



DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI

DUHS

**ANNUAL
STANDARDIZED
REPORT**

2018-19



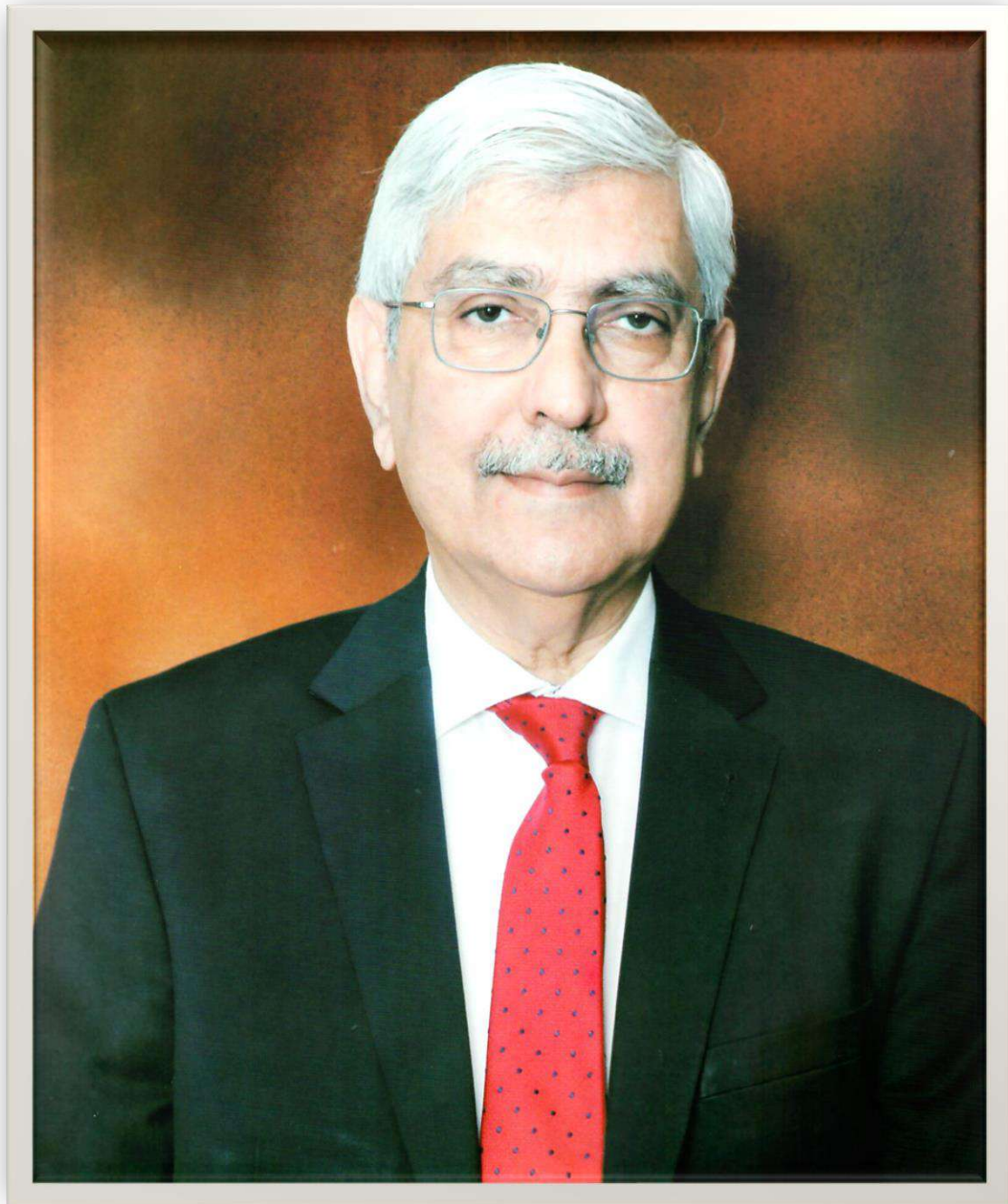
TABLE OF CONTENTS

Executive Summary	7
About the University	8
Chapter 1: Academic Activities	19
1.1 Undergraduate and Postgraduate Programmes	20
1.2 MPhil and Ph.D. programs	24
1.3 Academic achievements	25
1.4 Foreign Academic Linkages	27
1.5 Honours and Awards	28
1.6 Institutional Linkages	28
Chapter 2: Research and Development	30
2.1 R&D- An Overview	31
2.2 Projects	33
2.2.1 Completed	
2.2.2 Newly Launched	
2.3 Publications	33
2.4 Key Performance Indicators regarding Research	34
2.5 Research Journals	34
2.6 Research Collaboration	35
2.6.1 Indigenous	35
2.6.2 Foreign Linkages	35
2.6.3A Funding grants for R&D	36
2.6.3B Vice Chancellor's Seed Funding Initiative	37

Chapter 3: Quality Assurance	42
3.1 Impact of Quality Assurance in the University	43
3.2 Quality Enhancement Cell at DUHS	43
3.3 Membership of Quality Associations/ Networks	45
3.4 Accreditation of Programmes form Relevant Councils	45
3.5 Seminars, Workshops contributed/attended by QEC	47
 Chapter 4: Faculty Development	 49
4.1 Faculty Development Programmes (MS/PHD local + Foreign)	51
4.2 Returned Scholars	51
4.3 Present Scholars	52
4.4 Pre-Service and in-Service Professional development programmes	53
 Chapter 5: Access	 54
5.1 Basic Enrolment	55
5.2 Equity	55
5.3 Gender-wise Detail	55
5.4 Employability	62
5.5 Faculty-student ratio	64
 Chapter 6: Universities Building Economies	 65
6.1 University-Industry Linkage	66
6.2 New Initiatives	66
6.3 Technology Incubation Centre	66
6.4 Patents/ Trademarks	66
6.5 Internship and Placement Office	67
6.6 Student Counseling and Career Guidance	69

Chapter 7: Strengthening Physical Infrastructure	70
7.1 Development project (Laboratories, Libraries, etc.)	71
7.2 Research Equipment	72
7.3 Construction projects	72
 Chapter 8: Strengthening Technological Infrastructure	 73
8.1 Digital Library	74
8.2 PERN	74
8.3 Video Conferencing	74
8.4 Campus Management Solution	75
8.5 Web Portal of DUHS.....	75
8.6 Online Admission System	76
8.7 Cloud Services for Academics	76
8.8 DOW Connect	76
 Chapter 9: Universities Building Communities	 78
9.1 University-Community Interaction	79
9.2 University’s Role in Building Community	80
9.3 Alumni Affairs: Outstanding Achievements etc.	81
 Chapter 10: Sports	 83
10.1 Inter-departmental sports	84
10.2 Participation in national championships	86
10.3 Achievements at national level	86
10.4 Incentives and honors/awards for sports persons	87
 Chapter 11: Universities Building Leadership	 88
11.1 Faculty Leadership (Awards and representation in Govt. policy making committees, memberships on various Councils etc.)	89

11.2 Student Leadership (Co-curricular Activities: University Dramas exhibitions, expos, competitions, debates at national and international.	91
Chapter 12: Finance	92
12.1 Approved Budget 2018-19	93
12.2 Financial year at a Glance	94
12.3 Recurring Budget	98
12.4 Self-Generated Income	102
12.5 Student Financial Aid	104
Chapter 13: University Governance	105
13.1 Syndicate Meetings	106
13.2 Academic Council Meetings	106
13.3 Board of Advanced Studies & Research Meetings	106
Chapter 14: Office of Resource Generation/Development	107
14.1 Initiatives and Implementation	108
14.2 Future Plans	108
Chapter 15: Health Centre/Medical Facilities	109
15.1 Medical Facilities available	110
15.2 Counseling for Stress Reduction	117
15.3 Health Insurance Benefits for DUHS Employees	117
Chapter 16: University Sustainability Report	120
16.1 Good Health & Well Being - SDG 03	121
16.2 Quality Education – SDG 04	123
16.3 Gender Equality – SDG 05	130
16.4 Water and Sanitation SDG-06	130
16.5 Partnership for the goals – SDG 17	134



Prof. Mohammed Saeed Quraishy

VICE CHANCELLOR, DOW UNIVERSITY OF HEALTH SCIENCES

Executive Summary

Founded in December 2003, the Dow University of Health Sciences (DUHS) has been developing tradition of excellence in education, research and community service. DUHS has educated and trained more than 8,324 students and residents from 49 academic institutes, colleges, and research core and administrative entities. The University currently more than 4000 employees, including approximately 1026 faculty members as of 2018-2019.

The Dow University of Health Sciences (DUHS) offers a multitude of undergraduate and postgraduate programs that cater to the needs of the medical and allied healthcare sciences by providing quality human resources. At the global level, the research creates a demarcation between the curricula of undergraduate and post graduate level studies, and DUHS also emphasizes integrating research as a part of the regular curriculum, in addition to community service. The research, when taught to students at the undergraduate and post-graduate level, develops their habit of learning and acquiring information through primary data sources.

In terms of a Financial Overview, DUHS ended the fiscal year 2018-19 with an overall deficit of Rs. (291.306) million. Further, during the last year, DUHS has been setting aside the funds against employees' deferred liabilities. The total liabilities stood at Rs. 1280.333 million as on June 30, 2019, however the total assets we were able to earmark on the same date was of Rs. 537.308 million. The major reason of deficit amounting to Rs. (743.025) million is due to the various announcements of increments by the Government in the past couple of years, such as the change in pay structure in consecutive years and up gradation of posts. Consequently, the difference between assets and liabilities, especially in Staff Pension Fund and Leave Compensated absences, have been widened as a result of revision in government pay scales. Therefore, the University has prioritized and mapped out the parameters for attaining the prime objective of sustainability, which include good governance and strong financial management system.

In 2018-2019, the focus of the University was on acquiring accreditation and clearing for all of its programs, with a strategic aim to enhance employee development and heighten growth of academic and research activities, with earmarked funds to make an impact in research and other scholarly activities in the world of medicine and research.

The University initiated collaborations with international universities and sought MOUs with talented professionals and scholars globally to enhance the quality of research activities and ultimately, the demand for our graduates worldwide.

ABOUT THE UNIVERSITY

VISION OF DOW UNIVERISTY OF HEALTH SCIENCES

***To Be a Pre-Eminent Academic Institution
Committed to Changing and Saving Lives.***

MISSION STATEMENT

***Providing Outstanding Patient Centered
Education, Training and Clinical Care
Informed by Cutting Edge Research and
Innovation Generating and Disseminating
New Knowledge.***

Colleges, Institutes & Schools of DUHS

	Name of Institute/Colleges & Schools of DUHS
1	Dow Medical College (DMC)
2	Dow Dental College (DDC)
3	Dow International Dental College (DIDC)
4	Dow International Medical College (DIMC)
5	Dr. Ishrat-ul-Ebad Institute of Oral Health Sciences (DIKIOHS)
6	Dow College of Pharmacy (DCOP)
7	Institute of Physical Medicine & Rehabilitation (IPM&R)
8	Dow Institute of Health Professionals Education (DIHPE)
9	Dow Institute of Radiology (DIR)
10	Institute of Nursing (ION)
11	Institute of Business and Health Management (IBHM)
12	Institute of Medical Technology (IMT)
13	School of Public Health (SPH)
14	Dow College of Bio-Technology (DCOB)
15	School of Post Graduate Studies (DPGS) a. Institute of Clinical Sciences b. Institute of Biomedical Sciences c. Institute of Health Sciences
16	Dow School of Bio-Medical Engineering Technology (DSBMET)
17	School of Dental Care Professionals
18	Institute of Basic Medical Sciences (IBMS)
19	National Institute of Diabetes & Endocrinology (NIDE)

Clinical Departments of DUHS

1. ***Dow University Hospital***
 - a. ***National Institute of Diabetes & Endocrinology (NIDE)***
 - b. ***Dow Institute of Cardiology***
 - c. ***National Institute of Liver & GI Diseases (NILGID)***
 - d. ***National Institute of Solid Organ & Tissue Transplant (NISOTT)***
 - e. ***Clinical Hematology and Bone Marrow Transplantation***
2. ***Dow Institute of Radiology***
3. ***Dow Diagnostic, Research and Reference Laboratory (DDRRL)***
4. ***OJHA Institute of Chest Diseases (OICD)***
5. ***Institute of Physical Medicine and Rehabilitation (IPM&R)***
6. ***Dr. Ishrat UI Ebad Khan Location (near LNH), National Stadium Road***
7. ***Dr. Ishrat UI Ebad Khan Institute of Blood Diseases (DIKIBD)***
8. ***DHA City Medical Center***
9. ***Dr. Abdul Qadeer Khan Institute of Behavioral Health Sciences is a Department of Dow International Medical College, offering psychiatry and IPD services***

Other Non-Academic, Research Core and Administrative Entities

1. ***Office of Research Innovation & Commercialization (ORIC)***
2. ***Office of Strategic Development and Implementation (OSDI)***
3. ***Dow Research Institute of Bio-Technology & Bio-Medical Sciences (DRIBBS)***
4. ***Professional Development Center (PDC)***
5. ***Clinical Trials Unit (CTU)***
6. ***Advanced Animal Laboratory***
7. ***Reading Libraries***
8. ***Office of Alumni Affairs and Resource Mobilization***
9. ***Office of Graduate Placement and Student Exchange Program***
10. ***Office of Student Counseling and Advising***
11. ***Internal Audit Directorate***
12. ***Office of Registrar***
 - a. ***Establishment***

b. Heath Insurance Section

c. Legal Section

d. Transport Section

13. Directorate of Information & Communication Technology (ICT)

a. Campus Management Solution (CMS)

b. Dow Vocational Technical Training Centre (DVTTC)

c. Digital Libraries (Multiple Departmental Libraries) of DUHS

14. Finance Directorate

d. Financial Aid Office

e. Payroll section

15. Directorate of Human Resources

16. Planning and Development Directorate

17. Procurement Directorate (Office of Procurement and Supply Chain)

18. Examination Department

19. Question Bank (Q Bank)

20. Admissions Department

21. Day Care Centers

22. Student Facilitation Centers

23. Dow Premium Health Water- Riva Water

24. Institute of Biological, Biochemical and Pharmaceutical Sciences

25. Quality Enhancement Cell (QEC)

Brief Profiles of Institutes & Colleges Offering Academic Programs

i. **Dow Medical College (DMC)**

Dow Medical College (DMC) is one of the oldest medical college in Sindh. Established in 1945, it has a rich history and has been involved in the teaching and training of medical students since the establishment of the college. For more than 60 years, the college has approximately seventeen thousand alumni, who are serving with distinction globally. It is attached to Dr. Ruth Phau Civil Hospital Karachi, Pakistan's largest teaching hospital with departments of all major specialties, and more than 2000 bed occupancy.

The five years course has been divided into 10 semesters. A new system of integrated teaching comprising of applied knowledge has been introduced, in which the students are taught basic subjects in the usual manner, which is later on followed by clinically oriented teaching sessions to explain the clinical application of the basic knowledge spiral after spiral, with enhanced integration of concepts.

ii. **Dow International Medical College (DIMC)**

Dow International Medical College was established in order to facilitate children of overseas Pakistanis as they face various difficulties in entering into medical profession abroad. It is a PM&DC recognized medical college that has been recognized internationally, and included in INTERNATIONAL MEDICAL EDUCATION DIRECTORY (IMED), with approval from the Educational Commission for Foreign Medical Graduates. The laboratories of the college are fully equipped with the latest equipment, including power labs, lecture halls, tutorial rooms and other basic facilities. A state-of-the-art gymnasium and sports and recreational complex also host extra-curricular activities for the students. Separate hostels for boys and girls are available, along within the same campus with a regularly monitored security system. Clinical training for the MBBS program of DIMC is provided in the 650-bedded Dow University Hospital, located within the vicinity of the same campus.

iii. **Dow College of Pharmacy (DCOP)**

Dow College of Pharmacy (DCOP) was established in 2007, and it is recognized and accredited by the Pharmacy Council of Pakistan. Dow College of Pharmacy provides pharmacy education to its students, offering graduate and post-graduate degree programs in the field of pharmacy:

- I. Pharm D (Morning and Evening) - A Five years Program for degree of Doctor of Pharmacy*
- II. Master Philosophy in various disciplines, as approved by Pakistan Pharmacy Council.*

Dow College of pharmacy is a leading institute in training of the allied healthcare professionals who are able to conduct innovative research, provide quality pharmaceutical care and consultancies, along with being at the forefront in formulating pharmaceutical products.

The college is well equipped with audiovisual enabled lecture halls, fully equipped laboratories for Pharmaceutics, Pharmacology, Pharmaceutical Chemistry, Pharmacognosy, Industrial Pharmacy, Quality Assurance, Instrumentation, Anatomy, Physiology and Pathology, Microbiology.

iv. Dow International Dental College (DIDC)

Dow International Dental College (DIDC) has been established at OJHA Campus, to meet deficiency of dental surgeons in Pakistan as well as abroad. It is located on the Top floors of DIMC building and offers admissions mainly to overseas students, however due to acute deficiency of Dental Surgeons; the option for admission is also given to local students.

Pakistan Medical & Dental Council (PM&DC) has recognized this college in 2011. This college is fully equipped with most modern facilities including regular library having books, journals etc. besides the digital library.

v. Dow Dental College (DDC)

Dow Dental College (DDC) was established in November 2012 at Dow Medical College (DMC). The College's new building was inaugurated in April 2018 and is under consideration for recognition and registration with PMDC for BDS (4 year) program.

DDC is working to prepare competent and professional dentists in the existing oral health care educational and patient management system in Pakistan and outside the country with a focus to serve community and research and to develop academic excellence and to deliver the utmost quality of scientifically proven preventive, educational and therapeutic services to the community.

This college and its dental hospital are fully equipped with most modern equipment in the laboratories along with simulators to teach clinical procedures at pre-clinical & clinical level. It has highly qualified and experienced faculty who carry out all dental procedures ranging from simple diagnostic procedures to extractions and implant placements.

vi. Institute of Nursing (ION)

Institute of Nursing was established in June, 2006 with the help of Higher Education Commission (HEC) Pakistan. It is envisioned to promote nursing education in Pakistan, preparing the leaders in the nursing and producing a sufficient number of highly skilled and trained nursing professionals who can meet the challenges of modern preventive and curative healthcare.

The Institute of Nursing has a state-of-art building and all the modern facilities of teaching and learning. Both undergraduate and post-graduate programs are offered at Institute of Nursing. For nearly 11 years, the Institute has helped prepare qualified professional nurses to work as highly skilled nursing staff, competent teachers and leaders in public and private health care sectors.

The Institute of Nursing represents a strong and extraordinary community of excellent students, well trained faculty, dedicated staff, and supportive alumni.

All programs, which are offered at Institute of Nursing are accredited by Pakistan Nursing Council (PNC) and Higher Education Commission (HEC), Pakistan.

vii. Dr. Ishrat-ul-Ibad Khan Institute of Oral Health Sciences (DIKIOHS)

Dr. Ishrat ul Ebad Khan Institute of Oral Health Sciences (DIKIOHS) is offering the following programs:

- *Bachelor in Dental Surgery (BDS)*
- *Bachelor in Dental Care Professionals (DCP)*
- *Masters in Dental Surgery (MDS)*

The Dental College for imparting under-graduate dental education leading to the degree of Bachelor of Dental Surgery (BDS), fulfilling the requirements of the Pakistan Medical & Dental Council (PM&DC). Training in all Basic and Clinical Dental sciences, and Community Dental Health is provided under the Semester System. Currently there are departments of Oral & Maxillofacial Surgery, Prosthodontics, Oral Pathology & Oral Microbiology, Oral Medicine, Periodontology, Oral Biology and Tooth Morphology, Sciences of Dental Materials, and Community Dentistry. The attached Dental Hospital with 125 dental chairs has Nine Out-patient Departments, namely Oral Diagnosis, Oral Surgery, Oral Medicine, Oral Radiology, Periodontology, Prosthodontics, Crown & Bridge, Orthodontics and Operative Dentistry, Procedures including extraction of teeth, filling, root canal, capping and emergency oral treatment is offered.

