such exposures can be profound, especially in the vulnerable populations that we serve.”*

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Chemical Profile: Neonicotinoids

Neonicotinoids (or “neonics” for short) are a relatively new group of pesticides that kill a wide range of insects including flies. They have also been found to significantly harm pollinators such as honey bees, wild bees, and butterflies. This past year, **Maryland beekeepers lost nearly 50 percent of their beehives.** One third of every bite we eat is dependent on pollinators. While Austria, France, Germany, Italy, Slovenia, and Sweden have restricted the use of certain pesticides devastating pollinator species and our future food security, the United States still allows their broad use. The health of pollinators is directly linked to our country’s food security. While certain other factors, such as pathogens, parasites, poor nutrition and habitat loss may also play a role, the toxic effects of pesticides on pollinating species is undeniable and recently confirmed in an international report published by 50 scientists. Neonics also led the European Union (EU) to institute a two-year ban on their use following an EU-commissioned report documenting their toxicity to bees.

Neonics affect the central nervous system of insects, resulting in paralysis and death. The pesticide group of neonics includes *imidacloprid*, *acetamiprid*, *clothianidin*, *dinotefuran*, *nithiazine*, *thiacloprid* and *thiamethoxam*. While they are often used as a seed coating in agriculture, **they are also used as the active ingredient in some insecticides and are used in non-agricultural settings, such as in health care facilities.**

Neonicotinoid pesticides are very persistent in the environment with studies finding that the half-life of many of these chemicals to be between 200-1000 days, with some reports showing an even longer persistence in the environment.

Not only are these pesticides a major contributing factor to massive bee die-offs around the globe, new studies suggest that they can cause declines in insect-eating bird populations, with some scientists sounding the alarm on a second Silent Spring.

Additionally, a recent study found that neonics are also implicated in brain damage in children and the death of molting blue crabs.

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Success Stories: Our Past Award Winners *continued...*

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An added outcome at Springfield is reduced energy costs. Ms. Barnes explains: *“By improving the building doors and all the caulking that has been done throughout the hospital, not only has it reduced pesticide use, but also saves on energy use.”* However, she does recognize the major health benefits of IPM, *“The most important outcome is to keep our patients, staff, volunteers and visitors safe and healthy; and by not using pesticides I feel we are accomplishing this.”*

“The most important outcome is to keep our patients, staff, and volunteers and visitors safe and healthy.”

-Winnie Barnes, Springfield Hospital Center

Chemical Profile: Neonicotinoids *continued...*

Massive bee kills across the country show that the agricultural use of these chemicals should not be our only concern, with many deaths associated with use of neonicotinoid insecticides. Also, through nursery plants treated with neonicotinoids, we may actually be bringing these chemicals unwittingly into our facilities' landscaping plantings when attempting to plant pollinator friendly habitat. A study by Friends of the Earth earlier this year found significant levels of neonicotinoids in "bee-friendly" plants sold at home and garden retailers such as Home Depot and Lowe's. One of three "bee-friendly plants" tested at a big box store in Cockeysville, MD contained three neonics that would actually harm bees, according to the study, to which MPN and Beyond Pesticides contributed.

In addition to the EU, there has been a growing trend in federal and state government agencies such as the U.S. Fish and Wildlife Service and The Oregon Department of Agriculture, local municipalities, and private institutions banning or restricting the use of neonics. National Wildlife Refuge System Chief James Kurth, in announcing the phase-out of neonicotinoid processes, *"We have determined that prophylactic use, such as a seed treatment, of the neonicotinoid pesticides that can distribute systemi-*

cally in a plant and can potentially affect a broad spectrum of non-target species is not consistent with Service policy. We make this decision based on a precautionary approach to our wildlife management practices and not on agricultural practices."

For the sake of 'our babies, bees, and the Bay' it is important for us to avoid using these chemicals and instead look for safer alternatives to managing pests in our health care facilities as well as our communities.

Studies on the impacts of neonics on human health are few to date—we need more research to determine their public health impacts. But as the US EPA has states: "By

their very nature, most pesticides create some risk or harm. [They] can cause harm to humans, animals, or the environment because they are designed to kill or [harm]... living organisms."

For the sake of 'our babies, bees, and the Bay' it is important for us to avoid using these chemicals and instead look for safer alternatives to managing pests in our health care facilities as well as our communities.

Information on neonicotinoids provided by Beyond Pesticides and Maryland Pesticide Network. Please support efforts to restrict bee-toxic pesticides by visiting save-bees.org and signing the petition to EPA Administrator Gina McCarthy. For additional

information on the decline of honey bees and other wild pollinators, and a history of Beyond Pesticides' efforts to get EPA to act, visit BEE Protective webpage. Go to Maryland Pesticide Network to learn about efforts to protect Maryland's bees.



The active ingredient in Temprid and Maxforce fly bait is Imidacloprid, the most popular neonic, which is linked to neurotoxic, reproductive and mutagenic effects. It has been found to be highly toxic to pollinators and birds, is persistent in soils and can leach to groundwater.

Legislative Update

2014 LAW ESTABLISHES FUNDING FOR A PESTICIDE-USE DATABASE TO ASSESS PUBLIC HEALTH IMPACTS

The 2014 Pesticide Reporting and Information Law establishes dedicated funding for “collecting, assessing and reporting pesticide use data in the state” to help public health, wildlife and Bay researchers monitor the impacts of pesticides. This law is a significant first step toward a useful scientifically valid pesticide use database.

Without a comprehensive pesticide use database incorporating professional applicator’s reports of what pesticides have been used, when and where, our experts cannot track possible links to for example, cancer or asthma clusters, intersex fish in the Bay, or to the alarming near 50% death rate of Maryland’s beehives this past year.



Marylanders’ High Level of Concern about Pesticides

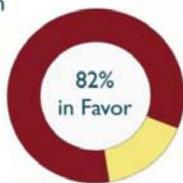
83% are concerned about the risk pesticides pose to their family’s health



92% are concerned, after hearing about pesticide links to chronic illnesses and environmental problems



82% favor legislation requiring farmers and lawn care companies to provide pesticide information



More work remains to be done to ensure a viable database is established. The law does not address the format for such a database and the Maryland Department of Agriculture (MDA) has chosen to go forward and use the funding to conduct a sample voluntary survey – similar to previous MDA surveys conducted once every 3-5 years. Such surveys do not provide researchers with adequate scientifically valid data. For example, in 2011, 823 farmers submitted their pesticide use records the MDA. Given that there are about 12,800 farmers in Maryland, this clearly did not provide significant data. Twenty-seven experts (to date) have signed on to letters to the MDA and other government officials outlining the essential criteria needed for a valid and useful database. While it remains to be seen, the more robust voluntary survey MDA is working on for publication in 2016, does not meet the criteria outlined.

Please consider adding your facility’s voice to Maryland’s health-related organizations and institutions that are supporting a scientifically valid database by joining the Maryland Smart on Pesticides Campaign. Contact Ruth Berlin, Executive Director of the Maryland Pesticide Network for more information: mpnberlin@gmail.com; 410.849.3909, ext. 1

[Click Here](#) to individually sign on to our petition requesting a scientifically valid database.