



Transforming patient safety

Clean Hospitals®: transforming patient safety from an idea to an international collaborative movement

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Over the last year, the group Clean Hospitals has developed from an idea to a maturing international collaboration, focusing on improving hospital environmental hygiene in the context of patient safety.

The healthcare industry is facing a number of new challenges, including the rise in antimicrobial resistance, an ageing patient population in most parts of the world, and the increasing costs associated with healthcare. The hospital environment is an important source of pathogen transmission. Investing in infection prevention and control,

including the hospital environment, is one of the most cost-effective ways for hospitals to prevent extra expenditures due to healthcare-associated infections. Preventing an infection is always cheaper than treating one. And not only does preventing infections save money, but it improves patient outcomes and experience, and reduces antibiotic consumption - lowering the antimicrobial pressure in the hospital environment contributing to the containment of antimicrobial resistance.¹⁻³

Although a safe and clean hospital environment is crucial for preventing healthcare-associated infections; it is often ignored, underfunded, and understudied. Available products, technologies, and practices vary widely in quality and effectiveness. Clean Hospitals aims to bring clinical and academic experts together to address the gaps present both in the knowledge in the field and in everyday practice, and raise both the visibility and quality of hospital environmental hygiene worldwide.

The group and its aims

Clean Hospitals has established a collaboration between various key stakeholders including: ministries of health, hospital management, academics, manufacturers and service providers from the professional cleaning industry, key opinion leaders, patient association groups, and others. The primary objective of this group is to develop a comprehensive network connecting all relevant stakeholders around the cause for a safer and cleaner environment for both patients and hospital staff. Through this extended collaboration, the group will initiate and support a range of initiatives to promote an increased focus on the importance and quality of environmental hygiene in healthcare settings across the world.

Clean Hospitals aims to build up the evidence that demonstrates the impact of improved environmental hygiene in healthcare settings in patient safety, and

align and evaluate hospital environmental hygiene recommendations across geographic regions and economical income groups. A major focus of the group is on the adaptability of best practice recommendations, so that they can be implemented across healthcare facilities, even in low-resource settings. Clean Hospitals works to promote quality products and techniques and cost effective approaches in the supply chain as well as champion the adoption of best practices for environmental hygiene, based on scientific evidence. It also works to highlight the need for corporate social responsibility and give the companies that provide these products and services a forum to exercise it. The vision of Clean Hospitals is that the world is large enough for all serious companies to do well, but that in the future, only quality products and methods should be on the market.

Context

Historically, the importance given to cleaning and disinfecting the hospital environment has varied greatly by time and region. Some regions adopted the attitude of "we don't eat off the floor so there is no reason to disinfect it", while others flooded non-critical areas of the hospital such as offices and hallways with disinfectant every day. Until recently the practices of how to clean and disinfect hospitals was often taken from what was done in other industries, such restaurants or hotels; a reason why, in some parts of the world, environmental hygiene personnel are still referred to as "housekeeping".

In the last 10 years there has been a strong upswing in the scientific literature available on the subject.^{1,4,5,6} Nonetheless, many hospitals do not view a contaminated hospital environment as a threat to patient safety. Globally, initiatives for preventing healthcare-associated infections have focused on hand hygiene. Hands are, at their most basic level, a highly mobile and often contaminated environment that

frequently is in contact with patients. It makes a lot of sense that hand hygiene is a primary focus for patient safety, but it also makes sense to look at environmental concerns, especially because perfect compliance with hand hygiene has proven impossible to implement.

Although the hospital environment tends to be one of the most understudied and underfunded areas in healthcare, there is enough literature in the field to prove that a well-maintained patient environment is crucial for preventing the spread of healthcare-associated infections and antimicrobial resistance.^{6,7}

Scope and research agenda

Instead of treating hygiene challenges in isolation, it is important to look at the broader picture and include all aspects of the hospital environment. Specific subject areas covered by Clean Hospitals include, but are not limited to, cleaning, disinfection, sterilisation, equipment for hospital environmental hygiene, the training of cleaning personnel, waste management, air and water treatment, and information technology solutions among others.

