

MASTER OF PUBLIC HEALTH
Johns Hopkins Bloomberg School of Public Health & IIHMR University

PRACTICUM REPORT

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MPH – Cohort 6
2018-20

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CERTIFICATE BY FACULTY ADVISOR

TO WHOMSOEVER MAY CONCERN

This is to certify that **Dr Udit Mohan**, student of Master of Public Health Program offered by IIHMR University, Jaipur in collaboration with Johns Hopkins Bloomberg School of Public Health, Baltimore has undergone Practicum Training at ***Johns Hopkins Bloomberg School of Public Health (Uttar Pradesh Health Systems Platform Project, Lucknow, Uttar Pradesh, India)***. from ***22nd October 2019 to 20th December 2019***.

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

The Practicum Training is in fulfilment of the course requirements.

I wish him success in all his future endeavours.

Sd-

Dr S D Gupta

Practicum Advisor

CERTIFICATE BY SCHOLAR

This is to certify that the Practicum Project submitted by me, ***Dr Udit Mohan*** with IIHMR Enrolment No: **U/07/2018-2020/0037** and Hopkins ID No: **5E27A1**, under the supervision of **Dr SD Gupta and Dr Brian Wahl** for award of **Master of Public Health** carried out during the period **22nd October 2019 to 20th December 2019** 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.

Dr Udit Mohan

MPH Cohort 2018-20

CERTIFICATE FROM THE ORGANIZATION



Date: 23rd January, 2020

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Dr. Udit Mohan who was pursuing his MPH from IIHMR Jaipur has successfully completed the internship program from October 22, 2019 to December 21, 2020 at Lucknow office of Johns Hopkins Bloomberg School of Public Health.

During this time, Dr. Udit has worked across all work streams of UPHSS project and he displayed professional traits during his internship period and managed to complete all assigned tasks as requested.

He had completed his internship satisfactorily under the supervision of Assistant Scientist Dr. Brian Wahl.

He was hardworking, dedicated, and committed. It was a pleasure having him with us in this short period.

We wish him all the best for his future career.

Thank You,

A handwritten signature in black ink, appearing to read "Dr. Wahl".

Dr. Brian Wahl

Senior Technical Advisor & Assistant Scientist

Department of International Health

Johns Hopkins Bloomberg School of Public Health

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ABOUT THE REPORT

This practicum report comprises three broad parts:

Part I: Describes the organisation/project which gave the practicum experience.

Part II: Elaborates in detail, the main work done at the organization for the practicum experience.

Part III: Describes and enlists, goal and objectives of this practicum along with all the important milestones achieved and the activities taken part in, during the internship at the organisation. This section also comprises the core competencies developed through this experience.

I. Organisation Information-Description of the Uttar Pradesh Health System Platform Project(UPHSP-JHSPH)

1. Introduction

Since November 2017, Johns Hopkins Bloomberg School of Public Health (JHSPH) has been working closely with the Uttar Pradesh Technical Support Unit (UP-TSU), University of Manitoba (UM) and the Government of Uttar Pradesh (GOUP) to support several new and ongoing health systems strengthening efforts in the state. This support was conceived through extensive consultations with the leadership of the UP-TSU and UM and through discussions with key stakeholders from the Department of Medical Health and Family Welfare (DOMHFW) and the Bill and Melinda Gates Foundation.

2. Objectives of the project

Ever since JHSPH has been involved in this activity, JHSPH's team has been responsive to short-term analytic demands of UP-TSU, the leadership of the GOUP, and the Gates Foundation. This support is collectively aimed at accelerating progress toward strengthening the Public Health System of the state of Uttar Pradesh.

3. Major Activities of the project

The health systems challenge in UP are systemic and deep-rooted. Against this context, the following areas were initially identified as priorities for addressing some of the underlying health systems issues in UP:

- **Performance management:** There are gaps in public health, administrative and management competencies of the health workforce of the state which are being identified and addressed by JHSPH in order to strengthen and improve performance management. This is being done by capacity assessment of SIHFW followed by giving recommendations for institutional strengthening and by assessing the Medical Officer trainings with the intention of strengthening them.
- **Improve Collaboration and Coordination at DOMH:** JHSPH had identified a need to restructure the directorate and provide change options with adherence to the Core and Support Functions identified by them in line with the directorate's mission and vision to achieve this target and is working on it.

