Training Need Assessment Report

Lead Organization:

Taaleem Foundation Health Initiative (TFHI)

Partner Institution:

Pakistan Institute of Medical Sciences (PIMS)

Table of Contents

Glossary

CBS	*Capacity Building Session*
CMT	*College of Medical Technology*
HHR	*Health Human Resources*
O.T	*Operation Theater*
OPD	*Out-Patient Department*
MLT	*Medical Laboratory Technician*
NA	*National Authority*
PAC	*Pakistan Accounts Committee*
PNC	*Pakistan Nursing Council*
PIMS	*Pakistan Institute of Medical Sciences*
TF	*Taaleem Foundation*
TFHI	*Taleem Foundation Health Initiatives*
TNA	*Training Need Assessment*

Chairman Note

To Bring About Visible Change, People Need To Be Able To Own The Process Of Educational Reform.

Destiny of an individual and a nation depends on good education. Our is an age of knowledge - to move in this competitive world and to make a mark in the comity of nations - our tender children "future of our nation" need value loaded high quality education, modern training aids and well balanced co-curricular activities.

The management of the organization is in the hands of well-experienced and qualified educationists and visionary educational managers. Every effort is made to focus on the quality of education. We are hopeful that with stakeholders' best co-operation, the best services would continue to be delivered to nurture and groom productive human resource.
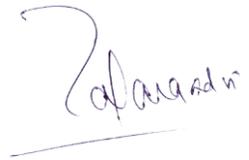
Dr. Zafar Iqbal Qadir
Chairman
Taaleem Foundation

Disclaimer

Acknowledgment

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Organizational Introduction & Background

Human development is the basic right of every individual, and health is a pre-requisite for the socio-economic development. Health is an entry-point towards prosperity and reducing poverty. The links between ill health and poverty are well known. Ill health contributes to poverty due to "catastrophic costs" of illness and reduced earning capacity during illness. Poor people suffer disproportionately from disease and are at higher risk of dying from their illness than are better off and healthier individuals. Women and children are particularly vulnerable. Illness keeps children away from schools, decreasing their chances of productive adulthood.

TFHI-Telemedicine covers various digital communication modalities, and is not a single technology. This ranges from the use of sophisticated video conferencing and other conferencing modalities, through Web-based provider patient communication systems, to the use of basic telephone service. It is defined as the delivery of e-health care and the sharing of medical knowledge over a distance using telecommunications. Telemedicine or Tele-health is a term given to offering remote care to health professional capacity building, people providing the care and reassurance needed to allow them to remain living healthily in their own homes.

The use of wired or wireless medical sensors may be part of a package, which can provide support for people with serious illnesses. Most Tele-health services mitigate harm by reacting to untoward events and raising a help response quickly. Some Tele-health services, such as safety confirmation and lifestyle monitoring have a preventive function in that deterioration in the user's well-being can be spotted at an early stage. Tele-care refers to the idea of enabling people to remain independent in their own homes by providing person-centered technologies to support the individual. In one of its form, it can be referred to a fixed or mobile telephone with a connection to a monitoring center through which the user can raise an alarm. Technologically more advanced systems use sensors, whereby a range of potential risks can be monitored. These may include falls, as well as environmental changes in the home such as

floods, fire and gas leaks. When a sensor is activated it sends a radio signal to a central unit in the user's home, which then automatically calls a 24-hour monitoring center, where trained operators can take appropriate action, whether it is contacting a local key holder, doctor or the emergency services.

Tele-care also comprises of standalone Tele-center which does not send signals to a response center but supports users through providing local (in-house) alerts in a person's home to let the user know when he / she requires attention. The interactive nature of communication between the Centre and remote Tele-health clinic / e-clinic, used by our partner organization (TeleCare) is described in the diagram on web link. http://www.tf.edu.pk/Futuristics/TFHI.php

Taaleem Foundation is working on e-health; e-education and ICT based governance solutions nationwide. Presently, TFHI (TFHI is a public health initiative of Taaleem Foundation) is already working on a similar concept of Talisman "***Rural and Remote Health Care"***. TFHI is working nationwide and has a pool of trained doctors, nurses, health professionals & community health workers, who are involved in rural and remote primary health care. Mobile Vans with all medical facilities are available to main population centers of rural areas. TFHI is providing mobile hospital facilities at their doorstep as rural and marginalized families patients have issues in going to a hospital.

