ECCL

A CIVIC ADVOCACY ORGANIZATION

GREATER ESTERO COMMUNITY REPORT

Fourth Quarter – 2020

This report is the ECCL's fourth and final Greater Estero Community Report for 2020. Thank you for your positive feedback on our earlier reports. If you would like to read any of the previous GECR documents we released earlier this year, you can find them on our website www.esterotoday.com.

Our goal is to provide you with a timely and comprehensive summary of key issues affecting our community and details on advocacy initiatives undertaken to sustain and enhance the quality of life for all residents in the greater Estero area. The two articles in this report are both health-related.

The first covers the growing evidence linking **algae blooms,** mainly blue-green algae, to serious long-term health risks for Floridians. We hope you find the information compelling and interesting. It is an issue that needs to be taken more seriously than in the past, and we believe it is one where more action is required to reduce the incidence of such blooms occurring.

The second summarizes **healthcare services changed and enhanced** due to the impact of COVID 19 on the way healthcare services are managed. The report provides an impressive update of what residents can expect in these challenging times from our local healthcare providers. As indicated, other services are being considered and will be introduced as the pandemic starts to be overcome. At the ECCL's request, Lee Health has provided an interesting update of how they have improved their services during this challenging period.

Thank you for your continued interest and support.

SPOTLIGHT:

The Genuine Danger in Our Floridian "Cocktail"

By Allan Bowditch

The periodic algae "cocktails" that appear in our local waters involve "red tide" and blue-green algae. These algae represent a significant threat to the local economy, but also people's health. This article takes a closer look at the worrying evidence emerging regarding blue-green algae's effect.

Published earlier this year[1], Walter G. Bradley, former chairman of the University of Miami Department of Neurology, posed some serious questions about the potential dangers of blue-green algae and its long-term effects. If you have been living in Southwest Florida for any length of time, you will be familiar with algae blooms. Expanding residential and commercial development and agri-business contributes to increased nitrogen levels that lead to these algae blooms. As population growth continues, there are increased burdens on water treatment plants and septic systems.

The Department of Health, responsible for Floridians' health, rightly posts warnings about the acute dangers to humans and swimming animals where there are algae blooms. But for too long, the Department has stated that "there is no proven connection between cyanobacteria and ALS, and that the BMAA (this is an amino acid and neurotoxin) hypothesis is still a hypothesis."

Despite various attempts to improve our water quality and address the release of contaminated bacterial water from Lake Okeechobee, we continue to see the impact of algae blooms across our region. This impact has a significant effect on our tourist industry, representing around 10% of Florida's economy. **Still, few have openly talked about the danger to our health!**

A scientific paper published in 2015 linked the distribution of chronic non-alcoholic liver disease in the United States to locations of cyanobacteria blooms. As far back as 2004, another

cyanotoxin produced by algae blooms, BMAA, was linked to ALS (Lou Gehrig's disease), dementia, and Parkinsonism in Guam. Closer to home, the problem has occurred in small towns on Lake Erie and New Hampshire banks.

About five years ago, doctors at a New Hampshire hospital noticed a pattern in their ALS patients—many of them lived near water. Researchers at Dartmouth-Hitchcock Medical Center have identified several ALS "hot spots" in lake and coastal communities in New England since then. They suspect that blue-green algae's toxic blooms—which are becoming more common worldwide—may play a role. Scientists are investigating whether breathing a neurotoxin produced by the algae may raise the risk of the disease[2].

New evidence in papers published since 2016 has shown that feeding BMAA to animals can produce neuropathological changes like Alzheimer's disease and ALS. **More recently, BMAA and the neuropathological changes of Alzheimer's disease have been reported in beached dolphins' brains in contaminated Floridian waters.**

Ethnobotanist Dr. Paul Cox has been on a mission traveling the world, compiling evidence that cyanobacteria associated with blue-green algae can cause ALS and other neurological diseases. He believes exposure to cyanobacteria is involved in many clusters of ALS around the world and may also contribute to other neurodegenerative disorders, including Alzheimer's Disease.

"Chronic dietary exposure to BMAA [a toxin in blue-green algae] results in the formation of neurofibrillary tangles and beta-amyloid deposits in a clear dose relationship," Cox writes in a recent study, published in the Proceedings of the Royal Society in January, 2016[3].

Not everyone is convinced that this is a critical finding in the search for causes of ALS. Other scientists are urging caution in interpreting the results of his studies. Still, Dr. Cox and colleagues have prepared and presented impressive evidence that is hard to argue against. When primates were dosed with BMAA, it resulted in changes in their bodies that mirrored what happens to people in the early stages of Lou Gehrig's disease or ALS.

The link between certain forms of blue-green algae and these diseases is both a compelling and worrying development.

"Dying from diseases like ALS and Alzheimer's is a tormenting process. The illnesses are increasing, and scientists believe an environmental toxin can trigger the disease in a gene/environment interaction."

TOXIC PUZZLE (a documentary film available on Netflix) is a medical and environmental detective story. Documentary filmmaker Bo Landin follows Dr. Cox and his worldwide scientific

team to hunt for the hidden killer. The pieces come together in a "Toxic Puzzle" where cyanobacteria in our waters become the culprit."[4]

Earlier this year, additional evidence emerged linking ALS with BMAA. A study published in February 2020 connects a toxin produced by some blue-green algae to Lou Gehrig's disease – while also showing that an amino acid may protect against its ravages[5].

