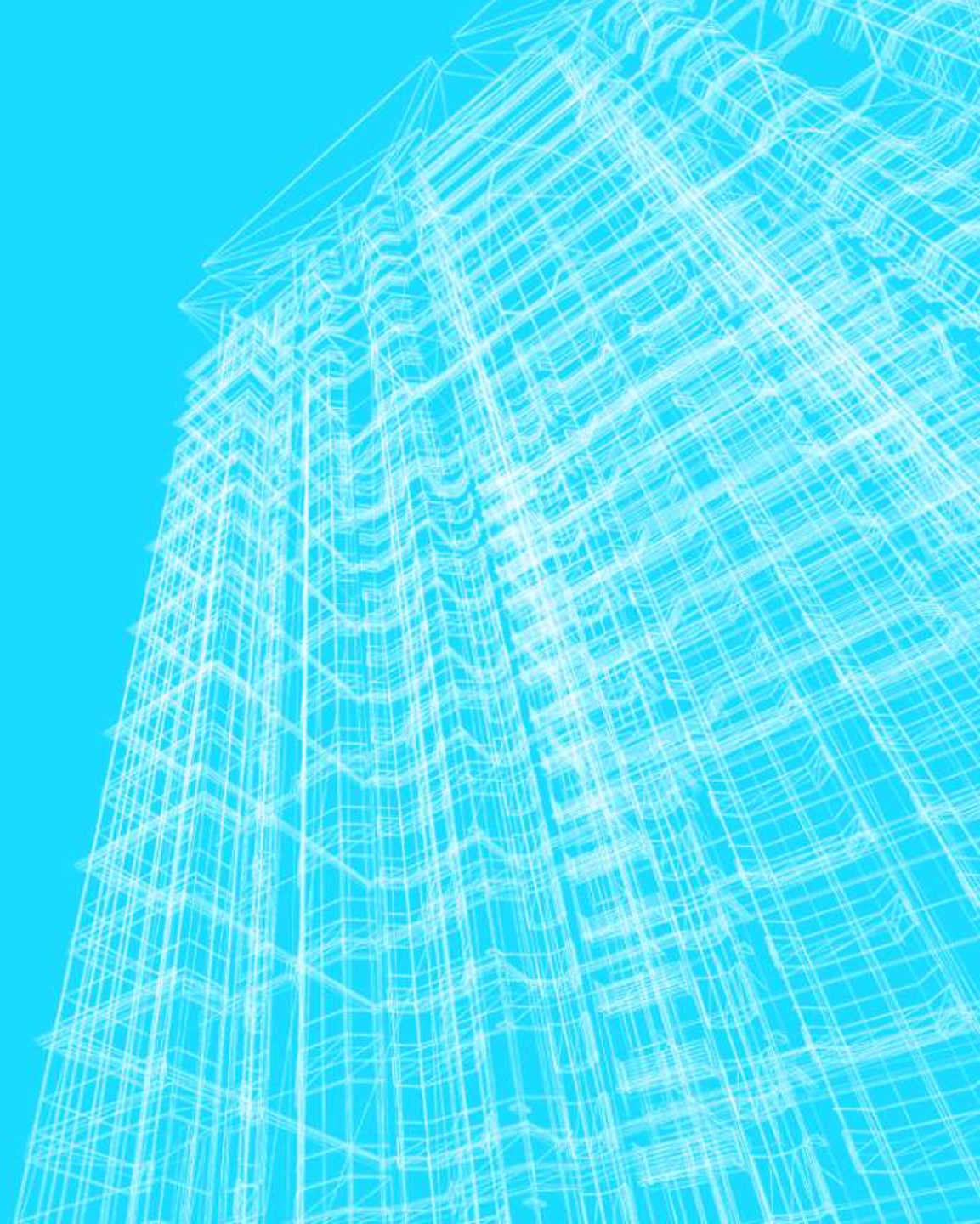
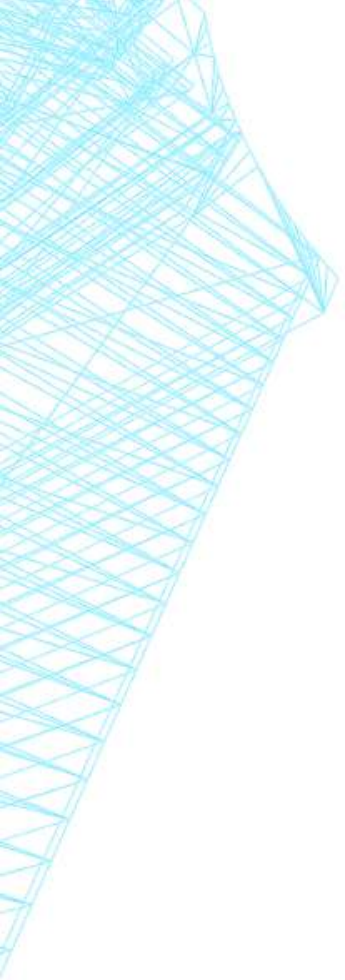