The clinical work at the hospital is augmented by best practices, good sterilization protocols and required gadgetry. All its departments are provided with material and equipment, which are further provided to patients at minimum cost. At the post Graduate Training and Research Centre of DIKIOHS, fellowship (FCPS) Part II training is underway at the Departments of Orthodontics, Prosthodontics, and Oral Surgery, after being recognized by College of Physicians & Surgeon (CPSP).

VIII. Institute of Business and Health Management (IBHM)

Institute of Business and Health Management is a constituent part of Dow University of Health Sciences and was established in 2007 to offer programs in Healthcare Management. The institute was established with the aim of creating an environment that facilitates learning and innovation, to bridge the gap between academia and healthcare industry, and to provide quality management graduates to contribute to the healthcare workforce. In order to meet objectives of providing quality health managers, IBHM is offering programs at the undergraduate level, with a Bachelors of Business Administration- BBA, along with a Masters of Business Administration - MBA (Regular) & Executive Masters of Business Administration- (EMBA).

IX. Institute of Medical Technology (IMT)

Medical Technologists are recognized globally as important and essential members of the health care team, not only for routine medical and surgical care but also for emergency medicine, critical care and management of disaster victims. The Institute of Medical Technology of Dow University was established for Human resource development in these key areas, with a four years' degree program in the following specialties:

- *Clinical Pathology*
- *Critical Care Technology*
- *Operation Theatre Technology*
- *Ophthalmology*
- *Perfusion Sciences*

It has eight semesters over four years and comprises of a core course where training is imparted in Basic Computer Skills, English proficiency, Behavioral Sciences, Research Methodology and Fundamentals of Basic Medical Sciences. The Institute has its own state of the art Skills Laboratory and a 26 station Digital library with Internet and PERN connectivity. Practical classes are held in well-equipped Science laboratories.

Additional training programs at Institute of Medical Technology include:

- *Adult Echocardiography / vascular technician course*
- *Cardiac technologist training program*
- *Electrocardiography training program*
- *Technician courses for ultrasound, radiography, CT scan and MRI*

X. Institute of Physical Medicine and Rehabilitation (IPM&R)

Institute of Physical Medicine and Rehabilitation was established in August 2007 and since then it is making a difference in the lives of people with disabilities through multidisciplinary Rehabilitative care to restore fullest possible, physical, mental, social and economic independence. It is one of the only civilian facilities in Pakistan providing such multi-disciplinary rehabilitative care.

IPM&R is committed to provide comprehensive multidisciplinary rehabilitation services and evidence-based practice to help the patients return to an active and healthy lifestyle. IPM&R is dedicated to being an internationally significant rehabilitation institute in the promotion, development and dissemination of research and education in the science of Rehabilitation through its activities and partnerships with internal and external communities.

XI. Department of Post Graduate Studies (DPGS)

The postgraduate education in Dow University of Health Sciences is conducted under the overall supervision of Department of Post Graduate Studies. The University bodies such as Board of Advanced Studies and Research, Institutional (ethical) Review Board and Scientific Committee facilitates monitors both the research activity and the overall programs.

Dow University conducts 35 Ph.D., Masters, Fellowship, Diploma and Certificate programs. Each year around 150 FCPS students, complete training form Dow University of Health Sciences. Till date, more than 150 candidates have passed M.Phil. MDS, MSBE, MS diabetes, MS Physiotherapy and obtained MBAs from Dow University of Health Sciences

XIII. Institute of Bio- Medical Sciences (IBMS)

Institute of Basic Medical Sciences (IBMS) has been established for M.Phil. and PhD courses in Basic Sciences i.e. Anatomy, Physiology, Biochemistry, Pathology,

Microbiology and Pharmacology to develop human resources. It is a part of medical research city at OJHA Campus. The building has spacious air-conditioned lecture halls and seminar rooms having necessary audiovisual multimedia facilities.

The contemporary techniques involved in basic sciences research activities is conducted in the labs of different departments, which are well equipped with modern equipment for variety of anatomical, physiological, biochemical, hematological, pathological, pharmacological, immunological and molecular biological experiments for specific research. The curriculum has been designed with multidisciplinary approach, focusing at molecular and cellular level. In addition, core and supportive courses provide competencies in research Biostatistics, critical analysis, and interpersonal communication. This institute is helping in bridging the deficiency gap of Basic Medical Sciences research in Pakistan.

XIV. School of Public Health (SPH)

Public Health is an important component of health services that is often ignored in the developing world and highly emphasized in the developed world. Keeping in view the needs of Pakistani population, the DUHS took this initiative to establish the first public health school in a public sector university of the Sindh Province.

Dow University of Health Sciences established the School of Public Health (SPH) at OJHA campus in 2012. The aim of this school is to improve the health of our population by addressing the major health issues. The programs at SPH include Master of Public Health, Master of Sciences (Biostatistics and Epidemiology), and Master of Sciences in Public Health. Pakistan Medical and Dental Council (PM&DC) has approved all of these programs.

The faculty and students of SPH are also conducting community-based research and health activities. The SPH has various sections to focus separately such as epidemiology division (examining communicable and non-communicable diseases in Pakistani population), nutrition division (studying the role of nutrition in disease development and prognosis) and economic and policy group (examining the impact of economic indicators on health of Pakistani population and health policy).

XV. National Institute of Diabetes and Endocrinology (NIDE)

It was established in 2006. It provides consultation and counseling of patients suffering from Diabetes and other Endocrine diseases. This institute is offering a two-year Master's program in Diabetes &

Endocrinology. This institute is also conducting public awareness programs regularly as the prevalence of diabetes and endocrine diseases are on the rise in Pakistan, in particular Sindh. This institute also has facilities for management and treatment of eye complications of diabetes through its Eye Care Center, which offers the patients:

- Complete Eye Examinations
- Screening for Diabetic Retinopathy
- Fundus Fluorescein Angiography
- Laser photocoagulation

More than 5000 patients have been registered. A comprehensive facility for diabetic diet consultation, foot care, early diagnosis and treatment-based facilities for other endocrine

diseases, especially thyroid diseases, growth disorders and obesity, is also offered to the patients.

XVI. Dow Institute of Radiology

The Dow Radiology Complex was established in 2008 to have the highest quality medical imaging, research opportunities, and Radiology educational experiences. Besides providing economic benefits to the patients, the department of Imaging Services is committed to be at the forefront of new developments and clinical applications in the rapidly changing field of medical imaging.

Services include the provision of all modern diagnostic facilities such as

- X-ray
- Ultrasound (09 Nine Machines)
- Fluoroscopy
- Dexa Scan
- Echocardiography
- Mammography
- CT Scan (03 Three Machines)
- MRI (03 Three Machines including one open MRI for Claus trophic patients).
- 2 MRI Machines (including 1.5 Tesla) and 2 CT Machines, which are functioning 24 hours.

Considering the growing demands of patients, a City Campus on Stadium Road has been established, named as 'Dow LEJ Campus' and it provides facilities of CT & MRI also, 24 hours a day. Highly qualified and experienced faculty, staff, and technologists perform all the teachings and services at Dow Institute of Radiology.

XVII. Dow Institute of Health Professionals Education (DIHPE)

The Dow Institute of Health Professionals Education (DIHPE) is the first health professional education program of the country. The idea has been conceived and the initiative finally took the shape of establishment of an institute of health professional education to restructure, organize and optimize the existing professional education activities of the region.

The foundation of Dow Institute of Medical Education is based on the four pillars of Medical Education: Teaching & Learning, Principles of Assessment, Curriculum Development & Innovation and Research. Additionally, we oversee the conduct of various types of Continuing Professional Development short courses ranging from one-day to five-day courses, and even up till three-month exploratory course that are compulsory for the all the MPhil and PhD trainees of Dow University of Health Sciences (DUHS).

Dow Institute of Health Professional Education (DIHPE) will act as a nucleus for DUHS in teaching, scholarship, development and evaluation of educational programs through service provision research and innovation. The scope of its activities includes postgraduate education, continuing professional development and continuing medical education.

XVIII. Dow College of Biotechnology (DCOB)

The Dow College of Biotechnology is located in the graceful building of Dow International Medical College, OJHA Campus. Currently, a four-year BS Biotechnology program is offered through Dow College of Biotechnology. The College has an excellent teaching faculty, comprising of foreign and nationally qualified PhD. scientists, who are extensively involved in research activities and hence are well aware of the recent developments in the field of sciences.

Teaching methodology at Dow College of biotechnology is a well-planned blend of theory and practical skills learned in laboratories; therefore, this program is for students who have a passion for becoming scientists. For those students, Dow College of Biotechnology can provide an excellent platform. The college offers the students diverse experiences and expertise, comprising of a quality educational environment that emphasizes learning through integration of theory with practical laboratory and field studies. Our program offers the students the opportunity to work on research projects that provide valuable insight and impact people's lives.

XIX. Dow School of Biomedical Engineering and Technology (DSBMET)

The Dow School of Biomedical Engineering and Technology is a driving force in creating engineering knowledge and novel biomedical technology that improve the human care through the advancement of clinical care and biomedical sciences.

We work closely with medical researchers to identify important problems that impact human health and solve them using our technical expertise. We engage motivated and talented students in the classroom, laboratory and clinic, imparting to them the spirit of our mission as we prepare them for future careers as effective, knowledgeable, and ethical leaders in corporate, professional, and academic communities.

We seek to prepare our students for skilled and ethical service to their communities by creating a free and open learning environment that fosters their intellectual growth, advance the frontiers of scientific inquiry and contribute with distinction to the international community for scholarship and service.

CHAPTER 1

ACADEMIC ACTIVITIES

1.1 UNDERGRADUATE & POSTGRADUATE PROGRAMS

UNDERGRADUATE PROGRAMS:

- 2 Bachelor of Medicine & Bachelor of Surgery (MBBS)
- 3 Bachelor in Dental Surgery (BDS)
- 4 Pharm-D (Doctor of Pharmacy)
- 5 BS Generic Nursing (BSN)
- 6 Post RN. Nursing
- 7 Doctor of Physiotherapy (DPT)
- 8 BS Occupational Therapy
- 9 BS Prosthetics & Orthotics
- 10 BS in Dental Care Professional (DCP) Dental Hygiene
- 11 BS in Dental Care Professional (DCP) Dental Technology
- 12 BS Medical Technology
- 13 Bachelors of Business Administration (BBA)
- 14 BS Nutritional Sciences
- 15 BS Biotechnology
- 16 Associate of Applied Sciences (AAS) leading up to BS Radiology
- 17 BS-Radiology

◆ POSTGRADUATE PROGRAMS

1. MASTERS IN DENTAL SURGERY (MDS-BASIC & CLINICAL)

A 4-Years Program in the following Specialties of **Basic Sciences**

- I. Dental Materials
- II. Oral Pathology
- III. Community Dentistry
- IV. Oral Biology

A 4-Years Program in the following Specialties of **Clinical Sciences**

- I. Operative Dentistry
- II. Oral Surgery
- III. Prosthodontics
- IV. Orthodontics

2. MASTERS IN SCIENCE DENTAL SURGERY (MSc. DS-BASIC & CLINICAL)

A 2-year program in the following specialties of **Basic Sciences**

- I. Community Dentistry
- II. Dental Materials
- III. Oral Biology
- IV. Oral Pathology

A 2-year program in the following specialties of **Clinical Sciences**

- I. Operative Dentistry
- II. Oral & maxillofacial Surgery
- III. Prosthodontics
- IV. Periodontics
- V. Oral Medicine

3. **MASTERS IN BIOSTATISTICS AND EPIDEMIOLOGY** (MSBE)
4. **MASTERS IN HEALTH PROFESSIONS EDUCATION** (MHPE)
5. **MASTERS IN ADVANCED PHYSIOTHERAPY** (MSAPT)
6. **MASTERS IN NURSING** (MSN)
7. **MASTER'S IN PUBLIC HEALTH** (MPH)
8. **MASTERS IN BIO-PHYSICS**
9. **MASTERS OF BUSINESS ADMINISTRATION** (MBA)
10. **MASTERS OF SCIENCE IN PUBLIC HEALTH, WITH SPECIALTIES IN THE FOLLOWING DISCIPLINES:**
 - I. Social & Behavioral Sciences
 - II. Health Policy and Management
 - III. Nutritional Sciences

◆ **CLINICAL DIPLOMA PROGRAMS:**

1. **DIPLOMA IN FAMILY MEDICINE** (DFM)
2. **DIPLOMA IN MEDICAL JURISPRUDENCE** (DMJ)
3. **DIPLOMA IN CARDIOLOGY** (DIP-CARD)
4. **DIPLOMA IN CRITICAL CARE MEDICINE** (DCCM)
5. **DIPLOMA IN TUBERCULOSIS & CHEST DISEASES** (DTCD)
6. **DIPLOMA IN CHILD HEALTH** (DCH)
7. **DIPLOMA IN DERMATOLOGY** (D- DERM)
8. **DIPLOMA IN RADIOLOGY** (DMRD)
9. **DIPLOMA IN ANESTHESIOLOGY** (DA)
10. **DIPLOMA IN OPHTHALMOLOGY** (DO)
11. **DIPLOMA IN PSYCHIATRIC MEDICINE** (DPM)

◆ ***FCPS-II: Fellowship training (4-Years Program), Degree awarded by CPSP***

- 1 **MEDICINE**
- 2 **SURGERY**
- 3 **GYNAE**
- 4 **PAEDS**
- 5 **CARDIOLOGY**
- 6 **RADIOLOGY**
- 7 **PULMONOLOGY**
- 8 **OPHTHALMOLOGY**
- 9 **ANESTHESIOLOGY**
- 10 **PLASTIC SURGERY**
- 11 **NEUROLOGY**
- 12 **ENT**
- 13 **PSYCHIATRY**
- 14 **COMMUNITY MEDICINE**
- 15 **OPERATIVE DENTISTRY**
- 16 **ORAL SURGERY**
- 17 **ORTHODONTICS**
- 18 **PROSTHODONTICS**
- 19 **CARDIAC SURGERY**
- 20 **ORTHOPEDIC**
- 21 **DERMATOLOGY**
- 22 ***PHYSICAL MEDICINE AND REHABILITATION***

**◆ MS/MD- MASTERS OF SURGERY &
DOCTOR OF MEDICINE PROGRAMS**

DOCTOR OF MEDICINE PROGRAM SPECIALTIES (4-5 YEARS PROGRAMS)

1. INTERNAL MEDICINE	6. PEDIATRIC
2. NEUROLOGY	7. CRITICAL CARE MEDICINE
3. CARDIOLOGY	8. FAMILY MEDICINE
4. DERMATOLOGY	9. PULMONOLOGY
5. COMMUNITY MEDICINE	10. ANESTHESIOLOGY
11. PSYCHIATRY	13. SPORTS MEDICINE
12. GASTROENTEROLOGY	14. RADIOLOGY

Master of Surgery Program Specialties

1. GENERAL SURGERY
2. GYNAE & OBS.
3. ORTHOPEDICS SURGERY
4. PLASTIC SURGERY
5. NEUROSURGERY
6. CARDIAC SURGERY
7. OPHTHALMOLOGY
8. PEDIATRIC SURGERY
9. ENT

1.2 M. Phil & Ph. D. PROGRAMS

M. Phil in Basic Sciences offered in the following specialties:

1. ANATOMY	11. MOLECULAR PATHOLOGY
2. PHYSIOLOGY	12. MOLECULAR BIOLOGY
3. PHARMACOLOGY	13. MOLECULAR MEDICINE & BIOINFORMATICS
4. BIOCHEMISTRY	14. M. PHIL IN PHARMACEUTICAL SCIENCES, IN THE SPECIALTY OF PHARMACOLOGY
5. HEMATOLOGY	
6. MEDICAL GENETICS	
7. HISTOPATHOLOGY	
8. MEDICAL MICROBIOLOGY	
9. CHEMICAL PATHOLOGY	
10. BIO-TECHNOLOGY	

◆ **Ph. Ds offered in the following Disciplines:**

1. PH.D. IN DENTAL SCIENCES
2. PH.D. IN CLINICAL SCIENCES
3. PH.D. IN BASIC SCIENCES
4. PH.D. IN PUBLIC HEALTH

◆ **PH.D. SPECIALTIES WITH CURRENT ACTIVE ENROLLMENT:**

ANATOMY, CHEMICAL PATHOLOGY, COMMUNITY DENTISTRY, GYNAE & OBS, HISTOPATHOLOGY, MEDICAL MICROBIOLOGY, MEDICINE, NEUROSCIENCES, OPERATIVE DENTISTRY, OPHTHALMOLOGY, ORAL BIOLOGY, ORAL PATHOLOGY, ORAL SURGERY, PHARMACOLOGY, PHYSIOLOGY, PUBLIC HEALTH & SURGERY

◆ **PHD SPECIALTIES ADVERTISED (HEC APPROVED & ACCREDITATION COUNCIL APPROVED PROGRAMS)**

BIOCHEMISTRY, BIOTECHNOLOGY, GENETICS, MICROBIOLOGY AND PHARMACOLOGY

1.3 Academic Achievements

In the year 2018-19, 1270 students have passed out from various undergraduate and postgraduate programs.

◆ **Total Passed out Students in Undergraduate Courses**

S.No	Course Title	No. of Students
1.	MBBS	399
2.	BDS	200
3.	Pham-D	96
4.	DPT	106
5.	BS MT	112
6.	BS OT	14
7.	BS PO	05
8.	BS DCP	45
9.	BS Nursing (Generic)	29
10.	Post RN Nursing	28
11.	BBA	42
Total Undergraduate Candidates		1076

◆ *Total Passed out Students in Postgraduate Courses:*

S.No	Course Title	No. of Students
1.	MS APT	06
2.	MPH	12
3.	MPhil	23
4.	MS BE	12
5.	MSc. D&E	10
6.	MS Nursing	09
7.	MS PH	07
8.	MDS	09
9.	MBA	42
10.	EMBA	14
11.	MHPE	07
12.	MSc. DS	02
13.	MS TMTT	01
14.	Ph.D.	01
Total Postgraduate Candidates		155

◆ *Total Passed out Students in Diploma Courses*

S.No	Course Title	No. of Students
1.	Dip. Card.	27
2.	D. Derm	01
3.	DMRD	09
4.	Diploma in Echocardiography	02
Sub. Total Diploma (C)		39

Sub. Total Undergraduate (A)	1076
Sub. Total Postgraduate (B)	155
Sub. Total Diploma (C)	39
<i>Grand total (A+B+C)</i>	<i>1,270 Total Graduated Students</i>

◆ **Research Achievements**

- ◆ *During the years 2018 and 2019, total number of projects approved were 286.*
- ◆ *90 research projects were newly launched.*
- ◆ *The research publication for the years 2018 and 2019 were 376.*

1.4 Foreign Academic Linkages

For the year 2018-19, academic linkages were continued or established with the foreign medical boards/associations/universities, including the following:

◆ Tech4 Life Enterprises Canada Inc.
◆ International Committee of the Red Cross (ICRC), Geneva, Switzerland
◆ Universiti Sultan Zainal Abidin, Malaysia
◆ American Medical Residency Certification Board (AMRCB)
◆ Educational Commission for Foreign Medical Graduates (ECFMG)
◆ Foundation for Advancement of International Medical Education and Research (FAIMER).
◆ Global Health Learning Opportunities (GHLO)
◆ Medical Board of California
◆ University of Illinois-Chicago
◆ International Committee of the Red Cross
◆ APPNA - Association of Physicians of Pakistani-Descent of North America
◆ ANG Centre for Liver and Biliary Surgery Private Limited Company

1.5 Honors and Awards:

Dr. Bari is a graduate of the Dow Medical University. He has been the recipient of numerous awards for his selfless contribution to medicine and community service, which include: Tamgha-e-Imtiaz 2019, presented by President Arif Alvi.

