Commanders' Risk Mitigation Dashboard (CRMD)
User Guide – 2025

Section 1: Introduction

Welcome

- Welcome to the Commanders' Risk Mitigation Dashboard (CRMD). CRMD is an operational tool for unit-level prediction of destructive behaviors in the Navy. Identifying these risk factors early arms Commanders with the tools and knowledge to implement measures that may help avoid destructive behaviors in their commands.

- The dashboard is hosted in the Navy's Authoritative Data Environment (ADE) and designated users can access the dashboard via CAC authentication to review their UIC's risk scores and contributing factors information.

- If you need any help accessing the CRMD, please email the ADE Help Desk at **ADEHelpDesk@us.navy.mil** and copy:

  o Please make the subject line, "CRMD Access: <your first and last name>, <Date you are submitting your request>." This will help us verify your access in a timely manner.

  o The ADE Help Desk Support hours of operation are 0800 – 1600 Eastern Time, Monday – Friday.

Notes about the current state:

- The current release of the CRMD is the initial set of features suitable to be fielded to an operational environment that provides value to the end user.

- The dashboard is still evolving, and we encourage users to provide feedback and recommendations for improvements on all aspects. New dashboard iterations will be released as improvements are implemented.

- The data is updated quarterly. Additional data information is available on the CRMD Data Dictionary screen.

- Though individual information is not displayed on the dashboard, units with 10 or less members will not display the predictive metrics available in the dashboard. This is to protect the privacy of individual members in a unit.

Notes to Command Leaders:

- CRMD provides unit-level risk of destructive behaviors; it is NOT to be used for punitive purposes.

- The majority (over 90%) of factors contributing to risk cannot be influenced by the command (e.g., age, time onboard, sex, marital status).

CULTURE AND FORCE RESILIENCE

MyNAVYHR

- It is not a negative reflection on command leadership to be a higher risk unit. Moving from higher to lower risk is not something commands can do by simply following a checklist.
  - Regardless, commands should be aware of when they have elevated risk and take the actions included in the related Action Plan to mitigate that risk.

Section 2: User Access

- Personnel identified as members of an active command triad will be granted access automatically based on their assigned role. If you experience any issues, please email the ADE Help Desk at **ADEHelpDesk@us.navy.mil.**
- Commands may designate additional appointees to have access to their CRMD. For individual units, this endorsement must come from the CO or XO. For Echelon II-IV, Chief of Staff-level endorsement (or equivalent) is required. Endorsement can be a brief email from the appropriate authority approving access to CRMD@navy.mil or ADEHelpDesk@us.navy.mil.
  - An email template to designate this access is available for download under the quick links section of the CRMD home page and shown here. Information required to grant full access includes full name, government email address, DoD ID, and UIC(s).

- To designate additional appointees to have access to their CRMD, command leaders can use this email template:

EMAIL TEMPLATE FOR REQUESTING CRMD ACCESS

TO: ADEHelpDesk@us.navy.mil

SUBJECT: CRMD Access Request

BODY: Please provide those listed below with CRMD access for [INSERT ORGANIZATION NAME] and all subordinate units (if applicable). Our UIC is [INSERT UIC]:

NAME: *Last, First, MI*

EMAIL:

DoD ID:

V/r,

(Please include official signature block)

- Note this template is provided as an example and is not required. As long as all required information (i.e., full name, email, DoD ID, and UIC) is included, please feel free to provide in any format that best suits your needs.

- Your DoD ID number is the 10-digit number located on the back of your Common Access Card (CAC).

- **Once your access is enabled, the dashboard can be reached via this URL:**
  https://crmd.portalprod.ade.cloud.navy.mil

