

Kids show surprising long COVID symptoms

New NIH-funded study shows effects on nearly every organ system

Adrianna Rodriguez
USA TODAY

Rose Lehane Tureen is one busy teenager. The 16-year-old is class president, an Irish step dance champion, singer, cross-country runner and straight-A student at her high school in Maine.

Her accomplishments belie the reality that she suffers from a debilitating headache that has lasted for more than four years, one of several long COVID-19 symptoms she's endured since an infection in March 2020.

At the beginning of her illness, Lehane Tureen went to the emergency room half a dozen times and was hospitalized twice with dizziness and blinding head pain.

She also had red and swollen fingers, toes and ears; peeling skin; joint pain; problems controlling her temperature and terrible dreams.

She lost years of her life to long COVID and is trying to make up for it.

"I had to decide if I wanted to wither away on the couch in the dark or push through and do things that made me happy," she said. "I'm reclaiming what it's taken and trying to live my life."

Lehane Tureen is one of the estimated 5.8 million children in the U.S. with long COVID, many of whom have not been diagnosed because doctors, parents and patients fail to recognize the constellation of symptoms, experts say. A new study funded by the National Institutes of Health aims to arm families with information by identifying the most common long COVID symptoms in school-age children and teenagers.

"Children aren't just little adults," said Dr. Melissa Stockwell, the study's co-author and division chief of child and adolescent health at Columbia University.

The more providers understand how long COVID affects people at different ages, the easier it will be to diagnose children and provide the care they require faster.

Symptoms in kids, teens

The study included 5,300 younger school-age children and teens from more than 60 health care facilities across the U.S. between March 2022 and December 2023.

Researchers found teenagers were more likely to report fatigue, pain and changes in taste and smell, whereas younger children between 6 and 11 were more likely to have difficulty focusing, sleep problems and stomach issues, according to the report published Wednesday in JAMA.

Long COVID symptoms affected almost every organ system, and most patients reported symptoms that affected more than one part of their body.

Children and teens commonly reported back or neck pain, headaches, lightheadedness or dizziness, and trouble with memory or focus. The study authors were surprised to find that symptoms among the younger children also included phobias, specifically the fear of crowded or enclosed spaces, and refusal to go to school. The symptoms that showed up in younger children were less likely to overlap with symptoms experienced by adults with long COVID. The authors said this underscored the importance of age-based research.

"The symptoms that make up the research index are not the only symptoms a child may have and they're not the most severe, but they are most predictive in determining who may have long COVID," said Dr. Rachel Gross, the study's lead author and associate professor of pediatrics and population health at New York University Grossman School of Medicine.

Lehane Tureen could have benefited from this research in 2020. It took more than a year to find doctors who would take her cluster of symptoms seriously. She eventually found that team at Boston Children's Hospital.

"I went from running a junior Olympic qualifier to being unable to walk," she said. "It was dramatic and confusing."

Missing 'whole boat' of data

Despite the new research, health experts say a great deal is still unknown about long COVID.

For example, most of the data from the study comes from patients who were infected with earlier COVID-19 variants, not the latest version, omicron, said Dr. Alexandra Yonts, a pediatric infectious disease specialist and director of the post-COVID-19 program at Children's National Hospital in Washington.

The study suggests kids infected with omicron are less likely to develop long COVID. However, Yonts argues there isn't enough data to support that theory since omicron hasn't been on the scene long enough to allow for robust long COVID data.

"If we're looking at kids that have been newly infected ... what is their risk of becoming long COVID patients?" she said. "We're missing that whole boat."

Authors of the JAMA study say their next research will be on long COVID symptoms in children 5 and younger. Yonts said the most urgent need for these patients is access to post-COVID-19 clinics that specialize in identifying and treating lingering symptoms. She said these types of efforts are beginning to close down across the country because of a lack of funding and support.

"These are such complex patients," Yonts said. "It's hard to find a multidisciplinary team that can define those symptoms and support them."

That's why Lehane Tureen, a California native, eventually moved with her family to southern Maine so they could be within driving distance of Boston Children's Hospital, where she visits the long COVID clinic at least once a month. In addition to the doctors at the



Rose Lehane Tureen, 16, and neurologist Dr. Molly Wilson-Murphy stand outside Boston Children's Hospital after an appointment on Tuesday. The Maine teen makes regular hospital visits for the constant headache that began three years ago when she first contracted COVID.
JOSH REYNOLDS/FOR USA TODAY

clinic, she's seen nearly a dozen specialists including a sleep neurologist, acupuncturist, gastroenterologist, endocrinologist, rheumatologist and cardiologist.

