

## TARGETING OBESITY:

# Louisiana Partners Harness the Latest Science for Weight Loss

ROBIN ROENKER Contributor to *Health Progress* 

t 35, Steven Harris feels he has a new lease on life. The Gonzales, Louisiana, native dropped from 520 pounds in 2021 to his current weight of 180 pounds, following a duodenal switch surgery — a bariatric procedure that modifies both the stomach and small intestine — overseen by Philip Schauer, MD, director of Metamor, a metabolic institute in Baton Rouge.

"Dr. Schauer saved my life," says Harris, who now is fit enough to work as a lab analyst in a factory, where he averages 15,000 steps a day. Before the surgery, even walking was difficult for Harris, whose high body weight had also caused him to be diagnosed with prediabetes, hypertension and obstructive sleep apnea.

Today, Harris has none of those health issues. "I'm living on top of my world," he says. After his transformative weight loss, Harris is looking forward to tackling bucket-list items his previous size had made impossible, including riding on his first-ever roller coaster this spring.

Harris is just one success story among many at Metamor, a new metabolic institute on the campus of Pennington Biomedical Research Center (PBRC) at Louisiana State University. The new clinical facility takes an integrated approach to weight management, drawing on evidence-based research and personalized medicine to help patients move toward improved health.

### FORGING NEW PARTNERSHIPS

Launched in 2020, Metamor represents an innovative partnership between Pennington and Our Lady of the Lake Regional Medical Center, a member of the Franciscan Missionaries of Our Lady Health System. It receives additional funding support from the Office of the Governor of Louisiana, Louisiana Economic Development, LSU Health New Orleans and the Pennington Biomedical Research Foundation.

The new facility hopes to provide muchneeded weight management services at a time when an estimated 41.9% of U.S. adults and 19.7% of American children are currently struggling with obesity.¹ Currently, 19 states have adult obesity rates over 35%; a decade ago, none did, according to Trust for America's Health.² Significantly, Americans living in the South — and, in particular, in rural areas of the South — are more likely to be obese than those living in urban or northern population centers.³

Metamor was launched in Louisiana, in part,

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to help improve access to weight management services precisely where they are needed most: in the Southern U.S.<sup>4</sup> "Metamor represents a very unique collaboration between Pennington, which is a LSU facility, and the state of Louisiana," explains Schauer, who was recruited from his former position at Cleveland Clinic to direct the institute. "And Our Lady of the Lake Regional Medical Center — one of the largest hospitals in Louisiana, practically across the street — was brought in as a partner as well, because prior to this, Pennington had been a research entity and didn't treat patients. They had clinical trials involving patients, but Pennington had never previously provided health care."

With these partnerships in place, the research center's campus is, for the first time, offering multidisciplinary weight loss services — including bariatric surgery, drug therapies and lifestyle interventions — to patients. Scientists on the campus already had an international reputation for their findings related to diabetes and metabolic function, and Schauer is an innovator in these fields, known for his research and bariatric surgery advances.<sup>5</sup>

Schauer's team completely renovated a preexisting Pennington Biomedical Research Center building to establish Metamor's state-of-theart obesity treatment center, which was unveiled in March 2022. The new facility has specially designed waiting room seating, exam rooms, exam tables and bathrooms able to comfortably accommodate patients who weigh up to 900 pounds. The center also incorporates an array of specialist services, from surgeons and obesity medicine specialists to nutritionists, dietitians and behavioral health experts — all under one roof.

"We realized we had a unique opportunity to build a clinic specifically to meet the needs of people who struggle with their weight," says Schauer. "We developed the center with a goal that a person who's struggling with their weight can come here, and we'll help them figure out the best treatment strategies for their particular case — whether it's medication, diet, surgery or all of the above."

Schauer believes the office of Louisiana Gov. John Bel Edwards was motivated to push for the institute's expanded patient treatment model, partly due to Louisiana's routine placement near the top of annual lists of American states most impacted by severe obesity.