VETERANS HEALTH ADMINISTRATION ENVIRONMENTAL SAFETY AND HEALTH STAFFING MODEL

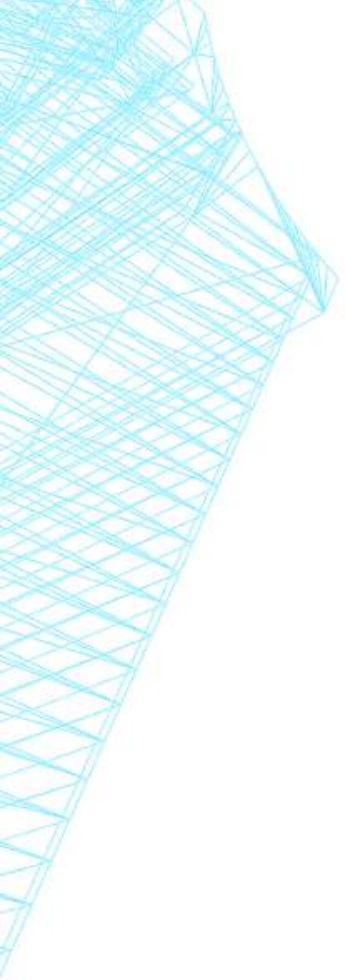
Douglas Dulaney MSEH, MHA
Director, VHA Office of Occupational Safety,
Health, and GEMS Programs (10NA8)





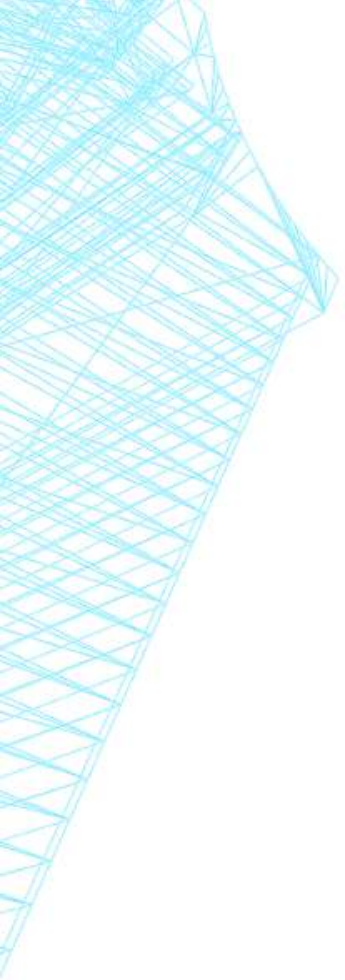
OVERVIEW

- Brief History of Previous Environmental Safety and Health (ESH) Staffing Models
- Rationale for Developing a New Staffing Model
- New Model Development
- Model Verification Pros and Cons