1.6 Institutional Linkages:

Academics – For the Purpose Of Post Graduate Trainings, We Are Linked With The Following Organizations:

✦ Aga Khan University, Karachi
✦ Jinnah Post Graduate Medical Center, Karachi
✦ Patel Hospital, Karachi
✦ Darul-Sehat Hospital, Karachi
✦ Karachi Adventist Hospital
✦ Tabba Heart Institute, Karachi
✦ Ghulam Muhammad Mehr Medical College, Sukkur
✦ Chandka Medical College, Larkana
✦ Pakistan Council for Scientific and Industrial Research (PCSIR)
✦ Pakistan Standard Quality Control Authority (PSQCA)
✦ Executive Membership from Sindh Province In Scaling Up Nutrition Academia & Research (SUNAR)
✦ Martin Dow Limited
✦ Post-Graduation Diploma & training programs of PIQC Institute of Quality
✦ Foundation for the Advancement of International Medical Education and Research (FAIMER)
✦ Educational Commission for Foreign Medical Graduates (ECFMG)

Educational visits of Medical College students from:

✦ Karachi Medical and Dental College Karachi
✦ Hamdard Medical University Karachi
✦ Sir Syed Medical College Karachi
✦ Liaquat College of Medicine and Dentistry Karachi
✦ Dr. Abdul Wahab Dogar and Associates (AWD Associates), Lahore

Research Work Collaborations with:

- ✦ Aga Khan University, Karachi
- ✦ National TB Control Program
- ✦ Pakistan Chest Society
- ✦ WHO

CHAPTER 2

RESEARCH AND DEVELOPMENT

2.1 Research & Development – An Overview

The establishment of Department of Research took place with the inception of Dow University of Health Sciences. Since then, the Research Department is providing its services to enhance university position in research, training and consultation areas.

I. Postgraduate Synopsis and Thesis Review

A. Scientific Research Committee

This committee was formed in November, 2012 with the approval of Board of Advanced Studies and Research of DUHS. The committee consisted of faculty of DUHS from various fields. In this committee, research proposals of postgraduate students are scientifically reviewed and advised the modifications to the students.

B. PhD Advisory Committee

The purpose of this committee is to evaluate synopses submitted by PhD students. The committee comprises of indigenous experts from different fields. In this committee, research synopses of doctorate students are scientifically reviewed and advised the modifications to the students.

C. Institutional Review Board

Department also administered and organized meetings of Institutional Review Board of DUHS which consists of 14 members from different specialty such as medicines, law, religious scholar, ethics, social work etc. It reviews and approves research proposals conducted by DUHS. Besides, DUHS offers this service to those institutes who have not their own IRB/ERB.

D. Board of Advanced Studies and Research

All the official works related to this Board are administered and organized under Research Department. The Board consists of 13 members under the Chairmanship of the Vice Chancellor.

The functions of this board are:

- | |
|---|
| 1. To advise authorities on all matters connected with the promotion of Advanced Studies and Research in university |
| 2. To propose regulations regarding the award of research degrees. |
| 3. To appoint supervisors for research students to determine the subject of their thesis. |
| 4. To recommend panels of names of paper setters and examiners for research examination after considering the proposals of Board of Studies in this behalf; and |
| 5. To perform such other functions as may be prescribed by the statutes. |

6. Furthermore, the Board also gives final approval for the synopsis.

II. ACADEMIC RESEARCH ACTIVITIES

- A. Undergraduate Students Research Activities:** A research component was also incorporated in MBBS curriculum of DUHS five years ago. Each clinical group works under a faculty member of DUHS.
- B. Fourth Year Research Book:** The researches of undergraduate students are published annually under department of research. This book contains reports of all the clinical groups of DUHS.
- C. Postgraduate Programs:** Research Department is running a postgraduate level program, Master of Science in Biostatistics and Epidemiology (MSBE). MSBE program was started in October 2008. This is a two years program comprises of four semesters with a research thesis work in second year of the program.
- D. Summer Short Courses:** Department has initiated three months summer short courses last year. The courses on Applied Biostatistics, Fundamental Epidemiology, Statistical software in health sciences and Research methodology are taught during June to August. The classes are conducted in weekends.
- E. Training on Biostatistics and Research Methodology:** Department also facilitates training on specific topics of biostatistics and research methodology. Several workshops have been conducted by the faculty of Research Department on the same.
- F. Foreign Scholarship program:** Foreign Scholarship program is funded by Higher Education Commission (HEC) of Pakistan. Twenty scholars were sent for PhD program at overseas universities. Fifteen scholars enrolled in United Kingdom's universities and one each in Australia, Canada, Sweden, Scotland and Germany. These scholars were selected after through screening by Graduate Assessment Test (GAT), subject and protocol writing tests and then following by two interviews based on candidate's research interest and specialty. Eighteen scholars have successfully completed their PhD program and joined the DUHS back.
- G. Research and Bio-statistical Consultation:** The faculty of Research Department also provides research and bio-statistical consultation not only to faculty and students but also to pharmaceutical industries till now. The consultation is classified following three major parts
H. Statistical Consultation: Department consults all kind of statistical works to different academic and research-based organizations including pharmaceutical industries. These services include, but not limited to, sample size calculation, data entry, data analysis and formatted table & graph of the output of the analyses.
- I. Research Writing Consultation:** Department also provides consultation in writing analysis and result sections of the research project/report. Besides, investigators who wants to write by themselves, department guides them how to interpret the statistical results.
- J. Research Protocol Review Guidelines:** The faculty also assists research student and faculty about the processes of research work and writing including questionnaire formatting, structure of protocol, literature review and consent form.

III. OTHER RESEARCH RELATED ACTIVITIES: RESEARCH POSTERS COMPETITION

Each year, research department celebrates Faculty and Student Research Days. On these days, researches of faculty and students are displayed through posters. The best three researches present their works orally are awarded.

JOURNAL OF THE DOW UNIVERSITY OF HEALTH SCIENCES

Department of Research, DUHS administered and published Journal of Dow University of Health Sciences

(JDUHS) 3 times a year. This journal is approved by PMRC and indexed in IMEMR, PakMediNet and CABI. The journal is also recognized by Higher Education Commission (HEC), Pakistan. The journal is available online and submission and processes of manuscript can be made while emailing to juduhs@duhs.edu.pk.

2.2. RESEARCH PROJECTS

2.2.1 Completed

Total number of Approved in 2018	158
Total number of Approved in 2019	128

2.2.2 Newly launched projects (research)

Total number of Newly Launched in 2018	54
Total number of Newly Launched in 2019	36

2.3. PUBLICATIONS & AUTHORS CREDITED TO DUHS:

Category	2018	2019
W	112	61
X	16	10
Y	15	9
Z	70	5
TOTAL	213	47

2.4. KEY PERFORMANCE INDICATORS REGARDING RESEARCH OF THE UNIVERSITY

Research at the Dow University of Health Sciences	2018-2019
No. of High-Quality Research Proposals	298
Total no. of Research Papers Published	285
No. of Research Paper Published in International Journals of High Impact Factor/HEC Approved Journals	128
No. of Research Paper Published in Other Journals	272
Total No. of Research Projects (DUHS only)	78
No. of Funded Research Projects (from external organizations)	22

2.5. RESEARCH JOURNAL

Journal of Dow University of Health Sciences (JDUHS)

Year 2018:

Volume- 11 Issue- 2 May to August - 2018

Volume- 11 Issue- 3 September to December - 2018

Total Issues of Journals in the month of July to December 2018 02 Issues

Year 2019:

Volume- 12 Issue- 1 January to April - 2019

Volume- 12 Issue- 2 May to August - 2019

Volume-12 Issue- 3 Sept- December - 2019

Total Issues of Journals in the month of January to December 2019 03 Issues

2.6. RESEARCH COLLABORATIONS

2.6.1 INDIGENOUS RESEARCH COLLABORATIONS:

Aga Khan University, Pakistan

Liaquat University of Medical and Health Sciences

University of Karachi

Pak Ethanol (PVT) Limited

Martin Dow Pharmaceuticals

2.6.2 FOREIGN LINKAGES:

Virginia Commonwealth University

Universiti Sultan Zainal Abidin (UniSZA)

Food and Agriculture Organization of the United Nations

World Health Organization (WHO)

2.6.3A- FUNDING GRANTS FOR R&D FROM HEC, FOR THE YEAR 2017-2018

S.No.	Title of Research Proposal	Amount Approved (Rs.)	Date of Approval	HEC Ref. No.
1	"To investigate the potential contribution or thyroid hormones."	Rs. 2,849,274	14/02/2019	No. 7238/Sindh/NRPU/R&D/HEC/2017
2	Glycemic control in type 2 diabetes mellitus patients through non-surgical periodontal therapy randomized control trial	Rs. 1405530	26/1/2019	No. 7143/Sindh/NRPU/R&D/hec/2017
3	Identification of biomarkers for the diagnosis of polycystic ovarian syndrome patients	Rs. 8718460	30/01/2019	No 7155/Sindh/NRPU/R&D/HEC/2017
4	Investigation to improve the therapeutic utility of genetically modified human umbilical cord derived stem cells for the regeneration of injured kidney tissues	RS. 1125000	26/01/2019	No. 7193/SINDH/NRPU/R&DHEC/2017
5	Design of experiment-based optimization for lactic acid production using sugarcane molasses as a raw material	Rs 480000	29/01/19	No. 21-2393/SRGP/R&D/HEC/2019
6	Heterologous expression of streptokinase from beta hemolytic streptococcal strain for pilot scale production of recombinant streptokinase	Rs. 1492274	04/03/2019	No. 7319/SINDH/NRPU/R&D/HEC/
7	Extraction. Purification and characterization of bromelain from pineapple waste	RS. 500000	18/11/18	No.21-2278/SRGP/R&D/HEC/2018

2.6.3 B- VICE CHANCELLOR'S SEED FUNDING INITIATIVE (VCSFI)

ESTABLISHED ANNUAL VICE CHANCELLOR'S SEED FUNDING INITIATIVE (VCSFI) FOR INTRAMURAL FUNDING OF COMPETITIVE GRANT APPLICATIONS, IN 2019, WHERE GRANTS FOR RESEARCH WERE AWARDED WITH A TOTAL AMOUNT OF **RS. 10,109,300.00 GRANTED & DISSEMINATED IN MAY 2019.**

S.No.	Title of Research Proposal	Amount Approved (Rs.)	Date of Approval	Sponsoring Agency
1	Role of 7-ketocholesterol (7-KCHO) in Pathophysiology of Diabetic Nephropathy (DN): Streptozotocin (STZ) induced Disease Model	500,000	23 MAY 2019	VCSFI
2	Pre-clinical studies of a novel simvastatin-lecithin stabilized surface coated folic acid-silver Nano formulation against atherosclerosis in Apo-E knockout mice	500,000	23 MAY 2019	VCSFI
3	Establishment of a Microbial Bio-resource Center (Bio bank)	1,000,000	23 MAY 2019	VCSFI
4	Role of Autophagy in Different Histological subtypes of Adult Diffuse Gliomas	350,000	23 MAY 2019	VCSFI
5	Effects of Antenatal Administration of Budesonide and Fluticasone Propionate on Intrauterine Fetal Growth: Special Emphasis on the Regulation of Breast Cancer Resistance Protein (BCRP) and P glycoprotein (P-gp).	1,000,000	23 MAY 2019	VCSFI
6	Pharmacodynamics And Pharmacokinetic Studies On Analogues Of Fluor quinolones Against MDR-Tb	900,000	23 MAY 2019	VCSFI
7	Gene correction of specific 619 bp deletion using CRISPR-Cas9 in induced pluripotent stem cells derived from β Thalassemia Patients	500,000	23 MAY 2019	VCSFI
8	Participation of DUHS in normative Pakistan data collection for the evaluation of Ayres sensory integration (easi), an international project, in collaboration with Thomas Jefferson University Philadelphia, USA.	700,000	23 MAY 2019	VCSFI
9	Housing and health: Use of C-Reactive Protein (CRP) as biomarker data	775,000	23 MAY 2019	VCSFI
10	Experimental Validation of Computationally Designed Anti-cancerous Peptide, DIP-36, against c-MYC-USP36 Complex in Diffuse Large B Cell	725,000	23 MAY 2019	VCSFI
11	Osteogenic Differentiation of Wnt Activated Human Periodontal Ligament	500,000	23 MAY 2019	VCSFI

	Stem Cells (hPDLSCs) in Three Dimensional (3D) Hydrogels			
12	Microbial DE phosphorylation of Phytic Acid: An alternative approach to increase the bioavailability and bioaccecibility of micronutrients in human.	500,000	23 MAY 2019	VCSFI
13	Antenatal Depression and Anxiety in Pregnant Women and Postpartum Outcomes: A Cohort Study from Pakistan	244,300	23 MAY 2019	VCSFI
14	In vitro and In vivo anticancer studies of Tagetes patula flower extract and pure compound (patuletin) against Hepatocellular carcinoma	250,000	23 MAY 2019	VCSFI
15	Investigating c-MYC Sequential and Expressional Polymorphism in Oral Squamous Cell Carcinoma	250,000	23 MAY 2019	VCSFI
16	Impact of Brain-Derived Neurotrophic Factor Gene Polymorphism on its Peripheral levels in Schizophrenic Patients	250,000	23 MAY 2019	VCSFI
17	Investigating Role of Kaiso Target Proteins Expression in Field Cancerization and Tumor Progression of Oral Squamous Cell Carcinoma (OSCC)	250,000	23 MAY 2019	VCSFI
18	Dynamic soft tissue Mobilization vs Proprioceptive Neuromuscular Facilitation Stretching in reducing hamstring muscle tightness in 23 MAY 2019patients with knee osteoarthritis: A randomized control trial.	250,000	23 MAY 2019	VCSFI
19	Comparative Analyses of Physical and Elemental Characteristics of Dental Material of Vertebrates	165,000	23 MAY 2019	VCSFI
20	Investigating the Synergistic Effects of Bevacizumab and Celecoxib on Angiogenesis Using In vitro Derived Human Umbilical Vein Endothelial Cells	250,000	23 MAY 2019	VCSFI
21	Association of polymorphisms in cytochrome P450 3A4 and deoxycytidine kinase genes on the adverse effects by Cytarabine in the treatment of acute lymphoblastic/myeloid leukemia	250,000	23 MAY 2019	VCSFI

◆ **OFFICE OF RESEARCH, INNOVATION AND COMMERCIALIZATION (ORIC)**

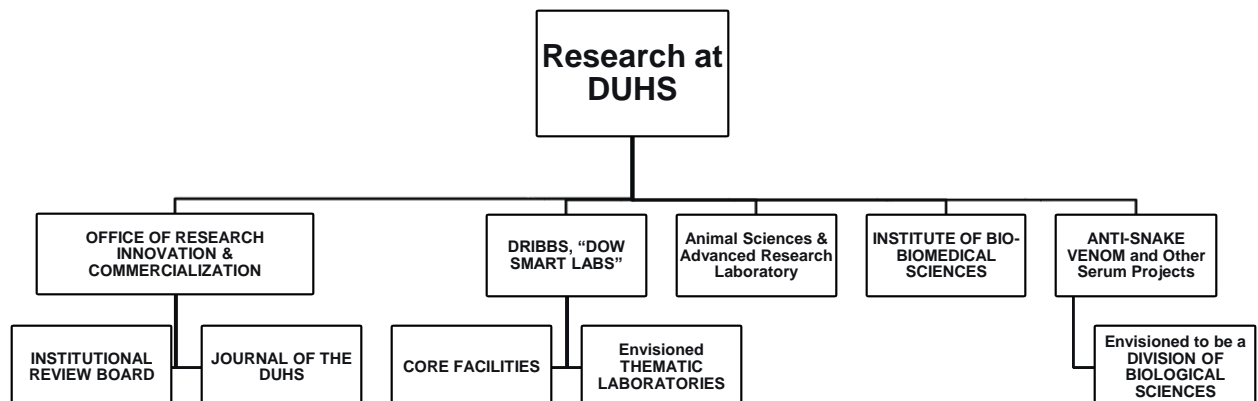
The Office of Research, Innovation and Commercialization 's Vision is to promote a culture of research and innovation, with a purpose to streamline the quality research with commercialization.

FORMATION OF ORIC

In 2011, under the directives of Higher Education Commission (HEC) of Pakistan, DUHS developed Office of Research, Innovation and Commercialization (ORIC) to promote innovation and commercialization at the university.

The ORIC, DUHS since then, adapted policies for augmenting activities related to innovation and commercialization at DUHS. The ORIC office at DUHS has divided its activities into four diverse segments including research projects, linkage establishment, innovation support and commercialization.

RE-ORGANIZATION OF RESEARCH AT DUHS AS PER STRATEGIC VISION 2030



VISION OF ORIC

It is the Vision of ORIC, DUHS to promote and align various research projects at the University, which have a direct impact on the society today.

4TH ALL PAKISTAN DUHS-DICE HEALTH INNOVATION EXHIBITION 2018

The 4th All Pakistan DUHS – DICE Health Innovation Exhibition 2018 was held on October 12th – 13th, 2018 at Expo Center, Karachi.

Dow University of Health Sciences is on a mission to revolutionize the academia with entrepreneurial activities. By the grace of Allah, we are heading towards “4th All Pakistan DUHS-DICE Health Innovation Exhibition - 2018”. This distinguished and unique event will provide a platform for the entrepreneurs and young generation to share their innovative ideas and work for Academic Industry, Capitalists from Government and Private sectors and the expatriates to interact jointly and share knowledge at par with the developed countries.

The main objectives of this exhibition are:

1. To establish a strong linkage between Academia and Health providing institutions.
2. Motivate professionally educated youth to generate innovative ideas and utilize currently available state of art technologies and software, for practically possible development of health-related products and services.
3. To foster culture of innovation and Entrepreneurship in the country and make it a part of Nation’s DNA.
4. Globally creating a positive and favorable image of Pakistan’s health sector.

Entrepreneurs and personnel of esteemed organizations / industry are invited to join us in the “4th All Pakistan DUHS – DICE Health Innovation Exhibition - 2018”, in which more than 150 innovative projects are showcased by more than 35 well known universities of Pakistan.

The DUHS DICE Health Innovation Exhibition 2018 was inaugurated by the honorable Vice Chancellor Prof. Muhammaed Saeed Quraishy, along with the Chairman DICE Health USA, Dr. Sohail Hassan (with their core DICE team) and Mr. Imran Ismail, Governor of Sindh was invited as the chief guest at the event.

NATIONAL INNOVATION BASKET SESSION (NIB)

Besides the routine activities of the event, this year DICE Foundation has introduced a new edifying segment (NIB). People from academia and health industry joined together in a brain storming session and discussed the SWOT analysis on 5 major modes of health industry medical devices, alternative medicine, health care, pharmaceuticals & Nutrition. The outcomes of this session were noteworthy as each expert has momentarily expounded the fences and prospects of their specific field.

