**2019 Accomplishments**

**CORE SERVICES:**

* **Gardasil Next Best Engagement business case** – Analyzed Gardasil personal and non-personal promotion to calculate a Customer Engagement Index (CEI) and subsequently, determine the impact of different promotion sequences on the CEI score for an HCP. Estimated the potential uplift from implementing effective channel sequences to be around ~$22MM (1.6% of net sales).
* **Gardasil DET** – Analyzed the impact of different waves being run through the DET campaigns
  + Wave 0 (Completed) – Utilized test-control, pre-post period models and concluded ~$1MM revenue impact from Wave 0.
  + Wave 1 (In Progress – expecting to finish in December) – Utilizing marketing mix models on Sales and Claims data to assess the impact for the Wave 1 tactics and how it differs by content

Total Digital Investment analyzed – ~$4MM

* **Gardasil Next Best Engagement development** – Provided analytics support to the G9 NBE team specifically geared towards the configuration of the engine, calculation of CEI, and evaluation of UAT results –
  + Provided vendor & channel level maximum digital touch point constraints for each microsegment/HCP
  + Worked with ZS to review CEI inputs, model inputs & results for G9 NBE training
  + Assisted the contracting team with estimating the recommended volumes
  + Attended daily/weekly meetings on project status, ongoing challenges, UAT results

Total Digital Adolescent Investment impacted through NBE – $6MM

* **Januvia Marketing Mix model for HCC & HCP promotion** – Ran a marketing mix and pre-post model to assess the impact of different HCC (Paid Search, Online Video, Display, Social) and HCP promotions (Medscape, SFMC, Epocrates, Doximity). Total Investment Analyzed – $17MM
* **Sample & Voucher impact assessment for Januvia Family, Belsomra, and Steglatro** – Analyzed the impact of Samples and vouchers on physician prescribing through a period-to-period change model for Januvia family and Belsomra. Total Investment Analyzed – $10MM
* **Investment Prioritization Framework**
  + Integrated promotional impact across different channels and ran optimization scenarios to recommend 2020 allocations for six brands in Primary Care (Januvia, Belsomra, Nexplanon, Steglatro) and Vaccines (Gardasil, Pneumovax). Held discussions with the individual brand teams to apprise them of the brand performance and suggested changes for 2020.
  + Recommended allocation within/across business units (Primary Care &Women’s Health, Specialty) through scoring models and communicated the results to the BU leaders & Finance team.

Total promotional dollars impacted – ~$300MM

* **RShiny dashboard (In Progress – expecting to finish in December)** – Working towards creating a RShiny dashboard that will help to automate channel optimization for the Investment Prioritization exercise. The dashboard will allow to create response curves, scenarios, and sensitivity scenarios through a GUI in R.
* **Adhoc activities**
  + Gathered Adherence data and worked with Finance to get the 2020 NPV values
  + Created an optimization template for Januvia NBE to determine the optimal no. of touchpoints
  + Explored the decline in Januvia over the past 2-3 years and assessed the impact due to decreasing marketing spend
  + Forecasted lift for Januvia NBE
  + Analyzed 2019 IPF results to identify channels for additional investment opportunity

**COMPLIANCE:**

* Completed all the trainings assigned on the learning portal. Ensured that day to day activities are fully compliant with the data privacy, social media, and other compliance guidelines laid by Merck

**PROFESSIONAL DEVELOPMENT:**

* Started a MAIO WOW platform with 6 other team members (and led by Valerie) to provide opportunities for information exchange between different sub-teams. Attended multiple observations (Proquad & Januvia DET, Januvia HCC Digital quarterly planning) and a briefing (deep dive into Channel Affinity modeling) as part of the program.
* Attended multiple trainings through Statistical Horizons (Structural Equations models), R Studio, and H20 to improve statistical, programming, and machine learning expertise
* Attended PMSA conference to learn about the latest methods in the pharma analytics space