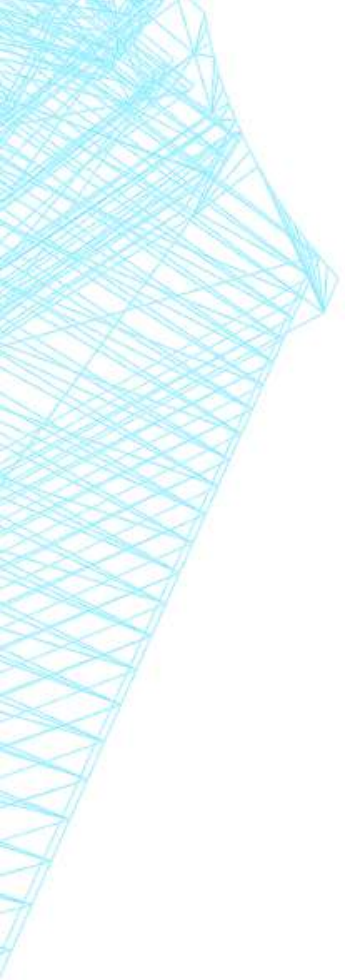
PREVIOUS STAFFING MODELS

- The original staffing model was created in the 1990's
- It was solely based on the number of Full Time Equivalent Employees (FTEE) at a given facility
- Was developed to both comply with Veterans Health Administration (VHA) Directives and provide adequate staffing to manage the safety program at a Medical Center
- The model required 1 Safety FTEE per 500 FTEE at a Medical Center



RATIONALE FOR DEVELOPING A NEW STAFFING MODEL

- Starting in the Early 2000's there was a marked increase in the volume and complexity of ESH workload at the facilities.
- VHA established 4th mission of Emergency Management.
- The Green Environmental Management System (GEMS) program was established and implemented.
- The need for Industrial Hygienists as an augment for the safety office was established (Medical Surveillance, Chemical Exposures, Asbestos, Lead, etc.)
- The overall staffing for VHA was increasing, as well as an increased amount of off site care such as Community Based Outpatient Clinics (CBOCs)