INNOVATION

ORIC, DUHS promotes innovative research ideas at the University through workshops, brainstorming sessions and intellectual property discussions with all major stakeholders of the University.

COMMERCIALIZATION ACTIVITIES OF DUHS

ORIC, DUHS envisions financial sustainability of the University; therefore, it promotes transformation of innovative discoveries into industrial ventures. The entrepreneurship spirit has been nurtured at the University, leading to commercial projects in the year 2017-18, including the following:

- ◆ **Riva Drinking Water Distribution, an enterprise of Dow University of Health Sciences.**
- **Daily Life Activities (ADL) Devices at the Institute of Physical Medicine and Rehabilitation**
- ◆ **Artificial Limbs (commercialization and ease of access through IPM&R)**

CHAPTER 3

QUALITY ASSURANCE

3.1 IMPACT OF QUALITY ASSURANCE IN THE UNIVERSITY:

Dow University of Health Sciences has a well-developed Quality Assurance system that monitors the academic programs, in compliance with HEC criteria, Accreditation Councils and benchmarking with international standards.

Worldwide, universities rely on quality assurance procedures to achieve excellence in their academic programs, as well as to sustain it in future. In 2006, as per the directives of Higher Education Commission (HEC) Pakistan, the Quality Enhancement Cell (QEC) at Dow University of Health Sciences was established.

In this regard, number of measures for quality enhancement and assurance has introduced to have an effective quality assurance setup with standardized procedures and practices in health education, which includes:

- Preparation of Program Self-Assessment Reports for all degree awarding programs
- Faculty and course assessment through student feedback.
- Implementation of Quality Management System at Dow University of Health Sciences, in accordance with minimum HEC criteria for graduate level and post-graduate programs.

3.2 QUALITY ENHANCEMENT CELL AT DOW UNIVERSITY OF HEALTH SCIENCES

The Quality Enhancement Cell at Dow University of Health Sciences was established in the 1st phase of HEC implementation in 2006, along with 29 other cells in various public sector universities throughout Pakistan. The prime objective of QEC is to practice evaluative measures in order to achieve excellence in program delivery. Since its establishment, QEC is continuously involved in monitoring and measurement of Quality Management System (QMS) processes and the academic services throughout the DUHS.

✓ EFFECTIVENESS OF QEC-DUHS BY HEC

- ✓ In 2017-18, the QEC-DUHS scored 93.24%.
- The Yearly Progress Report for 2018-19 is already submitted to HEC for evaluation.

✦ Responsibilities of QEC

The responsibilities of QEC include:

- Preparing and reviewing the program evaluation through Self- Assessment.
- Reviewing the Quality of teaching and learning in each subjected area through HEC prescribed feedback forms as per the guidelines given for each form in coordination with QMS coordinators and SAR Program Teams.
- Ensuring that the University's Quality Management System is designed to fit with the requirements of HEC.
- Follow-up on the accreditation of all the degree awarding programs offered by the University.

Major Achievements of QEC-DUHS in 2017-18

THE MAJOR ACHIEVEMENTS OF QEC DUHS IN 2018-19 INCLUDES:

□ **HEC Postgraduate Program Review 2018-19 Visit:**

- ◆ The HEC, Pakistan visited Dow University of Health Sciences on **26th & 27th June, 2019**, for the MS/MPhil and PhD review Visit. It was a successful visit by the designated team from HEC, Islamabad. In the 2 day visit the team visited both campuses and evaluated the 36 postgraduate programs of DUHS.

Key Performance Indicators of Quality Assurance in the University	Status as of 2018-2019
QEC Assessments	
No. of Academic Programs Assessed through Self-Assessment Reporting	All degree awarding programs
No. of Courses Assessed (Course-Wise Assessment Evaluations)	943 Courses Assessed Online
No. of Faculty Assessed (Student-Teacher Evaluation as Prescribed by HEC)	788 Online
Number of Programs with National or International Accreditations	32 Programs are Accredited
Number of Faculty Trained	307

◆ **HEC prescribed Feedback Forms:**

QEC-DUHS successfully conducted the following online proformas for feedback evaluation in all the degree-awarding programs of DUHS:

1. Student Course Evaluation Questionnaire
2. Faculty Course Review Report
3. Survey of Graduating Students
4. Research Student Progress Review Form
5. Faculty Survey
6. Survey of Department Offering Ph.D. Programs
7. Alumni Survey
8. Employer Survey
9. Faculty Resume
10. Teacher Evaluation Form

◆ **Quality Initiatives FY 2018-2019:**

The quality initiatives for the Year 2018-2019, in compliance with the Higher Education Commission, Pakistan are the following:

1. Accreditation of All Programs, and grant of NOC from HEC for all postgraduate programs.
2. A greater focus on faculty professional development and training in special need areas.
3. Employee Development & Training, though, English Language Proficiency programs for faculty and staff.

4. Establishment of the QEC Setup at all the affiliated colleges of Dow University of Health Sciences
 - Indus College of Nursing & Midwifery
 - Shaheed Mohtarma Benazir Bhutto Medical College, Lyari
 - College of Nursing, Memon Medical Institute Hospital
 - Patel Institute of Nursing & Allied Health Sciences
 - School of Nursing, Kharadar General Hospital
 - Saifee Burhani School of Nursing, Saifee Hospital Trust
 - Murshid School of Nursing and Midwifery, (Murshid SONAM)
 - Tabba Heart Institute
 - National Institute of Cardiovascular Diseases (NICVD)

3.3 Membership of Quality Association/ Networks

QEC has valuable memberships of different association/ networks at International/ National levels:

1. Member of Learning Innovation Division, HEC Pakistan since 2005.
2. Member of Tallories Network since 2009.
3. American Association of Medical Colleges, Visiting Students Learning Opportunities.
4. Prospective member of Asia Pacific Quality Network (APQN).
5. Corporate and Associate Member of Association of National and International Universities, Research and Educational centers.
6. Accreditation Agency Curacao – AAC
7. International Network for Quality Assurance Agencies in Higher Education
8. Pakistan Network of Quality Assurance in Higher Education-PNQAHE

3.4 ACCREDITATIONS OF DEGREE AWARDING PROGRAMS FROM ACCREDITATION COUNCILS

1. MBBS program at Dow Medical College (DMC) - Accredited by Pakistan Medical & Dental Council (PM&DC).
2. MBBS program at Dow International Medical College (DIMC) - Accredited by Pakistan Medical & Dental Council (PM&DC).
3. Bachelor of Dental Surgery (BDS) program at Dr. Ishrat ul Ebad Khan Institute of

Oral Health Sciences (DIKIOHS) – Accredited by Pakistan Medical and Dental Council (PM&DC)

4. Bachelor of Dental Surgery (BDS) program at Dow International Dental College (DIDC) – Accredited by Pakistan Medical and Dental Council (PM&DC)

5. Pharm D program at Dow College of Pharmacy (DCOP) - Accredited by Pakistan Pharmacy Council (PPC).

6. Post RN Nursing program at Institute of Nursing (ION) - Accredited by Pakistan Nursing Council (PNC).

7. BS Generic Nursing program - Accredited by Pakistan Nursing Council (PNC).

8. Master of Nursing (MSN) program- Accredited by Pakistan Nursing Council (PNC).

9. MPhil (Basic Medical Sciences) at Institute of Basic Medical Sciences- Accredited by Pakistan Medical & Dental Council (PM&DC).

10. Master of Dental Surgery (MDS) program at Dr. Ishrat ul Ebad Khan Institute of Oral Health Sciences (DIKIOHS) - Accredited by Pakistan Medical & Dental Council (PM&DC).

11. Master of Public Health (MPH) at School of Public Health- Accredited by Pakistan Medical & Dental Council (PM&DC).

12. MS in Epidemiology and Biostatistics (MSBE) at School of Public Health- Accredited by Pakistan Medical & Dental Council (PM&DC).

13. MS in Public Health (MSPH) at School of Public Health- Accredited by Pakistan Medical & Dental Council (PM&DC).

14. Master in Health Professional Education (MHPE) at Dow Institute of Health Professionals Education- Accredited by Pakistan Medical & Dental Council (PM&DC).

15. Master of Surgery (MS) at Department of Postgraduate Studies- Accredited by Pakistan Medical & Dental Council (PM&DC).

16. Doctor of Medicine (MD) program at Department of Postgraduate Studies- Accredited by Pakistan Medical & Dental Council (PM&DC).

17. BBA & MBA Programs are in the process of accreditation from National Business Education Accreditation Council (NBEAC).

18. Bachelor of Dental Surgery (BDS) program at Dow Dental College (DDC) is in process of accreditation from Pakistan Medical and Dental Council (PM&DC).

3.5 SEMINARS/ WORKSHOPS & TRAINING EVENTS OF QUALITY ENHANCEMENT CELL CONTRIBUTED OR ORGANIZED IN THE YEAR 2018-2019

Name of Event/Seminar/Workshop/Training	Date	Purpose
1. 36th HEC Master Trainer Faculty Professional Development Program at Islamabad	July 3, 2018	The purpose to attend the program was to focus more on the professional development of the faculty of DUHS.
2. Strategic Planning retreat of Dow University of Health Sciences facilitated & organized by QEC - DUHS	12 th September, 2018	To strategically plan the future of Dow University of Health Sciences.
3. 35th HEC Master Trainer Faculty Professional Development Program at Islamabad.	November 19 th to 26 th , 2018	The purpose to attend the program was to focus more on the professional development of the faculty of DUHS.
4. Professional English Language Training Program organized by QEC.	February 1 st to 9 th , 2019	To help the faculty and staff in their correspondence with the growing number of English-speaking students.
5. Seminar on "Practices of Quality Assurance in Universities/HEIs" at NED University	February 26 th , 2019	The QEC attended the seminar for awareness and to meet professionals in quality assurance from different universities so to get benefitted from their vast experiences.
6. Certified Associate QEC Lead Analyst Course prescribed by American Certification Services (A-PROCS) & recognition as QSI	March 9 th , 2019	The course was attended by the data analyst at QEC to gain expertise in their field.
7. Workshop on Leadership and Governance- 'Execution Bricks to Bridges' organized by PharmEvo Pvt. Ltd. at DMC Campus, DUHS	March 19 th , 2019	The workshop helped the Leadership/ Professors of DUHS to see the big picture.
8. Workshop on Leadership and Governance- 'Execution Bricks to Bridges' organized by PharmEvo Pvt. Ltd. at Ojha Campus, DUHS	March 20 th , 2019	The workshop helped the Leadership/ Professors of DUHS to see the big picture.
9. Progress Review Meeting & training for Quality Enhancement Cells organized by QAA, HEC	April 1 st and 2 nd , 2019	To share the progress and get updated on new methods of implementation of quality network.
10. NBEAC Policy Round Table on National Collaboration Between Business Schools - 6th Deans &	April 8 th , 2019	A step ahead in accreditation with NBEAC for IBHM.

Directors Conference, 2019		
11. 6th Deans & Directors Conference, 2019 - National Business Education Accreditation Council, The Evolving Landscape of Business Education across Globe	April 8 th , 2019	A step ahead in accreditation with NBEAC for IBHM.
12. Workshop on Leadership program for VCs/ Rectos and Deans- 6th Deans & Directors Conference, 2019 - National Business Education Accreditation Council, The Evolving Landscape of Business Education across Globe	April 9 th , 2019	A step ahead in accreditation with NBEAC for IBHM.
13. "2nd International Conference on Quality Assurance in Higher Education", workshop on " Constructive Alignment of Teaching, Learning and Assessment to the Intended Level of Course and Program Learning Outcomes" by Bassam Alhamad	April 23 rd to 25 th , 2019	To advance teaching methods at the University level.
14. "2nd International Conference on Quality Assurance in Higher Education", workshop on " The Role of Performance Evaluation System within the Quality Assurance Framework: Challenges and Opportunities" by Bahar Gun	April 23 rd to 25 th , 2019	To better evaluate the performance of employees at DUHS
15. "2nd International Conference on Quality Assurance in Higher Education" on " Quality Assurance to Revolutionize Higher Education in 21st Century"	April 23 rd to 25 th , 2019	To revolutionize the quality learning and teaching in HEIs.

CHAPTER 4

FACULTY DEVELOPMENT

PROFESSIONAL DEVELOPMENT CENTER (PDC) DUHS

With the establishment of Dow University of Health Sciences (DUHS) in 2004, it was envisioned that Continuing Medical Education (CME) should be promoted within the faculty and students of Dow University. Professional Development Center started working as the “Office of CME” as of January 2004. Under this office, CME lectures, seminars, symposia and conferences were conducted on a regular basis. Furthermore, International Health Days were celebrated regularly. Over a period of a year and a half, the faculty dedicated to PDC managed to organize more than 100 national and International events, with the dedication and efforts of the Faculty and Alumni abroad.

After the devastating earthquake of 2005, it was thought to add hands-on workshops in addition to the CME lectures, which were mostly theoretical. Thus, the Office of CME was amalgamated into a more comprehensive “Professional Development Centre” (PDC) of Dow University of Health Sciences. Also, a formal inauguration was performed by the Chancellor of the University, Governor of Sindh.

Subsequent to its formation, two divisions were formed within the PDC, namely Surgical and Allied and the Medical and Allied, where faculty members were designated as Directors of these two divisions. They were given the task to do a Training Needs Assessment and offer programs for different categories of health Professionals.

The Professional Development Centre has simulated ICU, simulated Operation Theatre, Laparoscopic / Endoscopic Suites, three training halls and a Conference Room. Equipped with the latest audio-visual and multimedia systems, state of art equipment, electronic simulators and manikins, the PDC is a site for all those healthcare professionals looking to enhance their skills with hands-on training.

Professional Development Centre currently provides training facility in the basic and advanced skills to undergraduates, postgraduates, residents, faculty members and other health professionals. PDC has its head office at DMC with its branch at Dow International Medical College (DIMC), Ojha with similar facilities, equipment and instructors. Each wing of PDC has a dedicated Undergraduate Skills Lab.

PDC CONSISTS OF CME, CPD, SKILLS, & MISC. PROGRAMS:

- 1. Continuing Medical Education (which deals with Seminars, lectures, symposia and conferences).*
- 2. Continuing Professional Development (that deals with long duration & short duration training courses and hands-on workshops).*
- 3. Undergraduate Skills Lab (which deals with the training of undergraduate students).*
- 4. Miscellaneous programs (that include programs like visiting faculty, reproductive health and alumni affairs).*

Since its inception in October, 2005 Professional Development Centre has conducted CMEs & Miscellaneous Programs in collaboration with National & International Organizations, like PTC Foundation UK, American Heart Association, North Middlesex University Hospital, London, IMPACT Nepal, Amber Institute of California, INTER BURNS, INFORM, EMAME & EmONC, FALAH, US AID, UNFPA & WHO.

4.1 FACULTY DEVELOPMENT PROGRAMS (MS/PH.D. LOCAL & FOREIGN):

The purpose of faculty development is to support and encourage the activities undertaken for development and professional growth of the faculty members of the Dow University of Health Sciences.

These initiatives are framed keeping in mind the University's Mission to create a culture of academic excellence. Furthermore, the teaching departments of the University are anchored on faculty continuous training and development.

Passed out Indigenous PhD Faculty

Name of faculty	Specialty
Dr. Azmina Hussain	PhD Public Health

4.2 RETURNED SCHOLARS (PRESENT IN THE UNIVERSITY)

1.	Asma Khurshid
2.	Jawad Safdar
3.	Kashif Shafiq
4.	Maheera Moin
5.	Mansoor Ahmed
6.	Mohsin Wahid
7.	Muhammad Aamir Mirza
8.	Muhammad Asif Qureshi
9.	Muhammad Furqan Bari
10.	Muhammad Sameer Qureshi
11.	Muhammad Yahya Noori
12.	Mushtaq Hussain
13.	Naresh Kumar
14.	Nilofer Fatimi Safdar
15.	Omer Mustapha
16.	Rafat Amin
17.	Sadaf Khan
18.	Samreen Memon
19.	Shaukat Ali
20.	Sonia Siddiqui
21.	Syed Imran Mehmood
22.	Syed Saoud Zaidi
23.	Tehseen Fatima

4.3 List of PhD Indigenous Batch

S#	Name	Specialty
1.	Arshad Hasan	Operative Dentistry
2.	Amynah Charania	Oral Biology
3.	Anwar Ali	Oral Surgery
4.	Shaheen Ahmed	Oral Surgery
5.	Ambrina Qureshi	Community Dentistry
6.	Ashar Afaq	Community Dentistry
7.	Sofia Ali Syed	Oral Pathology
8.	Malik Tajuddin	Public Health
9.	Muhammad Tahir Rizwan Khan	Public Health
10.	Shahkamal Hashmi	Public Health
11.	Zeeshan Noor Shaikh	Public Health
12.	Naheed Khan	Anatomy
13.	Sofia Nigar	Anatomy
14.	Aisha Abdul Haq	Anatomy
15.	Sarwat Jabeen	Anatomy
16.	Mahruxh Qasim	Anatomy
17.	Sahar Mubeen	Anatomy
18.	Sahar Iqbal	Chemical Pathology
19.	Tazeen Mustansar	Histopathology
20.	Durr-e-sameen	Histopathology
21.	Ruqaiya Shahid	Histopathology
22.	Farheen Sultan	Histopathology
23.	Rubina Gulzar	Histopathology
24.	Saba Hassan	Histopathology
25.	Lubna Avesi	Histopathology
26.	Bushra Sikandar	Histopathology
27.	Uzma Bukhari	Histopathology
28.	Fatima Fasih	Microbiology
29.	Saima Naseem	Microbiology
30.	Ambreen Fatima	Microbiology
31.	Ambreen Qamar	Physiology
32.	Shazia Jabbar	Gynae & Obs.
33.	Junaid Ashraf	Neurosciences
34.	M. Asim Khan Rehmani	Neurosciences
35.	Dr. Naila Naeem	Neurosciences
36.	Dr. Iftekhar Ahmed	Medicine

4.4 PRE-SERVICE AND IN-SERVICE PROFESSIONAL DEVELOPMENT PROGRAMS

HEALTHCARE PROFESSIONALS & OTHER FACULTY TRAINED BY PROFESSIONAL DEVELOPMENT CENTRE AT OJHA & DMC CAMPUSES.

