**Ambika Rana**

**Overall:**

* Summary

Ambika has been a very valuable asset for the Promotion Optimization team. She worked on wide variety of projects including Diabetes Sampling Pilot, Noxafil Evoucher rollout, Investment Prioritization Framework (IPF), various ad-hoc analysis and requests. Ambika also managed a summer intern very effectively and worked on developing agent based simulation model to understand utilization of coupons. Ambika attended several advanced statistics courses and incorporated some of the learning into her work.

Ambika delivered well above expectation in all of the projects she has been involved with. Ambika’s eagerness to learn, curiosity to understand and solve wide ranging business issues and technical know-how related to modeling, data processing and project management are invaluable assets. Ambika has excellent listening skills. She communicates her thoughts clearly, concisely and to the point in the meetings she has with various stakeholders including brand leaders, senior leaders, finance and other support teams. Ambika is also very detail oriented, a necessary skill for the current job, and is not afraid to push back and communicate her innovative ideas even if others have not thought about them. Overall, Ambika is a high performing team member. Merck and I are lucky to have her as part of the team.

I would like Ambika to take on more responsibilities, explore new business areas both inside and outside our group and continue to explore innovative ideas to identify and solve various business issues.

* Stakeholder Feedback

Ambika’s stakeholders find her to be a terrific partner and feel that she is highly collaborative, communicates clearly and delivers on her commitments. Ambika’s strength lies in communication, insights into business and its dynamics and balancing the analysis results with practical business needs. Ambika’s clients want her to get more involved in some of the businesses and to see her more often with additional analysis to support the business. Ambika has earned a spot at their table. Her client appreciates the innovative program design she developed that is currently live in the market. Ambika’s ability to clearly articulate the analysis and effectively answer questions from tough audience are noted with high regard.

**Projects:**

1. Core Services
   1. Diabetes Sampling Pilot

One of Ambika’s initial projects after joining the team was Diabetes Sampling Pilot. She quickly learned the activities involved in the project and adapted to complexities arising from difficulties in its execution. Ambika illustrated the execution difficulties clearly to the brand team through relevant metrics and chose a sub population to give directional guidance of impact of samples on the business. Her work confirmed that directionally samples do provide value to the patients and the physicians who would like to experiment with the trial. This study was well received by the brand and COE teams and helped to directionally validate IADS modeling approach as well as towards appropriate sample allocations.

* 1. Noxafil Evoucher Program

Noxafil brand team was evaluating whether an Evoucher program would be helpful to patients and be financially feasible. Ambika single handedly analyzed all relevant patient level claims data from Relay Health and Symphony Health Solutions and recommended an innovative targeting strategy that measures the benefit for the patients and also financial feasibility for Merck. She actively engaged with brand team, strategy board members that included legal department and in collaboration with brand team, successfully convinced legal team and other stakeholders that this new targeting strategy, the first for such programs, is the best approach for patients and Merck as well as being legally relatively less risky. This has set precedence for other brands to consider such innovative targeting approach. In 2019, Prevymis is considering such a strategy.

* 1. IPF

Ambika got fully involved in one of the most important project of the team - Investment Prioritization Framework (IPF). This process supports and informs over $200MM in promotional investments and guides the yearly budget allocation process. Ambika identified a potential $25MM savings in promotional investment through this process. This process is challenging in terms of technical know-how, communicating and coordinating with numerous stakeholders and deal with ambiguity due to limited data and inputs in many cases. Ambika, with minimal guidance from her manager, learned the process, communicated very effectively with the stakeholders and completed the analysis and informed the profit planning process. She effectively consulted with relevant brand team leaders as well as senior leadership team and finance and guided the profit planning process. Tom Loose, AVP of Chronic Care and Women’s Health, commented that Ambika’s presentation was one of the best presentation of the year. IPF & scoring models involved heavy workload and Ambika was able to take the extra workload and complete the analysis successfully. Ambika’s detail orientation, thought process and the ability to come up with appropriate solutions to the problem is highly commendable and is probably one of the main success factors in executing the IPF process.

