PRACTICUM REPORT

For the Partial Fulfillment of Course Requirements of the

Master of Public Health Program

Offered By

Johns Hopkins Bloomberg School of Public Health

In Cooperation with IIHMR University

By

Poushali Dutta
Cohort-4
2016-18

Under the Guidance of

Dr Jagjeet Prasad Singh
Associate Professor
IIHMR University

Dr P R Sodani
Acting President, Dean - Training
IIHMR University

Joydeep Das
Manager- Projects Delivery
Healthcare Lifesciences Analytics & Artificial Intelligence
Cognizant Technology Solutions

TO WHOMSOEVER MAY CONCERN

This is to certify that ***Poushali Dutta,*** student of Master of Public Health Program offered by IIHMR University, Jaipur in cooperation with Johns Hopkins Bloomberg School of Public Health, Baltimore has undergone Practicum Trainings at **IIHMR University** from ***23rd October*** to **22nd December** and **Cognizant Technology Solutions** from **9th Mar 2018** to **April 27th 2018.**

The Candidate has successfully carried out the study designated to her/his during practicum training and her approach to the study has been sincere, scientific and analytical.

The Practicum Training is in fulfillment of the course requirements.

I wish her success in all his future endeavors.

Sd-

Dr Jagjeet Prasad Singh
Practicum Advisor

CERTIFICATE BY SCHOLAR

This is to certify that the Practicum Project titled submitted by me, *Poushali Dutta* with Enrollment No. IIHMR-U/07/2016-2018/0023 , JH ID: 7100CD under the supervision of **Dr Jagjeet Prasad Singh /Dr P R Sodani** for award of **Master of Public Health** carried out during the period ***23rd October to 22nd December, 2017*** **and at Cognizant Technology Solutions** from **9th Mar 2018** to **27th April 2018 under the guidance of Mr. Joydeep Das** embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other Institute or other similar institution of higher learning.

Poushali Dutta
MPH Candidate 2016-18

Certificate from the Organization

INSTITUTE OF HEALTH MANAGEMENT RESEARCH
(WHO Collaborating Centre for District Health System Based on Primary Health Care)

IIHMR UNIVERSITY

Ref. No. IIHMR-U/DYR/HR/2018
Dated: April 13, 2018

PRACTICUM LETTER

This is to certify that Ms. Poushali Dutta has completed her Practicum as an Intern in the Training Unit at IIHMR University from October 23, 2017 to December 22, 2017 for the practicum requirement of MPH course.

She has cleared all her dues to the University and we have relieved her from the internship with effect from the closing hours of December 22, 2017. During her tenure, she was found sincere and hard working.

We wish all the best for her future endeavors.

With best wishes,

FOR **IIHMR UNIVERSITY, JAIPUR**

NEERAJ SRIVASTANA
DY. REGISTRAR (ADMIN & HR)

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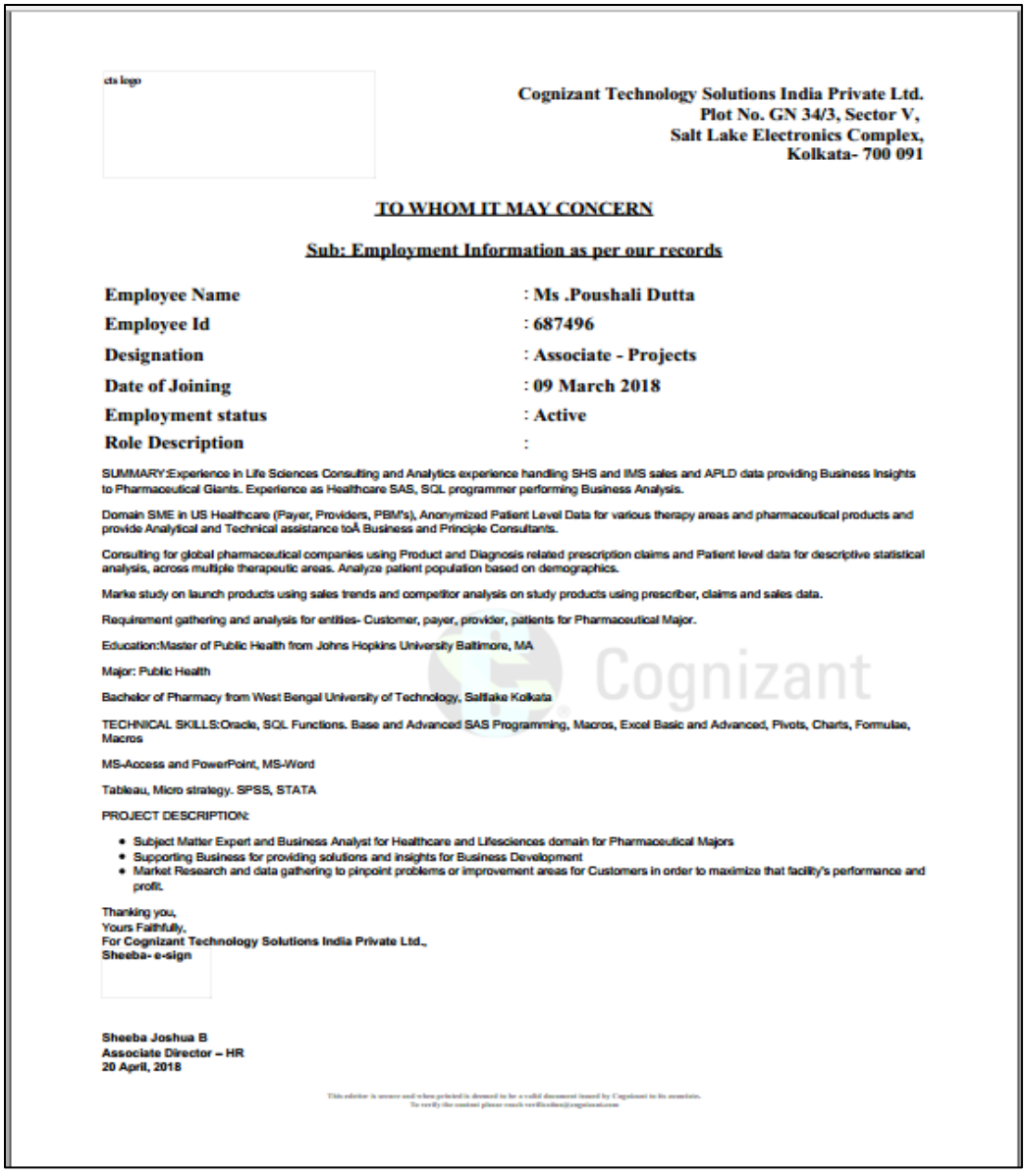