Lehane Tureen is disheartened that post-COVID clinics are shutting down for patients like her, but not completely surprised. She sees the world moving on from the pandemic, but she's still in pain. She hopes the JAMA study brings renewed attention to the condition.

"There's this illusion now that lockdown is over, that COVID is gone," she said. "It's really, really difficult and invalidating for all the people with long COVID - especially children."

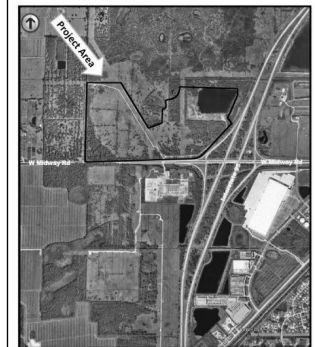
NOTICE OF PUBLIC HEARING FORT PIERCE CITY COMMISSION ORDINANCE ESTABLISHING KOA BAY COMMUNITY DEVELOPMENT DISTRICT

The City Commission of the City of Fort Pierce will hold a public hearing on Monday, August 19, 2024 and an adoption public hearing on Tuesday, September 3, 2024 on the enactment of the proposed ordinance in the City Hall Commission Chambers, 100 North U.S. Hwy 1, Fort Pierce, Florida, at their meetings which begin at 5:05 p.m. to consider review and approval of the following: **ORDINANCE NO. 24-034 - AN ORDINANCE OF THE CITY COMMISSION OF THE CITY OF FORT PIERCE, FLORIDA, ESTABLISHING THE KOA BAY COMMUNITY DEVELOPMENT DISTRICT PURSUANT TO CHAPTER 190, FLORIDA STATUTES; PROVIDING FOR THE NAME, POWERS, AND DUTIES; PROVIDING FOR DESCRIPTION AND BOUNDARIES; DESIGNATING FIVE PERSONS TO SERVE AS THE INITIAL MEMBERS OF THE DISTRICT'S BOARD OF SUPERVISORS; PROVIDING NOTICE OF REQUIREMENTS; PROVIDING FOR A SEVERABILITY CLAUSE; REPEALING ORDINANCES OR PARTS THEREOF IN CONFLICT HERewith; AND PROVIDING FOR AN EFFECTIVE DATE.**

The ordinance will create the Koa Bay Community Development District (CDD). The proposed CDD is generally located north of W. Midway Road, south of Okeechobee Road, and west of Interstate 95, and contains approximately 200.23 +/- acres, as shown on the map below.

The proposed CDD is designed to provide a financing mechanism, as well as a long-term operation and maintenance entity, for community infrastructure and services, including but not limited to, the funding and construction of parks and facilities for indoor and outdoor recreational, cultural and educational uses, and security for the site, including but not limited to guardhouses, fences, gates, etc. as authorized and described by Section 190.012(2), Florida Statutes.

Display Map of Subject Property



All interested parties may appear at the meetings and be heard with respect to the ordinance. All interested parties may provide written comments to be considered at the meetings with respect to the ordinance to the City Clerk at lcox@cityoffortpierce.com. Said ordinance will be available for inspection in the City Clerk's Office, City Hall, 100 North U.S. Hwy 1, Fort Pierce, Florida.

ANY PERSON SEEKING TO APPEAL THE DECISION OF THE CITY COMMISSION AS TO THE FOREGOING IS ADVISED THAT A RECORD OF PROCEEDINGS IS REQUIRED IN ANY SUCH APPEAL AND THAT SUCH PERSON MAY NEED TO ENSURE THAT A VERBATIM RECORD OF PROCEEDINGS IS MADE INCLUDING THE TESTIMONY AND EVIDENCE UPON WHICH THE APPEAL IS TO BE BASED.

In accordance with the Americans with Disabilities Act and Section 206.26, Florida Statutes, persons with disabilities needing special accommodation to participate in this meeting should contact the City Clerk's Office at (772) 467-3065 at least 48 hours prior to the meeting.

/s/ Linda W. Cox, City Clerk
Publish: 08.09, 08.16, 08.23, 08.30.2024

NOTICE OF PUBLIC HEARINGS

Notice is hereby given that the Board of County Commissioners of Martin County (Board) will conduct public hearings on Tuesday, September 10, 2024, September 24, 2024 and October 22, 2024, beginning at 9:00 A.M. each day, or as soon thereafter as may be heard, to review amendments to the Martin County Comprehensive Growth Management Plan resulting from the Evaluation and Appraisal Report for transmittal to the State Land Planning Agency (Public Hearings). The Board requested the amendments based on statutory requirements. The proposed amendments will be presented in Public Hearings over the three dates as follows:

September 10, 2024

Public Hearing to consider Comprehensive Plan Amendment 24-01, a proposed text amendment to Chapter 1, Preamble of the Comprehensive Growth Management Plan, Martin County Code.