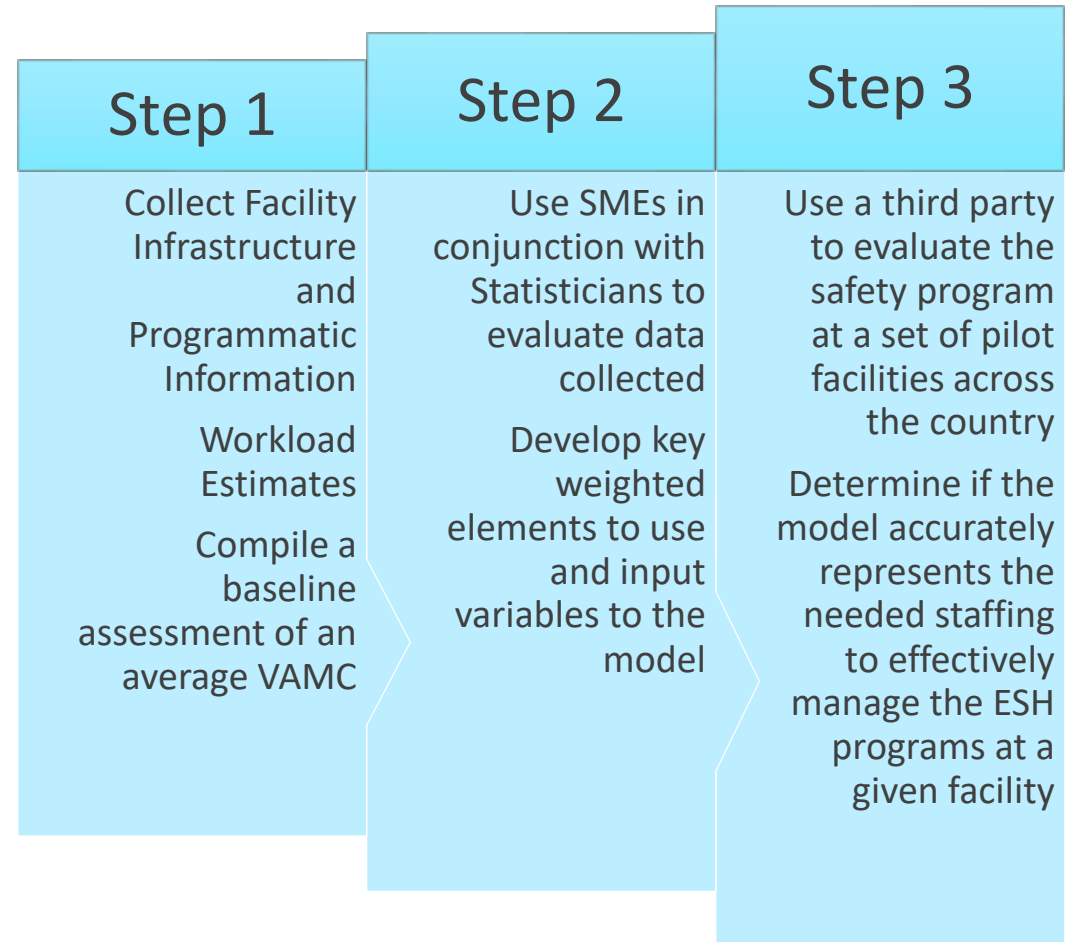
NEW MODEL DEVELOPMENT 2009

- Based on need for additional expertise for the ESH programs
- Collection of workload estimates by discipline (Safety, IH, GEMS, EM, Admin Support)
- Committee of Subject Matter Experts used to evaluate workload estimates and develop model variables.
- Model developed and verified by 3rd party contractor

General Criteria	Initial Model	New Model
Based on FTEE at Facility	Yes	Yes
Accounted for Workload	No	Yes
Could Predict other Job Class Needs	No	Yes