cts logo

Cognizant Technology Solutions India Private Ltd.
Plot No. GN 34/3, Sector V,
Salt Lake Electronics Complex,
Kolkata- 700 091

TO WHOM IT MAY CONCERN

Sub: Employment Information as per our records

Employee Name	**: Ms .Poushali Dutta**
Employee Id	**: 687496**
Designation	**: Associate - Projects**
Date of Joining	**: 09 March 2018**
Employment status	**: Active**
Role Description	:

SUMMARY:Experience in Life Sciences Consulting and Analytics experience handling SHS and IMS sales and APLD data providing Business Insights to Pharmaceutical Giants. Experience as Healthcare SAS, SQL programmer performing Business Analysis.

Domain SME in US Healthcare (Payer, Providers, PBM's), Anonymized Patient Level Data for various therapy areas and pharmaceutical products and provide Analytical and Technical assistance toÂ Business and Principle Consultants.

Consulting for global pharmaceutical companies using Product and Diagnosis related prescription claims and Patient level data for descriptive statistical analysis, across multiple therapeutic areas. Analyze patient population based on demographics.

Marke study on launch products using sales trends and competitor analysis on study products using prescriber, claims and sales data.

Requirement gathering and analysis for entities- Customer, payer, provider, patients for Pharmaceutical Major.

Education:Master of Public Health from Johns Hopkins University Baltimore, MA

Major: Public Health

Bachelor of Pharmacy from West Bengal University of Technology, Saltlake Kolkata

TECHNICAL SKILLS:Oracle, SQL Functions. Base and Advanced SAS Programming, Macros, Excel Basic and Advanced, Pivots, Charts, Formulae, Macros

MS-Access and PowerPoint, MS-Word

Tableau, Micro strategy. SPSS, STATA

PROJECT DESCRIPTION:

- Subject Matter Expert and Business Analyst for Healthcare and Lifesciences domain for Pharmaceutical Majors
- Supporting Business for providing solutions and insights for Business Development
- Market Research and data gathering to pinpoint problems or improvement areas for Customers in order to maximize that facility's performance and profit.

Thanking you,
Yours Faithfully,
For Cognizant Technology Solutions India Private Ltd.,
Sheeba- e-sign

Sheeba Joshua B
Associate Director – HR
20 April, 2018

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Abbreviations:

APLD	ANONYMIZED PATIENT LEVEL DATA
APLD	ANONYMIZED PATIENT LEVEL DATA
AZ	AZTRAZENECA
BP	BUSINESS PROCESS
CDC	CENTERS FOR DISEASE CONTROL
CMS	CENTER FOR MEDICARE & MEDICAID SERVICES
DLHS	DISTRICT LEVEL HEALTH SURVEY
EDM	ENTERPRISE DATA MANAGEMENT
FP	FAMILY PLANNING
HIV	HUMAN IMMUNODEFICIENCY VIRUS
IMR	INFANT MORTALITY RATE
IMS	INTERCONTINENTAL MARKETING SERVICES
MBA	MASTER OF BUSINESS ADMINISTRATION
MDM	MASTER DATA MANAGEMENT
MMR	MATERNAL MORTALITY RATIO
MPH	MASTER OF PUCLIC HEALTH
NACP	NATIONAL AIDS CONTROL PROGRAM
NFHS	NATIONAL FAMILY HEALTH SURVEY
NLEP	NATIONAL LEPROSY ERADICATION PROGRAM
PBM	PHARMACY BENEFIT MANAGER
PGDHM	POST GRADUATE DIPLOMA IN HOSPITAL MANAGEMENT
PIM	PROEJCTS IMPLEMENTATION MANAGEMENT
RHCS	REPRODUCTIVE HEALTH COMMODITY SECURITY
RPA	ROBOTIC PROCESS AUTOMATION
SME	SUBJECT MATTER EXPERT
SRH	SEXUAL AND REPRODUCTIVE HEALTH

My profile:

A Bachelor of Pharmacy Graduate with 5 plus years' work experience in Healthcare and Life Sciences Consulting & Analytics for US Healthcare (Payers, Providers, PBM's) customers and Pharmaceutical companies. My career objective is to further specialize in Healthcare and Life Sciences Consulting & Analytics and towards that end I am looking forward to completing a doctoral degree in Public Health preferably in the field of Health Economics and Outcomes Research.