1. People Development

Ambika successfully managed a summer intern and guided the intern to develop an agent based simulation model to understand the penetration and utilization of coupons in the market. She guided the intern to come up with various coupon designs and its impact on utilization of coupons by patients. The methodology was new to her and she quickly learned the necessary details so that she could guide the intern and teach all relevant business constraints and processes involved. Ambika’s willingness to spend lot of time with intern while she was busy with other projects had helped both the intern as well as herself immensely in terms of people management.

1. Training

Ambika’s eagerness and willingness to learn continuously is one of the greatest assets for the team. She attended multiple trainings on various statistical methods and applied some of the concepts in her work.

**Yan Guo**

**Overall:**

* Summary

In 2018, Yan worked with multiple important brands with a total of about $200MM+ consumer media investments. The brands include Keytruda, Nexplanon, Belsomra, Gardasil and Januvia. Yan developed and supported the development of Marketing Mix models and enhanced the team’s capability by venturing into pathway analysis and thus enhancing the attribution capabilities. She has a great grasp of exposure to claim study by Crossix and is heavily involved in its appropriate applications to the brand strategies and channel impact analysis. Yan worked with Nexplanon brand team, COE and Crossix and developed an innovative solution to identify revenue maximizing optimal touchpoints for various media vendors. This analysis has a potential to choose appropriate vendors and target frequencies and save considerable amount of media investments. Both pathway analysis and optimal frequency studies are planned to be extended for multiple brands in 2019. Yan also helped in designing various ad-hoc HCC digital pilots (ex: Belsomra) and guided the development of reporting systems like CORI.

Yan performed well above expectations on the above mentioned projects. She has good sales skills, is proactive and is a highly regarded consultant by her clients. Her clients frequently include her in various relevant meetings, studies and decisions. This speaks well to the confidence her clients have on her. Yan proposes appropriate ideas with confidence. She is willing to learn a lot about various areas of business and grow her skillsets.

One area of opportunity for Yan is to more consistently keep her management informed of key insights and recommendations she is planning to share with clients.      The purpose of this is for Yan to tap into any additional insights that management and/or other team members may be aware of that could improve the insights and recommendations Yan is offering to the client.       I look forward to working with Yan in this regard in 2019.

~~While Yan is busily engaged with clients, at times it gives an appearance of running her own consulting group. I look forward to work with her and learn about her projects, activities and ideas more frequently and keep the team abreast of the developments. This will help me and Yan to provide consistent message to the leadership and also help me to help her when she faces any difficulties. I am very confident that we can work together to formulate a plan to work more effectively in 2019.~~

* Stakeholder Feedback

Yan’s stakeholders expressed that Yan contributed significantly to get their arms around media planning. They feel much more confident in the investments they are making. She is a great collaborator and dedicates herself to help her stakeholders to increase overall effectiveness of the promotional activities. Yan also maintains deep level of engagement with other market research and marketing performance activities. Her key strength includes being very vocal and not shy about making recommendations. She makes consistent effort to be present and “plugged in” to all of other analytic work streams outside IADS. Yan has gone above and beyond reasonable activities to ensure deliverables are both accurate and timely. She is also seen as a great educator and solutions provider. ~~An area for continuous development is to increase her willingness to seek help from her IADS team and keep her management better informed. Asking for help is a good thing.~~

**Projects:**

1. HCC Media Measurement

Yan worked effectively with consumer points of multiple important brand teams (Keytruda, Nexplanon, Belsomra, Gardasil and Januvia), ZS, media vendors and other internal teams. Yan helped to measure the ROIs through marketing mix models and other related statistical techniques for various media channels (TV, digital, search, print etc.) that have a very high investments in the tune of hundreds of millions of dollars.

In particular Yan has been a go-to consultant on media strategies for Merck’s flagship brands like Keytruda. Yan helps the team by participating and providing valuable media related insights. She is considered as a great collaborative partner by brand teams such as Keytruda and Nexplanon where a large slice of consumer media spend is made.

Yan also helped to adapt new methodologies like pathway analysis that has a potential for better channel attributions. Pathway analysis has been expanding to multiple brands. Yan is tireless in running multiple what-if scenarios with brand leaders so as to identify most relevant and optimal (within given business constraints) HCC media channel investments.