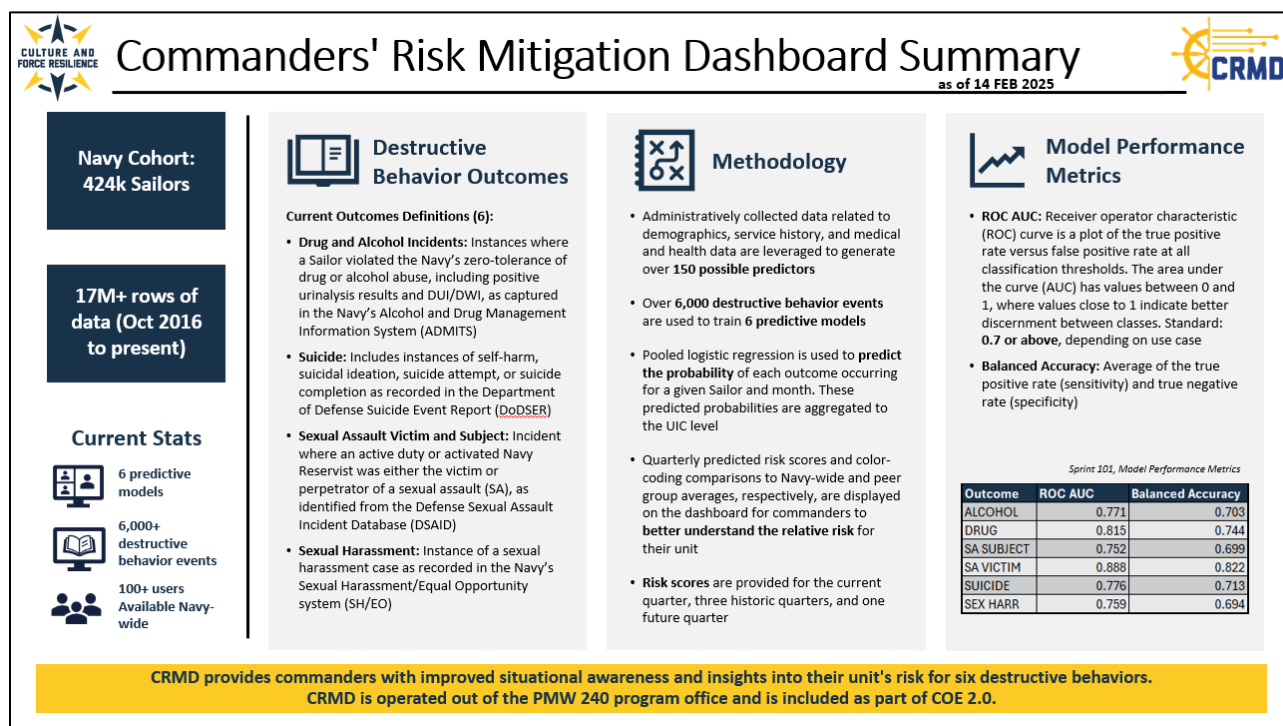## Section 3: CRMD Overview

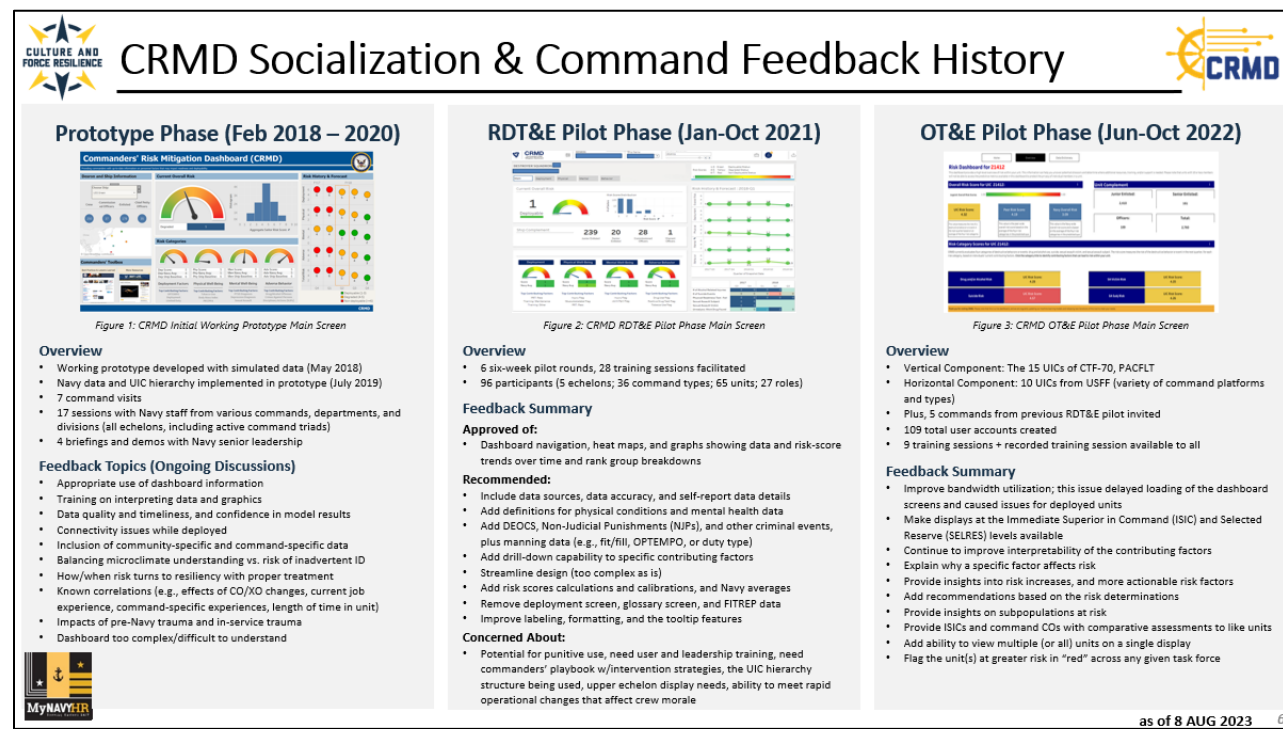**Figure 1: CRMD Summary Slide**

Figure 2: CRMD Socialization & Command Feedback Slide

Objective

- Counter-productive workplace (CWB) and destructive behaviors harm Sailors, impact mission effectiveness, contribute to unplanned losses, and increase administrative burden. The objective of the Commanders' Risk Mitigation Dashboard (CRMD) is to use existing Navy and DoD data to assess risk regarding CWB and destructive behaviors at a unit-level so that leaders can easily view and track these areas of risk within their units, and determine where additional resources, training, and support is needed.