Cognizant Technology Solutions India Pvt. Ltd. as Associate-Projects (since 9 Mar 2018 to **present):**

Currently working as a Consultant for Healthcare and Lifesciences Analytics at Cognizant Technology Solutions. Building solutions and providing insights for Pharmaceutical giants based on various Anonymized Patient Level data from vendors like IMS health, CMS (Center for Medicare and Medicaid Services) and MedPro.

My current role is with Cognizant Technology Solutions, which is a technology consulting company that partners with Healthcare and Pharmaceutical companies to achieve improved care delivery and better patient outcomes.

IIHMR UNIVERSITY as Research Intern Oct 2017 – Dec 2017:

Involved in projects/programs with major organizations like United Nations, Ministry of Health Sri Lanka and the Bill and Melinda Gates Foundation, related to health systems and health economics.

Coordinating the programs and sessions from the beginning to end. Assessment of the program before and after and provide evaluation reports on the same including session minutes. Designing Programs. Designing analysis and reports with automation and complex analysis.

Previous Profile: – CONSULTANT, Analytics (Healthcare & Life Sciences) Projects included consulting for global pharmaceutical companies using Product and Diagnosis

related Prescription Claims and Patient Level Data (APLD) for descriptive statistical analysis, across multiple therapeutic areas.

Organization information: The Institute of Health Management Research (IHMR) provides the institutional backbone of IIHMR University. As the largest School of the university system, IHMR houses our flagship educational MBA programs in health and hospital management which aims to develop trained professional managers with requisite skills in planning, implementation, operational management, diagnosis and problem solving, consultancy, and entrepreneurship. Theses program have achieved great success in preparing budding professionals to manage hospitals and healthcare institutions globally, both in the public and the private sectors, thus meeting the demands of a critical sector.

In addition to graduating MBA, MPH and doctoral students, this School conducts extensive research, training programs, and serves the following mission:

Capabilities:

- Management Research, Education and Training
- Design and Conduct Management Training for Health Sector
- Networking and Institutional Capacity Development
- Project Management and interventions
- Operations Research and Evaluation Study
- Economic and Financial Analysis
- Survey Research
- Social Assessment
- Quality Assurance
- Health Sector Reforms
- Program Evaluation

PRACTICUM PROJECT

Practicum project learning goals and objectives:

My career objective is to further specialize in Healthcare and Life Sciences Consulting & Analytics and towards that end I am looking forward to completing a doctoral degree in Public Health preferably in the field of Health Economics and Outcomes Research. I have chosen IIHMR University and Cognizant Technology Solutions India Pvt. Ltd organizations for my practicum purpose

- To exercise and develop analytical skills for evaluating the workshops
- To develop effective communication skills to interact with the participants as they were from various countries of South East Asia.
- To understand the current US Healthcare System, Pharmaceutical Market (AZ) and various patient level data on different therapy areas
- To upgrade database and programming skills and business requirement understanding to provide better insights to help clients with better service delivery
- To develop understanding and hands-on experience on various statistical packages in order to do data analysis and provide insightful data to client
- To specialize further on Health Economics and Outcomes Research related field.

- Program specific learning objectives were as follows:
    1. Family Planning Workshop:
    - To assess the participants' knowledge based on the Family Planning (FP) skills, the various cultural competencies on launching FP commodities, and also understand the various community related issues and solutions to start using FP commodities and FP methods.
    - To understand the various financial planning methods and supply chain management and logistics related to FP commodities and understand the utilization of FP methods and commodities and ways the communities react to it.

- To understand the country wise approach and strategic planning methods for the usage of FP methods.

2. Immunization Program Workshop:

- To strengthen skills related to economics and financing of national immunization programs.
- To understand the economic principles applied by policy-makers in low and middle-income countries for decision making in healthcare
- To understand and culture on the role of health economics and cost effectiveness in improving the sustainability of vaccines delivery in low and middle-income countries.
- To design the cost-effective methods and financial planning to help professionals in planning and implementation of immunization programs and projects.

3. Leadership Program Workshop: To focus on enhancing the leadership and managerial competencies in the health sector to manage and implement the various national level programs in Sri Lanka.

Practicum Experience at IIHMR University

ASSESSMENT/EVALUATION OF THE EFFECTIVENESS OF THE VARIOUS WORKSHOPS IN THE DOMAIN OF PUBLIC HEALTH FOR SOUTH EAST ASIA.

Brief description of International Workshop/Program on Family Planning and Reproductive Health Commodity Security:

In 2014, UNFPA Asia Pacific regional office initiated a process of identification of a suitable partner institution to ensure that international standard training courses that are regularly available on a range of topics related to Family Planning and Reproductive Health Commodity Security, that can address the perpetual training needs of the countries in the region. The IIHMR University in India was selected to conduct the training program on an annual basis. In May 2016, UNFPA and IIHMR University organized a joint consultation to design and develop the course curriculum, training methodology, and course coverage for a two-weeks residential training program. The joint consultation produced the course which was offered as a pilot in October 2016 at IIHMR University in Jaipur, India. The course was attended by 26 participants from seven countries of the region. Based on the feedback from the participants, the course was further refined and revised to focus on priority areas and to add some new topics based on the "felt needs" of the countries.

During 2017, the revised and updated course was attended by 25 participants from 8 countries. So far, 11 countries from the Asia pacific region have benefitted from the training program.