From October 2016 TFHI is in negotiation process with Talisman Health Community Outreach Program and it will contribute to 'Better World' initiative. Keeping in view the complex health issues and its related education/awareness facing in Pakistan, TFHI is in a view and struggle to work in collaboration with more capacity development partners worldwide.

Presently, the **TFHI team and its partner institutions (as given on http://www.tfhi.net/index.php) are concerned for a long term partnership with Talisman, in order to provide a wide range of healthcare training, capacity building and job placement solutions.**

Talisman Health commits to providing free healthcare education and skills training to disadvantaged women and girls in developing countries. Taaleem foundation can work with Talisman Health (https://www.talismanhealth.com/better-world-initiative) on its Objective 2.

Talisman Objective 2: Empowering disadvantaged women in developing countries by providing free healthcare education.

TFHI ((http://www.tf.edu.pk/) is already working on these thematic areas with outreach in Pakistan.

TFHI team is interested in exploring **long term partnership and contract** opportunities with Talisman, to provide a wide range of healthcare e-trainings and solutions. Initially TF/TFHI is interested to start with simple health professional courses by working together for the greater benefit of Pakistani communities. For this purpose PIMS-College of Medical Technology (CMT) will work with TFHI as partner institution.

College of Medical Technology, Islamabd has the capacity to imparts training in various disciplines of

- *Allied Health Profession.*

- *Medical Technology Group*

College of Medical Technology educational and professional structure is comprises of six courses of one/two years duration of Intermediate level. In 1990, six courses were extended to two years to make it at par with HSSC, and in 1994; IBBC started granting certificate to CMT diplomas as equivalent to HSSC.

The curriculum wing of Ministry of Education had approved its syllabus through National Review Committee. A new group of HSSC level (Medical Technology Group) was introduced. College was affiliated with Federal Board of Intermediate and Secondary Education in 2006. The first batch appeared in the board exam in 2007.CMT is a pioneer to commence all courses

in Medical Technology Group first time in the country. The college is a national teaching center for the Allied Health Professionals. The objective is to train health workers in a properly equipped and staffed institution.

- Biomedical Technician-DIP-1 Years
- Dental Hygienist-FSC-2 Years
- Medical Image Technology-FSC-2 Years
- Medical Laboratory Technology-FSC-2 Years
- Operation Theatre Technician-FSC-2 Years
- Ophthalmic Technician-FSC-2 Years
- Physiotherapy Technician-FSC-2 Year

DIPLOMA / CERT (After Matric)-
- Biomedical Technician-CERT-1 Years
- Cardiology-CERT-1 Years
- Dispenser-CERT-1 Years
- Public Health-CERT-2 Years
- Renal Dialysis Technology-CERT-1 Years

INTERMEDIATE / A-LEVEL
- Dental Hygienist-FSC-2 Years
- Medical Image Technology-FSC-2 Years
- Medical Laboratory Technology-FSC-2 Years
- Operation Theatre Technician-FSC-2 Years
- Ophthalmology-FSC-2 Years
- Psychotherapy-FSC-2 Years

Web link :(http://www.eduvision.edu.pk/institutions-detail.php?city=51I&institute=1401959827_college-of-medical-technology-pims-islamabad#sthash.mVPpn3sS.dpuf)

& for Nursing

http://www.szabmu.edu.pk/faculty_of_nursing_allied_health_sciences.php

The theory and demonstration classes are held in the college, whereas, on-the-job training is imparted at Islamabad Hospital, Children Hospital, MCH center and various institutions as required for the course. The teaching staff comprises of regular faculty, visiting lecturers, and specialists of the subjects from the concerned departments of **Pakistan Institute of Medical Science (PIMS).** PIMS is an attached department of Capital Administration and Development Division, Government of Pakistan, which includes

- o Islamabad Hospital (IH),
- o Children Hospital (CH),
- o Cardiac Surgery Unit, Mother and Child Health Center (MCH),
- o Burn Care center (BCC),
- o Liver Transplant Unit,
- o Shaheed Zulfiqar Ali Bhutto Medical university
- o Post Graduate Medical College (SZAMBU PGMC),
- o SZABMU College of Nursing (CN),
- o School of Nursing (SON)
- o SZABMU College of Medical Technology (CMT).