- The CRMD is not intended to be used punitively but rather is designed to be a unit-level decision support tool to provide leaders with information and insights to specific stressors and to aid in communication and planning with their Command Resiliency Teams (CRTs) and with their upper echelon leadership.

What data is used for the CRMD?

- Many data sources were initially acquired and analyzed to determine indicators and contributing factors for risk of destructive behaviors and events. The following data sources are currently used in the risk models for the CRMD:

MyNavy HR - AQD_DATA	Pharmacy Detail Transaction Service
MyNavy HR - ASVAB_DATA	Standard Inpatient Data Record
MyNavy HR - EDUCATION_DATA	Tricare Encounter Data Institutional
MyNavy HR - EVAL_DATA	Tricare Encounter Data Non-Institutional
MyNavy HR - LIMDU_DATA	Medical Data Repository Clinical Data Repository Vitals (DHA)
MyNavy HR - MRRS_DEPLOYMENT_FLAG	Comprehensive Ambulatory/Professional Encounter Record
MyNavy HR - OFFICER_DESIGNATOR_DATA	Theater Medical Data Store
MyNavy HR - PERSON_DATA	Navy Alcohol Drug Misuse Prevention Control System
MyNavy HR - PFA_DATA	Defense Casualty Incident Personnel System
MyNavy HR - RANK_DATA	Defense Sexual Assault Incident Database Case
MyNavy HR - SERVICE_DATA	Defense Sexual Assault Incident Database Subject Data
MyNavy HR - UIC_INFO	Defense Sexual Assault Incident Database Victim Data
MyNavy HR - WAIVER_DATA	Sexual Harassment Equal Opportunity
MyNavy HR - DEPLOYMENT_DATA_MRRS	Medical Health System Genesis Encounter
Periodic Health Assessment	Medical Health System Genesis Admissions
Periodic Health Reassessment	Health of the Force
DoD Suicide Event Report	

Table 1: Current CRMD Data Sources

- There are many challenges to working with personnel data since the data may contain errors and inconsistencies, and collection and reporting rates vary widely. Also, the data was not originally collected for the purposes of destructive behavior/event analyses, so care had to be taken to ensure the assumptions and inferences made were appropriate.

- If you have any questions about the data, its origins, or the analytics methodology, please reach out to the CRMD team via email at **CRMD@navy.mil**.

How often is the data refreshed?
- The timing of data changes and updates can vary widely depending on the unique data source. Some data does not change often, such as PRT results since they are on an annual cadence. However, personnel data sources may show changes daily as marital status and dependent changes, and UIC assignments can occur anytime.

- In CRMD, the data sources are updated quarterly.

What is displayed in the CRMD?
- The CRMD displays an overall risk score and category risk scores for an individual unit on the main screen with the ability to drilldown into the different categories to access information on the contributing factors to those risk categories. In addition, Navy peer group and Navy overall risk scores are also provided for comparison purposes.

In general, what is the risk score?
- The CRMD risk score measures the risk of a destructive behavior/event in the next quarter based on individuals' current contributing factors.

- The score is generated from predictive models that use machine learning then transformed and converted into z-scores to estimate individual risk of a destructive behavior/event. These individual risks are then aggregated at the unit level to produce a UIC-level risk score. Risk scores are calibrated so that the Navy average is close to 3, and high-/low-risk UICs are identified comparatively.

- The risk score is also backdropped with the stoplight color theme of **red**, **yellow**, or **green** to highlight the risk level. Peer group assignments inform these color backdrops.

What is the overall risk score?
- This is the average of the risk category scores for the six destructive behaviors/events for the unit.

What are the category risk scores?
- Risk of six destructive behaviors/events categories is examined in the CRMD:
    - <u>Suicide</u> – Probability of suicidal thought, attempt, or completion
    - <u>Illicit Drug Use</u> - Probability of a positive drug test
    - <u>Alcohol Abuse</u> - Probability of a flag for an alcohol event (e.g., DUI)
    - <u>Sexual Harassment</u> – Probability of sexual harassment occurring in the unit
    - <u>Sexual Assault Victim</u> – Probability of having a closed, adjudicated sexual assault case where the individual is listed as the assault victim
    - <u>Sexual Assault Subject</u> – Probability of having a closed, adjudicated sexual assault case where the individual is listed as the assault subject

- For each behavior/event category, a machine learning model has been independently developed and evaluated to better understand the unique factors that contribute to risk of that behavior/event for the unit.

What are the Navy peer group risk scores?

- Peer groups provide a more comprehensive view of relative risk, as some ship types/sizes are inherently at higher risk than others.