The two weeks residential course covers a wide range of topics related to program management to strengthen Family Planning and Reproductive Health Commodity Security to ensure better access to quality SRH services and commodities. The uniqueness of the training program lies in the fact that this program has been conceptualized to demonstrate the integration between Supply Chain Management and Family Planning, thereby helping to bring the linkages and synergies of the activities.

Objectives of the Program

The training program has been designed to benefit senior and middle level program managers at the national and sub-national levels with the objectives of:

- Developing a better understanding of the Family Planning program from a developmental and Quality of life dimension;
- Developing a better understanding of the concept and application of Reproductive Health Commodity Security;
- Learning program management, implementation, monitoring and supervision skills;
- Developing competencies for effective advocacy, networking and strategic thinking;
- Developing skills in preparing country policies; strategies and programs, and
- Sharing country experiences and best practices.

Brief description on Leadership and Strategic Management in Healthcare:

IIHMR University organized a 5-day Training Program on Leadership and Strategic Management in Healthcare from October 30 to November 3, 2017, in which 17 senior-most officials, managing the health systems of Sri Lanka from Ministry of Health along with the Minister of Health, northern provincial council participated.

Objectives of the Program:

The primary objective of the program is to enhance leadership and managerial competencies of the professionals engaged in health sector managing and implementing the various national level program in Sri Lanka.

Brief description of Program on Vaccine Economics On 21 And 22 December- Capacity Building Workshop

Jaipur, 20 December: IIHMR conducted a 2-day capacity building workshop in Vaccine Economics on 21 and 22 December. This is being organized in collaboration with the Johns Hopkins Bloomberg School of Public Health. The program is funded by the Bill and Melinda Gates Foundation.

Objective of the Workshop:

- The objective of the workshop is to strengthen skills related to economics and financing of national immunization programs.
- The policy makers in low and middle-income countries regularly apply economic principles to healthcare decision making which requires greater expertise in applied health economics.

- The workshop aims to improve the sustainability of vaccine delivery in low and middle-income countries. It will cover subjects like Introduction to vaccine economics; defining costs; uses of cost data for program managers and applying costing methodology for routine immunization programs among others.
- It is designed for professionals who are involved in planning and implementation of immunization programs and projects.

My roles and responsibilities:

My roles and responsibilities during the workshops as a Public Health Intern was mainly to ensure these sessions were conducted smoothly, record the details of the proceedings and also helping our clients better understand the concepts of health systems frameworks, FP and RHCS.

It also included collecting all relevant information for effectively assessing the success of the programs, as follows:

- Creating and designing exercises on FP, Leadership skills and Cost-effectiveness.
- Creating power point presentations on health systems and health economics, Family planning and reproductive health for participants to be delivered in the workshop.

- Developing complete understanding of various financial planning methods and supply chain management and logistics related to FP commodities and understand the utilization of FP methods and to design case studies based on the same.

While executing the above activities, I was able to systematically capture the details of each of the workshops and also participants' feedback and prepare an assessment of the same to be submitted at the end of the programs. The interaction with the participants from different countries in South-East Asia not only provided me with the opportunity to develop an in-depth understanding of the problems associated with the national level programs in the respective countries but also develop competency related to Family Planning, Health Economics and Public Health Leadership aspects.

Family planning is one of the most cost-effective health interventions in the developing world. For decades, research has shown that for a relatively modest investment, family planning saves lives and improves maternal and child health. Although it seems intuitive that investing in family planning would also lift families out of poverty by helping poor women have fewer children, there have been relatively few studies to shed light on this relationship. Now, a new study on Bangladesh provides evidence that long-term investment in an integrated family planning and maternal and child health (FPMCH) program contributes to improved economic security for families, households, and communities through larger incomes, greater accumulation of wealth, and higher levels of education. The evidence indicates that family planning and maternal-child health services help reduce poverty, the first goal of the Millennium Development Goals.

In general, there is paucity of evidence that links sexual and reproductive health with investments. However, in Uganda there are few studies that have shown potentials for investing in sexual and reproductive health, in particular, family planning. These are:

1. Adding It Up Study done by the Economic Policy Research Centre which shows that investing by addressing the current 41% unmet needs for family planning as one of the reproductive health elements reduces maternal death by 33%. We also know it has potential to reduce infant mortality by two times if birth were spaced for more

than 2 years with significant returns to the children, household, community and nation. For every US $1 invested in family planning, there would be US $3 return. So if Uganda invested Us $108 in family planning commodity procurement (which is the estimated cost) and therefore address all the current unmet needs for family planning, Uganda would save $112 million dollars annually in health care costs associated with management of complications of unintended pregnancies, it would add to earnings by saving potential earnings that would be lost through lives lost and lives lived with disability, equivalent to UGX 120 billion or o.4% of GDP. These savings could be invested back into health care to achieve the Abuja target for health sector budget allocation of 15% or even get re-invested in other economic sectors.

2. Resources for Awareness in Population & Development (RAPID) Projections – this projection has been done for Uganda, jointly with the National Population Secretariat and it examines the link between fertility, population growth rate and its impact on different sectors and the overall national economy. Assuming a slower population growth rate scenario (which can be achieved by a combination of strategic investment in economic and social sectors (e.g. addressing unmet need for family planning & girl child education) and assuming economic growth rates at constants of 7% or 10%, the projection gives Uganda options for attaining middle income status within a single generation (30 years' time frame).

Highlighting the issues on Rights Based FP and generating discussion on the same; To generate discussion on strategies and planning of various programs on Advocacy and Policy for promoting FP.