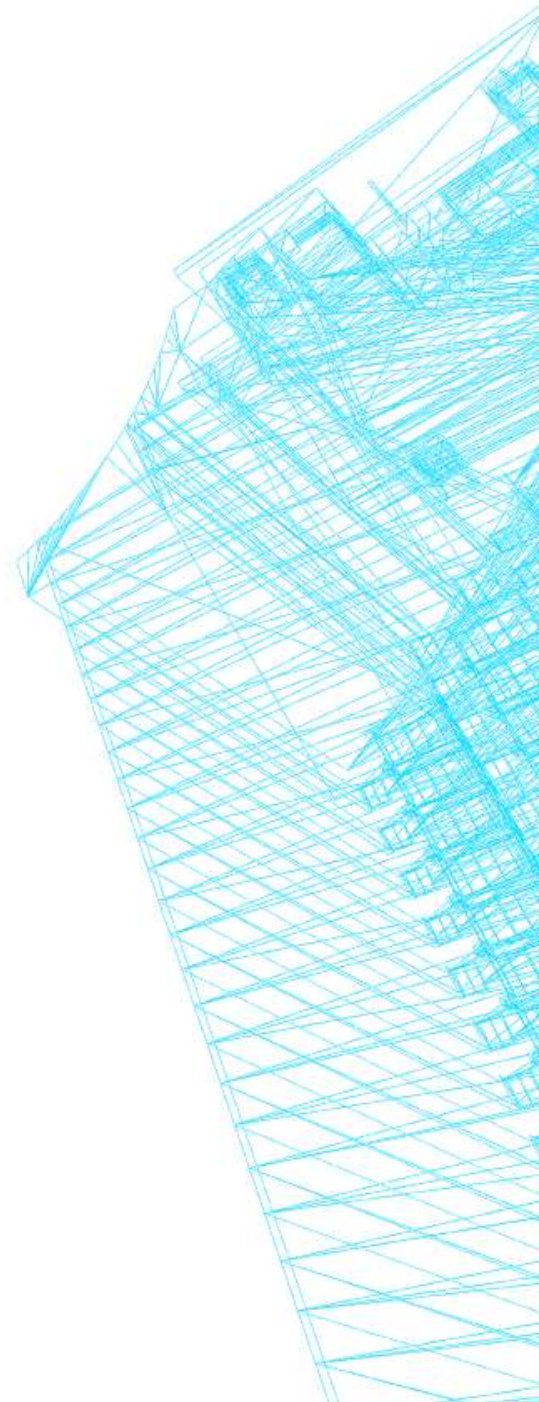
NEW MODEL DEVELOPMENT

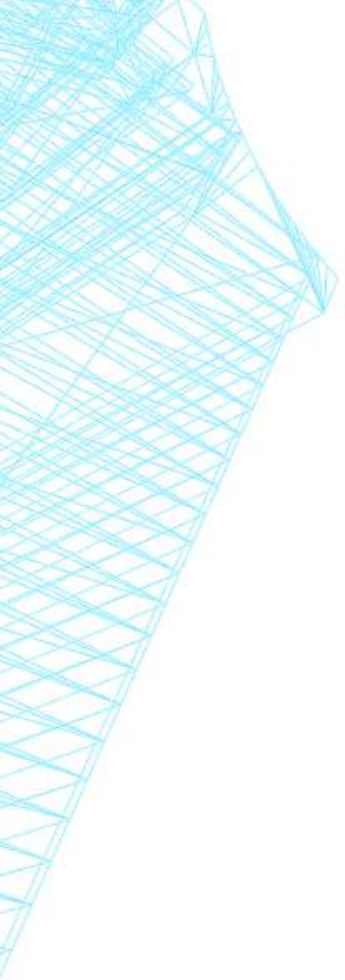
- Determine what was in the built environment (complexity, square footage, external space, research, employees)
- Evaluate all the infrastructure data to determine appropriate model variables and their weighting in the formula. Develop workload estimates.
- Conduct a pilot study to determine if the model could accurately predict the number of staff needed at a Medical Center and compare those numbers with actual staffing and program health.



CURRENT VHA ESH STAFFING MODEL

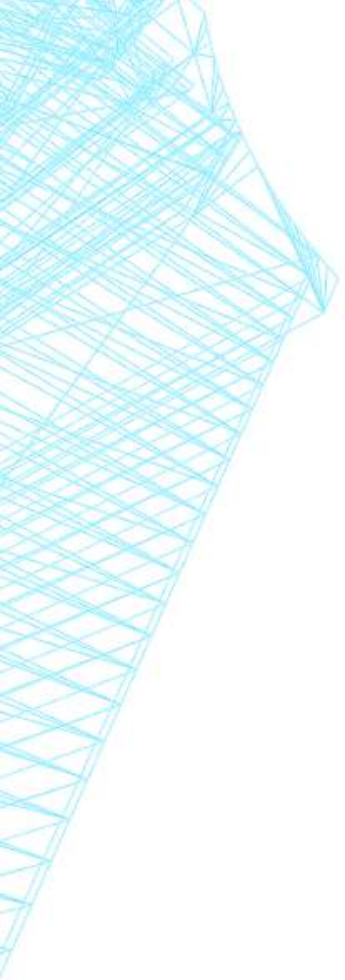
Model Inputs and Rationale





MODEL INPUTS

- The model accounts for 5 discrete job functions; Safety, Industrial Hygiene, GEMS, Emergency Management, and Administrative Support
- Each job function had its own unique variable inputs and weighting
- Each variable was weighted independently based on SME input and availability and accuracy of data gained from workload estimates.
- When applicable the model was adjusted to comply with VHA Directives (e.g., 1 Safety FTEE at each medical center as a baseline value)
- The inputs are broken down into two main categories:
 - 1) Infrastructure,
 - 2) Workload