1. Define Best Practices and develop a method to quantify halo impact

For Belsomra, Yan enhanced current Marketing Mix analysis by implementing a version of pathway analysis. This enhancement helps to attribute the impactables more thoroughly when there are heavy cross channel interactions. Pathway analysis was later applied to other brands such as Nexplanon, Januvia and Keytruda by ZS. Yan guided the development and implementation of these models very effectively and provided practical guard rails for such estimates.

1. Cookies to claims studies

Exposure to claims studies are some of the recent introductions to Merck. Yan worked with several stakeholders including Crossix and has a deep understanding of the offerings and insights provided by such analysis. Such expertise has made her a valuable consultative partner for the brand teams. Using data from exposure to claims studies (ex: net conversion rates) Yan computes ROI’s of various HCC channels for many of other important brands (Nexplanon, Gardasil, Keytruda etc.) where $100MM+ media investments are made. Yan’s work has helped the brand teams to continuously review the performance of various vendors and choose investments wisely.

1. Determine KPIs

Yan closely worked with Nexplanon brand team, COE and Crossix and developed an innovative solution to identify optimal frequency of HCC touchpoints for various media channels and vendors. This solution has larger implications and savings potential for multiple brands and is being considered to be implemented for multiple brands in 2019.

1. Belsomra Pilot

Given various data constraints, Yan devised an appropriate simple weighted relevant metrics based method to design a Belsomra heavy-up digital pilot. She identified relevant DMAs that would maximize impactable revenue for this pilot. The pilot was implemented by the Belsomra team.

**Blythe Bealer**

**Overall:**

* Summary

Blythe has been instrumental in evaluating the business case for NBE. She played a multi-faceted role going well beyond her normal work responsibilities to successfully establish the business case for NBE for Januvia and Keytruda with an estimated upside of about $175 MM per year. Blythe is a primary consultant for Keytruda CIA work for MCM and MMF promotions and provides data, insights, and methodologies along with verifying the results. She packages the results effectively and guided the allocation of $42MM on various HCP channels for Keytruda.

Blythe is also instrumental in guiding the development of MMM for Keytruda. She helps to validate results and guides ZS on the modeling side. Blythe also validated the usability of new pathway model extensions to MMM and guided its evolution through multiple iterations of validations and consultations.

Blythe effectively executed various ad-hoc impact and ROI analysis for various brands and MCM/MMF channels. The informed investment is about $20MM. Blythe also tested, maintained, enhanced and on-boarded various digital data sources, Grail datasets and CIRRUS migrations in partnership with IT and architects. She managed offshore resources and developed them to tackle some of the common ROI analysis carried out by Promotion Optimization team.

Blythe executed many of the above mentioned projects well above expectations by going above and beyond of what is normally expected. She is the data guru of the team and several IADS team members are highly dependent on her expertise. Blythe is a well-established exceptional collaborator and the IADS team members, clients, architects, IT personal – or for that matter anyone who interacts with her – are highly appreciative of all the help, support and expertise she offers. Blythe’s contributions to the team and the business are invaluable.

* Stakeholder Feedback

Blythe is seen by her stakeholders as approachable, highly collaborative, easy to communicate with, responsible and accountable. She is very engaged while being directive when she needed to provide guidance to help the team resolve an issue or move forward with the study. She is seen as a great partner and did a wonderful job presenting study results to senior and marketing leaders. One of the stakeholders would also like to see a continuous improvement in the team’s ability to translate the complex results into outputs that are easily digestible for business.

**Projects:**

1. Innovation – NBE

Next Best Engagement (NBE) is an important high visibility initiative for Merck in 2019 involving coordination between several Merck teams. The seed for NBE was planted in late 2017 and throughout the year 2018 as a business case development. Blythe is one of the few team members who were involved actively from the beginning. Her tireless efforts in collecting necessary data, understanding them, educating other project members and ideas on grouping tactics and sub-channels are commendable and were helpful in proving the NBE business case. Blythe willingly engaged in content coding of assets - not an easy task or part of her defined role. This content coding strategy has defined the basics of future content coding of assets. Blythe was also instrumental in supporting the implementation of optimal sequence couplets and triplets by the Digital Engagement team. The identified upside from NBE work for Januvia and Keytruda is about $175MM per year. Blythe played an outsized role in success of these business cases and setup a strong background for NBE expansion in 2019 and beyond.

