Bio-Aerosolization and Medical Staff SafetyManoj Mishra

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Healthcare Workers (HCW) are the most at-risk population for infection during epidemics, with constant and close exposure to infected individuals, the risk for them to be sick is up to 12 times that of the general population. Combined with their frequent contact with compromised individuals, the problem of HCW safety is only emphasized.

A significant risk factor for HCW infection is through bio-aerosols, in particular those created by the administering of certain procedures that involve pressurized air and gasses administration, generalized as Aerosol Generating Procedures, or AGP's. These include the different methods of NIV, open suctioning, and more.

30% of intubation processes could be replaced by NIV if it were safe for medical staff

During the recent CoViD19 epidemic, severe restrictions were placed upon the use of NIV due to the extreme risk posed by its use. Usage was limited to negative pressure rooms, with the highest possible level of protective gear and isolation measures.

These measures have effectively put an impossible dilemma to doctors: either refrain completely from administering NIV, or put themselves and their surroundings at risk.

Inspir Labs has developed an innovative and novel solution for the safe use of Non-Invasive Ventilation (NIV) in light of the ever-growing threat posed by airborne pathogens. Inspir Lab's solution utilizes the creation of a pressure gradient to ensure that no aerosol contamination occurs. This will allow the safe use of NIV methods in any necessary environment.

This approach to aerosol safety solves the challenges presented by the attempt to seal a constantly positively pressurized device, a near-impossible endeavor otherwise.

Biography

Mr. Eli Schwalm is a serial entrepreneur, with rich experience in developing Medical Devices and innovation in general. In the age of only 30, he was assigned as a director of the ceramic and cilicate institution of the Technion – Israel institude of Technology. Later on, he Founded Inspir Labs in order to confront one of the most common challenges in Respiratory assistance field.

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