"Obesity is a national problem — but it's also a



Steven Harris at 180 pounds in early 2023 after his duodenal switch surgery in May 2022 at the Metamor metabolic institute in Baton Rouge. "I'm living on top of my world," he says as a result of his transformative weight loss. Harris weighed 520 pounds in 2021 prior to his surgery.

Louisiana problem," Schauer says. "So, I think the governor's reasoning was that Louisiana needed to put more effort in this area in order to turn a negative into a positive."

#### ADVANCES IN WEIGHT MANAGEMENT SCIENCE

Significantly, many of the current standards of care in weight loss treatment being offered at Metamor — and other similar clinics across the country — have been informed by groundbreaking research done at PBRC over the past 35 years. Opened in 1988, Pennington has long been viewed as "one of the top research institutes in the country devoted to obesity, nutrition and chronic illness," says Schauer.

For example, PBRC-related research helped spur the development of the low-salt, rich-in-

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vegetables Dietary Approaches to Stop Hypertension (DASH) diet, which is routinely prescribed as a first-line treatment for high blood pressure management.<sup>6</sup>

Similarly, PBRC was a site of the National Institutes of Health-funded Look AHEAD Trial, which helped establish best practices for weight-loss lifestyle interventions that combine exercise and dietary management.<sup>7</sup>

"I think we have been involved in the clinical trials for all FDA-approved obesity drugs, as well as most of the FDA-approved diabetes management drugs," adds Eric Ravussin, PhD, PBRC's associate executive director for clinical science and director of PBRC's NIH-funded Nutrition Obesity Research Center.<sup>8</sup>

While Pennington will still be heavily involved in basic and clinical science work, the new evolution to include weight-management treatment means it's now easier than ever for PBRC physicians and researchers to directly translate the latest scientific discoveries into improvement and advances in patient clinical care.

Ravussin is particularly excited about the move toward precision medicine in weight management. With this new approach, patients' individual genomic biomarkers could be used to identify the specific types of medications and precise kinds of exercise or dietary changes likely to be most effective on their personal pathway to weight loss.

"Ten years ago, weight loss science was a onesize-fits-all approach, and we know now that is not correct," he says. Ravussin's current work also includes a directory role in the NIH-supported Molecular Transducers of Physical Activity Consortium, dubbed MoTrPAC, aimed at studying the body's response to physical activity on a cellular level.<sup>9</sup>

Through this work, it may be possible eventually to identify individuals who can more effectively manage their hypertension or prediabetes through endurance activities versus resistance activities, and vice versa, for example.

For his part, Schauer is energized by advances in both surgical and pharmacological options for patients seeking to lose large amounts of weight.

He points, for instance, to the recent addition of a new classification of FDA-approved drugs called incretins, which simulate the production of hormones involved in digestion, help regulate insulin and decrease appetite.  $^{10,11}$ 

"One drug approved last year, Wegovy (a semaglutide injection),12 is delivering a lot more weight loss than drugs had before. We're talking about weight loss around 15% of total body weight, which is really quite significant," Schauer says, adding he expects to see other new drugs entering the market that are far more effective than obesity management drugs of the past.

Surgery for weight loss, too, is advancing, with new endoscopic procedures — such as the endoscopic sleeve gastroplasty, or ESG — able to replicate the long-term weight loss success of some traditional bariatric surgeries, but with a significantly shorter recovery time.

"Ten years ago, weight loss science was a one-size-fits-all approach, and we know now that is not correct."

- ERIC RAVUSSIN

"I think there's a whole line of other fully endoscopic weight loss management approaches that will be receiving FDA approval in the coming years," he says.

#### ADDRESSING THE YOUTH OBESITY EPIDEMIC

In January, the American Academy of Pediatrics issued its first comprehensive guidelines for treating children and adolescents with obesity. The guidelines make clear the group's findings that obesity treatment for youth — including an increasing number of pharmacologic and surgical interventions now FDA-approved for children and adolescents — is "safe and effective." <sup>113</sup>

The move is one example of the health profession's growing acknowledgement that obesity is, in fact, a medical disease that should be addressed medically, says Katie Queen, MD, a pediatrician at Our Lady of the Lake Children's Health who is board certified in both pediatrics and obesity medicine.