- **Human Resource for health Management:** The existing problems in the health workforce in UP in terms of recruitment and distribution in spite of several interventions by the GOUP to improve accountability, training, selection, deployment and retention, needs to be addressed and JHSPH is working towards it by drafting a comprehensive HRH policy.
- **Use of data for decision-making:** Lastly, JHSPH has identified many inadequacies in data use and processes to use data among key stakeholders of the health sector. There is a need of training for proper use of data to inform their planning and decision-making to improve health systems performance.

II. Work at UPHSP-JHSPH

1. Roles and Responsibilities

During the internship at JHSPH, the key roles and responsibilities were:

- Mapping of medical officer induction training modules against the core competencies identified through the Core Competencies Workshop using a previously defined framework.
- Generate a written report describing the findings from the above task.

2. Evaluating Medical Officers' Induction Training Manual (Mapping Core Competencies against its Modules)

2.1 Background

Competency is defined as “the ability to apply knowledge and skills to produce a required outcome. It is the ability to perform activities within an occupation; to function as expected for employment; and the ability to do a job under a variety of conditions, including the ability to cope with contingencies”(1). And, according to the KSA(knowledge, skill and ability) competency model(2), “KSA are the required job attributes and qualifications based on service, education and/or training; Knowledge is the Information applied to performance and function history; Skill is Measured competency of a learned psychomotor activity and Ability is competency related to behaviour or behaviour resulting in an observed product”.

Competencies are important to be developed by the medical officers because a simple enlistment of job roles and responsibilities under job description cannot essentially be assumed to be sufficient to make sure high performance of an employee(3). This would also help in retention of public health professionals (4) which would in turn lead to improved outcomes in terms of better health indicators and improved health status of the society.

A Medical Officer(MO) recruited in the public health system in Uttar Pradesh state of India is expected to perform diverse public health roles and responsibilities which involves exercise of clinical, public health and management competencies(marked below for instance), and the same have been explicitly stated in the Indian Public Health Standards (IPHS) standards(5) :

- **Preventive, promotive and curative:** for performing preventive, promotive and curative public health work.(mainly require Public Health and Clinical Competencies)
- **Health facility Management:** Management of the health facility for which the officer is in charge. (mainly require Management Competencies)
- **Program Implementation:** Implementation of the national and state health programmes in the area where the officer is posted. (mainly require Management Competencies)

- **Training:** Organise and implement training programs for the staff at that particular health facility. (mainly require Clinical, Public Health and Management Competencies)
- **Administrative and financial duties:** Submission of reports regarding all the essential activities required to be performed at the health facility to the District Head Quarters. (mainly require Management Competencies)

This kind of job profile requires the MOs to have certain competencies in order to perform all these roles and responsibilities, successfully. There are 48 competencies which have been identified in a report(6) on Core competencies for Public Health Professionals in Uttar Pradesh, India (developed in partnership between UP SIHFW, India Health Action Trust (IHAT), and Johns Hopkins Bloomberg School of Public Health (JHSPH)). These competencies have been grouped under the following eight domains and a few examples of the competencies have been provided below (Table 1):

1. Public health sciences a. Demonstrate knowledge about the following concepts: the health status of populations, inequities in health, the determinants of health and illness, strategies for health promotion, disease and injury prevention and health protection, as well as the factors that influence the delivery and use of health services. b. Apply knowledge of public health tools and technique.	5. Partnerships and collaboration a. Mediate between differing interests in the pursuit of health and well-being. b. Be able to listen, engage, and mobilize communities.
2. Assessment and analysis a. Identify relevant and appropriate sources of information, including community resources. b. Collect, store, retrieve, and use accurate and appropriate data on public health issues.	6. Social and cultural determinants a. Recognize how the determinants of health (biological, social, cultural, economic, and physical) influence the health and well-being of specific population groups. b. Address population diversity when planning, implementing, adapting, and evaluating public health programs and policies.

3. Policy and program management a. Monitor and evaluate an action, policy, or program. b. Demonstrate the ability to fulfil functional roles in response to a public health emergency.	7. Communication a. Interpret information for professional, nonprofessional, and community audiences. b. Mobilize individuals and communities by using appropriate media, community resources, and social marketing techniques.
4. Financial management and budgeting a. Justify programs for inclusion in budgets, develop and defends budgets. b. Prepare proposals for funding (e.g., foundations, government agencies, corporations).	8. Leadership a. Utilize public health ethics to manage self, others, information, and resources. b. Contribute to team and organizational learning in order to advance public health goals.

