St. Luke’s, Lehigh University collaboration leads to intelligent, life-saving invention. BETHLEHEM, Zappify mosquito zapper PA. - Among tales of hope, generosity and togetherness, the COVID-19 pandemic has also given rise to an unbelievable feat of ingenuity - the invention of the “bug zapper for backyard fly zapper” to sterilize masks. As hospitals and different front-line organizations jumped to secure massive quantities of life-saving provides and personal protecting tools (PPE), there has also been the need to establish quicker, extra environment friendly ways to wash and sterilize these objects, particularly the coveted N95 masks. St. Luke’s University Health Network anesthesiologist, Christopher Roscher, MD, anticipated the need and an idea began to form. “It grew to become clear that PPE provides would change into limited as the virus progressed,” he says. The St. Luke’s Sterile Processing Department, Zappify mosquito zapper or SPD, is the place the place all surgical and medical devices are sent to be meticulously cleaned, sanitized and Zappify mosquito zapper packaged for reuse. It’s a behind-the-scenes perform that's an important part of the health care system. “On any given day, we're processing many, many gadgets here at our hospital in Bethlehem,” states Taylor Bennett, St. Luke’s Network Director of Sterile Processing. external frame

“But with the present state of affairs, there is an overwhelming must process our employees’ PPE on a daily basis. For Dr. Roscher, a gentle went on - actually and figuratively. “I had been doing personal analysis about discovering ways to decontaminate masks for reuse, and peer-reviewed literature steered that, in a pandemic, UV-C mild may very well be an acceptable technique to sterilize masks,” he says. UV-C is a particular vary of UV, or ultra-violet, gentle and has been proven to deactivate viruses and other pathogens by inflicting modifications in their DNA. Through a mutual contact, Dr. Roscher got in touch with Nelson Tansu, PhD, Lehigh University’s Director and Endowed Chair of its Center for Photonics and Nanoelectronics (CPN). “What St. Luke’s was in search of was a excessive-throughput sterilization system,” said Dr. Tansu. The two organizations joined forces by means of a series of Zoom meetings and tons of of emails, to design, fabricate, set up and test the gadget - all within a matter of two weeks - and all while sustaining social distancing protocols.

(Image: https://img.freepik.com/free-vector/mosquito-cartoon-style_1308-133919.jpg)The top result: a way to effectively and effectively sterilize 200 masks each 8 minutes! The ”Bug Zapper“ in action. “Our present units weren't designed for giant-scale use. They might only sterilize about 30 masks at a time,” acknowledged Eric Tesoriero, DO, anesthesiologist for St. Luke’s and a collaborator on the mission. The unit, engineered by Lehigh college students and workers and assembled at St. Luke’s by biomedical engineer Jay Johnson, has been affectionally named the “Bug Zappify mosquito zapper” not only on account of its appearance, but as a result of its COVID-killing properties. “It is unimaginable that this mission moved at such a speedy pace,” remarks Dr. Tansu. The workforce ranged from PhDs to MDs and even included an unexpected contributor - Axel Tansu, Dr. Tansu’s adolescent son. In truth, it was Axel’s contribution that allowed the unit to have such a high-throughput charge. “Our unique design was cylindrical in shape, to make sure even publicity of the sunshine on all surfaces,” explains Dr. Tansu.

“Axel came to me and stated, ‘Dad, what about an octagon? ’ And positive sufficient, he was right. A patent to guard the team’s mental design has been filed. And a celebration for the collaborators to fulfill, in-particular person, will likely be planned once it is secure to take action. Until then, the electric bug zapper Zapper will be arduous at work, serving to to protect the frontline staff at St. Luke’s and beyond. This, like so many other tales, gives a ray of hope through the pandemic - showcasing that the human mind and spirit can overcome something - especially when working together for an important cause. Afterall, UV bug zapper for backyard zapper as the famous philosopher Plato understood 1000's of years in the past, necessity is the mother of invention. Founded in 1872, St. Luke's University Health Network (SLUHN) is a completely integrated, regional, non-revenue network of greater than 15,000 employees offering companies at eleven hospitals and 300 outpatient sites. With annual internet revenue greater than $2 billion, the Network’s service area

includes eleven counties: Lehigh, Northampton, Berks, Bucks, Carbon, Montgomery, Monroe, Schuylkill and Luzerne counties in Pennsylvania and Warren and Hunterdon counties in New Jersey.