Partner Institution's Strength: PIMS- College of Medical Technology has been donated by the Government of Japan to the people of Pakistan as a goodwill gesture. Its planning, execution and financing has been made by the Government of Japan in collaboration with the Federal Ministry of Health, while keeping in view the requirement of the country. The building of College of Medical Technology was completed in 1986, and the first batch of students was

enrolled in 1st February 1987 in many disciplines i.e. Medical Laboratory Technician, Dental Hygienist and Electro-Medical technician. Afterwards other disciplines were introduced.

Objective of the Proposed Project:

The objectives is of TFHI team and its partner institutions (as given on http://www.tfhi.net/index.php) is

- o *To develop sustainable **partnership** with Talisman, in order to provide a wide range of e-healthcare training, digital capacity building and international job placement solutions.*

- o *To contribute in* Talisman Health Community Outreach Program *and add efforts in 'Better World' initiative.*

Training Needs Assessment (TNA) Background and Introduction:

In Pakistan, the complex health issues and lack of related awareness has created a hindrance in reaching to international job market for nurses and other health personnel. In this Connection, in December 2016 and January 2017, TFHI conducted a survey at National level (PIMS-College of Medical Technology Department) and with selected students, nurses, faculty member and health professionals from

- o Pakistan
  - Punjab
  - Sindh
  - Baluchistan
  - KPK
  - Gilgit Baltistan

o Afghanistan[1]

TNA Methodology and Participation:

Aim of the survey:

The aim of this survey was

o *To identify the gaps and assess capacity building needs of health professionals in line with Talisman objectives and develop training plan accordingly, to build their capacities".*

Scope of work:

For Talisman e-learning/local courses, TFHI had conducted Training need assessment survey. TFHI conducted a survey in PIMS where students from all over Pakistan are enrolled. The survey was conducted with the objective to find out identification of courses that should be taken from Talisman. Due to the security reasons, Talisman can only work in Islamabad, Lahore and Karachi. The survey was conducted to assess the capacity building training needs of the health professionals from CMT department in PIMS and interviews were held with registrar, health officers and students who would contribute in developing an assessment on their issues and solutions.

Survey methodology:

In project designing stage TFHI consultants and staff member conducted meetings with Registrar of the partner organization (PIMS) and conducted FGDs with students of PIMS-College of Medical Technology Department.

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[1] Engaged in ARC (http://arcrelief.org/our-work/pakistan/), +donor funded project.

TFHI team developed questionnaires and interview sheets for in-depth interviews, along with Focus Group Discussions. Two person's TFHI team was responsible for conducting of field exercise at PIMS Islamabad, filling of questionnaires through Individual Interviews (IDIs) (40% female and 60% male respondents) and conducting of more than 30 focus group discussion (FGDs).

Stratified random sampling technique was used for selection of respondents.

Total of 400-425 health professionals were involved, and they were asked for sharing their views regarding e-learning and staff training in the light of capacity building sessions.

A major component in discussion was the role and need to have specified courses in the "Disaster Areas"

The responses of the six different types of respondents' i.e. students, Registrar, legislator, PIMS officers, PAC members and other stakeholders were consolidated in this report.

Tool	Number of sources	Details
Desk review	5 Newspapers & WHO report	• WHO Global Code of Practice for Recruitment of Health Personnel 2011 • Pakistan Economic Survey 2014-15
Focus group discussions	400-425 students - Pakistan(Punjab, Sindh, Baluchistan, KPK, Gilgit-Baltistan)and Afghanistan[2]	Total 30-45 FGD s will be conducted having 12-14 members in each session.
Semi structure interviews	8 health professionals	Faculty member of PMIS-CMT department ,Islamabad

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[2] Engaged in ARC Project (http://arcrelief.org/our-work/pakistan/), and donor funded project.