Table 1: Core Competency Domains and Competency Examples Under Each Domain

Source: (6)

2.2 Rationale

After the recruitment of MOs into the state health system, an induction training is provided to them, in order make them familiar with the working of the system and to help them gain skills and knowledge, which would consequently aid their working in the field. For the purpose of this training SIHFW uses a training manual which has been designed by SIHFW, keeping in mind the following objectives(7):

1. To provide motivation towards Administrative, Professional, Human and Medical values.
2. To make the participants familiarize with different programmes related to Medical, Health & Family Welfare and their implementation.
3. To make the participants aware about different concepts of management and to provide skills.

Hence it is recommended that a starting point to improvise the MO Induction Training can be its redesigning to a competency based training, focussing on the appropriate public health and management competencies required by an MO to fulfil his/her duties, which would also be in line with what was prescribed by the Medical Council of India, when the body described the basic competencies required of an Indian Medical Graduate and designed a competency-based module on attitudes and communication(8). So, this mapping exercise was proposed for trying to answer the following research question with the subsequently listed objective :

Research Question : Is the induction training manual(9) used for the MOs' training, effectively delivering the public health and management competencies required by the MOs to perform their roles and responsibilities, as identified by Government of Uttar Pradesh(GoUP), Uttar Pradesh Technical Support Unit(UP-TSU) and JHSPH ?

Objective: To evaluate the MO training manual for competency-based training approach for the development of competencies which would aid them to perform their roles and responsibilities.

2.3 Assumptions

This work is being done with the objective, as discussed above, with the assumption that if a medical officer would possess these competencies, identified by JHSPH, he/she would be able to better manage all the situations and issues which might arise at their workplace. Here it is also being assumed that if a medical officer is effectively able to manage their workplace, as a whole, that would lead to an improvement in their working condition, their relationship with their co-workers, their own personal life and so subsequently they would feel much more satisfied and empowered and this would eventually lead to better healthcare delivery, which is actually the larger goal of JHSPH i.e. health system strengthening.

The later assumption has been made on the basis of Herzberg's two-factor theory which was designed in 1959 on the basis of feedback acquired from two hundred engineers, in the USA about their personal feelings towards their working environments(10). On this basis Herzberg defined two sets of factors and termed them Motivation Factors(intrinsic factors) and Hygiene factors(extrinsic factors). This theory proposed that "the Intrinsic and Extrinsic Factors are inter-dependant to each other. Presence of Extrinsic Factors will only eliminate employees' work dissatisfaction; however, it will not provide job satisfaction. On the other hand, sufficient supply in Intrinsic Factor will cultivate employees' inner growth and development that will lead to a higher productivity and performance; however, absence of this factor will only neutralize their feeling neither satisfy nor dissatisfy on their jobs"(10).

And hence, this, can lead to work on the extrinsic factors(as listed in the above paragraph) and consequently on the intrinsic factors, as discussed in the "Next Steps" section of the report.

2.4 Methodology of Literature Review

2.4.1 Process

The need of a mapping exercise to evaluate the MO training manual for competency-based training, was realised during the process of identification of the core competencies

using a Delphi technique. With further discussions an exercise was finalised which could tally the competencies finalised by JHSPH with the training manual for the MOs, in terms of whether they are being delivered or not. It was finalised that it would be essential to find a framework to aid this exercise through a thorough literature review. For this it was important to find a few frameworks which could have been used in the past for similar exercises and then come down to one framework which could essentially help in our work.

Next, keywords were identified for developing a search strategy for the literature review, along with their synonyms. Search strategies were finalised for a few eminent search engines and were implemented, and the results were then analysed. These have been discussed in the next sections.

2.4.2 Search

2.4.2.1 Keywords and synonyms

TERMS	SYNONYMS
Frameworks	Framework
Evaluating	Assessing
Training	Educational
Modules	Module, Materials, Material
Competency Based	+/-

Table 2: Keywords and synonyms

2.4.2.2 Search Strategies, Search Engines and Results

Listed in the table (Table 3) below are the search engines which were used for searching the articles along with the search strategy and the results.

Search Strategies	No. of Results (articles)
PUBMED:	115
- (framework* AND (assessing OR evaluating) AND (Training OR Education*) AND (Module* OR Material))	
- (((framework* AND (assessing OR evaluating) AND (Training OR Education*) AND (Module* OR Material) AND (Competency AND Based))))	10
	49

- (((((method* OR framework*) AND (assessing OR evaluating) AND (Training OR Education*) AND (Module* OR Material) AND (Competency AND Based))))))	
Embase: - framework AND (assessing OR evaluating) AND (training OR education) AND (module OR material) - (((framework* AND (assessing OR evaluating) AND (Training OR Education*) AND (Module* OR Material) AND (Competency AND Based))))	110 0
SCOPUS: - TITLE-ABS-KEY ((framework AND (assessing OR evaluating) AND (training OR education) AND (module OR material)))	451 [285 after limiting search to “Articles”]
Google Scholar: - (framework AND (assessing OR evaluating) AND (Training OR Education) AND (Module OR Material))	10pages