Walter Bradley states, ***"while it may take 20-plus years for a chronic neurotoxin like BMAA to produce Lou Gehrig's or Alzheimer's disease in humans. Does that put us where we were with smoking in the 1950s? Though people long suspected that smoking was harmful to health, it took decades to prove that smoking caused lung cancer -- and to persuade people to quit. But we didn't wait until "all the data was in" before the first Surgeon General Warnings were issued in 1964."***

As suggested by Walter Bradley and Howard Simon, ***"with the health of Floridians at potential risk, the Legislature has an opportunity to take important steps to protect our water and public health. We need to urge the Legislature and the governor to give teeth and funding to reduce the incidence of algae blooms."***

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Allan Bowditch is ECCL's, Chief Communications Officer.

References:

1 "Harmful algal blooms pose serious long-term health risks for Floridians" By Walter G. Bradley and Howard L. Simon. *Sun Sentinel* January 28, 2020, at 2:30 PM https://www.sun-sentinel.com/opinion/commentary/fl-op-com-simon-bradley-algal-blooms-florida-legislative-session-20200128-6tfldn4szrfmnkjni5ved7dp6a-story.html

2 "Are Algae Blooms Linked to Lou Gehrig's Disease?" By Lindsey Konkel, Environmental Health News on December 11, 2014. *Scientific America*. https://www.scientificamerican.com/article/are-algae-blooms-linked-to-lou-gehrig-s-disease/

3 "Dietary exposure to an environmental toxin triggers neurofibrillary tangles and amyloid deposits in the brain." Paul Alan Cox, David A. Davis, Deborah C. Mash, James S. Metcalf, and Sandra Anne Banack. Published January 27, 2016, *The Royal Society Publishing*. https://royalsocietypublishing.org/doi/full/10.1098/rspb.2015.2397

4 The Toxic Puzzle. The Facts. Dr. Paul A. Cox. https://www.toxicpuzzle.com/about

5 "New ALS research implicates blue-green algae toxin, offers hope that amino acid can help." Amy Bennett Williams. *News-Press Article* February 24, 2020: https://brainchemistrylabs.org/new-blog/2020/2/26/new-als-research-implicates-blue-green-algae-toxin-offers-hope-that-amino-acid-can-help

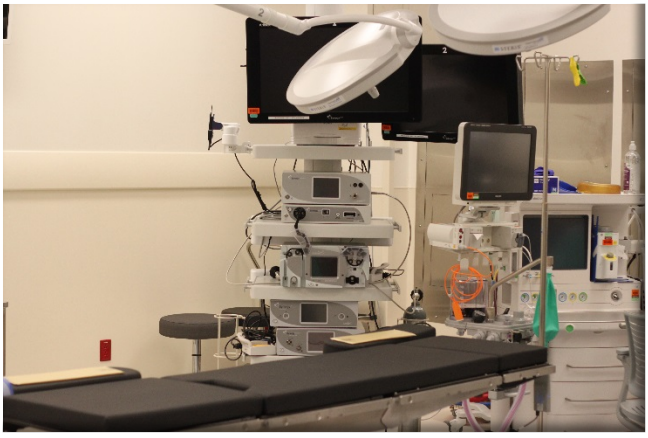
HEALTH:

Lee Health Coconut Point Brings Innovative Care to South Lee County

The global COVID-19 pandemic has changed the way most of us live our lives this year, and how we receive our routine health care has been no different. We had hoped when we reached the winter season COVID-19 would be behind us, but it is likely this will continue to affect our lives for the foreseeable future. However, health care has adapted. Through technological innovation, thousands of patients have been able to keep their appointments and see their own doctors via telemedicine.

Telemedicine has also provided the infrastructure for the new Observation Unit within Lee Health Coconut Point's emergency department. This eight-bed unit can monitor patients for up to 24 hours, and most patients are able to be discharged directly from the Observation Unit, keeping them closer to home and avoiding a transfer to one of Lee Health's acute care hospitals.

The Observation Unit is outfitted with state-of-the-art telehealth technology, and connecting nurses and patients directly to hospitalists and specialists at Lee Health hospitals during the time in the unit. The Coconut Point ED and Observation Unit are specifically designed to provide specialized care close to home, and patients who do need to be transferred are transported to the most appropriate hospital for their condition. For example, a patient suffering from a cardiac incident would be transported to HealthPark Medical Center, while a patient suffering from a stroke would be moved to Gulf Coast Medical Center. Centralizing specialty services to one hospital creates an environment that promotes a high quality of care, and both HealthPark and Gulf Coast have received national recognition for their heart and stroke care, respectively.



The purpose of the Observation Unit is to, if possible, prevent a patient from being transferred to another facility, but if necessary, it gets them to the right place to receive their care and

doctors at that hospital are already familiar with their condition through the telemedicine connection.

In addition to the Observation Unit, Lee Health Coconut Point offers a state-of-the art out-patient surgery experience. From prep to surgery to recovery, the process is seamless and allows patients to recover in the comfort of their own homes rather than in a hospital bed. Downstairs from the surgery center is a comprehensive rehab gym where physical therapists work with patients to help get them fully back on their feet as quickly as possible.

Lee Health continues to have an eye into the future for the Estero community, and will continue to grow with the community to meet their health care needs. COVID-19 has created some challenges, and some projects were put on hold due to the financial challenges cause by a global pandemic. However, the pandemic has also created some opportunities. Patients were able to keep appointments and keep seeing their own doctors through telemedicine, and for many patients they realized they preferred that option. As health care in the 21st century shifts toward the out-patient setting, Lee Health will continue to work with community leaders to provide the best possible care for Southwest Florida.

By Jonathan Little, Communications Supervisor, Lee Health