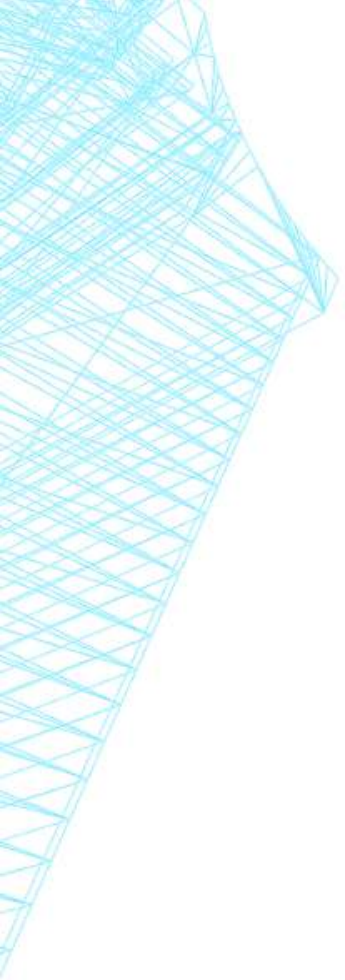
SAFETY INPUTS

Infrastructure

- Complexity Based on VHA VERA model (1a,b,c, 2, 3)
- Square footage of facility
- # FTEE at Facility

Workload

- Number of External Inspections (OSHA, TJC, OIG etc.)
- Coordinating the Environment of Care Program
- VERA Research dollars



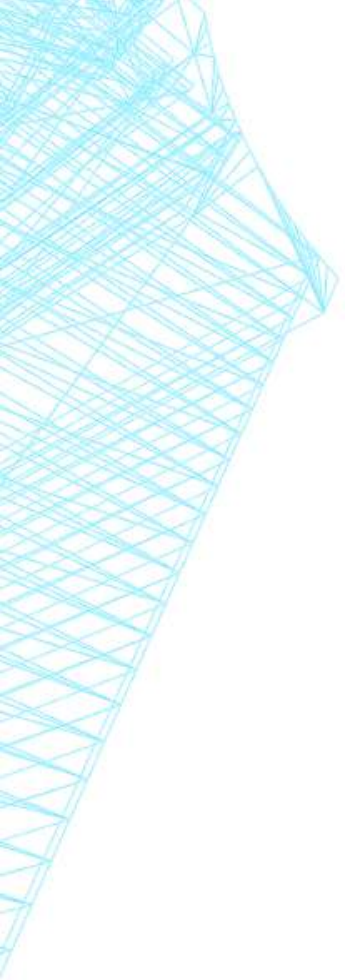
GEMS INPUTS

Infrastructure

- Complexity Based on VHA VERA model (1a,b,c, 2, 3)
- Square footage of facility
- # FTEE at Facility
- Multi Division Facility (Yes or No)

Workload

- RCRA Generator Status (LQG, SQG, CESQG)
- Self Supplies Utilities (Yes or No)
- On Site Medical Waste Treatment (Yes or No)
- VERA Research Dollars



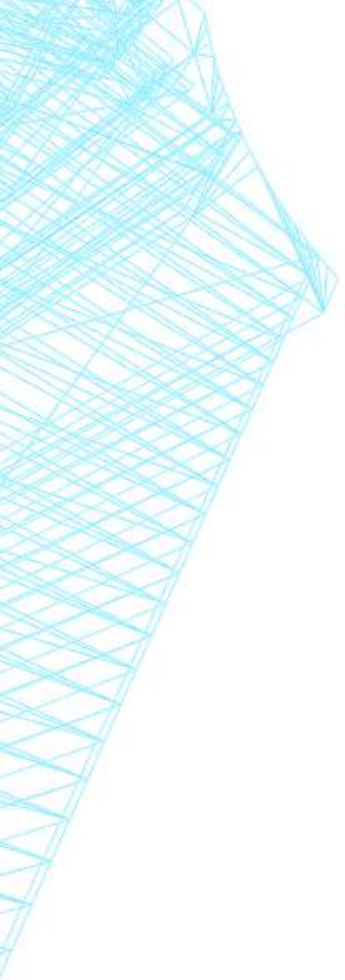
IH INPUTS

Infrastructure

- Complexity Based on VHA VERA model (1a,b,c, 2, 3)
- Square footage of facility
- # FTEE at Facility

Workload

- IH Monitoring (Yes or No)
- # Employees in Respiratory Protection Program
- Asbestos and Lead Based Paint Program (Yes or No)