Rights-based family planning is an approach to developing and implementing programs that aims to fulfill the rights of all individuals to choose whether, when, and how many children to have; to act on those choices through high-quality sexual and reproductive health services, information, and education; and to access those services free from discrimination, coercion, and violence.

Family planning helps save women’s and children’s lives and preserves their health by preventing untimely and unwanted pregnancies, reducing women’s exposure to the health risks of childbirth and abortion and giving women, who are often the sole caregivers, more

time to care for their children and themselves. All couples and individuals have the right to decide freely and responsibly the number and spacing of their children and to have access to the information, education and means to do so.

Sexual and Reproductive Health Rights are Human Rights:

- Rights in existing human rights instruments that are relevant in the context of human sexuality and reproduction
- Sexuality and reproduction are not only physical and biological issues but also fundamental components of human freedom, dignity and wellbeing

A constellation of existing civil, political, economic, social and cultural rights contained in human rights instruments (ICPD, PoA para. 7.3) as they relate to:

- Freedom to make **reproductive choices** (information and means to do so)
- Right to the highest attainable standard of **sexual and reproductive health**
- Freedom from **discrimination, coercion and violence**

Details about the financial planning methods and supply chain related to FP commodities along with case studies:

Participants were made aware of the particularities of each method, its effectiveness, safety, side effects. They were taught its effect on the risk of STD transmission, its appropriateness for breastfeeding women and the usual length of time between discontinuation of the method and return to normal fertility. Information on the common methods were presented and it was emphasized that "In no cases should abortion be promoted as a method of family planning" (ICPD para 8.25).

Barrier Methods

The most important barrier method introduced was male latex condoms. It was emphasized that the consistent and correct use of condoms can play the dual role of protection against STD and HIV infection and prevention of conception. They can be used alone or in combination with another method to increase effectiveness. Only water-based lubricants should be used with condoms. Other barrier methods; such as spermicides and female

condoms were also discussed and it was reiterated that If requested, every effort should be made to supply these methods.

Hormonal Contraceptives

Oral Contraceptive Pills should include at least:

- One combined oral contraceptive (COC): ethinyl oestradiol < 0.035 mg and levonorgestrel 0.15 mg;
- One progestogen-only oral contraceptive (POP): levonorgestrel 0.03 mg or norethisterone 0.35 mg.

Injectable Contraceptives described included depot medroxy progesterone acetate (DMPA, Depo-provera), one injection every three months, norethisterone enatharem (NET-EN) one injection every 2 months, or Cyclofem, one injection per month. Trained health professionals should administer injectables. It was recommended that only one injectable method should be used to avoid confusion and misunderstanding over the schedule for reinjection.

Supportive counseling and continued reassure during follow-up visits will help clients tolerate common side effects, such as changed patterns of menstrual bleeding.

Further details about the provision of Emergency Contraceptive Pills (ECPs); National policies and the demands of well-informed users recommended for consideration when it is required to guide the use of ECPs in different situations.

Copper IUDs (Intra-Uterine Devices)

Participants were oriented on IUD insertion, like sterilization and implants that requires special training, facilities and equipment that must be in place before these methods are provided.

Women known to be infected or at high risk for an STD, including HIV, should not have an IUD inserted. It was emphasized that for nulliparous women, an IUD is not the method of first choice.

Natural Family Planning (NFP) Methods

Natural Family Planning methods included lectures on the basal body temperature method, the cervical mucus or ovulation method, the calendar method and the symptothermal method. NFP was said to be particularly appropriate for people who do not wish to use other methods for medical reasons or because of religious or personal beliefs. Counseling must be provided to both partners when choosing these methods and when practicing them. The methods require initial training and regular follow-up until confidence is achieved in detecting fertility signs. Teaching these methods to potential users is relatively time consuming, and requires separate sessions for those refugees who wish to use them.

Breastfeeding

Breastfeeding is effective as a contraceptive method if a woman is exclusively breast-feeding on demand her infant (no other food being given to the baby), she is not menstruating and her infant is less than six months old. If any one this these three criteria are not met, then an additional method of contraception is advised.

Family planning methods recommended for breastfeeding mothers are:

- From delivery up to six weeks postpartum: barrier methods, postpartum IUD insertion and sterilization;
- From six weeks to six months postpartum: barrier methods, progestin-only methods (pills, injectables, implants), IUDs, and sterilization;
- After six months postpartum: COCs and combined injectable, and natural family planning methods.

Hormonal Implants

An implant is a long-lasting progestogen-only contraceptive. The most widely used types (Norplant and Norplant 2) consist, respectively, of six or two silastic capsules containing the progestogen levonorgestrel. The capsules, inserted under the skin of the arm, slowly release the progestogen. These implants are effective for five years. They should only be inserted or removed by properly trained personnel.

Before using any long-term contraceptive, service providers must be sure that the necessary facilities and skilled personnel exist in the country of origin to reverse or remove the

method. If such facilities do not exist in the country of origin, the method should not be used.

Voluntary Surgical Contraception

Both male (vasectomy) and female sterilization are desirable methods of contraception for some clients. As a surgical method, sterilization should only be performed in safe conditions, with the formal consent of the user and by trained personnel with the necessary equipment. Sterilisation should not be excluded especially if it is familiar and allowed in the country.

Supply Chain Management: SCM is part of a broader concept of Reproductive Health Commodity Security (RHCS) and this exists when every person is able to choose, obtain, and use quality contraceptives and other essential reproductive health products whenever s/he needs them.

