



DATA VISUALIZATION AND PATIENT IDENTIFICATION

CASE STUDY

“ The ACG System accelerates the identification of those patients within our population who are at risk of diseases we are interested in.

– David Carnahan, Colonel, USAF, MD, MSCE
Chief Data Scientist, Enterprise Intelligence
& Data Solutions PMO
Defense Health Agency

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The Defense Health Agency (DHA) is a joint, integrated Combat Support Agency that enables the U.S. Army, Navy, and Air Force medical services to provide a medically ready force and ready medical force to Combatant Commands. 3.5 million of their 9 million beneficiaries' data are processed through the ACG System, which the DHA has been using since 2010.



OVERVIEW

The DHA supports the delivery of integrated, affordable, and high-quality health services to Military Health System (MHS) beneficiaries and is responsible for driving greater integration of clinical and business processes across the MHS.



CHALLENGES

To create an understanding of population health information, including the distribution of patients for physician panels, through optimization of existing patient databases while validating the value of the ACG System to DHA leadership.



METHODS USED

- The ACG System was used to enhance the MHS's population health portal through the development of Resource Utilization Bands (RUB) and concurrent ACG risk, rebranded by MHS as Illness Burden Indexes (IBI).
- Integration of ACG System risk scores with MHS registries to determine in real time whether patients being admitted to hospital were high risk.
- Expansion of ACG System EDC codes within the registries for segmentation purposes and to identify patient risks and disease burden.



RESULTS

- Modified EDC codes allowed for greater population understanding through easy access to patient medical history, pooling of patients with certain conditions, and identification of new diagnoses compared to chronic conditions for patients.
- Visualization of ACG System data using BI tools, including Tableau, showed providers where to locate services to best serve high-risk patients as well as how to address quality and safety issues.
- Easier segmentation of the population based on patient morbidity lessened "time to discovery" for patients at risk of certain conditions.
- Improved balance of provider panels within MHS Patient-Centered Medical Homes across the system.
- Completed over a 6-month period, the project demonstrated that the ACG System could positively impact MHS patient outcomes.



RECOMMENDATIONS

Due to the success of leveraging the ACG System, the MHS recommended and approved the implementation of multiple other projects utilizing the ACG System including:

- High-risk intervention prior to deployment for the Navy and DHA
- Medical Management Model used by the Airforce
- "ACG System Academy" to teach future DHA employees to optimally interpret and use the ACG System