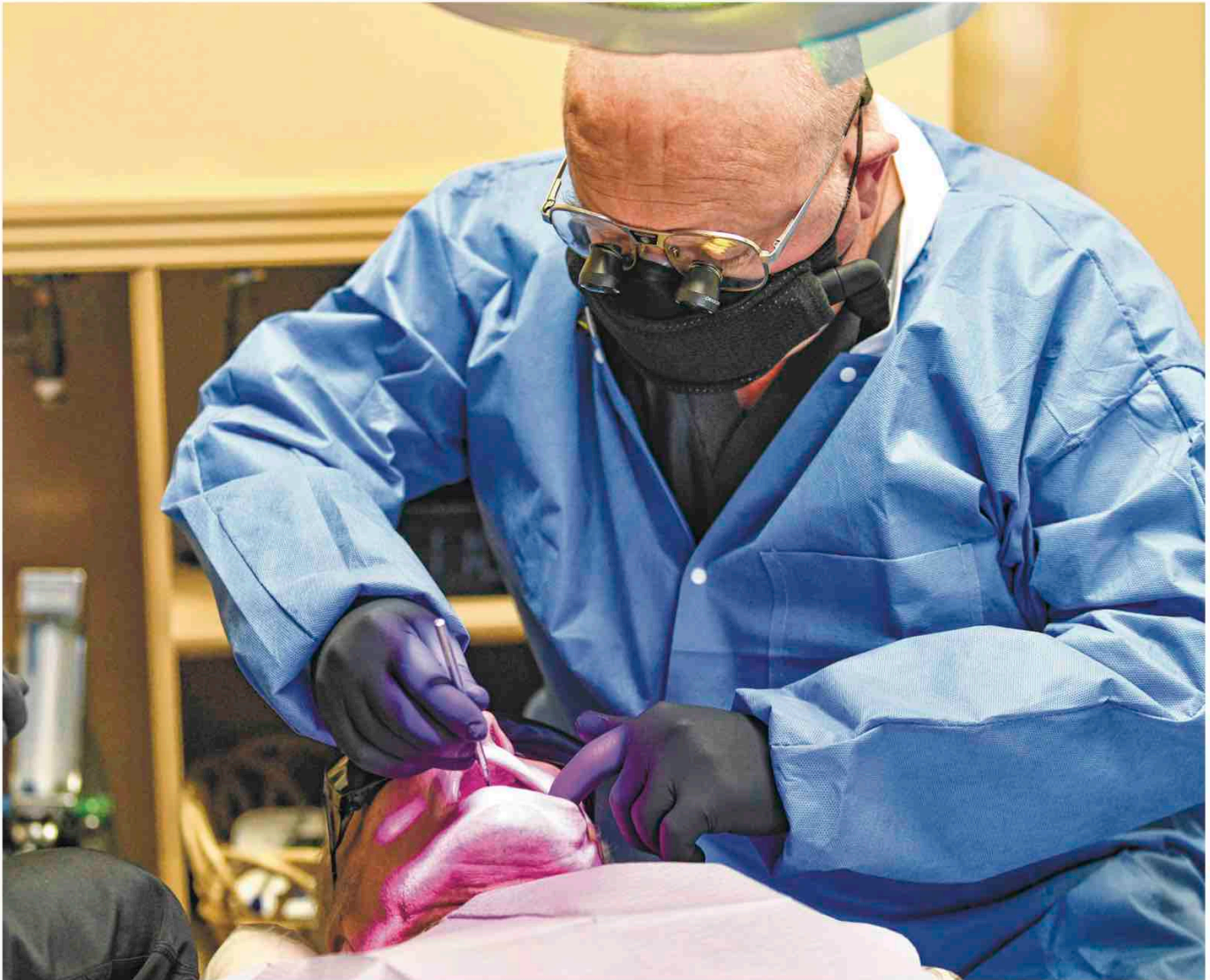


Dentist fighting coronavirus with special mask made in S.A.



Photos by Billy Calzada / Staff photographer

Dr. Philip Miner wears a JustAir powered air-purifying respirator as he works on a dental patient last week.

Portable filter device offers protection during hours-long procedures

By Laura Garcia

STAFF WRITER

In spring, Dr. Philip Miner shut down his Castle Hills dental office in accordance with local and state mandates to protect his staff and his patients.