The supply chain management (SCM) is a network of interconnected businesses involved in the ultimate provision of ***product*** and ***service*** packages required by end customers. Supply Chain Management spans all movement and storage of raw materials, work-in-process inventory, and finished goods from point of origin to point of consumption

In the output of this discussion few points were vivid:

- Access to contraceptives increases girls' access to education and empowers women and girls to develop skills and secure jobs.
- Empowering couples to plan their families helps increase household savings and provides economic benefits for communities.
- FP is the key for harnessing the demographic dividend and has substantial impact in the development of low and middle-income countries.

- Improving access to FP services will not only address the specific goal targets of SDG goals 3 and 5 but it is also important for attainment of other SDGs including the goals on poverty, hunger, education and sustainability

The issues on right based FP and UN convention or report mentioning these issues:

Lack of FP services and consequent unintended pregnancies deprive women and men the freedoms and opportunities to prosper and often act as a poverty trap therefore, UN and the global community has set following benchmarks in below different events to address these issues but we will elaborate on the recent sustainable development goals as following

1. In the International Conference on Population Development (ICPD) 1994 Reproductive health and FP are considered as fundamental human rights
2. Millennium Development Goals set the target 5A to Reduce the global maternal mortality ratio by three quarters, between 1990 and 2015 and as a result MMR cut nearly in half during the period - from 385 to 216/100000 live births
3. FP 2020 summit want to reach120 million women with unmet need by 2020
4. The UN Sustainable Development Goals 3 wants to reduce the global maternal mortality ratio to less than 70 per 100,000 live births by 2030,

Now SDG specific goals on FP are:

Goal 3 (health) and goal 5 (gender equality) focus on women's reproductive health and FP

Goal 3 - Ensure healthy lives and promote well-being for all at all ages sets a goal to reduce the global maternal mortality ratio to less than 70 per 100,000 live births that By 2030,

Similarly, it emphasizes that by 2030, the international community should ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes

SDG Goal 5 is to Achieve gender equality and empower all women and girls and wants to Ensure universal access to sexual and reproductive health and reproductive rights [in accordance with international agreements]

Project management implementation planning strategies on FP and its relationship with MMR, IMR reduction and improving quality of life; Improving the Quality of Care and Counselling skills for FP;

The survival, health and well-being of women, and girls are essential to eliminate extreme poverty, promote development, build resilience, and achieve SDGs. Nearly 800 women die everyday from complications in pregnancy and childbirth. According to SSA and SA global hotspots of maternal mortality; 99% of all maternal deaths occur in developing countries. Similarly, unwanted and ill-spaced births contribute to the 30% of highest Maternal Mortalities in developing countries, yet 225 million women who want to avoid pregnancy but cannot use modern contraception Unmet need for FP have adverse effects at individual, household, national and global levels.

Global evidences show that investing in Modern contraception and good quality of care for pregnant women and newborn will have an estimated return of $ 120 for every $ 1 spent[1]. Expanding Family Planning can reduce maternal death by an estimated 29%[2], therefore our first priority should be expanding Family Planning to avoid unintended pregnancies, delay early pregnancy, and distance pregnancy intervals and prevent STIs among young ones.

Improving the quality of care in FP:

High-quality contraceptive care involves providing women and men with safe and appropriate methods to meet individuals' and couples' needs at every stage of their reproductive lives. Accurate and complete information should be provided, allowing women and men to select freely a method that suits their needs. High quality means that:

- The needs of clients are assessed;
- An appropriate range of methods is provided;
- Complete and accurate information about all methods is offered, thus ensuring informed choice;
- A mix of methods matches the needs of all potential clients;
- Providers have the necessary technical skills to offer the methods safely (i.e., providers screen women for medical contraindications, assess STD/HIV risks, and can medically manage side effects);

- Providers are trained in technically accurate and culturally appropriate counseling techniques and use them effectively;
- Services are convenient, accessible and acceptable to clients;
- Follow-up care to ensure continuity of services is provided; and
- An adequate logistics system ensures a continuity of supplies.

As per the discussion in each of the sessions and based on presented reference documents; in order to fully meet the entire need for modern contraceptive methods in the developing world; a cost of $8.1 billion per year would be required and that would save millions of lives. In estimation it will help in

- Two thirds reduction in maternal deaths
- 71% reduction in unintended pregnancies
- 26 million abortions prevented (16 million of which would be unsafe)
- pregnancy- and childbirth-related complications averted – the leading killer of 15-to-19-year-old girls.

To understand the country wise approach and strategic planning methods for the usage of FP methods by various participants and initiate discussion on the same. Providing a short report on the various strategies and planning methods shared by the participants.

The overall discussion ended up with a moral that all births should be based on the Choices of families and not by Chances. Countries presented their strategies designed to address family planning in a comprehensive way that encompassed all elements of effective family planning programming – on the enabling environment, supply and demand. In order to improve effectiveness in FP programming, the need for effective coordination mechanisms among the partners at country, regional and global levels was emphasized.

These FP Strategic plans set out a framework for five measurable results:

Output 1: Enabled environments for human rights-based family planning as an integral part of sexual and reproductive health and rights;

Output 2: Increased demand for family planning according to client's reproductive health intentions;

Output 3: Improved availability and reliable supply of quality contraceptives;

Output 4: Improved availability of good quality, human rights-based, family planning services; and

Output 5: Strengthened information systems pertaining to family planning.

The outputs are mutually reinforcing and interdependent; therefore a deficiency in one output area will negatively impact the others. Achieving universal access to rights-based family planning in programme countries will depend on the extent to which strategies encompass integrated and scaled-up action to achieve each output.