- Each unit is assigned to a peer group based on whether it is an afloat or shore command, the platform type, and the number of sailors currently aligned and are defined as follows:

  - <u>AFLOAT</u>: Extra Small (10-49 sailors), Small (50-149 sailors), Medium (150-299 sailors), Large (300-799 sailors), Extra Large (800-1199 sailors), Extra Extra Large (1200-3200+ sailors)

  - <u>SHORE</u>: Small (10-49 sailors), Medium (50-149 sailors), Large (150-3200+ sailors)

- In addition, the dynamic backdrop coloring has been adjusted so that it is relative to the mean risk score for the unit's specific peer group:

  - **Green** = Commands that fall at or below the mean risk score for their peer group
  - **Amber** = Commands that fall within one standard deviation above the mean for their peer group
  - **Red** = Commands that fall above one standard deviation above the mean for their peer group

What are the Navy-wide average risk scores?

- The Navy-wide average risk scores provide visibility to the average risk Navy-wide and includes all units of every type and size and is calculated on the individual sailor-level. All unit-level risk scores and peer group risk scores have been calibrated to reflect the level of risk relative to the overall Navy average.

What are the Contributing Factors for the Risk Categories?

- On each risk category screen there are **quarter-by-quarter displays of demographic, service-related, or health-related factors** that most contribute to the predicted probability of destructive behaviors/events occurring within the individual unit. The lists also include aggregated factor constructs such as "Mental Health Diagnoses" as opposed to individual factors like "Diagnosed With PTSD". These factors are relevant to the individual unit, relative to the unit's peer group, and specific to the risk category selected.

- The past and future factors may allow for a better understanding of which contributing factors changed for the individual unit and the unit risk increases or decreases over time.

- The specific factors/factor constructs for each quarter can be viewed by selecting the quarter tile above the risk score in the quarter of interest. The quarter tile selected will display a black

background with white font. The display will show the **top 5 risk factors/factor constructs that either increase or decrease risk for that quarter using a bar graph along with their specific Shapley value.**

- o **Shapley values** are used to measure the impact of a feature on the model output. They provide insight on both the magnitude (how important a feature is in predicting risk) as well as direction (does the presence of this feature increase or decrease risk). Shapley values take into account how the model is weighting each feature to predict risk, as well as the number of Sailors in the command presenting this feature. For this reason, the top contributing factors that increase or decrease risk will be unique to each command.

What are the Action Plans?

- Action Plans provide Navy-approved recommendations to address and reduce the risk associated with the category's destructive behavior or event. In addition, each Action Plan includes links to other information and resources available to commands to support their crew members in these areas. To access an Action Plan, users simply click on the dark grey "Action Plan" button on the right side of the risk category screen of interest and the PDF will download to open or save.
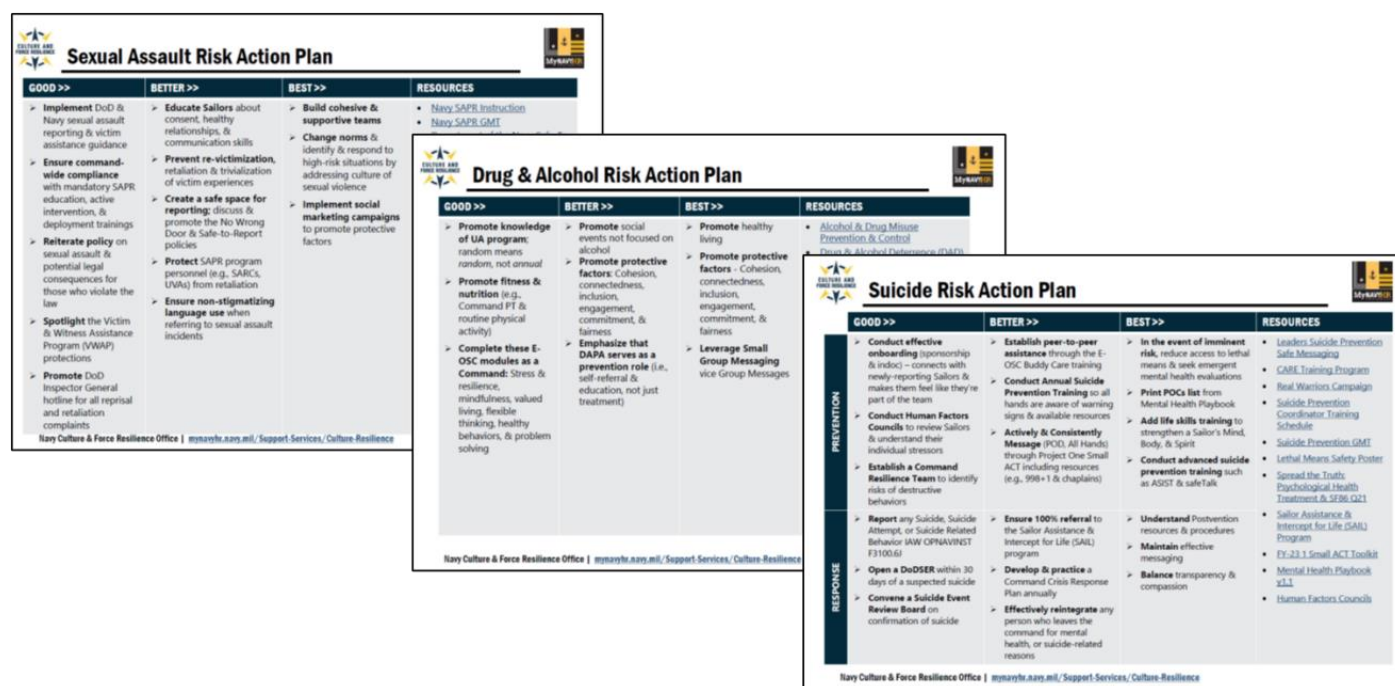
Figure 3: Sexual Assault Risk, Drug & Alcohol Risk, and Suicide Risk Action Plans

What is the Data Dictionary?