Table 3: Search engines, Search Strategies and results

2.4.3 **Results**

33 articles were shortlisted from the above results based on title of the papers/articles. These 33 articles were then reviewed on the basis of our requirement to fulfil our objective mentioned above and the ones which were found to be anywhere similar to our purpose of : evaluating the MO training manual for competency-based training approach for the development of competencies which would aid the MOs to perform their roles and responsibilities, were further shortlisted. Most articles which were reviewed, used a framework for evaluating educational material, which had a component comprising feedback from the audience(questionnaires/scoring etc.), the material was intended for, which in this case was not present with us. Hence, most of the articles were further eliminated and 3 articles with suitable frameworks were eventually finalised, out of which one was used. These frameworks were:

- 1) A Core Components Framework for Evaluating Implementation of Competency-Based Medical Education Programs by E. Van Melle, J. Frank, E. Holmboe et al.

- 2) Evaluation of Learning Materials: A Holistic Framework by J. Bundsgaard, T. Hansen.
- 3) Evaluation practice toolkit developed by King's College London Clinical Education and Patient Safety Research Group in partnership with Health Education England by T. Simpson, S Kitchen, M. Lavelle et al.

The article/framework which was finalised to be used was based on the following argument:

- Article by E. Van Melle, J. Frank, E. Holmboe et al. actually created a Core Competence Framework for evaluating CBME(competency based medical education) which was found to be useful for evaluating the Medical Officer training manual.
- Article by J. Bundsgaard, T. Hansen, evaluated material in relation to learning; discusses various types of learning material and the related aspects of learning, which needs to be investigated for evaluation.
 - However, it could not be ascertained whether one aspect should be investigated in isolation while using this paper as a support.
 - Although in conclusion the paper did quote: “ in this paper, we have presented a holistic framework for the evaluation of learning materials. Very few actual evaluations will include all three steps, let alone all the aspects of each step. Thus, the framework is neither a cookbook nor a demand for completeness or exhaustiveness, it is a heuristic to substantiate the design of evaluation and to discuss or evaluate accomplished evaluations.”
 - And hence, this article was dropped as it only provided a general idea on how an evaluation of learning material can be carried out through a framework, rather than a framework itself.
- Article T. Simpson, S Kitchen, M. Lavelle et al, actually presented a toolkit for evaluation of a project rather than education material. And hence, this too was dropped.

2.5 The Framework Used

The framework which was selected for performing the evaluation required, was from the article “A Core Components Framework for Evaluating Implementation of Competency-Based Medical Education Programs by E. Van Melle, J. Frank, E. Holmboe et al.” (11). The core components framework(CCF) was developed for examining the “fidelity of implementation” of a competency based medical education(CBME) , which is being rapidly

adopted around the world. The CCF was developed through a twostep method, where, in the first step core components were identified with the intention to bring about change in the CBME, and consequently these components were arranged into a framework. Then, in the second step, using a modified Delphi technique 5 components of CBME curricula were identified: outcome competencies, sequenced progression, tailored learning experiences, competency-focused instruction, and programmatic assessment. The details about each of these components is presented in the table below (table 4), which has been directly taken from the article. This framework was adopted for conducting an evaluation of the MO training module as the need of this exercise (which was to find out whether the current MO training manual delivers the competencies, effectively, which were identified by JHSPH, for an MO to possess to carry out the roles and responsibilities required for him/her to be carried out in a fulfilling manner) closely matched the requirement of development of this CCF for CBME evaluation as described above.

Analysis of MO Induction Manual using the Core Components Framework

“Competency-based medical education is an approach to preparing physicians for practice that is fundamentally oriented to graduate outcome abilities and organized around competencies derived from an analysis of societal and patient needs.”¹⁴