1. Keytruda- CIA

Keytruda MCM team spends over $45MM per year on various MCM programs. Blythe worked closely with Keytruda MCM architects, ZS and other brand points for Keytruda to compute and/or verify the impact of these promotions, communicated these tricky results and recommended appropriate investment levels. Given that Keytruda has lot of data challenges, innovative ideas are needed for such tasks. Blythe consulted heavily on the development and implementation of Channel Investment Allocator (CIA) model by ZS. She spent lot of her time including late nights and holidays with architects to guide and translate the inputs and results appropriately.

Blythe was also actively involved in the development, support and interpretation of complex MMM work executed by ZS. She paid deep attention to the interpretation and evolution of new attribution techniques such as pathway models. Debbie Cava, her client, has personally told me great things about Blythe’s patience, consultative approach, collaboration skills, detail orientation and the expertise she provides for proper investment of promotional dollars.

1. Core – Impact Analysis and ROI

Blythe did numerous ad-hoc impact and ROI analysis for various MCM and MMF channels and brands (ex: Januvia, Belsomra, P23, Gardasil). The total investment is about $20MM. She also provided relevant data and consultations to the vendors doing an impact analysis. Blythe reviewed the results thoroughly and presented them to brand teams and guided the architects to design the MCM journey.

1. Core – ACE 3PV Support

Blythe has a deep understanding of all the third party vendors’ digital engagement data that are stored in Merck’s environment. She regularly evaluates and on boards new vendors and tests the validity of such data. She works closely with IT, multiple vendors and internal stakeholders (including IADS team) and educates them on the numerous nuances associated with digital data. Several of our IADS team members rely heavily on her expertise and highly collaborative guidance to successfully execute their projects.

1. Data Guardian

Blythe is the primary data expert of our team and maintains, enhances and checks migration of various data sources (ex: Grail, Promotions, Publicis, Adheris adherence curves etc.). She has primary responsibility for Grail datasets, regularly requests for necessary changes to various data sources based on business needs and the whole group depends on these well maintained data to execute their work.

1. People

Blythe managed two offshore resources on project by project basis. She is highly organized, collaborative and an excellent educator and is very successful in guiding and managing the offshore resources. In 2019, she will manage few offshore resources directly and on-board them to Merck’s environment.

**Dave Furman**

**Overall:**

* Summary

In 2018, Dave worked with various vendors and provided impact measurements for various adherence related promotional programs. He consulted on measurement plans, provided data and performed internal ROIs for various point of care programs, in-store, at-home and non-personal third party managed promotional programs. Brands that Dave supported on these initiatives includes Gardasil, Pneumovax, Nexplanon, Belsomra, Asmanex, Dulera and Januvia franchise with total investment of about $10MM on these promotions.

Dave developed marketing mix model to measure impact of Pneumovax MCM and MMF programs. This helped the brand team to appropriately allocate funds for these programs (through IPF analysis). Dave used new GPO / IPP data sources to measure impact of GPO speaker programs on Keytruda claims. This was well received by his clients. Dave also designed and measured ad-hoc digital pilots for Sivextro and Gardasil. He developed PRCs for Gardasil, Pneumovax and Nexplanon which served as a key input to develop the call capacity and call plans for these brands by other IADS team members. Dave organized R training for the IADS group and made this training cheap and effective for the group. Dave also managed graduate intern recruitment process for 2018 and 2019 programs. He mentored and coached the intern Jue Wang and helped her to apply cutting edge data mining techniques to determine effective promotional sequences.

Later in the year Dave took a new responsibility and has been quickly learning the nuances involved in designing coupon offers and the patient’s abandonment and adherence behaviors. In this capacity Dave helped to determine coupon, Evoucher and denial conversion program budget allocations for Steglatro (2019 plans) and is studying the optimal coupon design for Januvia franchise.