S.No.	Title of Training	Date of Event	No. of Participants	Major Focus Area	Audience Type (student /faculty /staff)
National Workshops/ Trainings/ Professional Skills Development					
1	Basic Life Support	20 th January 2018 To 30 th June 2019	766	Life Support	All
2	Basic Life Support AHA	January 2018 to 30 th June 2019	17	Basic Life Support	All
3	Advanced Cardiac Life Support ALCS	January 2018 to 30 th June 2019	38	Advanced Cardiac Life Support ALCS	All
4	Basic Surgical Skills	January 2018 to 30 th June 2019	73	Surgical Skills	All
5	Principles of Fractures Fixations	09 th January 2018	36	Fractures Fixations	All
6	Rotary Endodontic	11 th January 2018	79	Dental	All
7	Primary Trauma Care	08 th 09 th Feb 2018	42	Primary Trauma Care	All
8	Rehabilitation Principal in Gynecological & Obstetric Patients	17 th Feb 2018	76	Rehabilitation Principal in Gynecological & Obstetric Patients	All
9	Pulmonary Function Test	07 th March 2018	129	Pulmonary	All
10	Endorsing Health Sciences Research	21 st March 2018	34	Endorsing Health Sciences Research	All
11	Toacs Short and Long Case	26 th 27 th March 2018	64	Toacs Short and Long Case	All
12	Rotary Endodontic	12 th April 2018	19	Dental	All
13	Interpretation of Electrocardiography ECG	24 th April 2018	59	Interpretation of Electrocardiography ECG	All
14	Surgical Staplers	16 th May 2018	13	Surgical Staplers	All
15	Constructing Single Best Answer MCQ	16 th August 2018	29	Faculty	All
16	Prevention and Management of Ischemic Heart Diseases	29 th Sept 2018	57	Heart Diseases	All
17	Soft Tissue Techniques	03 rd Nov 2018	96	Soft Tissue Techniques	All
18	Emergency Medicine	08 th December 2018	16	Emergency Medicine	All
19	Live Surgery on Development Dysplasia of Hip Joint	22 th Jan 2019	46	Dysplasia of Hip Dysplasia of Hip Joint	All
20	Short Preparatory Course for MCPS/IMM & FCPS –II Exam in Obs & Gynae	23 rd January 2019	17	Exam in Obs & Gynae	All
21	Chest Tube Intubation	22 nd March 2019	77	Pulmonary	All
22	Hospital Preparedness for Emergency	04 th May 2019	32	Hospital Emergency	All
23	Management of Tracheotomy	19 th June 2109	33	ENT	All
			1848	Faculty, Students and PGs Trained	

CHAPTER 5

ACCESS

5.1 BASIC ENROLLMENT

Total Enrolment during FY 2018-19 is 8324 for all graduate, post-graduate and diploma programs.

5.2 EQUITY

In Dow University of Health Sciences, admissions are granted on transparent open merit basis for all applicants, regardless of gender, sex, race or ethnic background.

5.3 GENDER-WISE DETAIL

ENROLLMENT ON REGULAR MERIT DURING 2018-19 GENDER WISE					
Department/ Institute	Subject	Years of Education	Total (M)	Total (F)	Grand Total
DMC	MBBS	1st year (1st Sem)	89	189	278
		2nd year (3rd Sem)	77	183	260
		3rd year (5th Sem)	53	201	254
		4th year (7th Sem)	66	190	256
		5th year (9th Sem)	63	207	270
DIKIOHS	BDS	1st year (1st Sem)	18	71	89
		2nd year (3rd Sem)	16	48	64
		3rd year (5th Sem)	7	54	61
		4th year (7th Sem)	6	53	59
DIKIOHS	DCP	1st year (1st Sem)	5	30	35
		2nd year (3rd Sem)	6	18	24
		3rd year (5th Sem)	3	20	23
		4th year (7th Sem)	1	4	5
DCOP	PHARM-D	1st year (1st Sem)	9	51	60
		2nd year (3rd Sem)	11	50	61

		3rd year (5th Sem)	7	50	57
		4th year (7th Sem)	1	54	55
		5th year (9th Sem)	8	48	56
IMT	BSMT	1st year (1st Sem)	15	92	107
		2nd year (3rd Sem)	22	103	125
		3rd year (5th Sem)	9	103	112
		4th year (7th Sem)	14	50	64
IPMR	BSPMR	1st year (1st Sem)	6	38	44
		2nd year (3rd Sem)	8	29	37
		3rd year (5th Sem)	1	35	36
		4th year (7th Sem)	3	21	24
IPMR	DPT	1st year (1st Sem)	10	40	50
		2nd year (3rd Sem)	9	42	51
		3rd year (5th Sem)	8	35	43
		4th year (7th Sem)	5	43	48
		5th year (9th Sem)	15	31	46
IHM	BBA	1st year (1st Sem)	32	64	96
		2nd year (3rd Sem)	18	44	62
		3rd year (5th Sem)	9	44	53
		4th year (7th Sem)	9	36	45
ION	BS NURSING	1st year (1st Sem)	5	46	51
		2nd year (3rd Sem)	6	33	39

		3rd year (5th Sem)	5	25	30
		4th year (7th Sem)	8	21	29
	POST RN	1st year (1st Sem)	24	12	36
		2nd year (3rd Sem)	11	21	32
DCOB	BS BT	1st year (1st Sem)	16	87	103
		2nd year (3rd Sem)	16	87	103
		3rd year (5th Sem)	10	89	99
		4th year (7th Sem)	7	61	68
DIR	BS RADIOLOGY	1st year (1st Sem)	2	19	21
		2nd year (3rd Sem)	5	15	20
		3rd year (5th Sem)	0	0	0
		4th year (7th Sem)	3	11	14
DIR	AAS	1st year (1st Sem)	1	1	2
		2nd year (3rd Sem)	2	11	13
SPH	BS NUTRITION	1st year (1st Sem)	0	30	30
		2nd year (3rd Sem)	0	29	29
		3rd year (5th Sem)	0	72	72
		4th year (7th Sem)	2	21	23
	MS BE	1st year (1st Sem)	1	5	6
		2nd year (3rd Sem)	6	4	10
DIKIOHS	MDS	1st year (1st Sem)	17	13	30
		2nd year (3rd Sem)	9	10	19

		3rd year (5th Sem)	7	16	23
		4th year (7th Sem)	34	35	69
	MSc DS	1st year (1st Sem)	0	0	0
		2nd year (3rd Sem)	21	51	72
DIHPE	MHPE	1st year (1st Sem)	4	4	8
		2nd year (3rd Sem)	5	25	30
DMC	MD	1st year (1st Sem)	13	4	17
		2nd year (3rd Sem)	1	8	9
		3rd year (5th Sem)	11	5	16
		4th year (7th Sem)	8	8	16
	MS	1st year (1st Sem)	2	2	4
		2nd year (3rd Sem)	14	1	15
		3rd year (5th Sem)	9	0	9
		4th year (7th Sem)	1	1	2
IPMR	MS APT	1st year (1st Sem)	9	15	24
		2nd year (3rd Sem)	4	7	11
IHM	MBA	1st year (1st Sem)	19	39	58
		2nd year (3rd Sem)	13	20	33
		3rd year (5th Sem)	0	2	2
		4th year (7th Sem)	1	2	3
	EMBA	1st year (1st Sem)	21	16	37
		2nd year (3rd Sem)	12	16	28

ION	MSN	1st year (1st Sem)	32	20	52
		2nd year (3rd Sem)	17	10	27
NIDE	MSc DE	1st year (1st Sem)	2	1	3
		2nd year (3rd Sem)	10	11	21
SPH	MPH	1st year (1st Sem)	8	20	28
		2nd year (3rd Sem)	19	25	44
	MS PH	1st year (1st Sem)	5	12	17
		2nd year (3rd Sem)	4	13	17
IBMS	MPHIL(DCOP)	1st year (1st Sem)	1	1	2
		2nd year (3rd Sem)	2	8	10
	MPHIL	1st year (1st Sem)	7	10	17
		2nd year (3rd Sem)	22	61	83
	PHD	1st year (1st Sem)	1	0	1
		2nd year (3rd Sem)	3	5	8
		Previous Enrollment	17	25	42
DMC	FCPS II	1st year (1st Sem)	109	236	345
		2nd year (3rd Sem)	74	142	216
		3rd year (3rd Sem)	96	175	271
		4th year (3rd Sem)	97	168	265
DMC	DMJ	1st year (1st Sem)	2	1	3
	DCH	1st year (1st Sem)	1	3	4
	DCARD	1st year (1st Sem)	3	0	3

	DFM	1st year (1st Sem)	0	4	4
	DLO	1st year (1st Sem)	0	1	1
	DDERM	1st year (1st Sem)	2	8	10
	DMRD	1st year (1st Sem)	4	6	10
	DA	1st year (1st Sem)	1	0	1
	DO	1st year (1st Sem)	1	0	1
OJHA	Ultsd	1st year (1st Sem)	1	8	9
	DOPPLER	1st year (1st Sem)	1	1	2
	Ecard	1st year (1st Sem)	2	2	4
Totals			1548	4348	5896

ENROLLMENT ON SELF FINANCE DURING 2018-19 GENDER WISE DETAIL

Campus	Subject	Years of Education	Total (M)	Total (F)	Grand Total
DMC	MBBS	1st year (1st Sem)	21	32	53
		2nd year (3rd Sem)	21	39	60
		3rd year (5th Sem)	26	67	93
		4th year (7th Sem)	24	70	94
		5th year (9th Sem)	31	48	79
DIMC	MBBS	1st year (1st Sem)	77	87	164
		2nd year (3rd Sem)	61	89	150
		3rd year (5th Sem)	61	96	157
		4th year (7th Sem)	45	74	119

		5th year (9th Sem)	34	83	117
DIKIOHS	BDS	1st year (1st Sem)	1	16	17
		2nd year (3rd Sem)	10	22	32
		3rd year (5th Sem)	7	35	42
		4th year (7th Sem)	6	34	40
DIDC	BDS	1st year (1st Sem)	12	44	56
		2nd year (3rd Sem)	13	39	52
		3rd year (5th Sem)	9	40	49
		4th year (7th Sem)	3	45	48
DDC	BDS	1st year (1st Sem)	7	44	51
		2nd year (3rd Sem)	5	45	50
		3rd year (5th Sem)	6	45	51
		4th year (7th Sem)	0	46	46
DCOP	PHARM-D	1st year (1st Sem)	6	37	43
		2nd year (3rd Sem)	3	37	40
		3rd year (5th Sem)	6	36	42
		4th year (7th Sem)	1	35	36
		5th year (9th Sem)	8	39	47
DCOP EVENING	PHARM-D	1st year (1st Sem)	9	49	58
		2nd year (3rd Sem)	9	34	43
		3rd year (5th Sem)	6	34	40
		4th year (7th Sem)	1	29	30

		5th year (9th Sem)	4	15	19
IPMR	DPT	1st year (1st Sem)	9	40	49
		2nd year (3rd Sem)	10	40	50
		3rd year (5th Sem)	11	99	110
		4th year (7th Sem)	12	83	95
		5th year (9th Sem)	15	91	106
		Totals		590	1838

5.4 EMPLOYABILITY

The graduates of Dow University of Health Sciences are serving in almost all prominent health care institutions & organizations of Pakistan, as well as at international levels.

Some major employers of DUHS graduates include the following:

- ✦ College of Physicians and Surgeons, Pakistan
- ✦ Sindh Institute of Urology and Transplantation (SIUT)
- ✦ National and Multinational Pharmaceutical Companies
- ✦ Private Hospitals locally and internationally.
- ✦ Public & Private Sector Medical Colleges & Universities
- ✦ Multinational and Private Limited companies

Batch Pass Out Year	ALUMNI / GRADUATES Currently Working in the following Select Organization:
2008	Dr. Ruth K M Pfau Civil Hospital Karachi
2010	Ministry Of Health (MOH)
2012	Private Practice As Medical Director
2014	DUHS, Dow University Hospital
2015	Jinnah University For Women
2015	Liaquat National Hospital And Medical College
2015	HANDS NGO
2015	Sindh Institute Of Urology And Transplantation
2017	National Institute Of Cardiovascular Diseases (NICVD)
2017	NIBD & BMT Karachi

2017	Patel Hospital
2018	Memon Medical Institute (MMI)
2018	Dow University Of Health Sciences, DIHPE
2018	Dow University Of Health Sciences, QEC
2018	Al Mustafa Hospital
2018	Jinnah Medical And Dental College
2018	Indus Hospital
2018	Aman Foundation
2018	The Kidney Centre PGTI
2019	Dow University Hospital
2019	Habib University
2019	Toastmasters Club
2018	Kharadar General Hospital Karachi
2018	Brookes Pharmaceuticals
2019	Tabba Heart Institute
2018	Thekaydaar Online Pvt Ltd
2017	GE Solucions Pvt. Limited
2018	Gulf Schooling System
2017	Unity Foods Limited
2017	The Citizens Foundation
2019	Green Crescent Trust
2019	DOW University Hospital
2018	Bank Islami
2017	Alsharqi Shipping
2017	Governor's House, Sindh
2018	Cake A Story
2017	Usman Public School System Campus-VI
2015	Filters Experts
2019	HEC
2017	Aga Khan University, Karachi
2018	Ali Builders & Developers
2018	Sanaula Corporation
2018	Gallant Foundation School
2017	Jannat Fabrics
2018	DHL Global Forwarding
2018	Sindh Sui Gas Company Karachi (SSGC)
2018	Dow University Of Health Sciences
2018	School Teacher At Private School
2018	Darson Securities Ltd
2017	Aga Khan Education Service Pakistan
2018	Meezan Bank
2018	SSGC, Internship
2019	CSS Aspirant
2018	Abbott

2015	Filters Experts
2015	Pakistan Rangers
2015	The Educator School
2015	Karachi Electric Supply Company (KESC)
2015	National Bank Pakistan
2015	Meezan Bank
2015	AGA Khan University As Research Associate
2015	South City Hospital, Karachi
2016	United Bank Limited, Karachi
2016	GSM
2017	Foreign Travelling Agency
2018	Gallant Foundation School
2018	Halo Intl. Marketing
2018	K Electric
2018	SZABIST
2018	Private Business Haroon Oil Limited
2018	Leopard Courier Service
2018	Jubilee Life Insurance
2018	SSGC
2019	Mehran International Dental Clinics
2019	Al Baraka Bank

5.5 FACULTY-STUDENT RATIO

In the year 2018-2019, the faculty-student ratio is calculated as follows:

◆ **TOTAL NO. OF FACULTY: 1049**

◆ **TOTAL NO. OF ENROLLED STUDENTS: 8324**

◆ **FACULTY-STUDENT RATIO OF THE UNIVERSITY IS 1:8**

CHAPTER 6
UNIVERSITY BUILDING ECONOMIES

6.1 UNIVERSITY- INDUSTRY LINKAGES

Dow University of Health Sciences, Karachi is dedicated to building collaborations and linkages with various national and international industries and still engaged in the process of enhancing strong linkages.

- ✓ *Dow University of Health Sciences has developed university industry linkages with several pharmaceutical companies for Research and development.*
- ✓ *Dow University has an agreement with National Research Program for Universities, which is a National program.*
- ✓ *The University enhanced its industry linkage by signing MOU with the international organization, DICE Foundation. It will act as a pragmatic platform for health-related innovation & for collaboration among academia, industry, government, entrepreneurs and Expatriate community on all matters pertaining to the growth of health sector in Pakistan.*

6.2 NEW INITIATIVES

SPECIAL EDUCATION AND VOCATIONAL TRAINING DEPARTMENT AT IPM&R

The Department of Special Education and Vocational Training for Children was established in 2017 at IPM&R, DUHS. It is the first of its kind in a teaching hospital in Pakistan. The Department of Special Education and Vocational Training for Children has a school and vocational training facility for children with special needs. The team at the Department of Special Education and Vocational Training comprises of special educators, occupational therapist and skill trainers in art, music, computers, sports and product development.

The services offered at the department of special education and vocational training are a school Program and vocational Training Program.

6.3 TECHNOLOGY INCUBATION CENTRE

The Dow University of Health Sciences, Karachi, is still in process of developing the Technology Incubation Centre. As far as current innovations are concerned, there are various technologies, infrastructure which are used and these may vary product-to-product.

The plans to establish a Technology Incubation Center at DUHS is designed for FY 2018-2019 with funding support from HEC, which was granted in 2018.

6.4 PATENTS/ TRADEMARKS

Dow University of Health Sciences is engaged in process of trademark registration by University Legal Consultant.

The registered trademarks of Dow University of Health Sciences are as below:

S. No.	APP. #	CLASS	TRADEMARK	DATE	STATUS
1	308949	44	DOW	21/10/14	Registered
2	344473	5	Shaffaf (Logo)	05/08/13	Registered
3	344474	32	Riva (Label Mark)	05/08/13	Registered

6.5 INTERNSHIP AND GRADUATE PLACEMENT OFFICE:

CLINICAL ELECTIVES

In the recent years, there is an increasing interest of the final year students of Medicine for doing electives in different medical schools/hospitals in the United States. The Quality Enhancement Cell, QEC-DUHS is also responsible for developing collaboration and linkages with other universities and colleges around the globe in different areas of interest.

DUHS has developed a Memorandum of Agreement with some of the prestigious foreign Medical Schools and associations for clinical electives namely:

Associations of DUHS for clinical electives with the following colleges:

<i>University of Illinois</i>	<i>Chicago</i>
<i>AAMC</i>	<i>Visiting Students VSLO Learning Opportunities</i>
<ol style="list-style-type: none"> <i>1. Jackson park hospital, Chicago.</i> <i>2. Holyoke Medical Centre, MA.</i> <i>3. Mayo Clinic, Rochester USA.</i> <i>4. Mount Sinai Hospital, New York.</i> <i>5. Specialty hospital of Washington.</i> <i>6. North West General Hospital, Peshawar</i> <i>7. Robert Wood Johnson University Hospital. New Jersey.</i> <i>8. Harrison Count Hospital, Corydon, USA.</i> <i>9. Winnie Palmer Hospital, Florida USA.</i> <i>10. Harvard Medical School, Boston USA.</i> <i>11. FIU, USA</i> 	<i>Clinical Electives offered at various National & International Hospitals</i>

INTERNSHIPS

The Placement office of each College/ Institute or School ensures the student secures a placement, which will support their learning requirements and nurture their professional development.

All work placements must be officially approved by the Registrar-DUHS and primarily involves the process of CV selection and competitive interview (if necessary) by the HoD/ Principal or Director, but can also be secured by direct matching if the student applies directly. The selection process is determined by the host organization. The Placement coordinator provides both group and one-to-one support to the students in the researching, sourcing, securing of placement and ongoing support of student whilst on internship or placement.

We are fully conscious of the utility of earning practical experience for students by undergoing internship(s) during their studies and after completion their studies. Interning in a field of choice will stand out on students' resume and help them with their job search after graduation. Students/interns should endeavor to gain on-the-job training that integrates education and career development; while organizations and companies hosting interns also benefit from the contributions of creative and innovative students. Students' networking during the course of their internship become subsequently professional "contacts" who can help guide their career path as they make their way into professional world.

The internship placements are taking place at Institute of Health Management for the passed-out batches, Institute of Medical Technology, and also at IPM&R. Final year students of Institute of Physical Medicine and Rehabilitation-Occupational Therapy department are placed at different hospitals and clinics for rotations and for learning purposes.

Students at IPM&R are placed at the following institutes under the placement program:

- 1. Ziauddin Hospital Clifton Campus*
- 2. Ziauddin Hospital North Nazimabad Campus*
- 3. Ziauddin Hospital Kemari Campus*
- 4. Jinnah Postgraduate Medical Center*
- 5. Ma Ayesha Memorial Centre*
- 6. Ashfaq Memorial Center*
- 7. Rabia Moon Trust*
- 8. Indus Hospital*
- 9. Tabba Heart Institute*
- 10. National Institute of Cardiovascular Disease (NICVD)*
- 11. Mamji Hospital*
- 12. Patel Hospital*
- 13. Civil Hospital, Karachi*
- 14. SMBB Trauma center*

BENEFITS OF INTERNSHIP TO STUDENTS

The placement department offers paid internship for 6 months to graduates, who have applied for the internship and selected by the placement committee. They are benefited from the internship and are placed in different departments of DUHS after the approval of the Registrar, DUHS. The duration of internships is from May-October, according to the duty roster which was designed on rotational basis (2 months), was handed over the interns, before going to their relevant departments such as Registrar Head office, Finance, HR, OPD, Radiology, IHM and DDRRL. The purpose of offering them internship was to increase their career related knowledge and provide them valuable work experience.