Assessment and evaluation of the understanding of the participants and the workshop meeting the requirements enhancing the leadership and managerial competencies in the health sector to manage and implement the various national level program in Sri Lanka.

- To create PowerPoint presentations highlighting on how to strengthen skills related to economics and financing of national immunization programs.
- Designing budget exercises on economic principles applied by policy-makers in low and middle-income countries for decision making in healthcare for participants and supporting the professor on evaluating the same.
- To understand and culture on the role of health economics and cost effectiveness in improving the sustainability of vaccines delivery in low and middle-income countries and Designing workshop/program requirements. Preparing questionnaires for the pre and post assessment for the participants.
- Design the cost-effective methods and financial planning to help professionals in planning and implementation of immunization programs and projects
- Working on pre and post assessment for the participants and evaluating the program based on the assessment reports submitted by the participants. Creating reports based on the evaluation.

- Designing training methods including lecture-cum-discussion, case analysis, group work, assignment, field visits and experiential learning with the professor for the participants.
- Designing exercises and case study sessions on vaccine economics. Creating PowerPoint presentations on defining costs; uses of cost data for program managers and applying costing methodology for routine immunization programs among others.
- Evaluation of the session by analyzing the feedback of the participants on the understanding of the concepts related to the various workshops conducted.

Practicum Experience at Cognizant

About Cognizant and contribution in the Health sector:

Cognizant is a major player in the US healthcare technology sector and it has helped numerous health insurance companies, pharmaceutical manufacturers, and hospital networks improve their business processes, and comply with the new regulatory norms as per the healthcare reforms. The objectives behind the healthcare reforms are the 'Triple Aims' which includes improving the patient experience of care, improving the health of populations, and reducing the per capita cost of healthcare based on the various prescription, diagnosis and procedure claims data and sales data retrieved from third party vendors

Cognizant offers a broad array of consulting and solutions for Life Sciences, Global Pharmaceutical and Biotech companies. These abovementioned objectives in the 'Triple Aim' are of utmost importance for the public health sector in the United States and I am fortunate that my role gives me the opportunity to directly contribute to the realization of these public health goals. It works on various healthcare areas like managed markets which focusses on Managed Markets Framework which provides visibility for all Managed Markets stakeholders and leverages our global delivery model with the efficiencies of on-site client management. The framework includes industry-standard customer and contract management systems. Proven results include:

- Lower costs and expanding business capabilities
- Increased effectiveness and efficiency of contracts and rebate management
- Greater business unit productivity by eliminating manual processes and redundancies
- Improved claims adjudication and government compliance

Clinical Trial Management Development Services

An integrated, holistic approach to global clinical trial management services. The development services are delivered by cross-functional global teams with capabilities that accelerate clinical development processes across therapeutic areas and phases. And the process, product and technology centers of excellence enable our clients to get the most from their technology investments.

About AstraZeneca (AZ): This Anglo–Swedish multinational pharmaceutical and biopharmaceutical company. It was headquartered in Cambridge, UK, and the R&D centers are at Cambridge;

Gaithersburg, Maryland, USA (location of MedImmune) for work on biopharmaceuticals; for research on traditional chemical drugs there is a center at Sweden. Az mostly has their product portfolio for major therapy areas including cancer, cardiovascular, gastrointestinal, infection, neuroscience, respiratory and inflammation.

They are collaborating with Cognizant to get insights on the out of pocket expenditure that is being incurred by various patients on their products across all therapy areas. They are exploring sales and claims data from IMS, CMS, CDC and Medpro for the various analyses.

Practicum project title:

Analyze various payment type options used by Patients to get their medications covered and to determine the overall out of pocket expenditure incurred by the patients for the medications and services rendered.

Objectives of the project:

- To understand the US Healthcare Market and Payment system
- To understand and study the anonymized patient level data for various therapy areas for AZ and segmenting the patient on the basis of the diagnosis claims and prescription claims for further analysis.
- To study the previous year's prescription, diagnosis and procedure claims and sales in order to determine the volume of claims coming from pharmacy, hospitals and clinics and to determine the various Physician specialties for the volumes of claims.
- To study these claims and sales in order to understand the various co-pays associated with them and the total OOP or Catastrophic Expenditure the patient cohort has to incur.
- To understand the insurance coverage by Government and Private Organizations for the cohort of patients for various Therapy Areas and if the patient medications (AZ Products) are covered by the formulary in the various plan.

This will help understand AZ understand the healthcare outcomes and healthcare utilization for better coverage and delivery.

Brief Description of the project:

AZ has various product portfolios. The therapy areas that are covered by AZ are as follows:

- Anesthetics
- Cardiovascular
- Diabetes
- Gastrointestinal
- Infectious diseases
- Oncology
- Respiratory and inflammatory diseases

Project Analysis Plan: The Patient cohort with be determined by the various ICD-9 and ICD-10 codes falling under these therapy areas. AZ as the client will be sharing the document with Business Analysis team in order to determine the various diagnosis codes that needs to be included. Based on the various diagnosis codes coming from Hospitals and Medical offices, the claims and patient's data will be pulled from the database. The claims data is provided by IMS and CDC.

The diagnosis patients for these claims will be taken as the total patient cohort. However, the patient will also be segmented as per the various major therapy areas. These patients will be again mapped to the various AZ products for the various therapy areas based on the claims.

Once the data is ready with both Diagnosis, Procedure and Prescription claims for the products the major analysis will start. The prescription claims will be further segmented by various Payer that is Government (Medicare, Medicaid), Private/Commercial (Humana, Aetna, Anthem, UHG etc) and Cash (Fee for Service).