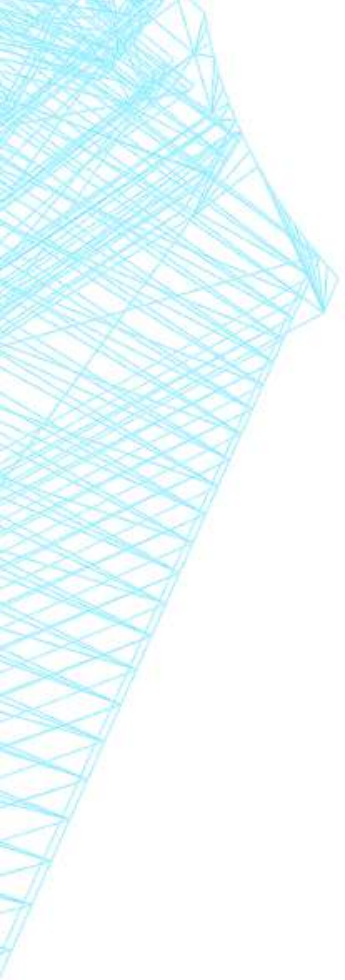
EMERGENCY MANAGEMENT INPUTS

Infrastructure

- None (model assumes 0.5 FTEE to maintain TJC EM Requirements)

Workload

- DECON Program
- Primary Receiving Center
- Historical Risk (Tornado, Hurricane, Wildfire, etc.)
- If any of these workload factors are a Yes then add 0.5 FTEE



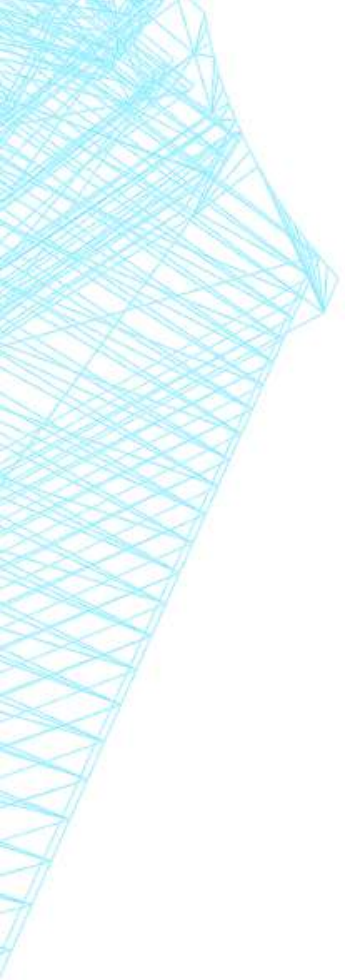
ADMINISTRATIVE / CLERICAL INPUTS

Infrastructure

- None (model assumes 0 FTEE if staffing for ESH Department is less than 7 FTEE)