Dave executed above mentioned projects very successfully. Dave puts in a lot of extra effort to meet his project commitments. Dave is always willing to learn new areas and this has been a key asset in quickly adapting to his new role. Dave takes a special interest and pride in developing young talents, which has been very helpful for IADS team to identify good future talents. Dave’s collaborative, consultative approach and his willingness to guide and work with variety of vendors have helped the promotion optimization team to keep the lights on.

* Stakeholder Feedback

Dave’s stakeholders highly appreciate his responsiveness and his ability to work seamlessly with variety of agency partners. They find him to be professional, reliable, thorough and thoughtful. Dave is always willing to provide his insight into any of the issues his clients have and to interact with the vendors directly. His stakeholders appreciate Dave’s deep understanding of the programs, the vendors and the analytic frameworks.

**Projects:**

1. ICE

Dave designed and evaluated pilot programs to quantify the impact of digital promotions (~$250K investments) for Sivextro and Gardasil. This informed the brand team on expansion plans for such digital promotions.

1. IPF / PRCs

Dave developed spline based PRCs for vaccines and Women’s Health brands such as Gardasil, P23 and Nexplanon. These PRCs were developed for various segments within each brand and was a key input to determining the appropriate optimal call plans for each of these brands. The tight deadlines for this project were quite challenging and Dave met these deadlines by putting in lot more extra efforts.

1. Core Services

Dave spent much of his 2018 efforts on delivering various core services of our promotion optimization team. Dave quickly adapted to his new role as patient access program lead towards the end of the year and supported coupon / voucher design and impact analysis for Steglatro. He worked closely with IQVIA and Digitas Health to understand the patient abandonment and adherence to the Januvia business.

Dave is a primary point tor understanding the impact of various promotion programs aimed at improving product adherences ($500K investment). He consulted with and evaluated ROI methodologies and results for various brands and vendors such as Connective Rx, Rx Edge, Practice Fusion, Walgreens and Optimize Rx.

Dave also consulted on measurement plans, provided data and performed internal ROI for various point of care (POC) programs, in-store, at-home and non-personal third party managed promotional programs. The brands here include P23, Gardasil, Nexplanon, Belsomra, and Zostavax. Various vendors that Dave consulted with on these programs are Coverwrap, Medicx, RxEdge, Outcome Health, Phressia and WebMD. The total investments informed here is about $9MM.

Dave analyzed the promotional impact of MCM/MMF programs for P23 through Marketing Mix Models. These modeling methods are complex and needs exploration of wide array of statistical techniques and most importantly - perseverance. Some art is also involved in determining these impacts and Dave patiently went through multiple combinations of techniques and chose appropriate final model and estimates. This helped to inform IPF process for P23 and helped to determine the optimal allocation of about $6.5MM investment in non-personal MCM promotions for the brand.

Dave is always willing to enter into new areas and was instrumental in collecting and understanding GPO / IPP data for various GPOs for Keytruda. He used this data to analyze the impact of GPO / IPP speaker programs and showed that GPO attendees within a given institute had lot more impact on business than the doctors who did not attend such programs from the same GPO organization. Further explorations of these programs are being done in 2019. Dave’s initial research has provided a wealth of knowledge on appropriate use of GPO data for our future analysis. The analysis was well received by the Keytruda team responsible for executing these programs.

1. Operational Transformations

Dave explored whether how data at national vs zip vs HCP level aggregation impacts the estimated bias in carryover for Januvia NRx/TRx (using US data). This analysis guided our France analytics team to appropriately adjust the carryover estimates and allocate appropriate impactable revenues to promotional channels.

1. Personal development

Another main area that Dave focused on during 2018 is the 2018 / 2019 graduate intern recruitment and management. This process consumes lot of time and Dave is always enthusiastic about bringing in and developing new talents. He educated and guided 2018 graduate intern Jue Wang and helped her to apply cutting edge data mining techniques to determine optimal HCP promotional sequences for Januvia. This project is also very helpful for internal capability development. Dave organized an R training class for whole IADS group. He recruited instructors from MRL and helped them to develop relevant materials and structure for R training class. This efficient and effective initiative saved considerable training budget for IADS group.