**Question:**

*"Can you describe your experience in communicable disease epidemiology, surveillance, and/or prevention, specifically related to HIV or STI, addressing challenges such as late diagnosis, reaching hard-to-reach populations, and data integration?"*

**STAR Approach Answer:**

**S – Situation:**

As the Senior Technical Advisor for the **Global Fund HIV Prevention Program** in Nigeria, I was responsible for analyzing data from various HIV surveillance systems and providing actionable recommendations for targeted interventions. Our primary challenge was to **reduce late diagnoses**, engage **hard-to-reach populations**, and ensure **effective data integration** across different surveillance systems to give a clear picture of the epidemic.

**T – Task:**

My task was to analyze data from **multiple surveillance sources** to:

* **Identify the most affected populations** (e.g., by gender, age, and behavior).
* Highlight **regions with the highest prevalence and incidence** of HIV.
* **Identify key risk factors** contributing to the epidemic.
* Make evidence-based recommendations for **prevention strategies** to the necessary stakeholders.
* **Monitor** the implementation of interventions to measure their impact and provide continuous feedback to service providers and policymakers.

**A – Action:**

1. **Data Analysis from Multiple Surveillance Systems**:
   * I analyzed data from **community-based testing programs**, **health facility surveillance (NARHS, IBBS)**, and **sentinel surveillance systems**. Using **STATA** and **R**, I integrated data across these systems to create a unified dataset that captured key demographic and behavioral variables such as **age**, **gender**, **geographic location**, **HIV status**, and **risk behaviors** (e.g., MSM, sex work, drug use).
   * I conducted **cross-sectional analysis** to identify areas with the highest **HIV prevalence** and **new infections (incidence)**. Through **regression models**, I identified the **most affected gender**, **age groups**, and **behavioral factors** contributing to HIV transmission, such as low condom use and multiple sexual partners.
2. **Identifying Trends and Risk Factors**:
   * My analysis revealed that **young women aged 15-24** and **MSM** were the most affected populations, particularly in the **Benue, Rivers, and Akwa Ibom** regions, where we recorded the highest HIV incidence. The data showed **higher transmission rates** among those who reported inconsistent condom use and in regions with **low HIV testing coverage**.
   * I also identified significant gaps in testing uptake and late diagnoses in older populations, particularly among heterosexual men who did not perceive themselves at risk.
3. **Making Recommendations**:
   * Based on the analysis, I developed a series of **evidence-based recommendations** to address the findings:
     + **Expand community-based HIV testing** in high-incidence regions to increase testing coverage, particularly for MSM and young women.
     + Launch **targeted health promotion campaigns** focusing on condom use, safe sex practices, and reducing stigma in healthcare settings to encourage more people to come forward for testing.
     + Introduce **Pre-exposure Prophylaxis (PrEP)** for high-risk populations and expand its availability in the regions identified as transmission hotspots.
   * I presented these recommendations to the Ministry of Health, international donors, and local stakeholders, including service providers, highlighting the urgent need to focus resources on high-incidence areas and marginalized populations.
4. **Monitoring Interventions and Continuous Feedback**:
   * After the implementation of the recommended strategies, I led **monitoring and evaluation (M&E) efforts** to track the effectiveness of the interventions. I continued to analyze **post-intervention data** to assess whether the increased focus on testing and PrEP was having the desired impact.
   * Regular feedback was provided to **service providers** and **commissioners** through monthly and quarterly reports, highlighting areas of progress and those needing improvement. For example, we noticed a **20% increase in HIV testing uptake** in the MSM population within six months of implementing the community outreach testing strategy.
   * Continuous engagement with stakeholders ensured that any emerging challenges were addressed promptly. For instance, when testing uptake plateaued in some regions, we worked with local authorities to enhance **community mobilization efforts** and intensify outreach in underserved areas.

**R – Result:**

* **Coverage Improvement**: The analysis and targeted recommendations led to a **significant increase in HIV testing coverage**, particularly among MSM and young women, with a **30% increase in testing rates** across high-incidence regions.
* **Reduced Late Diagnoses**: Through the expansion of community testing and outreach, we observed a **25% reduction in late diagnoses** over a 12-month period, particularly in previously underserved populations.
* **Impact of Prevention Strategies**: The introduction of PrEP for key populations resulted in a **40% uptake** in high-incidence regions, contributing to a reduction in new infections.
* **Continuous Monitoring**: Ongoing data analysis and monitoring provided evidence of **positive change** in transmission trends, and the regular feedback loop with service providers ensured that interventions remained effective and adaptable to emerging challenges.

By integrating surveillance data, identifying key risk factors and trends, and continuously monitoring the impact of prevention strategies, I was able to guide stakeholders in implementing targeted interventions that significantly reduced new infections and improved testing coverage. This experience demonstrates my ability to handle the key challenges in HIV surveillance and prevention, making me well-suited for this role at UKHSA.