Findings

Findings from the survey questionnaire, semi structure interview and desk review are mentioned below.

Desk Review Findings

2015-2016 local Newspapers data are considered and it is reported in said time period that Health care services internationally are going through a period of profound change, particularly with the move from a focus on secondary and tertiary hospital based care to community based primary and public health initiatives. Key professions most impacted by this change are those involved in planning, administration and provision of health care services. The professions of Nursing, Health Visiting and Midwifery form a substantial part of this critical health workforce and need to be at the forefront of these changes. Pakistan is planning to be well prepared. Today in Pakistan there are a total of 126 schools of nursing, 141 schools of midwifery, 30 school of public health, and 9 colleges of nursing.[3]

In addition to these, there are colleges of nursing which offer specialized courses to the nursing diploma holders and nursing graduates. The total number of students in nursing schools is a very important indicator to determine the number of faculty and administrative staff required in these institutions, both currently, and in the future. The primary purpose of nursing is the promotion and maintenance of an optimal level of wellness. The professional nurse participates in a multi-disciplinary approach to health in assessing, planning, implementing, and evaluating programs in regards to how they affect optimum wellness for patients. Being an important member of the healthcare professional team, it is important to retain nurses by better understanding the factors that contribute to their job satisfaction and elevates their motivation at work.

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[3] WHO Global Code of Practice for Recruitment of Health Personnel 2011

In the past 10 years production of nurses has improved, the number of registered nurses has doubled and the ratio of nurses to population is now estimated to be one nurse to 3,626 people and one midwife to 53,882 populations and one lady health visitor for 35,880 population. These figures indicate the need to increase the output of Nurse Professionals at a faster rate in order to keep up with the country's growing population and health challenges.

Pakistan Nursing Council (PNC) is a regulatory body established by the Pakistan Nursing Council Act. It was established in 1948. PNC is empowered to license nurses, midwives, lady health visitors (LHVs), and nursing to practice in Pakistan. PNC was an independent regulatory body of nurses in Pakistan and it was supposed to regulate nurses training and education by helping provincial nursing examination boards. The lack of federal and provincial governments amid powerful interest groups has become of the cause that PNC is not functioning independently. Despite of all this, PNC is trying to improve the state of nurses in Pakistan but without the help of government it is very difficult for an institution to work as per its mandate.[4]

Nurses are an important component of health delivery system but unfortunately they lack proper training, which is much required in their profession. The role of paramedics and nurses is well established worldwide but policymakers in Pakistan have never been able to realize that how small efforts for these health professionals can bring change. During nine months of 2014-15, 3,500 doctors, 3,300 nurses and 4,500 paramedics have completed their academic courses compared to 5,000 doctors, 3,150 nurses and 4,500 paramedics in 2013-14.[5]

Countries with better healthcare delivery system have trained paramedics and nurses staff, which is central to the efficient delivery system. According to the latest official statistics there are 40,879 nurses and 12,488 doctors in Sri Lanka; 154,309 nurses and 66,880 doctors in Iran; while in the USA there are 3.3 million nurses and 730,811 doctors. But in Pakistan it is the other way around: 94,766 nurses and 184,711 doctors.[6] It is ironical that paramedics and nurses who

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[4] Ibid

[5] Pakistan Economic Survey 2014-15

[6] http://www.dawn.com/news/1285737

are considered the backbone of healthcare system are mostly not well-trained in our country. In the absence of competent healthcare workers, it is not possible to provide basic healthcare to residents and this alarming doctor-nurse ration is showing the non-serious attitude of policymakers towards the health of the nation.

It is a stark reality that in Pakistan, only a small numbers of student nurses receives proper education and get a structured training under the observation of professional staff and doctors. Of the total 161 schools of nursing, very few have trained faculty to teach and train these nurses and aware them on necessary precautions during the treatment of patients in wards.