But the pressure was on to reopen his office almost from the beginning, despite the pandemic unknowns. Employees need their paychecks after all, patients need their treatment and dentists, too, have families to support.

He finally relented after nine weeks, but it's been a grueling test of resilience and ingenuity.

The coronavirus crisis has been that way for many small-business owners, especially for health care professionals who have the added costs of specialized



Dr. Philip Miner, whose dental office is in Castle Hills, said the JustAir respirator doesn't cause his telescopic goggles to fog up during procedures.

personal protective equipment such as N95 masks. Those are needed to safely treat patients during procedures that could lead to aerosol distribution of the virus.

Miner has seen one positive on that front. A patient told him about a new device that has saved the dentist stress and money: a powered air-purifying respirator known by its acronym, PAPR.

The portable face mask, made by a startup called JustAir that recently relocated to San Antonio, provides a more comfortable, protected way to work during dental procedures that can take hours. It filters out 99 percent of microscopic pathogens using a positive-pressure blower worn at the hip.

The mask retails for \$249 and is reusable.

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able. That compares favorably with the cost of the disposable N95 masks; Miner recalls having to buy a box of 50 for about \$1,000 near the start of the crisis as the world scrambled for ways to protect against the new threat.

So far, Miner has no complaints about the device.

“What I found was that this was very effective for me,” he said, noting the mask doesn’t cause his telescopic goggles to fog up during procedures.

The company expects that the face mask’s design will soon earn federal certification for meeting standards set by the National Institute for Occupational Safety and Health.

NIOSH approval means the air-filtering device now sold to consumers online will be able to attract bigger buyers, including schools and governmental agencies.

The respirator was created 10 years ago by physician



William Luther / Staff photographer

Nohemi Reyna sews parts for a powered air-purifying respirator at JustAir’s San Antonio plant.

and bioengineering entrepreneur Dr. Dan Burnett of Theranova Medical Device Innovations, a San Francisco-based incubator founded

in 2006.

A powered air-purifying respirator isn’t exactly new technology. Major medical supplier 3M makes bulkier

versions that start at \$1,100.

But Burnett’s is less expensive and more portable. It was first marketed as a way for consumers to combat pollutants and unsafe air quality in California, but in recent months the coronavirus has led to the demand for better consumer-friendly protective gear.

“There will always be airborne issues that people will have to deal with whether it be smoke or airborne pathogens,” said Dan Diamond, owner of TDThink, which was contracted to do product design for JustAir. “When you wear it, you’re getting that nearly 100 percent protection. This actually does give people some freedom because it’s wearable and compact.”

The product can be worn continuously for 12 hours and has replaceable HEPA and mask filters.

The Centers for Disease Control and Prevention is currently developing minimum filter efficiency standards for cloth masks and labels showing which products on the market meet

those standards.

One of 17 Theranova spin-out companies, JustAir had long been courted by local investors to relocate its headquarters and manufacturing facility to San Antonio.

The company finally agreed and leased property in August at 4590 Lockhill Selma Road provided by venture capital and private equity firm Fountainhead Investment Partners.

JustAir has hired nine employees to assemble the masks, including two engineering interns from the University of Texas at San Antonio.

Among its customers are frequent travelers, teachers and those who work in medical offices like Miner’s.

His office keeps up with stringent infection control protocols, and he’s actually added extra staff since the pandemic to make sure the thorough cleaning gets done in between each appointment.

“Once you’ve been battling the virus for almost 10 months, there’s worry of

dropping your guard,” he said. “But I have an incredible team here, and they take this very seriously.”

Some dental practices have resorted to charging patients a fee to cover the cost of extra PPE and cleaning supplies – one local dental chain was charging patients an extra \$10 a visit.

But others are just taking the financial hit, not wanting to add to their patients’ burdens.

Dr. Richard Potter, president-elect of the San Antonio District Dental Society, said he’s only submitting the fee to insurance companies that have agreed to reimburse providers for the costs of the increased PPE standards.

Miner said he briefly considered it because of the extra equipment expenses and because his patient volume is only 85 percent of what it was before COVID-19.

“We chose not to charge patients a surcharge,” he said. “The bottom line is that there are so many people affected. ... We don’t want to pile on.”