The Psychological Health Performance & Analytics Directorate (PHP&A) is part of the Deployment Health Clinical Center, the psychological health center of excellence within the Defense Health Agency’s J-3 Directorate.

**PHP&A Mission**
To leverage program evaluation expertise and large administrative medical data systems to provide relevant, timely, and actionable population and programmatic analysis in support of evidence-based decision-making and improve the efficiency, effectiveness, and impact of the MHS psychological health system of care.

Guided by this mission, analysts within PHP&A use big administrative medical data to conceptualize and conduct analyses with various MHS stakeholders in the following areas:
1. Surveillance of psychological health conditions and care delivery
2. Monitoring of psychological health care programs
3. Evaluation of prevention and care delivery efforts

At times, analyses are confined to one of these areas, but as psychological health programs and interventions are developed and implemented, we can leverage data analytics to inform programs and policies throughout the program planning cycle (Figure 1).

With integrated program planning and analytic design progresses, a set of common considerations (center of Figure 1) should guide all stakeholders from project onset. Discussing these early and often can help to align analytic support with programmatic goals at every step and ensure that program evaluation is conceptualized early in the process.

![Figure 1: Framework to Integrate Analytic and Program Planning Efforts](image)

**ANALYTICS LOOP EXAMPLES**

### 1. SURVEILLANCE (BROAD)
**Medication-Assisted Therapy (MAT) Use**
- How often is MAT prescribed among patients with an alcohol-related disorder?

### 2. SURVEILLANCE (DETAILED)
**Site Selection**
In designing an intervention focused on improving PTSD-related care, program managers want to know which military treatment facilties (MTFs) have the highest PTSD prevalence and service utilization.

### 3. MONITORING
**Primary Care Behavioral Health (PCBH)**
- How are patient populations changing within primary care behavioral health? Is care being provided with fidelity to the PCBH model?

### 4. EVALUATION
**Opioid Training**
Among providers who attended opioid prescription training, did their prescribing patterns change pre- and post-training?

**THE CHALLENGE**

Program planning requirements must be balanced alongside analytic capabilities to effectively leverage big data in evidence-based decision-making (Figure 2). Without conscious effort aimed at coordination, analytic design and program planning efforts can too often become desynchronized – limiting analysts’ capacity to deliver actionable information derived from available data.

When program needs are not considered concurrently with analytic approaches, challenges related to the common considerations in Figure 1 arise:
- **PURPOSE**: Stakeholders are unable to make decisions based on analytic findings
- **BARRIERS**: Managers discover too late that data critical to program objectives may not be available within administrative data sets
- **RESOURCES**: Time allotted for data management and analysis may be insufficient
- **GOALS**: Program needs and supplied analyses are fundamentally misaligned

How do we best balance program planning requirements with analytic capabilities and needs?

**OUR SOLUTION**

To encourage a proactive planning process linking programmatic and analytic considerations, PHP&A analysts developed a succinct data management and analytics questionnaire (Figure 3) to guide successful collaboration between key stakeholders (e.g., MHS leadership, data analysts, data managers, clinicians).

The analytic questionnaire is used with stakeholders at the outset of an analytic support relationship to work through common considerations (Figure 1) and assess, the who, what, when, where, why, and how behind the ask. By understanding stakeholders’ functional knowledge requirements for program management and decision-making, analysts can better support managers across a variety of analytic domains:
- Gauging the magnitude and importance of the ask against analytic resources and capabilities (IMPACT)
- Assessing the feasibility of stakeholder questions given available data (INPUTS)
- Identifying potentially useful proxies if existing data cannot speak to the questions of interest (LOGIC)

Through these conversations with stakeholders, analysts can define the analytic role in each specific project, discuss expectations and data limitations, and prioritize analytic efforts with an eye towards action-oriented projects. Such conversations build scientific literacy, providing stakeholders with a better understanding of the utility, capability, and importance of analytics across the program planning cycle.

**DISCUSSION**

Big administrative clinical data offers the potential of improving decision-making while at the same time driving program improvement and policy development. That said, this potential can only be realized when analytic and program goals are aligned. Analytic become most actionable when stakeholders from the program planning realm come together with stakeholders from the analytics realm (Figure 1) early in the project lifecycle to discuss how programmatic goals, facilitators, barriers, and resources align with analytic goals, facilitators, barriers, and resources.

When considerations common to both program planning and analytics align, we are much better equipped to inform care delivery and prevention efforts with data.

By using a set of questions (whether formally or informally) to guide discussions of common considerations, analysts and stakeholders can better embrace the challenges involved in evidence-based decision-making, collaboratively design programs and corresponding analytics, and align resources toward actionable data inquiries.