Public Hearing to consider Comprehensive Plan Amendment 24-03, a proposed text amendment to Chapter 3, Intergovernmental Coordination Element of the Comprehensive Growth Management Plan, Martin County Code.

Public Hearing to consider Comprehensive Plan Amendment 24-05, a proposed text amendment to Chapter 5, Transportation Element of the Comprehensive Growth Management Plan, Martin County Code.

Public Hearing to consider Comprehensive Plan Amendment 24-06, a proposed text amendment to Chapter 6, Housing Element of the Comprehensive Growth Management Plan, Martin County Code.

Public Hearing to consider Comprehensive Plan Amendment 24-07, a proposed text amendment to Chapter 7, Recreation Element of the Comprehensive Growth Management Plan, Martin County Code.

Public Hearing to consider Comprehensive Plan Amendment 24-16, a proposed text amendment to Chapter 16, Arts, Culture and Historic Preservation Element of the Comprehensive Growth Management Plan, Martin County Code.

Public Hearing to consider Comprehensive Plan Amendment 24-17, a proposed text amendment to Chapter 17, Public Schools Facilities Element of the Comprehensive Growth Management Plan, Martin County Code.

September 24, 2024

Public Hearing to consider Comprehensive Plan Amendment 24-02, a proposed text amendment to Chapter 2, Overall Goals and Definitions of the Comprehensive Growth Management Plan, Martin County Code.

Public Hearing to consider Comprehensive Plan Amendment 24-08, a proposed text amendment to Chapter 8, Coastal Management Element of the Comprehensive Growth Management Plan, Martin County Code.

Public Hearing to consider Comprehensive Plan Amendment 24-09, a proposed text amendment to Chapter 9, Conservation and Open Space Element of the Comprehensive Growth Management Plan, Martin County Code.

Public Hearing to consider Comprehensive Plan Amendment 24-10, a proposed text amendment to Chapter 10, Sanitary Sewer Services Element of the Comprehensive Growth Management Plan, Martin County Code.

Public Hearing to consider Comprehensive Plan Amendment 24-11, a proposed text amendment to Chapter 11, Potable Water Services Element/10 Year Water Supply Facilities Work Plan of the Comprehensive Growth Management Plan, Martin County Code.

Public Hearing to consider Comprehensive Plan Amendment 24-12, a proposed text amendment to Chapter 12, Solid and Hazardous Waste of the Comprehensive Growth Management Plan, Martin County Code.

Public Hearing to consider Comprehensive Plan Amendment 24-13, a proposed text amendment to Chapter 13, Drainage and Natural Groundwater Aquifer Recharge Element of the Comprehensive Growth Management Plan, Martin County Code.

October 22, 2024

Public Hearing to consider Comprehensive Plan Amendment 24-04, a proposed text amendment to Chapter 4, Future Land Use Element of the Comprehensive Growth Management Plan, Martin County Code.

Public Hearing to consider Comprehensive Plan Amendment 24-14, a proposed text amendment to Chapter 14, Capital Improvements of the Comprehensive Growth Management Plan, Martin County Code.

The Public Hearings listed above on September 10, 2024 and September 24, 2024 will begin on the specified date and will be continued to October 22, 2024. The Board will conclude all of the Public Hearings and vote on the proposed amendments on October 22, 2024. All interested persons are invited to attend and be heard.

Each day of the Public Hearings will be held in the Commission Chambers on the first floor of the Martin County Administrative Center, 2401 S.E. Monterey Road, Stuart, Florida. Written comments may be mailed to: Paul Schilling, Director, Martin County Growth Management Department, 2401 S.E. Monterey Road, Stuart, Florida 34996. For further information, including copies of the original application documents or agenda items, contact Clyde Dulin, Comprehensive Planning Administrator, Growth Management Department at (772) 288-5495.

Persons with disabilities who need an accommodation in order to participate in this proceeding are entitled, at no cost, to the provision of certain assistance. This does not include transportation to and from the meeting. Please contact the Office of the ADA Coordinator at (772) 320-3131, or the Office of the County Administrator at (772) 288-5400, or in writing to 2401 SE Monterey Road, Stuart, FL 34996, no later than three days before the hearing date. Persons using a TTY device, please call 711 Florida Relay Services.

If any person decides to appeal any decision made with respect to any matter considered at the meetings or hearings of any board, committee, agency, council, or advisory group, that person will need a record of the proceedings and, for such purpose, may need to ensure that a verbatim record of the proceedings is made, which record should include the testimony and evidence upon which the appeal is to be based.

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