Drone Deployment for Healthcare Facilities

Trends in technology, the business atmosphere, and the regulatory environment have all come together to encourage healthcare organizations of all types and sizes to use drone deployments for a variety of purposes. Drones and Drone Technology have become more accessible and affordable than ever before. In certain cases, specialist operators are no longer required, especially when used for hobby purposes. While drones are undoubtably an exciting technology, there remain many safety and privacy considerations. In fact, per the Federal Aviation Administration (FAA), it is not legal to purchase a drone and deploy it for commercial applications.

Utilization

Regarding healthcare facility inspections, the current state of technology allows for detailed building, roofing, electrical, equipment and infrastructure inspections, 3D modeling, thermal & multi-spectral imagery, energy efficiency studies, elevation modeling, leak detection, dimensional studies, and many more. A primary benefit is capturing necessary information about a building, site or operation while minimizing worker exposure to a hazardous environment. Drones have transformed the way facility engineers can address necessary inspections by leveraging technology to capture images of challenging-to-access areas around the facility or hospital campus.

Drones can be utilized for many business purposes including from disaster response planning, site emergency pre-planning, wildland fire vegetation management and mitigation planning, aerial inspections, marketing, security and emergency response surveillance, and even to assess the safety and condition of helidecks, support structures, and markings.

Digital Surface Models and Disaster Response

Drones can be deployed quickly and provide real time imagery of external structures, topography, and conditions. The high definition from the cameras and sensor technology delivers impressive detail and improved data while increasing worker safety, thus reducing the need for physically performing inspections. Before embarking on the world of drones, it is important to realize that there are many factors to consider. Challenges include following the FAA's unmanned aircraft system (UAS) regulatory paradigm including licensure, handling and processing large amounts of imagery data, inclement weather conditions, airspace restrictions and flying overpopulated areas (urban areas) to name a few.

Thermal & Multispectral Imagery

The Federal Aviation Administration (FAA) "Part 107" ruleset for small, unmanned aircraft systems enabled commercial drone use via less restrictive pilot certification and reduced operational requirements. It allows drone operator to follow a specific set of rules, without the need to get pre-approval from the FAA. It also allows drone operators to follow a specific set of rules without the need to get pre-approval from the FAA. They also alleviate the need for commercial drone operators to get case-by-case permission ("exemptions") to fly.

Part 107 Highlights

Part 107 allows line-of-sight operations with no required visual observer (1 person), and no longer needs the operator to hold an aircraft pilot's license but requires a remote pilot airman "certificate." It also allows flights near non-participating structures.

Special operations entailing "night flights" or flights overpopulated areas and beyond line of site (BLOS) require drone operators to apply for a Certificate of Waiver or Exemption from Part 107, or to work directly with a Certificate of Authorization holder. Some commercial drone vendors have been granted additional airspace authorizations through a 333 Exemption, Test Site Certification of Authorization (COA), and NASA COA to fly in otherwise restricted airspace.

Beyond-line-of-sight (BLOS) operations also require an FAA Section 333 exemption outlined in the FAA Part 107 rules. Significant operational challenges include the fact that drones may not operate over anyone not directly participating in the operation unless they are under a covered structure or vehicle. So, flying over pedestrians in a crowded area is not safe and hence not allowed.

Learn More & Connect

For more information on protecting your business, contact your local risk engineer, visit the Chubb Risk Consulting Library, or check out www.chubb.com/riskconsulting.

While the FAA regulations were designed to provide clarity for these innovations, healthcare organizations need to employ best practices when embarking on drone technology:

- Use only experienced and qualified licensed pilots certified to fly drones per FAA. It is a fine line that can easily be crossed between hobby use and commercial use. A good rule of thumb is whenever a drone is being used for a commercial building or institution such as a hospital, outpatient clinic, senior living community or nursing home; it should be considered commercial use. If the business plan is to utilize drones as part of routine (i.e., daily) inspections, consider hiring an employee with the requisite training, experience, regulatory knowledge, and certification/licensure to fly drones.
- Obtain certificates of insurance from specialty drone vendors. Speak with your general counsel and insurance agent about what minimum limits should be required.
- Create, implement, and follow a formal Safety Assessment and Plan for each flight. The plan should include, but not be limited to:
  - Weather considerations
  - Emergency landing provisions
  - People management

While the future of drone adoption will likely include continued easing of fly zone (airspace) restrictions and BLOS operations, the risk of these unmanned aircraft will continue to grow and evolve as the operational boundaries are pushed with new and exciting use cases. Therefore, don't go it alone. Seek an expert's assistance and make sure that the regulatory paradigm is followed. Address safety both administratively through insurance requirements and by following flight safety plans. For further assistance, please seek the following references.

Resources

Federal Aviation Administration (FAA) Part 107 Rule for Unmanned Aircraft, https://www.ecfr.gov/current/title-14/chapter-I/subchapter-F/part-107