



NEW DATA SHOWS SYNEXIS® DHP™ TECHNOLOGY SIGNIFICANTLY REDUCES HOSPITAL-ACQUIRED INFECTION RATES

In the study, patients exposed to Dry Hydrogen Peroxide (DHP™) had 61.4% lower odds of developing a hospital-acquired infection compared to patients who were not¹

LENEXA, KS – [JANUARY 11, 2022] – Synexis® LLC, pioneer in microbial reduction and sole developer of hydrogen peroxide gas and Dry Hydrogen Peroxide (DHP™) technology for occupied spaces, today announced positive new data from a retrospective analysis evaluating the use of DHP™ Technology in a clinical setting were published in the current issue of the *American Journal of Infection Control (AJIC)*. The retrospective analysis assessed the efficacy of DHP™ Technology, in addition to standard manual cleaning, in reducing hospital-acquired infections (HAIs) in the intensive care unit (ICU) of a pediatric oncology hospital. As an adjunct technology for environmental cleaning, DHP™ contributed to the reduction in HAIs in this clinical setting.

“Standard cleaning and disinfecting protocols may not be sufficient for immunocompromised patients who are particularly susceptible to HAIs,” said Dr. Mario Melgar, Medical Director for Infection and Control.

The study was conducted between January 2019 and November 2020 at the pediatric ICU (PICU) at Unidad Nacional de Oncología Pediátrica (UNOP), the National Referral Center for Children with Cancer and a global partner of a leading pediatric cancer institution in the U.S. UNOP is a 65-bed pediatric oncology hospital located in Guatemala City, Guatemala. Though they follow all CDC guidelines and protocols for preventing HAIs, DHP™ Technology was added to standard environmental cleaning and disinfection in the PICU to determine its effect on HAI rates.

“This study demonstrates the value of DHP™ Technology. I am thrilled to see the significant decrease of *C. diff* incidence in our PICU,” said Dr. Alicia Chang, Department of Infectious Diseases. “We continue to follow the CDC’s recommended prevention and control strategies, and the addition of DHP™ to our environmental cleaning process helped optimize our outcomes.”

Between 2019 and 2020, the addition of DHP™ to standard cleaning resulted in a 44.3% reduction in HAI incidence (incidence rate difference, IRD = -21.20, $p=0.0277$) in the PICU, including a 76.4% reduction in *Clostridioides*-associated gastroenteritis (IRD=-8.23, $p=0.0482$), compared to the period before DHP™ installation. Additionally, only one case of hospital-



acquired COVID-19-associated non-pneumonia respiratory infection occurred in the PICU where DHP™ was installed compared to a control area without DHP™ which experienced an increase in hospital-acquired non-pneumonia respiratory infections (IRD=2.52; p=0.028). This is consistent with recent studies that indicate DHP™ inactivates SARS-CoV-2 both in the air and on surfaces.^{2,3} Overall, exposure to DHP™ led to a 61.4% reduced odds of contracting an HAI during their stay (OR=0.386; p=0.029). HAI incidence did not significantly change in another part of the hospital where DHP™ was not installed.

“Hospital-acquired infections such as COVID-19-associated non-pneumonia respiratory infections are a serious threat that manual cleaning cannot fully eliminate,” said Eric Schlote, CEO of Synexis®. “We are excited that DHP™ Technology is continuing to demonstrate effectiveness in clinical settings and may provide another layer of protection from HAIs and SARS-COV-2.”

Patients in the study ranged in age from 1 month to 22 years old, with an average age of 7.7 years. The majority (61%) were patients with leukemia, while the remainder were diagnosed with other forms of cancer, including sarcoma, blastoma and lymphoma. These patients are at high risk for HAIs due to their immunocompromised state, exposure to invasive devices and procedures, and underlying medical conditions.⁴ DHP™ Technology reduced HAI rates without causing any adverse events related to exposure to DHP™.

Synexis® technology deploys DHP™ to actively clean the air and surfaces. DHP™ molecules travel throughout an enclosed space to reduce viruses, bacteria, mold, odors and many insects. Generated from ambient humidity and oxygen naturally present in the environment, DHP™ can be effectively delivered in occupied spaces at levels well below occupational airborne safety standards established by OSHA, which allows for continuous microbial reduction without disturbing normal operations and workflow.⁵ DHP™ is able to impact contaminants in air and on surfaces in hard-to-reach places.

ABOUT SYNEXIS

Synexis develops cutting-edge BioDefense systems designed to transform the air to make the air and surfaces cleaner. Synexis BioDefense systems are regulated by the US Environmental Protection Agency and state governments as antimicrobial devices. Accordingly, Synexis BioDefense systems are produced in an EPA-registered facility and packaged and labeled in accordance with EPA regulations appearing at 40 CFR 152.500. The Synexis system is Underwriters Laboratories (UL2998) Certified to produce no ozone and works continuously without disruptions in normal operations or workflow.⁶ Synexis currently has 16 U.S. patents with



17 pending.⁷ In addition, Synexis® DHP™ Technology is supported by data from seven peer-reviewed studies.^{1,2,8,9,10,11,12}

Founded in 2008, Synexis LLC is the leader in microbial reduction and the sole developer of patented technology that creates and continuously disperses DHP™ (Dry Hydrogen Peroxide) to help reduce the presence of microbes in indoor spaces around the clock, without the need for occupants to evacuate the space. Synexis has set the bar in the industry and continues to educate current and future customers in indoor environmental quality (IEQ).

For more information, visit Synexis.com.

MEDIA CONTACT

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- ⁶ UL Certification numbers: Blade UL E482400, Sentry UL E495096 and Sphere UL 2998.
- ⁷ Synexis <https://synexis.com/patents/>. Accessed November 30, 2021.
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