**SUMMARY - Promotion Optimization Team Accomplishments – 2022**

1. **Analytics Delivery - Core**

* Guided and informed about $1.2+ Billion investments in Marketing Promotions across all BUs
  + Oncology -$700 MM, Vaccines - $200+ MM, Chronic Care - $105 MM, Hospital / Specialty - $10+ MM, Patient Support Programs (Coupons etc.) - $200+ MM
* Select Key Initiatives:
  + DOMINO – Helped Oncology Senior Leadership team in 2023 budget allocation process across all the Oncology brands ($670+ MM). Helped refine 2022 portfolio budgets.
  + Channel Investment Allocation (CIA) – Analyzed and allocated HCP Digital channel budgets for Oncology brands (~$45 MM)
  + Evaluated and provided business cases for large TV investments that gets risen to CEO.
    - Keytruda: $75 MM in 2022 and $100 MM in 2023.
    - Gardasil: ~$40 MM to $50 MM
  + Recommended optimal HCC channel investments for 2022 and 2023 across Oncology / Vaccines / Chronic Care BUs. Channels include TV, Point of Care, Streaming Video, Online Video, Display, Social Media, Paid Search, Radio etc.
  + Guide / Develop measurement protocols for various Accelerate initiatives (ex: tumor prioritization (n=1), splitters etc.)
  + Managed multiple Point of Care vendors. Provided measurement protocols and evaluated Rx impacts provided. Covered Oncology, Vaccines and Chronic Care BUs.
  + Analyzed and Recommended marketing and sales force promotion strategies to plan for Januvia LOE (2023 and 2026 LOE), Steglatro reduced budgets and Belsomra promotions.
  + <Sensitive> For Legal, Finance and Brand teams: Assessed scenarios related to impact to patients and business by pulling out coupons (or not pulling out) due to coupon related litigations for multiple brands. Fortunately, Merck won the litigation and further action was not needed. Brands analyzed: Belsomra, Verquo, Steglatro, Januvia, Welireg, Dificid, Isentress, Delstrigo, Pifeltro, Prevymis
* Rx Impact Assessments / Mkt Mix Models / Promotion Response Curves (PRCs)
  + Analyzed Rx Impacts and ROIs of both HCP and HCC marketing channels (including Digital) and vendors through Marketing Mix models.
    - Two cycles for Keytruda, G9 Adults & G9 Adolescents
    - Januvia, Steglatro, Belsomra, Verquo, Bridion, Lynparza, Lenvima, Pneumovax, Rotateq / Vaxelis / Proquad
  + Test vs Control methods applied to measure impact of VERQUVO MMF and select digital channels for multiple brands
  + Sales Force response curves (PRCs) modeled for G9, P23, Vaqta Ped, Rotateq, Januvia, Steglatro, Belsomra, Verquo.
* DET Campaign Impact Analysis (Rx Impacts) and Campaign Planning
  + Evaluate Rx impacts by tactics (including contents), channels, vendors, and campaign groups – A more granular analysis of DET campaign impact on Rxs and ROIs.
  + 2022 Brands – G9 Adolescents, G9 Adults, Vaccine Confidence Campaign, Ongoing: Belsomra, Dificid, Zinplava, HIV, Prevymis
* Optimal Resource Allocations (Investment Prioritization Framework)
  + 2023 profit planning guidance and investment optimization support for Gardasil Adolescents, Gardasil Adults, Pneumovax, Verquo, Januvia, Steglatro, Belsomra
    - includes HCC channels and HCP channels with ~$220MM investments
  + Addressed multiple ongoing 2022 and 2023 investment strategies and brand questions for all measured brands mentioned above.
  + Helped to form Verquo HCP and HCC promotion planning scenarios. Identified and reinvested in high performing channels. Addressed Bayer’s concerns on investments.
* NBE support:
  + Indexed, Triangulated, and provided channel response slopes for Keytruda to compute CEI (customer engagement index) and dCEI (digital version).
  + Determined max touchpoints and provided CEI inputs for multiple vaccines and chronic care brands using various vendor channel Rx impact measurements and proxies.