By and large, the condition of nursing schools and colleges is deplorable and student nurses and paramedics have to deal with the shortage of textbooks, tutors, availability of resource material and much needed teaching aid. This condition substantially results into passing out of nurses without any sound theoretical knowledge and non- existence of professional ethics.

This trend has significantly increased the need of training for nurses and doctors particularly. It is the need of the time to establish new cadres and train them through E-learning courses so they can provide services to more people especially in remote areas.

Unfortunately, training of these nurses and paramedics is not the only challenge, as there are still number of nurses not employed to meet the needs of the health services. Inadequate number of sanctioned posts in public sector is responsible for unemployment of nurses and in private sector; the monitoring of regulatory requirements is insufficient.

For these issues to get solved, Member States should consider strengthning educational institutions to scale up the training of health personnel and developing innovative curricula to address recent health related needs.

Member States should undertake steps to ensure that appropriate tarining takes place in both public and private sectors.

Overall Health community based primary and public health initiatives are required with focus on planning, administration and provision of health care courses. Nursing, Health Visiting and Midwifery have specialized diploma holders and graduates courses, but upgrading based on international tool is required to beat international market.

Pakistan Nursing Council (PNC) provides license to nurses, midwives, paramedics and lady health visitors (LHVs), but not regulating latest training and education. No proper education courses and structured training under the observation of professional staff and doctors are available.

Shortage of textbooks, tutors, availability of resource material and teaching aid results into passing out of nurses without any sound theoretical knowledge and non- existence of professional ethics. This issue can be addressed through establishing new cadres and training through E-learning courses. On the other hand nurses, midwives, paramedics and lady health visitors employment structure in international market is also need attention.

Focus Group Discussions Participants' Response

Focus group discussions were held involving various students' population represented at the nursing and paramedics' college. *Annexure attached based on contact numbers and names of the FGDs Student Contact List CMT (College of Medical Technicians- PIMS- Islamabad).* The purpose of these focus groups was to gather information relevant to our report and it helped finding the need for training and courses to give these health workers a professional touch.

These discussions were held to collect information in regard to these following outcomes;

- *To understand what motivates student to pursue higher education or training courses*
- *To understand the level of understanding of students of their curriculum and how is the college effective in meeting their needs*

- *To understand the preference of these students in terms of job or higher education*
- *To understand the issues which are causing a hindrance to their performance or involvement in further education*
- *To assess the training areas identified by nurses and health professionals*

No. of Students participated	Male	Female
410	60%	40%

Total thirty FGDs were conducted with 400 students with the age group of 18-21. None of the students are receiving any financial aid nor do they have any information on scholarships. These students identified themselves from different regions of Pakistan and most of them have chosen this profession as passion and their area need. Especially students from KPK, northern areas and remote areas joined after natural disasters in their areas.

Students' Perspective

Outcome 1: To understand what motivates student to pursue higher education

Majority of the students have selected the two year of health care worker diploma after matriculation and a very few of them have skipped their studies and worked but later decided to join college and pursue their education. The students offered a number of reasons for their decision to choose this career and joining college in different city:

- ❖ Their parents forced them to pursue their education in healthcare professional diplomas for securing government job in future
- ❖ They had motives to broaden their social circle
- ❖ They were motivated by their friends to pursue their career along with them
- ❖ They have a strong sense of earning after the completion of diploma which can lead to fulfill their responsibilities towards their families.

Outcome 2: To understand the level of understanding of students of their curriculum and how the college is effective in meeting their needs

In general, students had a mixed response towards their college. They cited a number of qualities of their college as one of the student said,

"*It is quite affordable for us as the tuition fees are low*".

The students also mourned the weakness of the college by saying, "Professors sometimes leave us with a reference to any topic and we have to prepare on our own without any understanding". The non-reliable source for compilation of notes and professors' non-serious attitude towards their students is seemingly a cause behind low level of theoretical knowledge in healthcare workers. Majority of the students need modern courses to compete international market.

Outcome 3: To understand the preference of these students in terms of job or higher education

Majority of the students had same response when asked about their choice after the completion of diploma. The students opted for part time job with higher education and a few of them took a priority for evening classes so that they could continue their studies alongside their professional engagement with any hospital. As most of the students quoted,

"We will do both things as we have priorities both for job and further studies".