CORE COMPONENTS				
OUTCOME COMPETENCIES: Competencies required for practice are <i>clearly articulated</i> .	SEQUENCED PROGRESSIVELY: Competencies and their developmental markers are <i>sequenced progressively</i> .	TAILORED LEARNING EXPERIENCES: Learning experiences <i>facilitate</i> the developmental acquisition of competencies.	COMPETENCY-FOCUSED INSTRUCTION: Teaching practices <i>promote</i> the developmental acquisition of competencies.	PROGRAMMATIC ASSESSMENT: Assessment practices <i>support & document</i> the developmental acquisition of competencies.
PRACTICE: What the core component should look like in practice				
Required outcome competencies are based on a profile of graduate and/or practice-based abilities.	Competencies are organized in a way that leads to a logical developmental sequence across the continuum of medical education or practice.	Learning takes in settings that model practice, is flexible enough to accommodate variation in individual learner needs & is self-directed.	Teaching is individualized to the learner, based on abilities required to progress to the next stage of learning.	Learner progression is based on a systematic approach to decision-making including standards, data collection, interpretation, observation & feedback.
PRINCIPLE: How the core component is supposed to work in practice				
Specification of learning outcomes promotes focus and accountability.	A sequential path supports the development of expertise.	Learning through real life experiences facilitates membership into the practice community & development of competencies.	Development of competence is stimulated when learners are supported to learn at their own pace and stage.	Programmatic assessment systems allow for valid and reliable decision making.
CONCEPTUAL FRAMEWORKS: Why the core component should work according to theories, models, or best practices				
• Social accountability • Outcome-based education • Backwards design • Job task analysis	• Expertise theory • Entrustable professional activities • Surface & deep approaches to learning • Mastery learning	• Situated learning • Deliberate practice • Self-regulated learning • Workplace-based learning • Professional identity formation	• Zone of proximal development • Constructive friction • Learner-centered teaching • Cognitive apprenticeship • Coaching theory • Growth mindset	• Programmatic assessment • Formative assessment • Learning analytics

Table 4: The Core Competency Framework

Source: (11)

The three, coloured asterisks above (marked adjacent to the above illustration), are used to represent the associated discussion done in the following table (Table 5), for evaluating the MO induction training manual using the CCF in the following manner:

- **Blue Coloured text** in the **table below corresponds(table 5)** to the **blue asterisk** and represents the core component of CCF in discussion
- **Green Coloured text** in the **table below corresponds(table 5)** to the **green asterisk** and represents what the core component must look like, in practice, as a part of the education material being evaluated(and whether it is so or not).
- **Orange Coloured text** in the **table below corresponds(table 5)** to the **blue asterisk** and represents how the core component must work, in practice, as a part of the education material being evaluated(and whether it is so or not).

CORE COMPONENTS (of the CCF)	ANALYSIS
1. Outcome Competencies	– The competencies outlined in the draft report are based on the consensus acquired through Delphi technique involving 22 Indian Public Health experts as participants. – These competencies were developed on the basis of a literature review for identification public health core competency frameworks used around the world and upon the 20 core competencies which were already outlined by the MoHFW in the Model Curriculum Handbook for MPH Programs <i>(So, it can be inferred that these competencies are based on a profile of graduate and practice based abilities)</i> – The competencies are developed with the learning outcome aim that acquiring these would lead to effective delivery of public health functions by tackling challenges which the state health cadre has been facing so far. – These are being treated as a starting point to understand and meet health workforce development needs, manage performance, and advance the health of communities they serve. <i>(So, it is evident that with this aim being clearly put forth, focus and accountability would be promoted)</i>
2. Sequenced Progressively	– <u>Mapping*</u> of the competencies with the training manual was done through this component of the CCF. <i>[The details of the mapping exercise can be visited by clicking the hyperlink embedded in the word “mapping” (internet required) and comments on the same as a part of the CCF are listed below]</i> – Though all the competencies identified by JHSPH were found to be getting addressed in the manual,

	there was no particular order, which was found in it, for the competencies being delivered through it. –There was also a considerable amount of overlap which was noticed through the mapping exercise i.e. many competencies were being covered through multiple modules and no logical developmental sequence could be noticed. –An appropriate amount of reinforcement is understandable for the proper development of these competencies, but the delivery should be more structured so as to support the development of expertise.
3. Tailored Learning Experiences	–The module outlines clear instructions to facilitators for the module along with a training checklist and an evaluation form. –There are training activities which are included in the module with clear guidelines for their usage. –Provision of options for activities such as “parking lot” and “gallery walk”; usage of bell, tone or sound and lastly usage of an closing activity for presentation, increasing participant engagement, gaining attention and for synthesizing the content learned, respectively, through the module can be considered as being flexible enough to accommodate variation in individual learner needs. –However, learnings through real life experiences which can facilitate membership into the practice community and development of competencies <u>was found to be lacking</u>-for example, problem solving exercises etc for managing a rural health centre in times of an emergency or other real life issues.