The Clean Hospitals research activities centre around a taskforce, which develops the main agenda for the group members based on the identified needs. The taskforce is organised in a three-pronged structure: research; training and education; and awareness raising. Research includes analysis of the cost and value of improved environmental hygiene in hospitals, and the association between improved environmental hygiene and reduced healthcare-associated infections. Results of this research will be published in peer-reviewed journals, and help to advance the field.

Training and education centres on creating course content and specific modules to 'train the trainers' on key topics in hospital environmental hygiene that can be tailored to the needs and levels of health systems or specific institutions. The group is also developing a core curriculum to train hospital environmental hygiene personnel. Awareness raising is the public relations part of the group and focuses on making Clean Hospitals visible at both the global and regional levels. Activities include making a business case for hospitals to use based on research on

the economic impact of improved cleaning, having booths at shows or consortiums, presenting the group at conferences, and other public outreach.

In addition to this main taskforce, there are also various subgroups where industries and the Clean Hospitals academic team collaborate on subjects which are of special interest to some of the members. Current subgroups include, sterilisation and instrument reprocessing; mapping and analysing existing guidelines; creating a transposable model for hospital hygiene that can be adapted to diverse environments and resource levels; and developing a protocol and group for reacting to fake news in hospital environmental hygiene.

A large network of industries, NGOs, and ministries of health are supporting this initiative. Because of the academic reputation of core members of the team and their capacities of championing patient safety worldwide, any research conducted and published by the group will be held to the highest academic standard; giving the group's outputs more weight than if they came from industry alone.

Structure and timeline

The Clean Hospitals collaboration consists of meetings, as well as dedicated initiatives, activities and projects. It is facilitated via a secure web-based hub. Group activities and initiatives are coordinated and implemented in collaboration with the respective stakeholders. The Clean Hospitals group meets biannually, and the various sub groups and related initiatives meet at additional, mutually agreed, times.

The Clean Hospitals inception was at the Healthcare Cleaning Forum at Interclean Amsterdam in May 2018.³ The Forum was the first of its kind, and a whole hall of the RAI Exhibition and Convention Centre was dedicated to environmental hygiene in healthcare settings. After the conference on the role of the hospital environment in patient care, the main question that both the speakers and participants had was "Where can we have the most impact and how?" The creation of Clean Hospitals is our answer to that question.

Clean Hospitals had its introductory meeting for potential stakeholders meeting in October of 2018. The formation of the core group of participating

stakeholders took place in autumn 2018 and the Knowledge/Information/Coordination hub (KIC-hub) is currently in development. A first stakeholders' meeting was held in January 2019, where the agenda and aims of the group were more clearly defined. The academic team of Clean Hospitals presented and conducted interactive workshops at the Healthcare Cleaning Forum at Interclean in Istanbul in April 2019, which hosted participants from over 80 countries. The second stakeholders meeting was held in May 2019 and the group will have its official launch at the International Conference on Prevention and Infection Control (ICPIC) in Geneva in September 2019.

We look forward to developing our projects, changing how the world views hospital hygiene, championing the fight against healthcare-associated infections, and saving patients' lives.

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Au cours de l'année écoulée, le group Clean Hospitals, dont la création est partie d'une idée, est devenu un lieu de collaboration internationale mûrissante, centrée sur l'amélioration de l'hygiène hospitalière dans le contexte de la sécurité du patient.

Im Verlauf des letzten Jahres hat sich die Gruppe Clean Hospitals aus einer Idee in ein heranreichendes internationales Kooperationsprojekt entwickelt, dessen Schwerpunkt die Verbesserung der Hygiene in einer Krankenhausumgebung im Kontext der Patientensicherheit ist.

Nel corso dello scorso anno, il gruppo Clean Hospitals si è sviluppato partendo da un'idea fino a creare una collaborazione internazionale affinata che si concentra sul miglioramento dell'igiene negli ambienti ospedalieri nel contesto della sicurezza dei pazienti.