

## **AIR QUALITY AND RESIDENT WELL-BEING**

Indoor air quality is a critical factor in maintaining the comfort and well-being of residents in care facilities. Poor air quality can exacerbate respiratory issues and contribute to the spread of infections. BMS integrated air quality systems provide real-time monitoring and control of ventilation and filtration systems, ensuring a clean and healthy living environment.

Air quality control is a top priority in residential care homes.

Residential care plays a vital role in providing support and assistance to vulnerable individuals. As the demand for such services continues to grow, the need for efficient, safe, and comfortable residential care facilities becomes paramount. In recent years, the integration of advanced Building Management Systems (BMS) has revolutionized the way residential care is delivered. This article delves into the significance of BMS in residential care facilities, particularly focusing on air quality systems, energy efficiency, and energy management.

#### THE EVOLUTION OF BUILDING **MANAGEMENT SYSTEMS**

Building Management Systems (BMS) are technological solutions designed to monitor and control various building functions, such as heating, ventilation, air conditioning, lighting, and security. In the context of residential care, BMS has emerged as a game changer, contributing to better living conditions and enhanced quality of life for residents.



According to the census.gov: the US population of 65 and older has recently seen the largest and fastest growth. This demographic shift underscores the importance of ensuring that residential care facilities are equipped to meet the evolving needs of their residents. BMS solutions offer a comprehensive approach to address challenges faced by residential care homes, ranging from environmental comfort to security.

Air filtration, thermal and humidity control, and amenities all play a key role in healthy buildings. Alerton building management systems for healthcare help bring your facility to peak shape, making sure that all HVAC systems are operating efficiently, and every piece of equipment is optimized.



#### Fresh air

Ensuring the quality of indoor air and the amount of fresh air needed for your facility is key to a healthy environment. Controlling the indoor sources of odors, chemicals, and carbon dioxide ensure the optimal resident experience. In bathrooms and other areas with high contamination potential, increasing the frequency of air exchange will reduce the risk of airborne transmission of infectious disease.



#### **Humidity**

Abnormal humidity levels can foster an unhealthy environment for patients and staff. Humidity sensors can help manage and maintain comfortable humidity levels for your healthcare building.



#### **Consolidate facility control systems**

At the heart of a holistic digital plan is the BMS. Crucially, the BMS must be able to communicate with the other software, systems and devices across the trust to ensure a reliable, open flow of information. Open protocol-based BMS, such as the Alerton Advance Control Platform, can deliver this unimpeded communication between systems to give healthcare organization a single point of access with a comprehensive view of facility operations.



#### **Pressurization**

Maintaining stable negative room pressurization ensures efficient recirculation within a space and improves air exchange. It also prevents the spread of infectious pathogens suspended in the air from drifting into neighboring spaces and infecting others reducing the spread of infectious disease from room to room.



#### Thermal comfort

Respond to comfort issues before you receive complaints, using advanced mobile data and alerts wherever you are. Optimize bedroom conditions to suit the needs of the resident through individual room control.



#### 24/7 building monitoring

Set up your building's management dashboard to monitor key variables, with alerts when optimal conditions are not being met. This will support staff in taking a proactive approach to residents needs.



# SAFETY, SECURITY AND OPTIMIZED EFFICIENCY

Single site or enterprise access control, intrusion detection, video surveillance, building automation, contact tracing or a combination.

### SECURITY AND RESIDENT SAFETY

Ensuring the safety and security of residents is paramount in residential care settings. BMS solutions offer integrated security systems, including access control, surveillance, and alarms. These systems not only deter potential threats but also provide real-time alerts to staff in case of emergencies.

John Roberts, a security consultant specializing in healthcare, emphasizes, "BMS-enabled security systems create a safer environment for vulnerable residents. They empower caregivers to respond swiftly to incidents, preventing potential harm and ensuring the wellbeing of all residents."

## A CLEAN BUILDING ENVIRONMENT

- Improves the resident experience
- Increases staff productivity
- Lowers resident healthcare costs
- Reduces cross-contamination
- Maintains consistent comfort levels
- Increases staff retention

## **ENERGY EFFICIENCY AND SUSTAINABILITY**

The commitment to reducing carbon emissions and achieving sustainability targets aligns with the integration of energy-efficient solutions in residential care facilities. BMS technologies can help optimize energy consumption by intelligently managing heating, cooling, and lighting systems. This not only reduces operational costs but also minimizes the environmental impact of these facilities.



The NHS Sustainability and Transformation Plan highlights the importance of adopting green practices in healthcare environments.

#### **CONCLUSION**

In the rapidly evolving landscape of residential care, the integration of advanced Building Management Systems is a transformative step towards enhancing resident well-being, energy efficiency, and security. As demonstrated by expert insights, BMS technologies offer a holistic approach to addressing the challenges faced by residential care facilities. By prioritizing air quality, energy efficiency, and security, these systems pave the way for a brighter future for both residents and caregivers in the realm of residential care.

"The elderly can have weakened immune systems and age-related health problems, which make them more vulnerable to health complications associated with indoor air pollution... That makes enhanced indoor air quality a critical contributor to their health and wellness at long-term living facilities."

#### **Gail Vittori**

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