6.6 STUDENT COUNSELING AND CAREER GUIDANCE

Student's Counseling Cell has been inaugurated by the Vice Chancellor DUHS, Honorable Prof. Dr. Saeed Quraishy on the occasion of World Mental Health Day 18th October 2018 at the Dr. A. Q. Khan Centre, Institute of Behavioral Sciences exclusively for Dow Students, where they can get free of cost services.

The Student Counseling Services are provided at the departmental level regarding academics, personnel or group counseling, crisis assessment/ management, career exploration and professional training guidelines. Student counseling is also offered through the official mentoring program at the Departmental/Collegiate level. Student Counseling involves meeting with and seeking help from a trained professional who can help you identify your strengths, weaknesses and interests regarding academic/career matters and also offer emotional support and guidance.

The Dow University of Health Sciences has hired an experienced Psychologist for student counseling services to be offered for its students. The professional has knowledge of student counseling/career guidance to students with a variety of issues, ranging from behavioral issues to career preparation. The professional will assist the students with Career and Academic Development and work directly with students to develop academic and career related solutions.

Dow University of Health Sciences wants all enrolled students to prosper in life and pursue the career of their interest. Thus, the students can count upon their Departmental Head or faculty members for guidance and mentorship.

The Institute of Physical Medicine and Rehabilitation IPM&R has a well-organized mentoring system at department to provide counseling, guidance and appropriate suggestions to students to rectify their academic, personal and other issues to improve the quality.

Student-teacher interaction also helps us ascertain students' need for career counseling. Teachers and management personnel are always available to the students to hear to their queries. Additionally, Dow College of Pharmacy has developed a system of mentoring, which may serve as a platform for addressing needs of the students. Other Colleges & Institutes also have a well-developed mentoring system.

In the mentoring system of DUHS, there are assigned mentors for every 20 students and a chief mentor to lead all the mentors. Apart from this they also periodically organize career counseling sessions in which experts from the industry are invited to guide students.

CHAPTER 7
STRENGTHENING PHYSICAL
INFRASTRUCTURE

DIRECTORATE OF PLANNING & DEVELOPMENT

The Department of Planning and Development of Dow University has completed renovations and refurbishments of old Dow Medical College and a number of old buildings and infrastructure at the Ojha campus.

7.1 DEVELOPMENT PROJECTS (LABORATORIES, LIBRARIES, ETC.)

FOLLOWING DEVELOPMENT PROJECTS ARE BEING IMPLEMENTED AT DOW UNIVERSITY OF HEALTH SCIENCES:

S.No	Project Title	Funded by
1	Strengthening of Oral Health Sciences and Support Facilities at Dow University of Health Sciences, Karachi. (On-going)	PSDP
2	Establishment of Trauma Centre, BSL -3 Lab and Provision of support services at Institute of Chest Diseases Ojha Campus of Dow University of Health Sciences, Karachi	ADP
3	Strengthening of Institute of Physical Medicine and Rehabilitation of Disable at DUHS, Karachi	ADP
4	Establishment of Department of Serobiological and providing power generation by gas along with heat recovery system at ojha campus of DUHS, Karachi	ADP

PSDP PROJECTS:

- ✦ **Strengthening of Oral Health Sciences and Support Facilities at Dow University of Health Sciences, Karachi. (On-going)**

The scope of the project is almost completed and building is functional. The project falls under the head "Infra Structure Development" funded by Higher Education Commission. The project is a part of overall vision/ perspective plan of the Dow University of Health Sciences Karachi which is in line with the government priorities for the development, expansion, up-gradation and improvement of essentially required infrastructure and research facilities at Public Sector Universities and degree awarding institutions. The project's duration is 4 years i.e. 2015-2019. and total cost is 640.209 M. in which DUHS contributed share is 150.000 M and the expenditure incurred till July 2019 is 609.328 M.

ADP SCHEMES:

Establishment of Trauma Centre, BSL -3 Lab and Provision of support services at Institute Chest Diseases Ojha Campus of Dow University of Health Sciences, Karachi

The subjected Ongoing scheme is a multidisciplinary 200 bedded Emergency Care Centre. It will be equipped with the most modern technology for diagnosis & treatment having operational theaters, Surgical & Medical ICUS and other allied essential services for treatment of seriously injured patients round the clock. The total cost of the scheme is amounting to Rs

681.284 Million. The expenditure incurred till July 2019 is 329.483 M. BSL3 Lab Building is completed and handed over.

Strengthening of Institute of Physical Medicine and Rehabilitation of Disabled at DUHS, Karachi

The subjected scheme i.e. IPM&R is fully functional & operational.

IPM&R is providing Rehabilitation services to the patients of stroke, Arthritis, Polio & other disabilities. It provides comprehensive multidisciplinary rehabilitation services with state-of-the-art facilities to help patients in various disabilities. Patients not only from Karachi but also from Thatta, Hyderabad, Jamshoro, Dadu and from entire provinces of Pakistan came here and get the free of cost treatment and best services. It is worth mentioning here that it's the only Public Rehabilitation center in Sindh, one such center is existing in Rawalpindi which is exclusively for defense services. It was therefore felt necessary to have such institute in Pakistan for civilians also. IPM&R at Dow University of Health Sciences, Karachi is first ever institute for civilian public sector in the country. Total cost of the project is 244.376 M and the expenditure incurred till July 2019 is 122.903 M.

Establishment of Department of Serobiological and providing power generation by gas along with heat recovery system at OJHA campus of DUHS, Karachi

The subjected ongoing scheme is a mix of preventive, curative, education and research services. Structure is completed only supply of Medical equipment are in process The Serology Department will have animal serology laboratory which will produce various immunoglobulin and antibodies for various human diseases and ailments. Human serology laboratory will be capable of diagnostic of various diseases. Serology Research and development unit will be a helping hand for production and diagnostic laboratories. In Pakistan there is no single serology institute which could produce indigenous quality sera for sero therapy, diagnostic and reference. An indigenously produced serum is very cheap, economical and local production will not only save foreign exchange in billions of Pak Rupees, but also provide opportunity for employments. Total cost is 410.265 M and the expenditure incurred till July 2019 is 195.271 M.

7.2 Research Equipment

Dow University of Health Sciences has modern research equipment which is available for faculty and students to facilitate them in their research work.

7.3 Construction Projects:

- 1. Strengthening of Oral Health Sciences and Support Facilities at Dow University of Health Sciences, Karachi. (On-going)*
- 2. Establishment of Trauma Centre, BSL -3 Lab and Provision of support services at Institute of Chest Diseases Ojha Campus of Dow University of Health Sciences, Karachi*
- 3. Strengthening of Institute of Physical Medicine and Rehabilitation of Disable at DUHS, Karachi*
- 4. Establishment of Department of Serobiological and providing power generation by gas along with heat recovery system at Ojha campus of DUHS, Karachi*

CHAPTER 8
STRENGTHENING TECHNOLOGICAL
INFRASTRUCTURE

8.1 Digital Library

Digital Library program was propelled by HEC to help researchers and mentor at public sector universities. Digital Libraries developed by Dow University of Health Sciences in their various campuses and institutes give access to global insightful writing in view of online delivery, peer-reviewed journals, databases, articles and e-books crosswise over extensive variety of controls. Through HEC's digital library which is available from all computerized libraries built up in DUHS, clients can get to more than 75,000 electronic substances. Taking after are the rundown of digital libraries at various campuses of Dow University of Health Sciences alongside the quantity of accessible systems.

- ◆ Main Digital Library (Ojha Campus) – 150 Systems
- ◆ Digital Library (DMC Campus) – 124 Systems
- ◆ Digital Library (Institute of Nursing) – 42 Systems
- ◆ Digital Library (Institute of Health Management) – 28 Systems
- ◆ Digital Library (Dow College of Pharmacy) – 14 Systems
- ◆ Digital Library (Institute of Physical Medicine and Rehabilitation) – 26 Systems
- ◆ Digital Library (Institute of Dow International Dental College) – (24 Systems Proposed)

8.2 PERN (Pakistan Education and Research Network)

PERN was initially launched in year 2002 as a part of IT action plan providing Internet facility and interconnectivity between universities for data bank integration, research collaboration and upgrade learning and teaching skills. Dow University of Health Sciences receive a total of 92 MBPS in DMC and Ojha Campus, DUHS is acquiring the services of PERN-II Network. The bandwidth is further distributed to all other campuses.

In addition to PERN, there is the following addition:

- Dow Medical College Campus – 82 MBPS
8 MBPS Internet Bandwidth Backup link is provided by NTC DSL.
- Ojha Campus – 160 MBPS
10 MBPS Internet Bandwidth Backup link is provided by CyberNet Pakistan.
- HEC Smart University Project – 248 MBPS for 248 Access Points deployed at Ojha Campus

8.3 Video Conferencing

- ✦ Video conferencing facility is provided by the information technology in all campuses. Clary Icon (PC based web conferencing) setup is installed in Ojha Campus for advance conferencing. Huawei TE-50 is installed at the Video Conferencing hall at Head Office DMC Campus. Tandberg 990 MXP (Multiple unit supporting up to 4 sites) is deployed in VC Board Room, DMC campus. Polycom PVX software is utilized in Ojha Campus for seamless video conferencing and web conferencing experience; which works on H-323 protocol.
- ✦ Cisco WebEx is deployed in DMC campus for conferencing – DUHS currently own license of Cisco WebEx for 25 simultaneous nodes and planning to expend up to 100 users.

- ✦ APPNA Merit training, CTU (CRCP and CRC) classes, HEC workshops, interviews and official meeting are usually conducted through Cisco WebEx facility of DUHS.

8.4 Campus Management Solution (CMS)

Dow University has been aiming for provision of facilities to students, faculty, and staff with immediate access to real-time information which connects that information to specific action. Campus Management System CMS is logically divided into several modules, each of which maps to a university function/department. DUHS worked closely with the HEC (Higher Education Commission) and "Campus Management Solution" project was initiated at Dow University first time in any university of Pakistan. Higher Education Commission selected six public sector universities for the implementation of Oracle People Soft Campus Solutions, Dow University did the pilot model, successfully for the initial period of two years.

The Campus Management software is an integrated solution which takes care of the various activities of an educational institution like institution management, student management, administrative functions, etc. The solution is available as a basic integrated application upgradeable to an Intranet / Internet system.

Oracle Corporation has a customized ERP Solution for academic institutions i.e. Campus Management or Student Information System. The solution is a combination of software and hardware. It helps to manage the business processes of an academic institute in an efficient and professional manner.

The integration between various processes and departments i.e. admissions (electronic and manual), enrolment, examination, fees etc. helps in automating the manual and traditional methods of functioning of a campus.

CMS Features

- The web-based features enable the faculty, students as well as the management to interact.
- The application generates various reports useful to the management, to the faculty and to the end user separately, for each module.
- The security levels can be administered at three levels.
- The management has the option to set user's right of the end user, depending on the role and job responsibility.
- CMS make easier to prepare and generate reports from different required aspects.

8.5 Web Portal of DUHS

The Website of Dow University of Health Sciences assists in the timely update of news, events, information on the official website of the university which is managed by IT department. It provides all the information regarding admissions, curriculum, examination and events planned in the university. Following facility are provided through web portal

- ◆ Accessibility to DUHS official email.
- ◆ Faculty profiles
- ◆ Microsoft for all users
- ◆ Individual academic programs and Colleges/ Institutes and Health Services Data/ Information
- ◆ Professional development center workshops schedule
- ◆ Alumni Association Webpage for Connecting with Dow
- ◆ Tenders and Admissions

- ◆ DUHS CME (Continuous Medical Education)
- ◆ JDUHS (Journal of Dow University of Health Sciences)
- ◆ Curriculum and course outline of MBBS

8.6 Online Admission System

Online admissions assist in reducing work load, avoid data entry mistakes and of course in keeping up to date record by electronic means. DUHS announces admissions in different programs; online admission assists in form filling over the website, provision of electronic copy of prospectus along with related information, eligibility criteria & fee structure of the courses, day to day updates and news alerts about admissions, entry test & interview dates announcements, display of online Merit list.

8.7 Cloud Services for Academics: Dissemination of Student Account ID

As part of the ICT Directorate's overall initiative to facilitate and enhance the learning experience at DUHS, the Microsoft Office365 cloud platform has been acquired and disseminated to the students: It will enable collaboration among faculty & students.

The services being offered through this platform are:

1. Outlook for Email
2. MS Office Online
3. Microsoft Teams as collaborative workspace
4. Microsoft Planner for teamwork planning
5. Skype for Audio/Video Conference
6. Yammer for social networking, etc.

To initiate the use of this platform, online accounts have been created for students. Roll out activities are being planned to hand-over these accounts to the students & give them a brief overview.

8.8. Dow Connect

Dow Connect is connecting all departments with our people, across DUHS and also serves as a student grievance portal.

- In order to streamline requests and better serve you:
 - We utilize a Dow Connect System to solve your issues as early as possible.
 - Every request is assigned a unique number which you can use to track the progress and responses online.
 - For your reference we provide complete archives and history of all your requests.
 - A valid email address is required to submit a request through the following features:

◆ TICKET FILTERS

Define rules to route incoming tickets to the right department, concerning officer, as well as trigger actions.

By using the filter system, Dow Connect empowers you to automate the creation and routing of tickets. Set actions such as ticket rejection, department/concerning officer assignment or even send an automated canned response. Rule criteria of filter can include any custom field added to the forms as well as user data.

◆ ASSIGN, TRANSFER, & REFERRAL

Transfer tickets between departments to make sure it's being handled by the correct concerning officer or assign tickets to a particular department or team of agents.

Refer a ticket to maintain view-only access to tickets when transferred or assigned to a department/officer. Tickets can be auto assigned by help topics or departments when they arrive, but what if they need to be reassigned? No problem! You can reassign tickets to agents or a team of agents or transfer to a different department all together. Transfer, Assignment, and Referral notes are logged in the ticket thread to keep track of what's happened in the ticket.

◆ AUTO-RESPONDER

Configurable automatic reply sent out when a new ticket is opened, or a message is received. Auto responses can be formatted to pull information from the ticket to personalize the email. Dow Connect supports placeholder variables which will pull the user's first name in the auto response. Auto responses can be edited and customized for each department as well as associated with Help Topics.

◆ THREAD ACTION

Officer now have the ability to create a Ticket or Task from a Ticket's thread entry or from a Task's thread entry. Need to create a separate ticket or task from a user's message to separate or expand on that item? No problem! Now with thread action, agents can simply create a new ticket or task with the message and keep it in the original ticket thread. Thread actions are noted in the original ticket thread with reference to both the new item as well as the thread item it was pulled from.

◆ TASKS: CREATE AN INTERNAL TO-DO LIST FOR AGENTS.

Tasks can be associated with tickets or they can stand alone in the help desk. When tasks are ticket-related, this prevents the tickets from being closed until all tasks within the ticket are complete. Add collaborators to include external users to the task items while keeping them separate from the ticket thread and contents.

Please follow the following link for DOW Connect Portal to register complaints:

[HTTP://DC.DUHS.EDU.PK/INDEX.PHP](http://dc.duhs.edu.pk/index.php)

CHAPTER 9
UNIVERSITY BUILDING COMMUNITIES

9.1 University-Community Interaction

University and Community Interactions in 2018-2019	
Pattern of Unintentional Burns, with a hospital in local community	<p>Community Service, Building Activity of Dow Medical College, Department of Community Medicine</p>
Oral Health Education and free Dental Camps in DIDC, Chanesar and Safoora Goth, Karachi (Community Dental Sciences, DIKIOHS)	
Dissemination on smokeless tobacco hazards	
Polio Awareness Programs NICH	
Junk Food Hazards Awareness in Adolescents	
Vitamin A, D, Awareness Sessions in Karachi	
Routine IMMUNIZATION community awareness session in Public Health School, Chand Bibi Road.	
Special children needs disabilities, Rehabilitation, NICH	
Media Briefing and Conference on World Immunization Week	
Community Engagement Session for Islamia Colony, Site Town at DC West Office expert on Polio Eradication	
Pneumonia Awareness seminars at Public Health Schools	
Assessment of Food Care, awareness and practices in diabetic patients	
Knowledge, attitude and practices regarding BCG among patients and their attendants	
Immunization awareness session at DHQ Tando Muhammad Khan	
Education and awareness at community level on fluoride applications (Community dental sciences, DIKIOHS)	<p>Community Service and Building Activities with Department of Community Dentistry, DIKIOHS</p>
Education and Awareness on Fissure Sealant, scaling	
Restoration of dental caries	
Extraction of Mobile Teeth	
Multi-screening for diabetes and periodontitis, with DDRRL	

9.2 University Role in Building Community

The Dow University of Health Sciences, since its inception has been focusing on community services to provide preventive, diagnostic and treatment facilities for community health care specially to the under privileged class. The students of various undergraduate and postgraduate programs of DUHS are also actively involved with the faculty members in all the Civic Engagements of DUHS.

Some Civic Engagements of DUHS FY 2018-2019

- ◆ **World Diabetes Day** Awareness Seminar organized by National Institute of Diabetes and Endocrinology on 14th November, 2018.
- ◆ **WORLD PNEUMONIA DAY** 2018 organized by Ojha Institute of Chest Diseases on 10th November, 2018
- ◆ **World TB Day** Walk awareness of TB National Campaign to stop the spread of TB illness organized by Ojha Institute of Chest Diseases on 25th March, 2019.
- ◆ Awareness Seminar on **Safe Fasting during Ramadan** organized by National Institute of Diabetes and Endocrinology –DUHS on 27th March, 2019
- ◆ Dr Ishrat ul Ebad Khan Institute of Blood Diseases conducting Awareness program "**Thalassemia screening awareness and free screening Camp**" in collaboration of NGO (HELP) on 27th September, 2018.
- ◆ **World Asthama Day**, Observed at Ojha Institute of Chest Diseases on May 4th, 2019.
- ◆ **World Hepatitis Day** was observed on July 27th, 2019 at National Institute of Liver & GI Diseases, DUHS. A walk and public awareness program were organized at that occasion.
- ◆ Renal Transplant Unit & Department of Urology of DUHS celebrated the **World Kidney Day** on March 15th, 2019.
- ◆ An Awareness Seminar on "Medicinal and Nutritional Benefits of Moringa oleifera" Organized by Dow College of Biotechnology on 30th January, 2019
- ◆ **World Oral Health Day**
 - *Apart from regular community visits round the year, this year also the department of community dentistry celebrated World Oral Health Day marked on 20th March 2019. An oral health awareness walk was organized at Dow University Hospital Ojha Campus. KONPAL which is an NGO taking care of children who suffer child abuse collaborated with us in celebrating the day with street children and the institutional children who are differently-abled intellectually. The street children and the care-takers of differently-abled children were taught about oral hygiene maintenance of self and those under care.*
 - *An out-reach activity was also organized in February 2019 in the outskirts of Thar in collaboration with Thar Foundation, Sindh Engro Coal Mining Company.*

◆ **IDA RIEU SCHOOL (Tooth Brushing Activity)**

Visually impaired children are solely reliant upon verbal instructions and simple information for their everyday routine abilities. One such routine task that they must fulfil is oral hygiene, which if jeopardized may have negative impact on their quality of life. The students of Dow University of Health Sciences organized a “**Tooth Brushing Activity**” for the special children at IDA RIEU School of visually impaired children.

◆ **Basic Health Unit, P.E.C.H.S Society**

(Free Screening and Dental Services)

Free screening and dental services were provided by the Basic Health Unit, PECHS Society a project of Dow University of Health Sciences.