- The CRMD Data Dictionary screen consists of four tabs each providing a different type of information related to the data used to generate risk scores and populate the dashboard. Please note that the Data Dictionary screen is a living page and will be updated as new data is added to the dashboard and machine learning models. The information provided by each tab includes:

  - **Data Constructs** – This tab identifies the compilations of individual features used in model training combined for dashboard display to improve interpretability.

  - **Individual Features** – This tab identifies standalone data elements used for model training.

  - **Features Controlled For** – This tab identifies features that were controlled for in the models but do not appear in dashboard display.

  - **Data Sources** – This tab identifies a list of data sources utilized to train the models along with the date range of the data source and the data refresh periodicity.
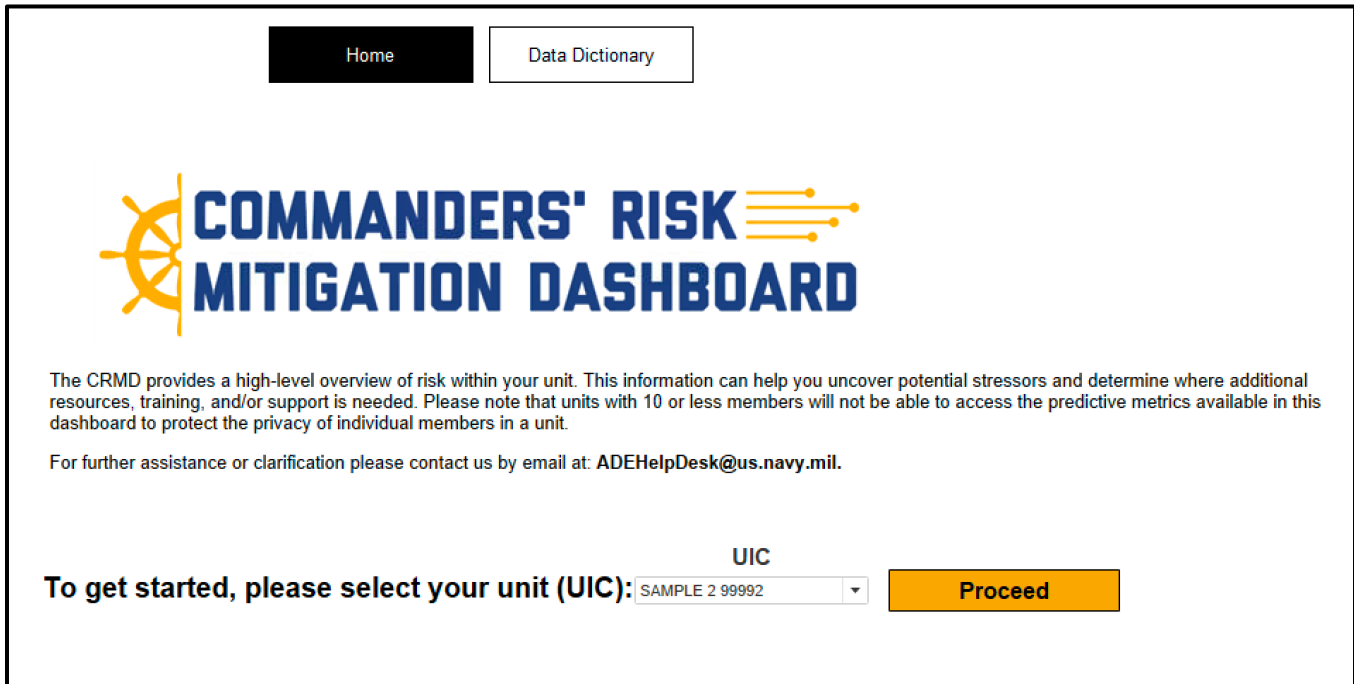
How does leadership use the information in the dashboard?

- A unit's risk factors can vary based on the type of unit, the mission assigned, the region the unit is based or deployed in, and other unit-specific details; however, the CRMD risk scores for a unit are a good starting place for leaders to begin to identify data-based areas of contributing factors that lead to risk for their unit.

- Leaders view the dashboard screens for risk scores, trends, and contributing factors to identify areas of concern or escalation, and to compare to the Navy peer group and Navy average risk scores.

- Keep in mind, most factors contributing to risk cannot be influenced by command leadership (e.g, age, time onboard, sex, marital status). Therefore, the focus is on mitigating risk, not lowering it. Commands should be aware of when they have elevated risk and take the action included in the related Action Plan to mitigate risk.

- The risk assessment information provided by the CRMD can be used in combination with additional insights and personal observations from CRT members and khaki leadership to help determine intervention strategies and to plan future support and training efforts.