Outcome 4: To understand the issues which are causing a hindrance to their performance?

Majority of the students complained about less responsiveness of job market due to language and updated courses. Some of the other issues described by these students, which have considerable effect on their studies which in turn results in lower level of professional skills, are following:

❖ Poor orientation after college

❖ Language barriers (as many students come from Urdu medium school)

❖ Inadequate future facility

AREAS	AGREE	DISAGREE	SILENT
❖ Poor orientation after college	40%	30%	30%
❖ Language barriers (as many students come from Urdu medium school)	50%	30%	20%
❖ Inadequate future facilities	60%	30%	10%

These are serious line of considerations for bringing a professional attitude among students but unfortunately are root cause for low performance of these health care professionals in their career. With the world more focused on computer literacy, these students are seriously deprived of this basic skill.

Talisman Courses Demand Findings

During the session Talisman courses were also share for their feedback. Participants interest in the courses as under:

COURSES	STUDENTS FEEDBACK			
	Highly Required	Less Interested	No Response	Do not Know
1. ABCD...ECG	30%	30%	10%	30%
2. Acute Coronary Syndrome Management	30%	30%	20%	20%
3. Advanced Airway	---	---	---	---
4. Basic Airway	30%	30%	10%	30%
5. Confined Space Rescue	---	---	---	---
6. Coordinate Incident	40%	20%	20%	20%
7. Critical Care for EMTs	40%	30%	20%	10%
8. Critical Care Transport	30%	30%	10%	30%
9. ECG and Pharmacology	40%	20%	30%	10%
10. Emergency Medical First Responder	60%	10%	20%	10%
11. Emergency Medical Technician - Basic	45%	30%	15%	10%
12. Duration: 6 weeks	55%	25%	10%	10%
13. Emergency Medical Technician - Intermediate	30%	30%	10%	30%
14. EMS Educator	40%	30%	20%	10%

Instructional Methods				
15. EMS Leadership	40%	20%	20%	20%
16. Geriatric Education for EMS	30%	45%	15%	10%
17. HAZMAT	---	---	---	---
18. Industrial Medic	----	----	-----	----
19. High Risk PPE and Trained Observer	40%	30%	10%	20%
20. Incident Command Training	50%	20%	15%	15%
21. Manage Injuries at an Emergency Incident	45%	20%	15%	20%
22. Manage Incident Response Information	30%	30%	10%	30%
23. Mass Casualty Management	60%	20%	10%	10%
24. Meds and Maths for Medics	----	-----	----	-----
25. Moving People	----	----	---	-----
26. Occupational Health and Safety for EMS	30%	20%	30%	20%
27. Operate Breathing Apparatus	30%	30%	10%	30%
28. Paediatric Advanced Emergency Assessment, Recognition and Stabilisation	40%	20%	30%	10%
29. Paediatric Advanced	30%	30%	30%	10%

Life Support				
30. Pain Management	50%	20%	10%	20%
31. Patient Safety	40%	30%	10%	20%
32. Perform CPR	-----	----	----	----
33. Prehospital Thrombolysis	---	---	---	---
34. Prehospital Trauma Management	---	---	----	---
35. Provide First Aid in Remote Situations	55%	35%	0%	10%
36. Road Crash Rescue	50%	20%	20%	10%
37. Sick or Not Sick?	---	---	---	---
38. Tactical First Responder	40%	30%	10%	20%
39. Tactical Trauma Life Support	-----	-----	------	-----
40. Vascular Access	40%	30%	20%	10%

Out of 40 Talisman Courses, 85% courses get response of the participants. The above table reveals that most of the participants have shown their interest in e-capacity building sessions, besides few respondents were in the view that all the three session are very essential for them, and very few were in the view that although it is very important and desired but they don't have facilities and institution for these courses. Some of the students want the e-courses in evening time to continue with their studies.

"*I want to join e-training sessions*"

Interviews Findings:

The same questions were asked from 5 respondents from CMT department, they shared that these Capacity Building Sessions (CBS) are not only very important for the training of health professionals and students but also very important for their professional grooming and quality service delivery.