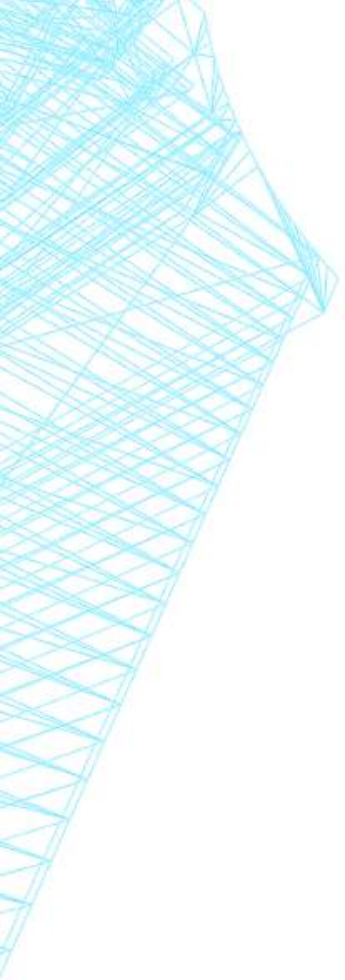
Workload

- Support of 7 or more FTEE in the ESH Department



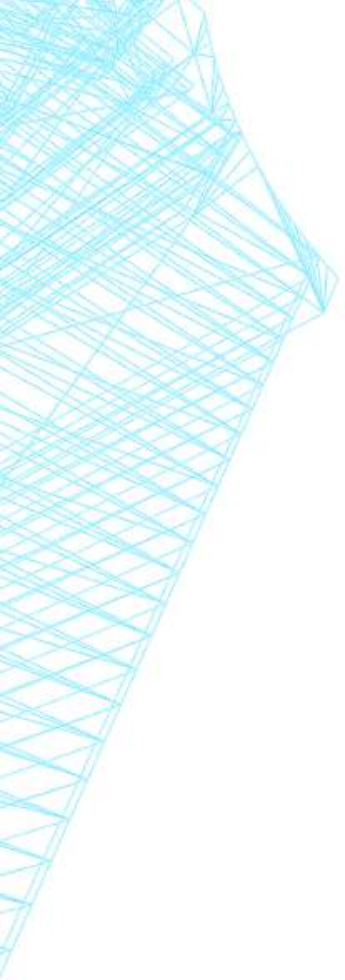
MODEL VERIFICATION

- We hired a 3rd party contractor to evaluate the model.
- We selected a mix of hospital complexities across the country (1a,b,c, 2, 3).
- We evaluated a representative sample (30 Medical Centers representing all complexities) of the 141 Medical Centers in the VA at that time (2009) Approx. 20%.
- The purpose of the evaluation was to look at the overall health and resources available for individual ESH programs at VHA Medical Centers. Then compare existing staffing to the staffing predicted by the model.
- This process took 3 years to complete.



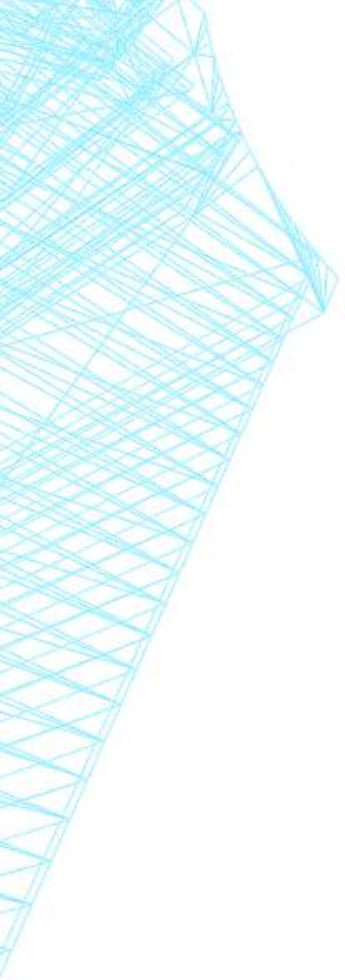
PROS OF THE MODEL

- In 2012 the contractor was able to verify that if the staffing predicted in the model actually existed at a Medical Center there was sufficient evidence to say the ESH program as adequately resourced.
- In the past 10 years since its inception the model has been used to evaluate resources and staffing at VA Medical Centers across the country.
- Although the agency turnover rates for these job series is higher than average the overall number of staff in these job series has steadily increased.



CONS OF THE MODEL

- There was a learning curve for facility leadership specifically how to actually utilize this model (understanding the use and difference between FTEE and Resources).
- Although workload is considered in the model does not account for burnout (working beyond a 40 hour work week, which is a contributing factor to the high turnover rates in these job series).
- The scope and complexity of the work at our Medical Centers has increased beyond our 2009 estimates, and this is not reflected in the model. There may be additional variables that could be added to increase the accuracy of the model.



SUMMARY

- The need to have a solid staffing model for the EHS disciplines is critical not only for the success of the program but it is also important in ensuring that there is adequate staffing to protect employees and be a good steward of the environment.
- We took a thoughtful and rigorous approach to develop and validate this model to make sure it is simple, robust, and reliable.
- Previous models were not powerful or accurate enough to target resources and support to the EHS programs nationally. Our current model solves that problem.



QUESTIONS?

Thank you for your time and attention!