Section 4: CRMD Navigation

The Landing Page:

- The Landing Page provides:
    - A brief overview of the CRMD
    - The Helpdesk email address
    - A dropdown menu to select your unit for viewing

Figure 4: CRMD Landing Page

Main Screen:

- The Main Screen provides the following information relevant to an individual unit:
    - Overall risk scores for the unit, Navy peer group, and Navy-wide average
    - Unit complement breakdown
    - Unit-level risk category scores for Alcohol Abuse Risk, Drug Use Risk, Suicide Risk, Sexual Harassment Risk, Sexual Assault Victim Risk, and Sexual Assault Subject Risk
    - Drilldown capability to additional insights for each risk category by clicking on the category score tile
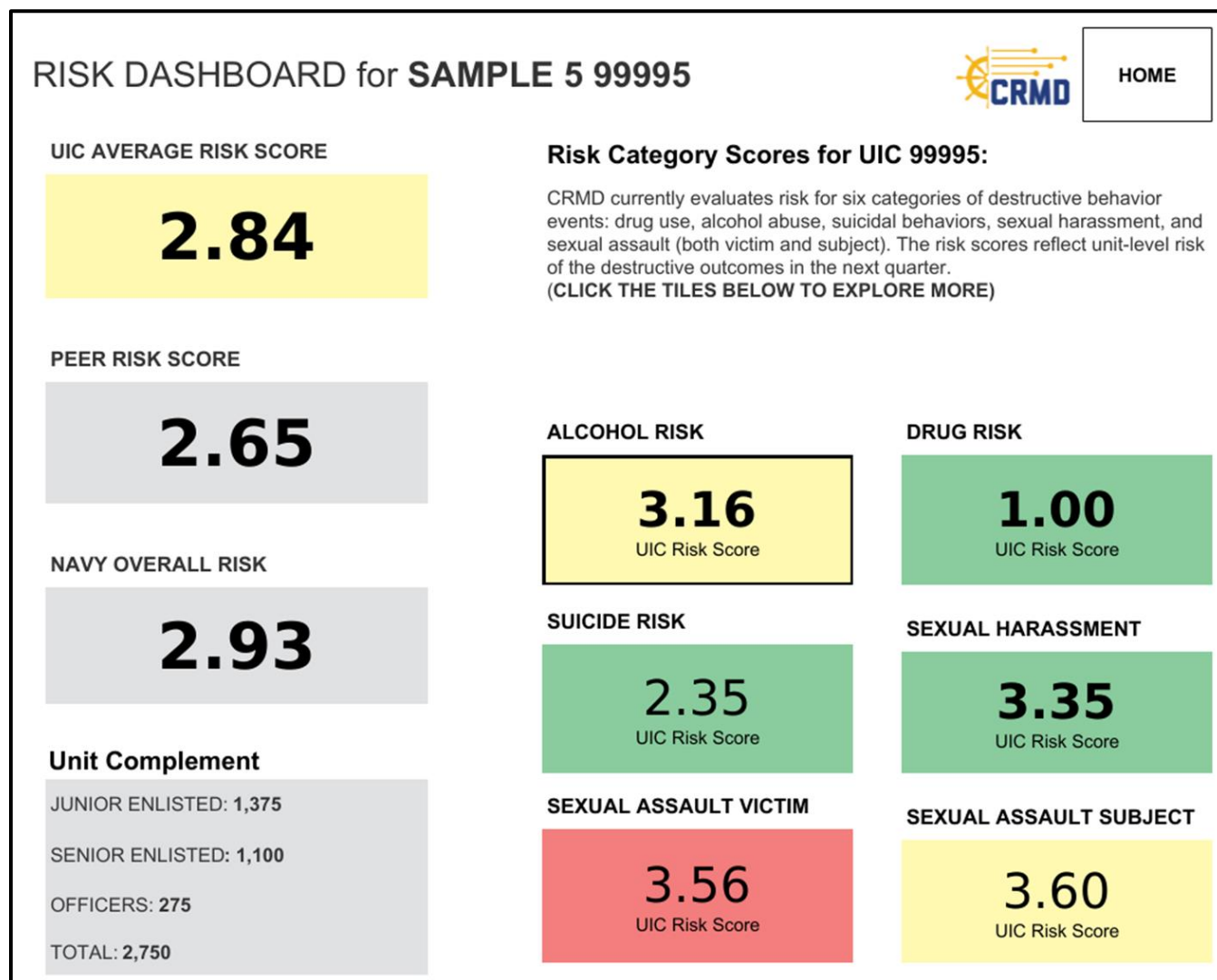
Figure 5: CRMD Overview Screen

Risk Category Drilldown View:

- Each risk category has a distinct, unit-specific drilldown view available. To access this view, click on the risk category score tile on the Main Screen.
- Once a risk category is selected (e.g., Alcohol Abuse Risk, Drug Use Risk, Suicide Risk, Sexual Harassment Risk, Sexual Assault Victim Risk, Sexual Assault Subject Risk), the screen will look like this:
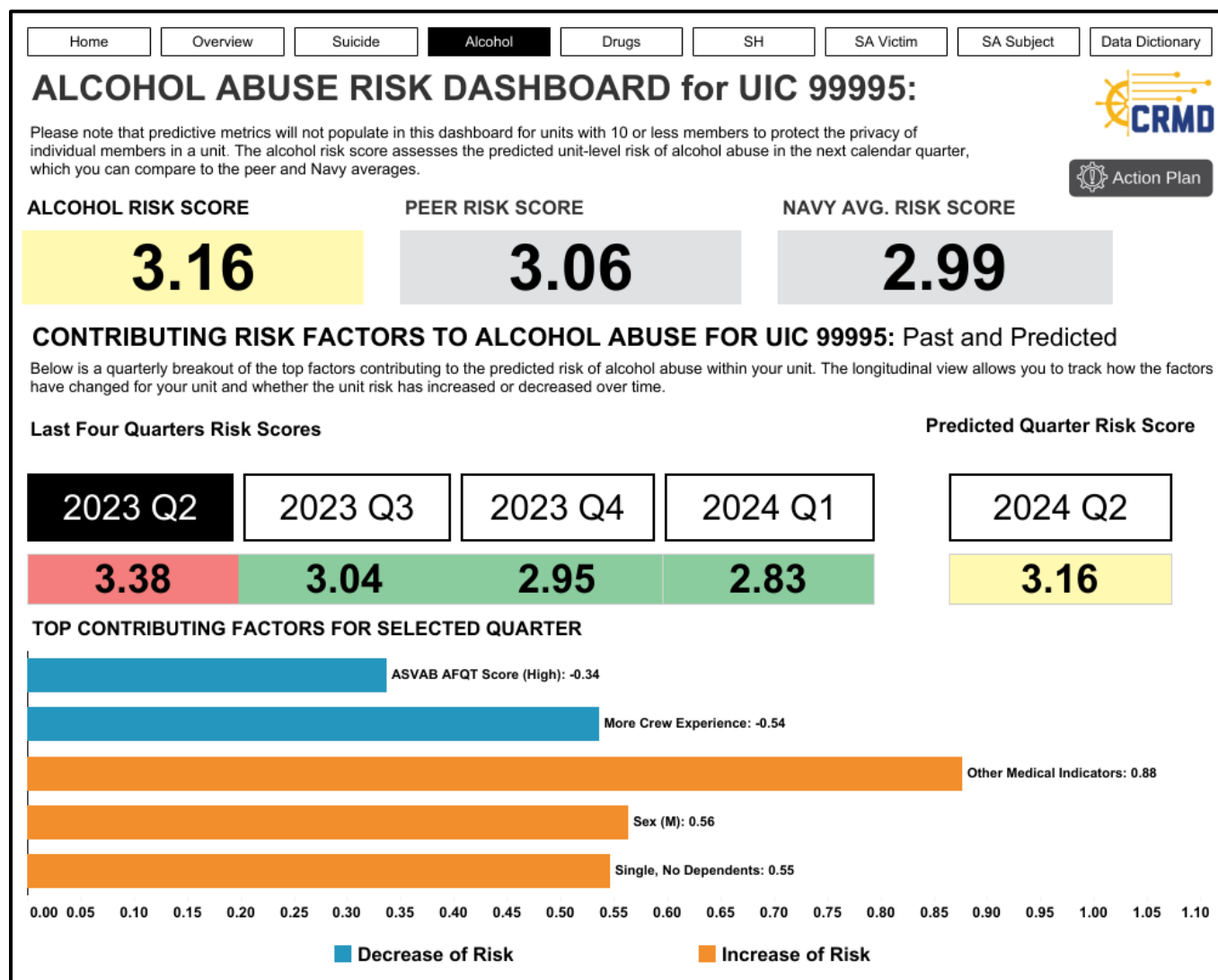
Figure 6: CRMD Alcohol Abuse Risk Category Screen

- Each risk category view features the following **category-specific information** for the unit:
  - Unit-level Risk Score
  - Navy Peer Group Risk Score
  - Navy Average Risk Score
  - Contributing Factors/Factor Constructs graphs with Shapley values for past, current, and predicted quarters
  - Link to Action Plan

Data Dictionary Screen:

The CRMD Data Dictionary screen consists of **four tabs** each providing a different type of information related to the data used to generate risk scores and populate the dashboard.

Data Constructs Tab

This tab identifies the compilations of individual features used in model training combined for dashboard display to improve interpretability.

Figure 7: CRMD Data Constructs Screen

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Individual Features Tab

This tab identifies standalone data elements used for model training.

Figure 8: CRMD Individual Features Screen

Features Controlled For Tab

This tab identifies features that were controlled for in the models but do not appear in dashboard display.

Figure 9: CRMD Features Controlled For Screen

Data Sources Tab

This tab identifies a list of data sources utilized to train the models along with the date range of the data source and the data refresh periodicity.

Home	Overview	Suicide	Alcohol	Drugs	SH	SA Victim	SA Subject	Data Dictionary

Data Dictionary

Please utilize the buttons below to select your dictionary of interest. The **Data Sources** dictionary identifies a list of data sources utilized to train the models. Please note that this is a **living page** and will be updated as new data is added to the dashboard and machine learning models.

