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WORLD'S BEST HOSPITALS 2020  
Newsweek  
POWERED BY statista

**Two years in a row**

**Sheba is ranked as a world's Top 10 hospital**

**This year, ranked #9!**

# Sheba Medical Center Pilot

March 2020

# Overview

We are honored to take part in the Sheba Medical Center pilot, and target the health of hospital staff and patients.

Moreover, during this sensitive time in which the disease (COVID-19) has affected the whole world, we at [redacted], believe that our device can help alleviate and treat infected air.

[redacted] aims on providing a comprehensive solution for improving and managing the air quality in one of Sheba Medical Center's departments, while increasing awareness of outdoor air quality. The pilot will be executed through an interactive data-based experience providing reports and insights.

August 13, 2019

**Letter of Intent: Collaboration between [redacted] Smart Air Ltd. (515816114) to Surgical Department C, Sheba Medical Center.**

Following the challenge we face with infections in the hospital, representatives of [redacted]

Air Ltd. contacted us, claiming that they could improve the current indoor air quality by disinfecting the purifying the air using the technology they developed.

After several meetings that included reviewing [redacted] Smart Air's technology, a tour in the department, and air samples conducted at the facility; We believe there is a great potential for collaboration. We agreed to hold a pilot in the operating rooms and department rooms, with the ambition to look at improving air quality and dealing with the infections in the hospital.

Best regards,

Professor Aviram Nissan

Director of Surgical Department C

Sheba Medical Center

Aviram Nissan MD  
Director of Surgical Department C  
Sheba Medical Center  
13/08/2019

**"In American hospitals alone, the Centers for Disease Control (CDC) estimates that Healthcare-acquired infections (HAIs) account for an estimated 1.7 million infections and 99,000 associated deaths each year."**



# The Pilot

## Schedule

### Phase 1: Measurement

Since February 12th at 12:00 PM, the device was installed in the Surgery C-General and Oncology Department in Sheba Medical Center. We measured the following parameters: VOC, CO<sub>2</sub>, PM 2.5, PM10, CO, temperature, humidity and AQI, to provide a comprehensive report.

### Phase 2: Measurement and Treatment

Starting March 19th, the device will be installed with the purification and disinfection components.