4. Competency Focussed Instruction	– In the teaching manual for medical officers, teaching did not seem to be individualised. Rather it seemed to be developed, assuming that all the medical officers must be possessing the same abilities to understand and grasp the information being provided through the module. – However, this issue can be overlooked keeping in mind that the modules are being also delivered face to face by an instructor who can bridge the gaps in the grasping abilities amongst the medical officers, if any. – Also, what couldn't be observed was the module being divided into stages of learning, presuming all the officers would be at same stages of learning through the module and that the pace of learning would also be uniform across the group of medical officers.
5. Programmatic Assessment	– The progression of a Medical Officer's learning did not seem to be based on any systematic approach to decision making like data collection and its interpretation, observation and feedback, which could be assumed to help in better decision making, if done.

Table 5: Analysis of MO Induction Manual Using CCF

For evaluation, the reason as to why the modules need to be delivered, in accordance with the 5 components identified as a part of this CCF is mentioned below every component (in the table of the CCF components, provided above) under the heading “Why the core components should work according to theories, models or best practices”.

Also, the issues/ the gaps found while evaluating the training manual using this CCF, have been addressed in the recommendation section of the report.

*The Mapping Exercise

(About the Mapping Exercise)

- *The mapping exercise forms major part of this work, done for evaluating the MO induction training manual and hence it should be noted that the other 4 components of the CCF(as used above), although accompany comments, may require further thinking, if and when the mapping needs further stratification or improvements(as mentioned in the mapping exercise).*
- *The mapping was done using the objectives listed in the modules, wherever available.*
- *Similarity of ideas and/or key words was found between a module's objectives and the competencies(as defined in the final report on core competencies(6)).*
 - ***For example**, the module: Introduction to Uttar Pradesh –Familiarize the participants with the geography, demography, epidemiology, social and political economy of the State aims to introduce the basics about the state in terms of principles of Public Health and so it was assumed that it would also be introducing/refreshing the basic concepts of public health through this module and so the competencies under the domains : Public Health Sciences and Social and Cultural Determinants were mapped against it.*
 - *Then for, the modules involving the key word “finance/financing”, the competencies under the domain: Financial Management and Budgeting, were mapped against them.*
- *The mapping was done in a manner that after determining a domain, all the competencies were listed from that domain which suited the objectives which were to be delivered through that module.*
- *For the modules, which were not present in the Training Manual, the mapping was done according to modules which were listed in the index with similar ideas.*
 - ***For example** the Module: AIDS Control Programme - Organization, program components and activities, MIS, reporting and monitoring wasn't listed and so the competencies were mapped according to the module: Iodine Deficiency program & National Mental health program & national deafness program - Organization, program components and activities, MIS, reporting and monitoring, since both the modules tried to capture similar ideas about different programs.*
- *The use of the complete framework isn't robust/exhaustive, but considerable amount of thought has been put into the mapping work [though it may require further stratification, in terms of making it more comprehensive and restructuring the MO training. This would also require a complete copy of the manual comprising all the modules.]*
- *A section of “next steps” and “recommendations” has thus been incorporated in this document, and the mapping exercise can be found in the excel sheet accompanying this document or from this [link](#).*

2.6 Limitations

The evaluation of the MO induction training manual for the core competencies was done based on the CCF for CBME. The core competencies were found to be getting addressed through the manual, but more work is required, to comment about the extent of delivery of the competencies to the MOs. The framework in itself looks promising for our work but for a more thorough application of the framework and to make concrete comments about the competency delivery, further work in terms of documented feedback from the intended audience(about the delivery and the training as a whole), documented data/data collection on how the training

progresses and documented feedback on the audience in terms of how well they perform (and how the training performs in terms of delivering the competencies) on getting through this training, was absent.

2.7 Recommendations

Based on the mapping exercise and the evaluation of the manual done, below are a few recommendations which could help in strengthening the health system, to an extent, by improving the induction training which is being provided to medical officers:

- 1) There should be a prescribed sequencing for the competencies to be developed through the training module. (For example, the competency order given in the JHSPH's report on core competencies can be followed (although not being currently followed) or not; but an order must be followed, as developing a competency, say leadership might be more beneficial (in terms of correlation and aiding in learning) when taught after the modules on communication.)
- 2) The timing of the modules which are being delivered as a part of the MO training, should be decided based on the order of the competencies as described above. This not only involves a restructuring of the training manual but also involves strict enactment of a training schedule, as the restructuring of the training module would be in vain i.e. same is not followed during the training.
- 3) The training should also be divided into stages (for e.g. Beginner/medical officer, intermediate/medical officer cum manager and allrounder/leader) so that the medical officers can not only keep track of their own progress but are also motivated to attain the highest level of competencies which can be attained through the training.
- 4) The training must progress with regular programmatic assessment, which could be in the form of either, feedbacks from the medical officers or data collection and its interpretation (regarding a medical officer's learning in the form of assessments). This would not only help the medical officers to keep track of how well they are doing, but also aid in gradual, self-improvisation of the training manual, due to the feedbacks recorded from the medical officers.
- 5) Along with these recommendations, there are a few more recommendations in the "recommendation" sheet of the [file comprising the mapping exercise](#).