◆ **Adopted School By Al-Zohra Welfare (Free Screening And Oral Hygiene Awareness)**

Free Screening and Oral Hygiene Awareness provided by Dow University of Health Sciences students at an adopted school of Al-Zohra Welfare.

◆ **Neuro Rehabilitation Unit-DUH**

Two thousand, eight hundred and seventy-two patients were treated at the Neuro Rehabilitation Unit of DUH.

◆ **Collaboration with International Movement Disorder Society**

In collaboration with International Movement Disorder Society DUHS is running a Centre to Centre program for Parkinson’s disease and other movement disorders and faculty training.

◆ **Deep Brain Stimulation Centre**

DUH approved the formation of Deep Brain Stimulation Centre at the Neurology Department of DUHS.

◆ **Alzheimer’s Day**

Alzheimer’s Day was celebrated on 29th September 2018 for the awareness of Alzheimer Disease to the general public.

◆ **Epilepsy Day 18th December 2018**

Epilepsy Day was celebrated on 18th December 2018 for the awareness of Epilepsy Disease to the general public.

9.3 Alumni Affairs: Outstanding Achievements

Alumni from Dow University of Health Sciences are serving in various medical and allied health sciences of national as well international repute.

For example, Syed A. Hoda is a Professor of Pathology at the Weill Medical College of Cornell University and an Attending Pathologist at the New York Presbyterian Hospital. Dr. Hoda is a surgical pathologist with a particular interest in diagnostic breast pathology. He is an example of an exceptional alumnus with outstanding achievements in his field.

International Alumni Outstanding Achievements

Over 3000 graduates of Dow University of Health Sciences are practicing in various medical institutions of USA, UK, KSA and other countries. Majority of them are supervising the different medical departments, contributing in the medical researches and in their respective fields as alumni of DUHS:

Prominent Alumni of DUHS include:

1. Prof. Shahed Quraishi – President of the Royal Society of British Medicine (ENT Section)
2. Dr. Azra Raza – Author “The First Cell: And the Human Costs of Pursuing Cancer to the Last” and of Professor of Medicine and Director of Myelodysplastic Syndrome Center at Columbia University

National Alumni: Outstanding Achievements

A large number of graduates of Dow University of Health Sciences are serving humanity throughout the country and hold key posts. Majority of them are the heads of various health care institutions.

Graduates of Dow College of Pharmacy are rendering their services in highly reputable private and public sector organizations. Some notable entities where alumni of our institute are performing their duties include Drug regulatory authority of Pakistan, Aga Khan University Hospital, South city Hospital, NMC Hospital, NIBD, Kiran Hospital, Indus Hospital Korangi, leading pharmaceutical manufacturing companies and many others.

Our alumni have been outperforming alumni from other universities in various fields, one such example is AKUH entrance test for internship programs, where our alumni have been performing extraordinarily each year.

Several graduates are also playing their roles in industrial pharmacy and working in multinational and local pharmaceutical industries including Abbot, GSK, Brookes Pharma (Private) Limited, Bosch Pharmaceuticals, The Searle Company Ltd., Hilton Pharma (Pvt) Ltd, AGP Limited, among many others.

Prominent Alumni within Pakistan:

Dr. Syed Adeebul Hasan Rizvi – Founder of Sindh Institute of Urology and Transplantation

Dr. Abdul Bari – CEO Indus Hospital Network (Indus Hospital)

Dr. Syed Baqar Askary – Founder of Fatima Jinnah Dental College, Karachi

Dr. Asim Jamal – Country Chair and MD, Sanofi Aventis

CHAPTER 10

SPORTS

10.1 Inter-Departmental Sports

Annual Sports 2019 was successfully conducted from 26th February to 2nd March 2019. The students of 13 constituent Colleges/ Institutes namely Dow Medical College (DMC), Dow International Medical College (DIMC), Dr. Ishrat-ul-Ebad Khan Institute of Oral Health Sciences (DIKIOHS), Dow International Dental College (DIDC), Dow Dental College (DDC), Dow College of Pharmacy (DCOP), Institute of Health Management (IHM), Institute of Medical Technology (IMT), Institute of Physical Medicine and Rehabilitation (IPM&R) and Institute of Nursing (ION), Dow Institute of Radiology (DIR) Dow College of Biotechnology (DCOB) and School of Public Health (SPH) participated with great enthusiasm. Color coded shirts and flags were provided to the students representing the respective institutes. The girls and boys enthusiastically participated equally in all events despite the fact that they are not regular athletes.

We plan to schedule a Sports Week every year so that the maximum numbers of students participate in healthy activities.

State of art gymnasium and cricket ground has been provided by Dow University where the students play after college hours.

We have planned to have regular sessions for trained students with expert coaches who can groom these players to shine nationally and internationally.

During last few years with the growth of the university, the faculty enhancement has also taken place. Therefore, we also held faculty matches in which most of them participated with enthusiasm.

DUHS Fitness & Sports Rehab Centre

What we Offer

- *Providing Fitness Training*
- *Weight Management (Fat reduction)*
- *Weight Maintenance and Weight gain*
- *Neuro Rehab, Ortho Rehab*
- *Geriatric Rehab Services*

Talent Show-DUHS

On Vice Chancellors directives "Talent Show" was organized at Muin Auditorium, Dow Medical College on 10th November 2018. More than 165 students from all 13 colleges/institutes of DUHS participated in singing, dancing, skit, parody and playing instrument. Vice Chancellor, Prof. Mohammed Saeed Quraishy was the Chief Guest on this occasion.

Declamation Contest For Award of Allama Iqbal Shield

Declamation Contest was organized at DUHS in Urdu/English on 25th & 26th April, 2018 at Arag Auditorium, DMC, Prize money was released by HEC.

The HEC has taken number of initiatives to promote extracurricular activities to enhance speaking skills and sparking healthy competition, develop understanding of socio

economic, cultural and political issues among the students. Divert energies of students towards healthy activities and creative thinking Encourage tolerance, non-violence and respect for others.

SPEAK TO LEAD DOW DEBATING SOCIETY

It is said, if you can speak, you can influence, if you can influence, you can change. Dow debating society in collaboration with KHATEEB arranged a public speaking workshop "Speak to lead" on 12th May 2018. The mentors of the session were Muhammad Ateeb, Haadi Faroogi and Sobhan Baig being highly equipped on the topics they spoke about. They highlighted the significance of the art of public speaking in our society.

DUHS LITERARY AND DEBATING SOCIETY

INTER UNIVERSITIES DEBATING COMPETITION

DUHS Literary and Debating Society organized an Inter Universities Debating Competition at Moin Auditorium on Feb 20, 2019. The chief guest of the event was Prof. Saeed Quraishy and the program was organized by Prof. Mukarram Al. President of DUHS LDS Shaheera Iqbal did great effort for this event. Team TSA grabbed the team trophy of the event

QUAID DAY CELEBRATION JASHAN-E-JINNAH

"We are not too far when Pakistan will be among the world's leading nations"

Jashan-e- Jinnah was organized by Dow University of Health n Sciences on 26th December, 2018 at Arag Auditorium, Dow Medical College. In which Speech Competition, Quiz Competition & Essay Writing Competition were organized and well attended by the students.

Students from all colleges/ institutes of DUHS participated in this program. During the program students took part in the debate section in which they paid tribute to heroes of Pakistan who served the country and even sacrificed their lives for the sake of their country.

Mr. Javed Ali Memon, Regional Director, HEC, Sindh was the Chief Guest. Speaking on this occasion, he said youth in Pakistan's great hope and will bring the country to the ultimate development with utter sprit and patriotic labor. "We are not too far when Pakistan will be among the world's leading nations"

International Students Convention, Pak China Friendship Center

Students from DUHS visited the Parliament House and met with the ministers, who showed them how the parliament works they also participated in the International Students Convention 2018 held at Pak China Friendship Center.

10.2 Participation in National Championships

The students of DUHS participate in various local and regional competitions and have been given laurels for their efforts on behalf of the University.

10.3 Achievement at Regional /National levels

Shahjiwani International Debating Championship

Dow Debating society grabbed the top position again in an International Debating Championship.

This miraculous story is about the 17th Shahjiwana International Debating Championship which was organized by University College Association of Debaters and was held at University College, Lahore from 7th February till 10th February 2019.

Dow Debating Society sent two teams to compete. Team 1 constituted of Shaheera Iqbal and Areeba Ahmed whereas Team 2 had Taha Ahmed and Mairaj-ul-Arfin. Both the teams performed marvellous. Team 1 won the title in the Novice Category of Urdu British Parliamentary Debate.

Shahjiwana is considered as the biggest and the oldest Parliamentary Debate Championship in the whole country where 200+ teams participated this year which was a second break experience. DUHS Literary and Debating Society is proud of its speakers.

DECLAMATION & DEBATE IU PARLIMENTARY & LUMHS

LUMHS All Sindh Trilingual Declamation Competition In September 2018, students of DUHS (Taha Ahmed, Waniya Noor and Kamlesh) participated in All Sindh Trilingual Declamation contest at LUMHS Jamshoro, where Kamlesh grabbed 2nd position in Sindhi humorous declamation and this amazing trio team of DUHS achieved runner up team trophy there acing the hearts of Sindh. It was a great experience for the students of DUHS for which they are highly obliged to Prof. Saeed Quraishi and Prof. Mukarram.

IU Parliament and Debate Championship 2018

“Team Dow ends up as runner up team at their first go at the Asian parliamentary debates”.

The competition took between 36 teams from all Over Karachi, while team Dow stood ahead of 34 of them. The team of adjudicators comprised of 9 zealous debaters who have competed in and won multiple debating competitions all across Pakistan. Team Dow Comprised of 3 students from Dow Medical College in which Taha Ahmed, Mairaj ul Arifin and Ashhad spoke, led by Taha himself. This great event took place in September 2018, at the Main Campus of Iqra University.

Declamation PAF-KIET & Liaquat University

“Dowites Owned the PAF-KIET Declamation”

In April 2018 the magnificent event all Karachi Bilingual Declamation took place, hosted by PAF. Our zealous speaker Taha Ahmed participated in the Declamation Urdu category and ended up as the 2nd Best speaker.

In November 2018, another shining star of Dow, Wania Noor got 3rd position in English Declamation.

Team Dow Wins All Karachi Asian Parliamentary Debate at NU Fast

Dozens of Universities from Karachi participated in this grand event of Asian Parliamentary Debate held at FAST- NU on 22nd- 23rd Jan 19.

The adjudication core comprised of highly qualified and experienced Parliamentary speakers from all over Karachi. The competition was structured having three preliminary rounds, political, global and humorous, followed by semifinals and finals.

Taha Ahmed (3rd year), Mairaj ul Arfin (2nd year) and Shaheera Iqbal (Final Year) participated as “Team Dow” and brought this honorable shield to Dow Medical College.

Sports Competition Inter Professional Medical College

All Karachi Inter Professional Medical College Sports Competition 2018 of DUHS was held on 12th March to 17th March, 2018.

Inaugural Ceremony was held on 12th March 2018 at Gymnasium, Ojha Campus. Mr. Javed Ali Memon, Director, Regional Centre Sindh, Higher Education Commission, and Vice Chancellor, Dow University of Health Sciences was the Chief guest on this occasion. DUHS held the first position in following matches Throw Ball Girls, Netball Girls, Football Boys, Volley Ball Boys, Volley Ball Girls, Basket Ball Boys, Squash Boys, Table Tennis Boys and Runner up positions in Basket Ball Girls, Squash Girls, Table Tennis Girls.

10.4 Honors & Awards to Winners

DUHS awards special shields and certificates of appreciation to the winners of different sports and co-curricular / extra-curricular activities contests held at regional and / or national level.

Medallions and shields are also awarded to the winners of inter departmental sports/ contest winners.

CHAPTER 11
UNIVERSITY BUILDING LEADERSHIP

11.1 Faculty Leadership

Awards and Representation in Government Policy making committees, memberships on various councils etc.

Faculty Leadership Awards of faculty members are mentioned below:

Name of Faculty Member	Title of Award	Year	Name of Org.
Dr. Tariq Ali	Productive Scientist of Pakistan	2018	Pakistan Council for Science and technology. Govt of Pakistan
Dr. Fakhshena Anjum	Productive Scientist of Pakistan	2018	Pakistan Council for Science and Technology, Govt of Pakistan
Dr. Anab Fatima	Productive Scientist of Pakistan	2018	Pakistan Council for Science and Technology, Govt of Pakistan

Representation in Govt. Policy Making Committee (FY 2018-19)

Name of Faculty Member	Name of Committee / Representation	Name of Org.
Prof. Nisar Ahmed Rao	Strategic Treatment Advisory Group (STAG)	National TB Control Program Ministry of Health, Pakistan

Dr. Saifullah Baig	Strategic Treatment Advisory Group (STAG)	National TB Control Program Ministry of Health, Pakistan.
Prof. Dr. Arshad Hasan	Syndicate, Migration IRB, PMDC Committee, Committee	Pakistan Medical and Dental Council
Saeed Akhtar	Member	DPT National Curriculum Review Committee (NCRC) HEC
Dr. Nilofer Fatimi Safdar	Sindh Food Fortification Alliance Academia member	Ministry of Planning & Development, Sindh Government
Dr. Nilofer Fatimi Safdar	Fill the Nutrient Gap (FNG) in the "Scaling Up Nutrition" (SUN) Expert member	Ministry of Planning & Development, Sindh Government
Dr. Nilofer Fatimi Safdar	National Nutrition Program, Adolescent Nutrition Expert member	Ministry of National Health Services, Regulations & Coordination

Membership in Various Councils (FY 2018-19)

Name of Faculty Member	Status	Name of Council
Prof. M. Saeed Quraishy	President, PSG & GIE	Pakistan Society of Gastroenterology & GI Endoscopy
Atiq ur Rehman	Board of Directors	Pakistan Society Therapy Association (PPTA)
Umesh Kumar	Information Secretary	PPTA (Sindh Chapter)

Prof. Ambrina Qureshi	Reviewer	Scientific Manuscripts published by PLOS-One, Elsevier and JPDA.
Prof. Ambrina Qureshi	Honorary Editorial Board	Journal of Pakistan Dental Association.
Rabya Munawar	Ex. Executive member	Pharmacy Council of Sindh
Wajiha Gul	Editorial Board Member	ARC Journal of Pharmaceutical Sciences
Dr. Naresh Kumar	Co-opted member Standing Recognition Committee (Dental)	Pakistan Medical and Dental Council

11.2 STUDENT LEADERSHIP

CO-CURRICULAR ACTIVITIES: UNIVERSITY DRAMAS, EXHIBITION, EXPOS, COMPETITIONS & DEBATES AT NATIONAL AND INTERNATIONAL LEVELS

- ✦ *Shahjiwani International Debating Championship, Shaheera Iqbal and Areeba Ahmed won the title in the Novice Category of Urdu British Parliamentary Debate.*
- ✦ *All Sindh Trilingual Declamation contest at LUMHS Jamshoro, where Kamlesh grabbed 2nd position in Sindhi humorous declamation.*
- ✦ *IU Parliament and Debate Championship 2018, Taha Ahmed, Mairaj ul Arifin and Ashhad runner up team at their first go at the Asian parliamentary debates.*
- ✦ *All Karachi Bilingual Declamation took place, hosted by PAF. Our zealous speaker Taha Ahmed participated in the Declamation Urdu category and ended up as the 2nd Best speaker.*
- ✦ *In November 2018, another shining star of Dow, Wania Noor got 3rd position in English Declamation.*
- ✦ *All Karachi Asian Parliamentary Debate at NU Fast, Taha Ahmed (3rd year), Mairaj ul Arifin (2nd year) and Shaheera Iqbal (Final Year) participated as "Team Dow" and brought the honorable shield to Dow Medical College.*

CHAPTER 12

FINANCE

DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI

12.1 APPROVED BUDGET 2018-2019

(Rs. in Million)

	Particular	Approved Budget 2018-19	REVISED 2018-19
12.1	Annual Statement of Accounts	Annual Statement of Accounts for F.Y. 2018-19 is in progress.	
12.2	Financial Year at a Glance		
12.3	Audit Report	DG Audit Sindh Report of 2018-19 is in process.	
12.4	Development Budget HEC	HEC GOS UDWP	Rs. 00. 00 Rs. 396.473 (m) Rs. 1775.290 (m)
12.5	Recurring Budget	3,037.561 (m)	3261.088 (Annex: II)
12.6	Self-Generated Income	1,864.436 (m)	1,990.934 (Annex: III)
12.7	SAP related activities	Not Applicable	
12.8	Trend per Student Spending	Revised Exp. 3,261.088 / 8310 Students =	2018-19 0.39 million

12.2 FINANCIAL YEAR AT A GLANCE

DUHS currently worked on the Strategic Plan under which we have built rehabilitated, remodeled and expanded Physical and Technological Infrastructure that had outlived its utility. The new facilities, expanded rapidly, can now easily last for the next ten years. Now the maintenance of these facilities is a big challenge and still posing an uphill task for the management to control.

DUHS ended the last fiscal year 2018-19 with an overall revised deficit of Rs. (291.306) million.

Further, during the last year, DUHS has been setting aside the funds against employees' deferred liabilities. The total liabilities stood at Rs. 1280.333 million as on June 30, 2019; however, the total assets we were able to earmark on the same date was of Rs. 537.308 million. The major reason of deficit amounting to Rs. (743.025) million is due to the various announcements of increments by the Government in the past couple of years, such as change in pay structure in consecutive years, up gradation of posts etc. Consequently, the difference between assets and liabilities, especially in Staff Pension Fund and Leave Compensated absences, have been widened as a result of revision in government pay scales. It is not possible for the Institution to cover this huge gap from the recurring streams of income.

Moreover, we believe that the important parameters for attaining prime objective of sustainability are good governance and strong financial management systems.

*As per direction of the office of the Hon'ble President of Pakistan and the Higher Education Commission of Pakistan, we have already submitted **Strengthening of Financial Management Systems with Complete ERP solution plan**, capable of providing accurate and timely financial information necessary for taking commendable decision making, that will eliminate administrative efforts and increase efficiency, Internal control and sustainability.*

DUHS currently in process of implementation of ERP Software Microsoft Dynamics, which will be comprehensive ERP solution for the University.