Last Updated: September 14, 2023

Data Construct	Individual Features	Features Controlled For	Data Sources
(ADE) NAVYY_MEMBER_ASSIGNMENTS_VIEW		CY11-Current	Monthly snapshots 2011-19; Daily snapshots starting Jan 29
(ADE) NAVYY_MEMBER_ASVAB_VIEW		CY11-Current	Monthly snapshots 2011-19; Daily snapshots starting Jan 20
(ADE) NAVYY_MEMBER_DESIGNATOR_VIEW		CY11-Current	Monthly snapshots 2011-19; Daily snapshots starting Jan 23
(ADE) NAVYY_MEMBER_EVALS_VIEW		CY11-Current	Monthly snapshots 2011-19; Daily snapshots starting Jan 21
(ADE) NAVYY_MEMBER_INJURY_VIEW		CY11-Current	Monthly snapshots 2011-19; Daily snapshots starting Jan 22
(ADE) NAVYY_MEMBER_PERSON_VIEW		CY11-Current	Monthly snapshots 2011-19; Daily snapshots starting Jan 24
(ADE) NAVYY_MEMBER_RANK_VIEW		CY11-Current	Monthly snapshots 2011-19; Daily snapshots starting Jan 25
(ADE) NAVYY_MEMBER_SERVICE_VIEW		CY11-Current	Monthly snapshots 2011-19; Daily snapshots starting Jan 26
(ADE) NAVYY_MEMBER_WAIVERS_VIEW		FY17-Current	Daily snapshots starting Jan 17
(ADE) NAVYY_PERSON_TRAINING_VIEW		CY11-Current	Monthly snapshots 2011-19; Daily snapshots starting Jan 28
(External) COMPREHENSIVE AMBULATORY/PROFESSIONAL ENCOUNTER RECO..		FY17-July 23	Monthly
(External) DEFENSE SEXUAL ASSAULT INCIDENT DATABASE CASE		FY17-August 23	Monthly
(External) DEFENSE SEXUAL ASSAULT INCIDENT DATABASE SUBJECT DATA		FY17-August 23	Monthly
(External) DEFENSE SEXUAL ASSAULT INCIDENT DATABASE VICTIM		FY17-August 23	Monthly
(External) DEPT OF DEFENSE SUICIDE EVENT REPORT		FY17-July 23	Monthly
(External) MEDICAL DATA REPOSITORY CLINICAL DATA REPOSITORY VITALS (D..		FY17-June 23	Monthly
(External) MEDICAL HEALTH SYSTEM GENESIS ADMISSIONS		FY17-July 23	Monthly
(External) MEDICAL HEALTH SYSTEM GENESIS ENCOUNTER		FY17-July 23	Monthly
(External) NAVY ALCOHOL DRUG MISUSE PREVENTION CONTROL SYSTEM		FY17-August 22	As Required
(External) PERIODIC HEALTH ASSESSMENT		FY17-July 23	Monthly
(External) PHARMACY DETAIL TRANSACTION SERVICE		FY17-July 23	Monthly
(External) SEXUAL HARASSMENT EQUAL OPPORTUNITY		FY17-July 23	Monthly
(External) STANDARD INPATIENT DATA RECORD		FY17-March 23	Monthly
(External) THEATER MEDICAL DATA STORE		FY17-June 23	Monthly
(External) TRICARE ENCOUNTER DATA - NON INSTITUTIONAL		FY17-June 23	Monthly
(External) TRICARE ENCOUNTER DATA INSTITUTIONAL		FY17-June 23	Monthly

Figure 10: CRMD Data Sources Screen

Section 5: User Feedback

- As mentioned earlier, the dashboard is still **evolving**, and we encourage users to provide feedback and recommendations for improvements on all aspects.

- **Please share your command's thoughts about any of the following aspects by emailing the CRMD team directly at CRMD@navy.mil**
  - The features and format of each of the screens
  - The general design of the data displays and screens
  - The usefulness of the data provided
  - The interpretability of the risk scores and data
  - Suggestions for future options

Section 6: Help Desk

What to do if you have trouble accessing the CRMD:

- If you are experiencing any issues accessing the dashboard, please follow the steps below to troubleshoot.

- Ensure you are only using Google Chrome to access the Dashboard.
- Clear your Cache and cookies following the steps below:
  - On your computer, open Google Chrome.
  - At the top right, click More.
  - Click More tools > Clear browsing data.
  - At the top, choose a time range. To delete everything, select All time.
  - Next to "Cookies and other site data" and "Cached images and files," check the boxes.
  - Click Clear data.
- Change your proxy/VPN if you are connected via NMCI.

- If you are still experiencing issues after performing the steps provided, please contact the ADE Help Desk at **ADEHelpDesk@us.navy.mil**.

- Please make the subject line, "CRMD Access: <your first and last name>, <Date you are submitting your request>". Additionally, any details you can provide, i.e. screenshots, error messages, etc. would be greatly appreciated in order for us to assist as seamlessly as possible.