"I think international exposure in form of e-learning; can help marginalized students of rural areas to explore further for determining the trend and short courses for English language as a solution to their language barriers."

Many of them were of the view that due to hostel facilities and nationwide student presences any kind of courses can be practically introduced in the institution.

"I think infrastructure of PIMS can be effectively utilized to cater the training needs of diverse communities"

Some faculty members pointed about the need for TOT for the members to improve and update their strength.

04 respondents have recommended the 2 trainings on practical scenarios in remote and natural disaster areas. Beside 04 respondents were in the view to include more training like communication and departmental, institutional development sessions.

"I want a guideline plan for health personnel professionally, which will help them to adjust in international job scenario"

Conclusion

From the desk review and the findings of FGDs, there seems a less motivation combined with the inadequate facilities and training for health personnel that contribute to the ineffective service delivery in Pakistan. Other challenges that are factors behind the ineffectiveness of performance are poor infrastructure, poor sanitary conditions and bad orientation along with

language constraints. Most of the students are from rural areas and it need to be explored further for determining the trend and there need to have a motivational model and short courses for English language as a solution to their language barriers.

There is a need to have an authentic data on paramedics. Absence of Paramedics Council is a complex issue which leads to the non-existence of reliable data on paramedics in Pakistan. The act for the Paramedics Council was put forward before Health Ministry but after 18th Amendment, no further actions were taken and the act stayed non-operational.

Increasing the HHR production must be accompanied by enhancement in the standards and quality of education being offered, coordinating the demand and supply of health personnel through effective manpower planning, maintaining data effectively for evidence based policy making and ensuring an equitable distribution of HHR for improving the health of the public at

large.

The survey reveals that the capacity building sessions are the dire need of the students as well as staff, as they are the important actors for the health service delivery performance.

The overall survey extracted the need for the capacity enhancement training for the above mentioned stakeholders. It was also come into notice that the training manuals should be developed by the experts with the consultation of senior health professionals who have expert knowledge of the rules and current practices.

NA (National Authority) should help in setting up a system to establish the cost of producing the health personnel in the public sector, the positive impact of migration and the negative impact of unemployment.

Educational infrastructure of PIMS should be utilized such a way that can help these health personnel professionally, so they can cater the needs of diverse communities and also help them to adjust in international job scenario.

Recommendations

From the findings of FGDs, following are the general recommendation of the designed survey

1. Need to improve capacity of the health professionals through e-learning /training courses, combined with

2. Orientation of health professionals' skills including local language needs to be improved.

3. Focus should be on new health related issues/areas for students from rural areas.

4. There needs to have a motivational/managerial model including short courses for English language as a solution to their language barriers.

5. There is a need to have an authentic data on paramedics for upcoming international jobs.
   .

6. Educational infrastructure should be built in such a way that it can help these health professionally, to cater for the needs of diverse communities and also help them to adjust in international job scenario.

➢ **At the health professional and student level:**

o There should be visits to underprivileged communities to accustom the students to the uncontrolled environment of the communities.

o There should be new courses and e-learning opportunities available for the students and staff.

o Capacity enhancement needs to be built and new jobs should be created for health professionals to overcome the shortage of paramedics and nurses nationally.

➢ **At the Partner institution Level**

o There should be e-training of staff and more international recruitment in the remote areas for utilization of these skills.

o Staff should be trained on new courses and e-learning portal should be available for their access to these courses for professional development.

o There should be strengthening of career ladder and salary structure as a motivation to students who want to pursue their career as medical technicians and nurses.

➢ **At the digital learning level :**

o There should be an online learning site that should also be the world's largest source of health related education and courses.

o Individual students should get a certificate on the completion of the e-courses of planning, administration and provision of health care services. Certificates should be dual branded with both Talisman and the employer or Government agency.

o There should be an E-learning portal for corporate clients such as hospitals and healthcare groups; comprising of as many courses as they want specifically for their staff to enrol in and complete.

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Annexure

Student Representatives Contact List			
CMT (College of Medical Technicians PIMS Islamabad)			
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