The various copays/coinsurance or the OOP payments will help us determine the expenses associated with various products, diagnoses and procedure which will help us determine the total OOP expenditure. The product portfolio will also help us identify the various brands and generics in the formulary of the payer as per the pricing.

Further the data will be used to determine the various type of providers or physicians associated with the treatment, procedure and prescriptions. The various specialty physicians associated with them and the place of service (hospital or medical) and price associated with the same.

The overall idea is to determine the OOP and reduce the cost for the patient for medication and treatment or services so that patient do not reach the Catastrophic Phase and they get full coverage for their treatment. This will help proper healthcare utilization and delivery.

Finally, AZ wishes to do a competitor analysis for other Pharma products in the same therapy areas and the cost associated with them. They wish to do this to retain their profit as a Pharmaceutical major and to do a market study so that they adhere to the prescription drug plan provided by Medicare Part-D and their medications are well present in the various formularies.

Analysis plan:

- Market Study by studying previous data.
- Trend Analysis with timeline to determine the volume of claims
- Payer / Payment type Analysis
- Patient Segmentation based on diagnosis, procedure and prescription claims
- Time Series Analysis to understand and the forecast copays based on the sales and claims volume.
- Physician Specialty Analysis and Deciling

Project Timeline: Started Feb 1st, 2018, Probable end date Dec' 2018

My roles and responsibilities:

As a business analyst my responsibility majorly includes client communication to understand the business requirements. As the subject matter expert my responsibility will be to understand the therapy area and product portfolio in order to design the analysis plan.

- To communicate the requirements to the database and production team who will be responsible for the loading and fetching the data from the database and third party.
- To document the requirement and share the same with the data cleaning team so that the right entities and attributes are kept.

As a data analyst one my key role will be analyzing the data based on the project objectives and requirements and perform various statistical analysis on SAS, SQL platform and generate Excel dashboards with the reports. Finally, preparing a PowerPoint presentation with charts and graphs and providing insights based on the same to the client.

To discuss the results with the client at various stages or sharing monthly reports to reach to the final outcome of the project.Coordinating with various teams, database, practice consultants and other Business analysts so that the deliverables are delivered as per the timeline. And finally, to provide a monthly update to the Project Manager with the progress report and changes.

Conclusion

This practicum which has been designed by Johns Hopkins Bloomberg School of Public Health and made mandatory for all Master of Public Health student is an essential component as this gives the students a real Public Health experience. The theoretical knowledge is being implemented practically. The students who have no past experience at all, benefit from this practicum as this gives them the opportunity to work with various organizations real-time. The jargons like MMR, IMR, FP which were completely theoretical for a fresher gives him/her the real-time experience. The practicum opportunity offers students with various industry experiences and field experiences. The students get to develop their skill sets based on the knowledge acquired during the classes and the assignments.

For me, I have been a Healthcare Life sciences Consultant for US healthcare payer, provider and patients. I have been consulting for various pharmaceutical giants for past six years. My experience has only been on handling various claims to determine out of pocket expenditures for Medicare/Medicaid and Private customers using Anonymized patients level data. I have been working on various project on Pharmaceutical Management.

These Public Health Experience with these International giants have provided me with an experience which is different from my past experiences. I have been exposed to the practical problems of Family planning and solutions provided by the various participants. I have been able to upgrade my skill sets on Economic theory of cost effectiveness as I wish to incorporate these concepts on my next organization where I aspire to be as Healthcare Consultant. The analytical skills and communication and leadership skills acquired at the workshop will help me in my future endeavors. I aspire to work on Health Economics Outcomes Research related field and the workshop on vaccine economics will help me further in developing economic models and cost –effectiveness and provide the pharmaceutical companies with better insights.

As per the current industry scenario in US healthcare the Center for Medicare and Medicaid is dealing and trying to reduce the Out of pocket and Catastrophic expenditure for patients suffering from various diseases. My career goal is to further specialize in Health Systems dealing with Health Economics data in particular. The current Business Consultant role is giving me the opportunity to connect to Consultants or Business Strategists. My communication skills will improve and I am getting the opportunity to get acquainted with industry business logics and terms.

I will be able to incorporate this knowledge on the insurance related issues in my own country where there is very less penetration of payers and patients have to make a large amount of payment out of their pockets for medication and treatment.

Since this role expects me to generate insights based on the data provided and work with principle consultants for various therapy areas, my knowledge on life sciences and healthcare sector will improve. This will add value to my skill sets as a Healthcare SME (Subject Matter Expert).

The various type of analyses rather data analysis techniques is helping me to upgrade my biostatistics and epidemiological knowledge as I am required to use statistical packages and tools to perform the analyses. I am also getting the knowledge on health insurance as this project deals with various payers and payment related data and information. I will be able to incorporate this knowledge on the insurance related issues in my own country where there is very less penetration of health insurance and patients have to make a large amount of payment out of their pockets for medication and treatment.

I always had an interest of working with various databases as I am a SAS, SQL programmer and in working with various DBMS and administrators, I will be able to upgrade my database handling and programming skills sets.

My past experiences and this knowledge will help me further approach these emerging issues with a different view point altogether and I feel the workshops I attended the experience of working on a long-term project determining the out of pocket expenditure will further help me as my goal is to get a doctoral degree preferably in the field of Health Economics and Outcomes Research. The public health experience will give a different angle to the business solution I will be working on in the near future