## Schedule:

### Phase 1

Installation and Measurements

### End of phase 1

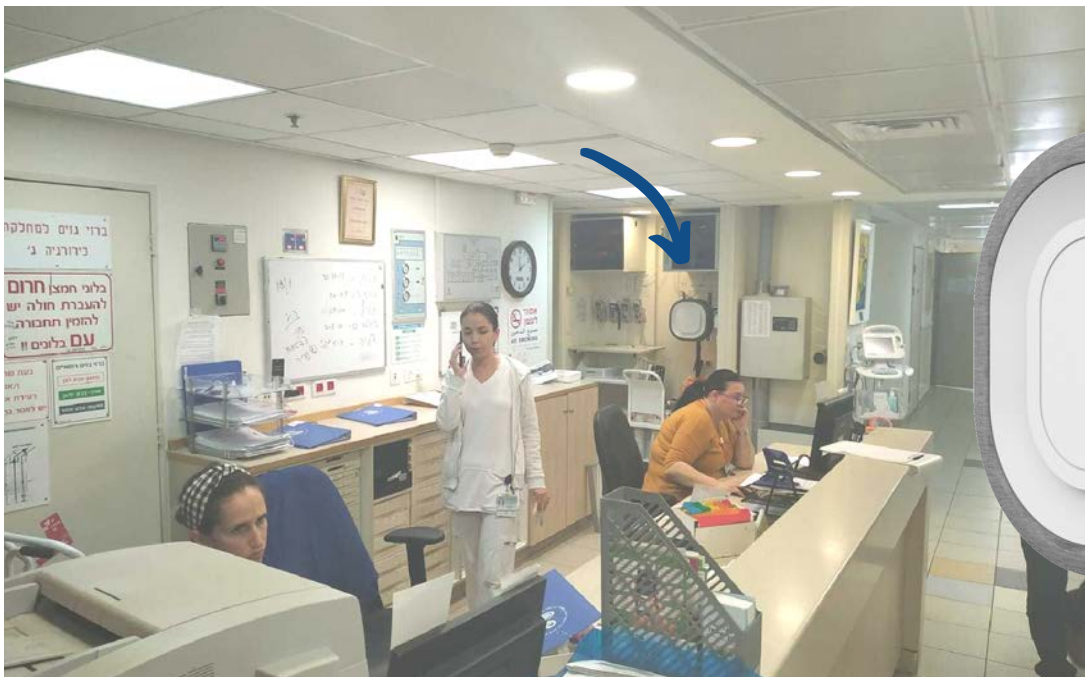
Comprehensive Report

### Phase 2

Full Operation

### End of phase 2

Feedback & Summary



# Our Claim

(Based on the Aura Air white paper)

The efficiency of the Sterionizer in removing different types of pollutants is presented in Table 2.

Table 2- Sterionizer efficiency tests

Substance	Substance name	Removal
Bacteria	Escherichia Coli	99%
	Escherichia Coli ATCC	91%
	Staphylococcus aureus	91%
	Pseudomonas aeruginosa	99%
	Staphylococcus aureus (MRSA)	99%
Fungus	Aspergillus Niger	97%
	Candida albicans	36%
	Dichobotrys abundans	90%
	Penicillium	95%
Mold	Cladosporium cladosporioides	97%
Spores	Bacillus subtilis var Niger	89%
Viruses	Influenza H1N1	99%
	Influenza H5N1	99%

Table 2 shows that the Sterionizer decreased the amounts of bacteria for at least 1 order of magnitude (more than 90%) for all the strains tested. It also decreased the amounts of fungus for at least 36% and the amounts of mold, spores, and viruses for at least 89% for all the tested strains.

Examples of the plates after incubation are presented in Figures 12-13:



Figure 12: incubation results of the control plates on December 31<sup>st</sup>, 2019



Figure 13: incubation results of the Ray filter+ Sterionizer+ UVC LEDs plates on December 31<sup>st</sup>, 2019

# Past Pilot Results

Hilton Hartford, Connecticut

Guest Room

PM 2.5 ↓ 42%  $\mu\text{g}/\text{m}^3$

PM 10 ↓ 8%  $\mu\text{g}/\text{m}^3$

VOC ↓ 31% ppb



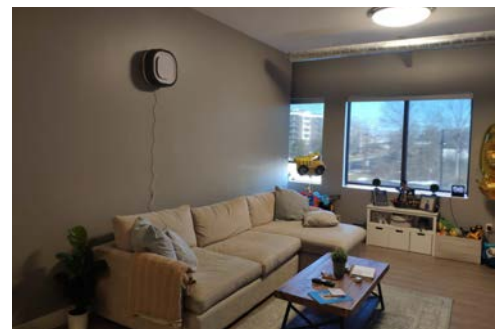
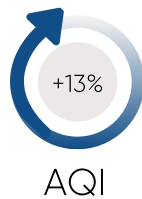
Lexington Hartford, Connecticut

Residential Apartment

PM 2.5 ↓ 82%  $\mu\text{g}/\text{m}^3$

PM 10 ↓ 48%  $\mu\text{g}/\text{m}^3$

VOC ↓ 34% ppb



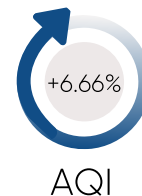
Shelbourne Hartford, Connecticut.

Conference Room

PM 2.5 ↓ 33.3%  $\mu\text{g}/\text{m}^3$

PM 10 ↓ 2.4%  $\mu\text{g}/\text{m}^3$

VOC ↓ 28% ppb



## Method of Action



### PM 2.5

PM 2.5 levels were decreased as a result of the Ray Filter's HEPA layer



### PM 10

PM 10 levels were decreased as a result of the Ray Filter's HEPA layer



### VOC

VOC levels were decreased as a result of the Ray Filter's Carbon layer



### AQI

AQI decreased as a result of the Ray Filter, the UVC LED and the Sterionizer