In October 2021, Queen helped launch a multidisciplinary pediatric obesity specialty clinic at Our Lady of the Lake in Baton Rouge. The practice includes two pediatricians, two dieticians and a social worker who can help patients practice mindful eating or combat disordered eating

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with treatments that are available."

- KATIE QUEEN, MD

practices like binge eating, among other services.

To qualify for the clinic's care, patients must be at least two years old and have a BMI above 30 or that falls in the 95th percentile or above for their age. Many of Queen's patients, significantly, screen highly on intake questionnaires surrounding issues of food insecurity as well as transportation and housing insecurity. For these patients, Queen's team works to make connections with food banks and other social and mental health supports to ease emotional distress that may be contributing to the child's weight gain.

"We are seeing some of the sickest, most severe pediatric obesity cases from across the state," Queen says. "And what's different about our clinic is that we don't just do lifestyle treatment — meaning teaching them about healthy eating, nutrition and physical activity. We offer all aspects of treatment, which includes lifestyle modifications plus anti-obesity medications and surgery, when appropriate."

Given her clinic's proximity to Pennington, Queen can refer pediatric patients in need of bariatric surgery seamlessly to Schauer and his surgical team at Metamor.

"When a young patient comes in, we're not just saying, 'OK, we're going to teach you how to eat healthier and be active.' Instead, we're really looking at their condition medically, and thinking about how best to match the severity of their obesity and their health complications with treatments that are available," she says.

Queen points to one recent success story: a 12-year-old girl who had gained significant weight following use of psychiatric medications to address schizoaffective disorder. With Queen's prescription of liraglutide, an anti-obesity medication that's FDA-approved for ages 12 and up, the patient was able to lose 15% of her body weight in just six months — far more than she likely would have been able to lose with diet and exercise modifications alone.

In addition to developing her own pediatric specialty clinic, Queen has also been working to share pediatric weight management best practices with other pediatricians and clinics across Louisiana, many of them within the Franciscan Missionaries of Our Lady Health System.

In this pursuit, she has worked closely with Amanda Staiano, PhD, director of the pediatric obesity health behavior lab at PBRC, whose research has included studies on the effectiveness of exergames — video games that encourage kids to get up and moving.

Staiano's findings illustrate that these interventions, when implemented correctly, can successfully help kids lose weight and improve their blood pressure and other weight-related health concerns.

"The kids that we've worked with really seem to enjoy that relationship with their [online] coach, as well as having these resources that they can do at home or with their family," Staiano says.

She's currently at work to expand the intervention to an easy-to-use app and to share it with other pediatric patients, including kids dealing with ADHD. She notes that, compared to 15 years ago, exergames have become much more involved and immersive as technology has improved.

Building on their mutual expertise and research findings, Staiano and Queen have trained about 40 pediatricians, nurse practitioners and family medicine doctors throughout South Louisiana. During these workshops, they've offered insights into

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scientifically proven weight loss interventions as well as practical tips for how best to engage families in conversations about weight management.

Because obesity medicine is a relatively new board specialty, "most of these providers did not get this type of training in medical school or graduate school," Staiano says.

Staiano hopes her partnership with Queen can help pediatricians and nurses begin to routinely and directly "talk about children's weight with their family [during office visits], just like they would about blood pressure or labs."

#### CONCLUSION

As the partnership between Metamor and Our Lady of the Lake grows, weight management researchers and clinicians at both facilities hope their combined efforts will help curb the growing tide of obesity across Louisiana and the South.

"It is pretty clear now that obesity is one of the most important public health problems in our nation — if not the most important," Schauer says. "To address the issue, we really need to be devoting as much energy as possible into finding solutions both on the clinical care side and the research side, and that's exactly what we're trying to do here."

**ROBIN ROENKER** is a freelance writer based in Lexington, Kentucky. She has more than 15 years of experience reporting on health and wellness, higher education and business trends.

### NOTES

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