2.8 Next Steps

Although the mapping exercise and the evaluation of the manual has been done with a lot of in depth thinking, there is huge scope of further deepening the work. This can be accomplished in the following manner:

- Apart from the component 2 of the CCF, the other components can also be utilised in a much better manner to overall evaluate and improvise the MO induction training manual.
- In the “recommendation” sheet of the [file comprising the mapping exercise](#), further stratification should be done where required and modules should be re-arranged in a manner that there is least overlap/repetition of the competencies being delivered and that there is an apt form of regular assessment(e.g. Self-assessment/test/examination/Group Discussion etc.) incorporated into the training.
(This might also help in shortening of the training period and might also help in preventing time wastage)
- There needs to be a mapping exercise done to write Job Descriptions for the MOs, inclusive of identified competencies, and present these, competency based roles and responsibilities, may be through a competency matrix, which may describe, which competency is helpful in fulfilling which role or responsibility of the MO. This will enable identification of the competencies which are being addressed through the MBBS curriculum and also those which need to be strengthened for each public health cadre with adequate training for efficient discharge of the duties by the health professionals and achievement of health system goals.
- Lastly and eventually, on successfully addressing the extrinsic factors of the Herzberg’s two-factor theory (as discussed above), the intrinsic factors i.e. the motivators such as achievement, recognition, responsibility, growth etc. should be addressed in order to further improve the job satisfaction of a medical officer and in turn improve the healthcare delivery leading to a considerable strengthening of the health system.

2.9 Conclusion

This exercise has been done to build upon the work on core competencies and make a stronger application of the identified competencies . Its established that an MO is required to fulfil roles and responsibilities which go beyond curative services for which they are trained at their undergraduate level. These require certain competencies by the MOs to have so as to successfully implement their job’s roles and responsibilities. These competencies are

being provided to them through a training which is organised by the state's SIHFW. This exercise deems to be beneficial in terms of visualising which competencies are being delivered through which module of the training manual and this work should lay a foundation for further improving the training in terms of delivering the competencies necessary for an MO to have in order to effectively manage a health facility eventually leading to improving health delivery and consequently leading to health system strengthening.

III. Practicum Experience

1. Practicum Goal and Learning Objectives

Goal

To acquire Analytics/Assessment Skills, Policy Development/ Program Planning Skills, Communication Skills, Community Dimensions of Practice Skills by achieving the objectives listed below.

Learning Objectives

- Defining a Public Health problem, obtaining and interpreting data to define risks to the community and Identifying the importance of data in shaping public health issues.
- Collecting and preparing information to support policy development, developing policy recommendations, creating connections and collaborating with key stakeholders to promote health and Identifying the role of government in health promotion.
- Formulating communication plans through input from stakeholders, utilizing learned skills to communicate effectively with a variety of stakeholders and then employing effective strategies of communicating with the media by utilizing communication skills through a variety of media for explaining scientific information for press and lay audience in appropriate language by employing advocacy skills (e.g., advocating for change, public policy, programs, populations, etc.)

2. Key Achievements and Success

Apart from delivering the report as above, other key achievements and successes were (listed chronologically):

- Earned a CITI training: JHSPH Basic Human Subjects Research Course
- Assisted in Medical Officer(MO) orientation at State Institute of Health and Family Welfare-UP(SIHFW-UP) and also in compilation of the notes regarding this contact with them, which captured basic educational background of this group of MOs along with their opinions on the MO training in terms of their expectations it and also opinions regarding the challenges they face during their work at their health facility
- Assisted in Pre-test, conducted for evaluation of MO training
- Did Note Taking and transcript writing for Focussed Group Discussions (FGDs), conducted with the MOs.

- Assisted in Friday Night at the ER (FNER) activity, conducted at SIHFW-UP with the MOs.
- Assisted in Nominal Group Technique (NGT) session, conducted at SIHFW-UP with the MOs.
- Led post-test conducted for evaluation of MO training at SIHFW-UP, followed by its data entry(data collection).

