One year after first hitting the fleet, a unique F/A-18 analytical tool, Hornet Health Assessment and Readiness Tool (HhART), continues to benefit the warfighter and demonstrate how a mix of big data analytics and engineering can serve as an accelerator for U.S. Navy aircraft readiness.

“Of course edge technology will reduce unscheduled maintenance and make diagnostics and maintenance planning easier for the warfighter,” said Don Salamon, an engineer for the Physiological Episodes (PE) Integrated Product Team within the F/A-18 and EA-18G Program Office (PMA-265).

He explained, “While the inception of HhART stemmed from PE investigations, the resulting tool puts data to use in a practical, proactive way, directly supporting the ability to maintain increased aircraft readiness as well as maintenance and supply postures.”

HhART leverages aircraft and sensor data, maintenance information, and advanced data analytics to create a health and performance dashboard display of the aircraft’s critical Environmental Control System (ECS). This information provides the fleet with enhanced prognostic and predictive capabilities to facilitate better troubleshooting and more efficient maintenance of this complex system of aircraft components. Naval Air Systems Command (NAVAIR) employed the tool and began surveilling the fleet in March 2019, providing squadrons with direct, proactive feedback and maintenance recommendations on flagged aircraft.

Salamon said HhART became the top corrective action taken to combat PEs and after great initial success, the program rapidly expanded, leveraging data correlations and unique features identifying underperforming or failing systems ahead of the onboard aircraft prognostics. He attributes the program’s success to PMA-265 and NAVAIR leadership empowering and providing resource support to the multifaceted HhART Team, led by the PE IPT and comprised of data scientists and technical experts from NAVAIR, Naval Air Warfare Center Training Systems Division, Naval Sea Systems Command, the Carderock Division of the Naval Surface Warfare Center, the Center for Naval Analyses, and The Boeing Company.

“This cross-functional and collaborative effort between Industry and Government highlights the U.S. Navy’s organic capabilities to execute true applications of ‘big data’ and produce actionable results and outcomes,” said Capt. Jason Denney, PMA-265 program manager.

After a successful year in the fleet, the HhART team is transitioning this same methodology to other aircraft systems that are primed to benefit from similar data analysis, such as fuel systems, flight controls, propulsion systems and Generator Control Units, the current number one degrader for both the F/A-18E/F Super Hornet and E/A-18G Growler.

The tool provides operators and maintainers with an indication of issues or degradation of systems in near real-time, enabling a more proactive than reactive approach and quicker identification of trends that often inform supply chain management decisions. The ultimate goal for HhART is integration directly into the aircraft’s numerous complex systems, further supporting improved supply, maintenance and readiness postures for F/A-18s and EA-18Gs, and the team behind it is currently digging into the data analysis and engineering challenges to bring that plan to fruition.

“The HhART Team has done an amazing job in creating this program and we expect, with its continued development and expansion to other aircraft systems, that it will become an indispensable tool for maintaining increased readiness for our aircraft platforms,” said Capt. Denney.

**Hospital ships Comfort, Mercy deploy in battle against COVID-19**

In Los Angeles, Sailors transport the first patient aboard the hospital ship USNS Mercy (T-AH 19) into the casualty receiving area, March 29. Mercy is deployed in support of the nation’s COVID-19 response efforts.

In New York City, Sailors treat COVID-19 patients and to use their Intensive Care Units and critical care, and ward care for adults. This will allow local health professionals and hospitals to focus on treating COVID-19 patients and to use their Intensive Care Units and ventilators for those patients.

Each hospital ships’ medical treatment facility (MTF) is staffed with approximately 1,100 Navy personnel and support staff from various commands, as well as more than 70 civil service mariners, and each of them is ready to serve.

“The gravity of the mission is understood by every person who comes aboard the ship,” said Capt. Patrick Ambersbach, commanding officer of the MTF aboard Comfort. “We understand that our nation, specifically the people of New York, have requested our assistance and we are ready to respond. I’m so proud of our crew during this challenging time as they leave their families and loved ones at home to respond to this national emergency to care for our fellow Americans.”

That sentiment was echoed by Capt. John Rotruck, Mercy’s MTF commanding officer, when he said, “I couldn’t be more proud of our crew for all the hard work they did to get us here and ready in such a short time. Being able to accept our first patients is a true testament of the teamwork between Mercy, the Navy, the State of California, the county of Los Angeles, and the City and Port of L.A.”

Also underway with the response deployment are more than 120 Reserve Sailors aboard Comfort and 60 more aboard Mercy