==============================================================================

1. **Analytics Delivery - Innovation**

* Predicted engagement impacts from Content Hyper Personalization (CHP) and Content Tagging (CTAP) projects for Gardasil and Keytruda digital contents.
* *Innovative cutting edge synthetic control methods* used to evaluate CVS / Merck initiatives to quantify the Gardasil sales impact. This guided optimal discount discussions with CVS.
* Developed Investment Resource Optimization for IPF in R-Shiny environment.
* Helped enhance T/C and develop Impact aggregation analytics R-shiny tools from Datazymes
* HealthMap:
  + Guided development of Net Impact analysis for HCC channels for Januvia.
  + Guided and evaluated net impact analysis for key Verquo consumer channels.
* Evaluation of alternate data sources for TV: VideoAmp (scheduled to go ahead in 2023), EDO, and Charter in partnership with Media and Brand team.
* Completed research of effects of IOS15 upgrade on email engagement counts and impact per email for ROI analyses

==============================================================================

1. **Analytics Delivery – Capability Enhancements**

* Guided data lake team to Complete first two versions of Mkt Mix data lake to collect all promotions data in a single platform. This has largely improved Mkt Mix process automation
* Oncology BU
  + Enhanced DOMINO to include Lynparza, Lenvima and Welireg
  + Analyzed and guided portfolio Tumor Prioritization (national)
  + Guided HCP mass media evaluations with Crossix (HCP Paid Search & eNewsletters)
* Campaign Planning Tool (Rx impact based) second phase development is complete and operational. Helps in yearly engagement / delivery based third party contract planning using results from various Rx impact analysis
  + Gardasil Adult and Bridion used this tool for determining vendor and channel level yearly investments (+ contracting) for 2023.
* Adhoc and Other Capability Enhancements
  + Evaluated multiple vendors for whom impacts are hard to determine through Test/Control measurements (ex: Contextual Search impacts, Alert ROI confirmations)
  + Vaxneuance and Vaxelis promotion channel investment strategies support using measured proxies.
  + Combining Diabetes and Belsomra promotion strategies into one to optimize cross brand investments and strategies
* Helped design coupon offers (both coupon and eCoupons) for launch brands and forecasted their cost impacts to the bottom line. Brands include a) Lyfnua and b) Sotatracept
* Non-US Markets:
  + Collaborating with Analytical Wizards, AP BAEs, and Global Digital Marketing teams to:
    - Support using Wiz tool for outside US Market Mix models
    - Provide blinded Gardasil and other vaccines US Rx Impact analysis to guide AP and other global markets.

==============================================================================

1. **Team Collaboration**

* Various analytical delivery, consultations and guiding large investments optimally involved close collaborations with teams within and outside Merck. Some of the key stakeholders are:
  + Business Stakeholders
    - Oncology: Customer engagement and digital planning & execution team (Jarrett, Susan, Lori); Consumer operations (Nancy Ibach); Senior Leaders and Portfolio Planning teams (Debbie Cava, Jeff Simmons, Tom Lampron, and other VPs and AVPs).
    - Vaccines / Chronic Care / Select Hospital & Specialty BU: Brand teams of all major brands and the senior leadership.
    - US Commercial Operation teams: DET (Myriam), Media (Sumana), Coupons (Nicole), NBE (Jody)
    - US Finance leadership team and Commercial Legal (for Coupons)
  + Internal Merck Teams (HHIAD / IT): Data Management (Walter), Customer Engagement Optimization (Nicolas), Data Governance (Patrick Moore), BAEs, Data Science (Suman), Digital Analytics (Seung – select projects), US IT(Harish).
  + Vendors: DATAZYMES, Crossix, Initiative, Solved, Multiple Point of Care vendors, IQVIA, Symphony Health, Analytical Wizards etc.

==============================================================================

1. **Team Management**

* Empowered team members to focus on innovation projects that benefit Merck and the individual. Allocated time and regular meetings to progress meaningfully. Outcomes:
  + Synthetic Control methodology development and applied to business problem
  + Enhancements to Rx Impact measurement methods
  + Investment Optimization Scenarios R-Shiny tool (mimics excel version)
  + iOS15 email change impacts to ROI measurements
* Motivated through onsite visits, coached, and mentored Datazymes consultants to be highly efficient analytical problem solvers. Enabled them to deliver multiple critical projects successfully.
* Increased responsibilities and ownerships of new team members and helped them lead respective practice areas very effectively. Team members loved such ownership.
* Applied expertise and experience and guided every step of way to increase efficiency in analytics delivery through establishing agile processes and being available to help solve complex analytical methods, questions, and dilemmas.

==============================================================================

1. **Compliance**

* Compliant with trainings and all business processes.

==============================================================================