3. **Learnings from the Activities** (LISTED CHRONOLOGICALLY)

S.No.	ACTIVITY	COMMENT/LEARNINGS
1)	Earned a CITI training: JHSPH Basic Human Subjects Research Course	- This was an online certification course which helped in gaining knowledge about ethically conducting human research and supplemented knowledge gained during the Master of Public Health(MPH) curriculum. - This will serve as endorsement of knowledge on ethics for the next five years.
2)	Assisted in Medical Officer(MO) orientation at State Institute of Health and Family Welfare-UP(SIHFW-UP) and also in compilation of the notes regarding this contact with them, which captured basic educational background of this group of MOs along with their opinions on the MO training in terms of their expectations it and also opinions regarding the challenges they face during their work at their health facility	- This activity helped in getting hands on experience of how one must deal with participants involved in such activities. - The notes compilation helped gaining insights regarding formal documentation of such activities.
3)	Assisted in Pre-test, conducted for evaluation of MO training	- This helped in getting a better view of the work being done by JHSPH in UP and it supplemented the existing knowledge about it, which was provided by an office member on the first day of joining. - This helped to learn about the importance of proper handling of information and also how a researcher must deal with queries while dealing with sensitive information and making the participants comfortable.
4)	Did Note Taking and transcript writing for Focussed Group	- The knowledge about FGDs gained during MPH curriculum as a method of

	Discussions (FGDs), on 2 occasions i.e. for 4 groups i.e. assisted in Qualitative Data Collection	qualitative research was supplemented here, where working with a senior colleague from office, helped in gaining a practical view of how this activity should be conducted; how it is to be moderated and how the notes must be taken down. - This also gave a chance to look for online literature, and further refine knowledge about conducting FGDs thus making the learnings even stronger. - A format for doing the note taking was found through the internet search as well as for writing the transcripts, through the online search which was helpful for the fellow note takers as well(as they said). - This eventually helped in the transcription work of the FGDs and this exercise gave more clarity on such documentation work. - A discussion about the analysis of transcripts with an office colleague helped getting a better idea of how qualitative data analysis should be done. This was helpful in correlating the theoretical knowledge from MPH curriculum with this practical assessment of real time data.
5)	Assisted in Friday Night at the ER (FNER) activity, conducted at SIHFW	- This was the first activity experience with Dr Brian where a unique approach of handling participants along with some fine leadership skills were witnessed and imbibed.
6)	Assisted in Nominal Group Technique (NGT) session, conducted at SIHFW	- This was a skill learnt at JHU during the Problem Solving Module at Baltimore and this was a fine opportunity to see it being executed in a controlled environment by diverse groups of people. - Also, during this activity, it was the first opportunity, although suddenly and briefly, to address the MOs regarding the NGT.
7)	Delivered a report on a Mapping Exercise(mapping core competencies against the MO training manual)	- This was an important activity done in this duration. - This helped in amalgamating the practical experience of interacting with the MOs at SIHFW, regarding their work environment and the ongoing training, and the prior research done for this activity on the internet. - This also, helped in doing analysis of a real situation on the basis of the practical

		and theoretical knowledge gained about the MO training.
8)	Led post-test conducted for evaluation of MO training at SIHFW, followed by its data entry(data collection)	- This activity was executed independently and thus gave immense confidence being solely responsible for finalizing the date, talking to the concerned person for it and then interacting with the MOs and conducting the test with them. - Practical learnings so far, in this tenure, in interacting with the MOs were highly useful here. - This generated ample self-confidence to now interact with various stakeholders to get an activity done. - Till now, through the MBBS training the confidence of dealing with patients was there, and confident communication skills with various audiences, were acquired through the MPH curriculum. This experience has made the previously generated confidence more firm with the ability to act appropriately in similar situations in the days to come.

Table 6: Activities and Learnings

4. Core Competencies Developed

Competency developed	Supplementing Activity
1) Analytics/Assessment Skills	Mapping Exercise(Mapping Competencies against MO training Module which included development of a search strategy, analysis of search results found through various search engines, documenting the analysis including sections on conclusion, results, limitations, recommendations and next steps)
2) Policy Development/ Program Planning Skills	
3) Community Dimensions of Practice Skills	Through the following activities I was a part of:
4) Communication Skills	Mapping Exercise, notes compilation for MO orientation, Pre-test and Post-test for MO induction training assessment(data collection and data entry), CITI training, Note Taking for FGDs i.e. Qualitative Data Collection, FNER, NGT.

Table 7: Core Competencies Developed

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ANNEXURE

- [Excel File Containing Mapping Exercise \(Google Drive Link\)](#)