Particulars	2018-19 (Rs. in million)
Revised Overall Surplus / (Deficit)	(291.306)
Financial Aid Assistance	109.156
Training and Development (Million)	6.825
Increase in Budget (Millions)	223.527
Self-Generated Income as Percentage of Total Income	67%
Budgetary Controls Percentage through Improved Measures (Deficit)	1%
University Endowment Fund (Millions)	415.327
University Research Fund	50.640
Funding Required for Strengthen Financial Management System with Implementation of ERP system	100.000

External funding for Development side (HEC & Sindh Govt.)	396.473
Capex incurred during the year	2171.763
University funding for Development side	1775.290
Difference Between Funds Available with University for Employees Retirement Benefits & Auctorial Evaluated Estimates (In Millions)	Rs. (743.025) Deficit

DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI

FINANCIAL YEAR AT A GLANCE (2018-19)

A. RECEIPTS:

As per Revised, total receipts for the FY 2018-19 increased by 5.47% as compare to Budget Estimates 2018-19, mainly due to the following factors:

Particulars	BUDGET 2018-19	REVISED 2018-19	Increase/ (Decrease)	Remarks
HEC	613.241	614.241	1.000	-
Grant for TTS	9.839	8.712	(1.127)	Grant released from HEC is less than expected.
Provincial Govt. Grant	150.000	151.697	1.697	U&B Department Govt of Sindh released Rs. 151.697 (m) for recurring expenditure more than expected.
Donations	7.000	6.154	(0.846)	-
Any Other Grant	180.000	198.044	18.044	Rs.198.044 million is grant for stipend of PG's and other is from donors for scholarship.
Self-generated income	1,864.436	1,990.934	126.489	Increase in dollar rates result in increased tuition fee from budgeted estimates.
Total	2,824.516	2,969.782	145.266	

B - EXPENDITURES:

The Revised Expenditure for 2018-19 have seen an increase of 5.43% as compared to Budgeted Estimates 2018-19. A summarized comparison of different expenditure heads is as follows:

Description	BUDGET 2018-19	ACTUAL 2018-19	Difference
Pay & Allowances	1,685.861	2,183.668	(497.807)
Utility	85.000	86.378	(1.378)
Occupancy Cost	60.000	54.474	5.526
Travel & Transport	95.000	77.741	17.259
Operating Expenses	544.500	390.761	153.739
Employees Retirement Benefits	133.000	155.476	(22.476)
Repair & Maintenance	85.900	52.954	32.946
Research & Feasibility Studies	15.500	37.928	(22.428)
Financial Assistance / Scholarship	93.500	109.156	(15.656)
Entertainments & Gifts	4.000	3.377	0.623
Physical Assets	89.600	61.667	27.933
Civil Work	11.000	4.978	6.022
Others	134.700	42.530	92.170
Total	3,037.561	3,261.088	(223.527)

DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI

12.3 RECURRING BUDGET (2018-19)

Code No.	Budget Heads	Budget 2018-19	Actual 2018-19
A031	Fees (Total)	3.500	7.636
A03101	Bank Fees	1.900	1.542
A03102	Legal Fees	1.600	6.094
A032	Communication (Total)	12.500	25.824
A03201	Postage and Telegraph	0.050	-
A03202	Telephone & Trunk Calls	3.500	2.500
A0320402	PERN	4.750	19.745
A0320403	Internet Charges	2.700	2.638
A03205	Courier and Pilot Services	1.500	0.941
A033	Utilities (Total)	85.000	86.378
A03301	Gas	4.250	4.248
A03302	Water	9.250	3.340
A03303	Electricity	71.500	78.791
A034	Occupancy Costs (Total)	60.000	54.474
A03407	Rates and Taxes	0.750	0.938
A03410	Security Charges	27.250	18.647
A03470	Other Occupancy Cost	32.00	34.889
A036	Motor Vehicles (Total)	5.500	18.343
A03602	Insurance	3.250	2.943
A03603	Registration	2.250	15.400
A037	Consultancy & Contractual Work (Total)	5.000	0.726
A03702	Management	5.000	0.726

Code No.	Budget Heads	Budget 2018-19	Actual 2018-19
A038	Travel & Transportation [Total]	95.000	77.741
A03801	Training - Domestic	4.500	0.775
A03802	Training - International	10.000	6.050
A03805	Travelling Allowance - TA/DA	5.800	6.253
A03806	Transportation of Goods	2.500	0.066
A03807	P.O.L. Charges	15.750	17.142
A03808	Conveyance Charges - for late sitting	0.450	0.392
A03810	Study Tours	0.750	
A03820	Others (Transport Expense)	55.250	47.062
A039	General Operating Expenses (Total)	544.500	390.761
A03901	Stationery	5.500	4.665
A03902	Printing and publications	13.200	11.079
A03903	Conferences / Seminars / Workshops / Symposia	5.500	1.404
A0397006	Convocation Expenses	9.750	13.201
A03905	Newspapers Periodicals and Books	8.500	15.939
A03907	Advertising & Publicity	9.350	8.794
A03912	Expenditure on Pakistani Delegations to Foreign Countries	0.700	-
A03915	Payment to Govt. Department for Services Rendered	0.250	0.174
A03917	Law Charges	4.500	-
A03918	Exhibitions Fairs & Other National Celebrations	1.650	0.717
A03919	Payments to Other services rendered - Audit Fee etc.	2.250	2.659
A03936	Foreign / Inland Training Course Fee	2.750	-
A03940	Unforeseen Expenditure / Contingencies	3.300	3.819
A0394204	Specific Consumable	7.900	10.480
A03959	Stipends Incentives etc.	400.000	259.426
A03970	Others	22.400	11.876
A0397002	i. Operational Cost- Office of Research Innovation & Commercialization (ORIC)	8.000	19.211
A0397003	ii. Operational Cost of Quality Enhancement Cell (QEC)	8.850	3.557
A0397004	iii. Operational Cost of Financial Aid Development Office (FADO)	3.000	-
A0397005	iv. Conduct of Examinations	13.500	13.351
A0397006	v. Sports Activities	1.650	0.721
A0397008	vii. Remuneration to Part-time Teachers / Visiting Faculty	12.000	9.688

Code No.	Budget Heads	Budget 2018-19	Actual 2018-19
A03	Total Operating Expenses	811.000	661.884
A04	Employees Retirement Benefits (Total)	133.000	135.476
A04102	Commuted Value of Pension	115.000	113.350
A04114	Superannuation Encashment of LPR	13.500	18.076
A04170	Others - Assistance Package for Families of Emps	4.500	4.050
A13	Repair and Maintenance (Total)	85.900	62.954
A13001	Transport	7.500	3.236
A13101	Machinery & Equipment	18.000	21.403
A13201	Furniture & Fixture	3.250	3.090
A13301	Office Buildings	35.200	17.476
A13302	Residential Buildings	11.000	10.757
A13703	I.T. Equipment	4.250	3.895
A13801	Maintenance of Gardens	3.300	1.831
A13901	Lines & Wires - Repair	1.200	1.255
A13920	Others - Repair	2.200	0.012
A021	Feasibility Studies (Total)	2.200	-
A02101	Feasibility Studies	2.200	-
A022	Research Survey & Exploratory Operations (Total)	15.500	37.928
A02201	Research and Survey	15.500	37.928
A061	Financial Assistance/ Scholarships (Total)	93.500	109.156
A0610102	Need Based Scholarships	88.000	109.156
A0610103	Faculty Scholarships	5.000	-
A06103	Cash Awards - for Meritorious Services	0.500	-
A063	Entertainments and Gifts (Total)	4.000	3.377
A06301	Entertainments	4.000	3.377
A064	Other Transfer Payments (Total)	106.000	-
A0640202	Contribution / Transfers to Pension Fund	100.000	-
A0640204	Contribution / Transfers to Benevolent Fund	6.000	-

Code No.	Budget Heads	Budget 2018-19	Actual 2018-19
A09	Expenditure on Acquiring of Physical Assets (Total)	89.600	61.667
A09201	Hardware	22.000	4.605
A09202	Software	5.500	6.264
A09203	Purchase of I.T. Equipment	13.200	9.017
A09501	Purchase of Transport	5.000	5.567
A09601	Purchase of Plant & Machinery	13.200	14.086
A09701	Purchase of Furniture & Fixture	13.200	8.120
A09801	Purchase of Livestock	5.500	-
A09470	Others	12.000	14.008
A124	Civil Works - Buildings & Structures (Total)	11.000	4.978
A12405	Electrification Plumbing and Other Infrastructure	11.000	4.978
	Total Non-Salary Expenses	1,351.700	1,077.420

Annex-III**12.4 DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI****SELF-GENERATED INCOME (2018-2019)****(Rs. in million)**

Code No.	Budget Heads	Budget 2018-19	2018-19 Actual
C02813	Education General Fees [301 - 390]	1,656.564	1,814.246
C0281301	Admission Fees	67.487	87.693
C0281306	Tuition Fees - Regular Fee Structure	409.589	545.490
C0281311	Tuition Fees - Self-Support Scheme	102.820	101.055
C0281316	Tuition Fees - Self-Financing Scheme	988.783	992.039
C0281332	Examination Fees-University On Campus Students	20.604	29.101
C0281333	Examination Fees - Affiliated Colleges Students	1.200	1.600
C0281346	Degree / Transcript Fee etc.	5.000	5.804
C0281361	Income from Continuing Professional Development Courses for Business & Community	4.349	3.001
C0281380	Course Fees - 'Post-Graduate Diploma'	7.274	5.544
C0281382	Course Fees - 'Special / Short Courses'	2.183	2.828
C0281390	Other Misc. Fees from Students	47.276	40.092
C02812	Hostel Fees / User Charges [201 - 226]	92.000	91.835
C0281206	Hostel Room Rent	47.000	-
C0281221	Income from Transport / Buses	45.000	44.360

Code No.	Budget Heads	Budget 2018-19	2018-19 Actual
C02810	Income from Endowments	17.872	12.630
C02815	Income from Regeneration & Development Programs [566 - 572]	25.000	21.488
C0281572	Income from Regeneration & Development Programs - Others	25.000	21.488
C02818	Others [809 - 870]	73.000	50.734
C0281830	Sale of Prospectus / Forms	16.000	1.098
C0281840	Rent / Lease of University Buildings / Shops etc.	2.000	2.825
C0281860	Interest on Investments / Cash Balances etc.	15.000	34.607
C0281870	Other Misc. Receipts	40.000	12.204
	Total Own Resources	1,864.436	1,990.934

12.5 STUDENT FINANCIAL AID:

Dow University of Health Sciences, Karachi, has established a University Advancement Cell and Financial Aid Office for the financial facilitation/assistance to the students. The University is engaged in the process of increasing the number of funding organization / philanthropist and sign MOU with them. The University future planning is to enhance duration of refunding amount of scholarship and develop a new fee structure with emphasis on minimizing the burden of scholarship awardee, to increase promotional activities through workshops, seminars, social media etc. and to arrange Symposium of different funding agencies with students, so that they may explain their program to students directly.

S #	Institution/Organization Offerings Financial Aid/ Scholarships To DUHS Students	Type Of Assistance
1	Ihsan Trust	Qarz-E-Hasna
2	Professional Education Foundation	Qarz-E-Hasna / Zakat
3	Abdullah T Mohammed Wehwaria & Farhat Aleem Scholarship	Scholarship
4	University Of Karachi Alumni Association	Scholarship
5	Endowment Fund Scholarship	Scholarship
6	Fauji Foundation	Stipend
7	Staff Welfare Organization	Stipend
8	Federal Employees Benevolent and Group Insurance Funds	Stipend
9	NBP Student Loan Scheme	Loan

CHAPTER 13
UNIVERSITY GOVERNANCE

13.1 SYNDICATE MEETINGS

2019 (03 meetings)

- ◆ *76th meeting of syndicate held on Saturday, the 19th January, 2019.*
- ◆ *77th meeting of syndicate held on Saturday, the 6th April, 2019.*
- ◆ *78th meeting of syndicate held on Saturday, the 13th July, 2019.*

2018 (05 meetings)

- ◆ *70th meeting of Syndicate held on Saturday, the 27th January, 2018*
- ◆ *71st meeting of Syndicate held on Saturday, the 21st April, 2018*
- ◆ *72nd meeting of Syndicate held on Wednesday, the 27th June, 2018*
- ◆ *73rd meeting of Syndicate held on Saturday, the 21st July, 2018*
- ◆ *74th meeting of Syndicate held on Saturday, the 20th October, 2018*
- ◆ *75th meeting of syndicate held on Saturday, the 8th December, 2018*

13.2 ACADEMIC COUNCIL MEETINGS

- ◆ *14th Meeting of Academic Council held on Thursday, the 15th March, 2018*
- ◆ *15th Meeting of Academic Council held on Monday, the 17th September, 2018*
- ◆ *16th Meeting of Academic Council held on Wednesday, the 13th March, 2019*

13.3 BOARD OF ADVANCED STUDIES AND RESEARCH MEETINGS

- ◆ *54th meeting of the Board of Advanced Studies and Research held on 06th February, 2018*
- ◆ *55th meeting of the Board of Advanced Studies and Research held on 16th May, 2018*
- ◆ *56th meeting of the Board of Advanced Studies and Research held on 28th September, 2018*
- ◆ *57th meeting of the Board of Advanced Studies and Research held on 23rd November, 2018*
- ◆ *58th meeting of the Board of Advanced Studies and Research held on 12th March, 2019*
- ◆ *59th meeting of the Board of Advanced Studies and Research held on 14th June, 2019*

CHAPTER 14
RESOURCE GENERATION &
DEVELOPMENT

The Vice Chancellor of Dow University of Health Sciences leads the functions of Resource Generation & Development. He is responsible to organize, administrate and manage projects for University Development and control the general activities of the University.

The main function of this office is to generate resources for University Development Programs and provide better services to all the stakeholders.

14.1 NEW INITIATIVES & PLANS FOR IMPLEMENTATION

- ◆ Initiative to develop a central research center for Dental Colleges at Dow Medical College Campus, a hub for dental research in Karachi City.
- ◆ Implement a student clinical & psychological counseling service for the University.
- ◆ Extensive Ramadan Zakat Campaign was carried out to create awareness about services offered at the Dow University Hospital.
- ◆ Initiative to acquire Online Payment Gateway to facilitate donors from other countries to Donate and contribute in DUHS's projects.
- ◆ Multiple reunions with alumni community to create awareness and have pledges in future plans of the department.

14.2 FUTURE PLANS FOR DEVELOPMENT

- ◆ Extension of College of Pharmacy Building (2,700 Sqft) - Academic Block

- ◆ Institute for Genomics & Genetic Diseases Research & Treatment Center (45,000 Sqft) - Academic Block

- ◆ Hostels for Female Student (for 200 students)- 45,562 Sqft.

- ◆ Auditorium (for 700 students) - 24,200 Sqft

- ◆ Upgrade in ICT Infrastructure (immediate need of 530 systems) in various digital libraries across DUHS- DVTC, ION, SPH, DCOP, IPM&R & DIMC

- ◆ Establishment of an Alumni Database for future fundraising and resource generation activities

- ◆ Establishment of Business Incubation Center Building/floor/area with minimum covered area of 10,000 sq. ft. for BIC activities, including successful development of start-ups and fledgling companies by providing entrepreneurs with an array of targeted resources and services, support linkages between academia and industry, and promote innovative research-based initiatives to enhance the competitiveness of Pakistan's economy.

- ◆ Raise Awareness & Funds for the establishment of Center for Genomics in a public sector University of Pakistan.

CHAPTER 15
HEALTH CENTER & MEDICAL
FACILITIES

15.1 MEDICAL FACILITIES OF DOW UNIVERSITY OF HEALTH SCIENCES

Dow University Health System a unit of Dow University of Health Sciences is the largest and the most comprehensive provider of tertiary clinical care in the region. Anchored by Dow University Hospital, the System is comprised of Dow Institute of Radiology, Dow Diagnostic Research & Reference Laboratory, OJHA Institute of Chest Diseases, Dr. Abdul Qadeer Khan Institute of Behavioral Sciences, Institute of Physical Medicine & Rehabilitation, National Institute of Diabetes & Endocrinology, National Institute of Liver & GI Diseases, and Dr. Ishrat-ul-Ebad Khan Institute of Blood Diseases.

Dow University Hospital (DUH) was established in 2009 as a tertiary care teaching and training facility for students, residents and fellows in medicine, pharmacy, nursing, dental, and other allied health sciences. With a capacity of over 500 beds, DUH is the only modestly priced tertiary care hospital that serves the burgeoning healthcare needs of the community. It provides education and training to both undergraduate and postgraduate students in the following colleges/schools/institutes in DUHS:

- Dow International Medical College*
- Dow International Dental College*
- Dow College of Pharmacy*
- Dr. Ishrat-ul-Ebad Khan Institute of Oral Health Sciences*
- Institute of Nursing*
- Dow Institute of Medical Technology*
- Dow College of Biotechnology*
- Institute of Business & Health Management*

It is among the few hospitals in the region that provide services for liver, kidney and bone marrow transplantation. Additionally, it offers complex and advanced medical and surgical care needed for patients in the areas of cardiology, cardiac surgery, neurology, neurosurgery, gynecology & obstetrics, emergency medicine, pediatrics, nephrology, physical medicine & rehabilitation, dermatology and other disciplines.

SOME OF THE ACCOMPLISHMENTS IN FY 2018-19 ARE DETAILED BELOW:

- *Inauguration of purpose-build Clinical Hematology & Bone Marrow Transplant (BMT) facility*
 - *First successful Bone Marrow Transplant conducted in a 63 years old patient with Multiple Myeloma*
- *Established Nursing Education Services (NES) to provide longitudinal education and training of nursing staff.*
- *Established Pharmacy & Therapeutic Committee*

- *To develop Hospital Formulary in compliance of National Essential Medication List 2018*
- *Initiated the deployment of Hospital Information Management System for:*
 - *Both inpatient and outpatient Computerized Physician Order Entry (CPOE)*
- *Initiated a year-long Pharmacist Internship Program – a first such program in a public sector hospital*
- *Appointment of new senior leadership:*
 - *Sohail Rao, MD, MA, DPhil., Chief Executive Officer, DUH*
 - *Prof. Haris Alvi, Medical Superintendent, DUH*
 - *Ms. Iffat Swamir, Chief Operating Officer, DUH*
 - *Mr. Abdul Hakim, Nursing Superintendent, DUH*
 - *Ms. Aasma Hamid, Manager, Department of Pharmacy, DUH*
 - *Initiated clinical rounds by pharmacists in BMT and Intensive Care Units*
- *Established Drug & Poison Information Centre*
- *Successfully conducted over 100 living-related renal transplants*
- *Initiated the process of developing an annual budget with Profit & Loss statements at the level of each service line*

Service Areas within Dow University, of the OJHA campus are:

◆ <i>Dow University Hospital (DUH)</i>
◆ <i>Dow Institute of Radiology (DIR)</i>
◆ <i>Dow Diagnostic Research & Reference Laboratory (DDRRL)</i>
◆ <i>National Institute Of Diabetes And Endocrinology (NIDE)</i>
◆ <i>Dental Sections, DIMC & DDC (With 10 Units For Oral & Maxillo-Facial Surgical Procedures) & Dental OPD Of DIKIOHS</i>
◆ <i>National Institute Of Liver And Gastrointestinal Diseases With Liver Transplant Unit (NILGID)</i>
◆ <i>Renal Transplant Unit</i>
◆ <i>Center For Surgical Oncology</i>
◆ <i>Dr. Abdul Qadeer Khan Institute Of Behavioral Sciences</i>
◆ <i>Institute Of Physical Medicine And Rehabilitation</i>

Pharmacy Services:

Pharmacy provides 6 days a week services to its customer. All prescription drugs and over the counter drugs are provided by the IPD & OPD pharmacy to cater to the needs of our patients as well as walk-in patients.

Vaccination Services:

Vaccination services are available as provided by the National Expanded Programme of Immunization (EPI) and free of cost at OICD.

Physical Therapy Services:

The Department of Physiotherapy provides comprehensive inpatient and outpatient services. All Physiotherapists are here to assess and treat patients of all ages and ailments and provide an important support service for our inpatients and out patients in need of dire physical therapists.

In Patient Departments:

- ◆ *Surgical*
- ◆ *Medical*
- ◆ *Gynae / Obs*
- ◆ *Orthopedic*
- ◆ *Paeds*
- ◆ *Psychiatry*
- ◆ *E.N.T*
- ◆ *Dialysis*
- ◆ *Ultrasound/ VIR*

Critical Care Units

- ◆ *Medical ICU (11 Bedded)*
- ◆ *Surgical ICU (06 Bed)*
- ◆ *Neonatal ICU (06 Incubators)*
- ◆ *Operation Theater (04 O.T Tables)*
- ◆ *Labor Room*
- ◆ *Emergency Department (15 monitored Bed)*
- ◆ *Fully equipped 24 hours running ER including separate minor O.T, Ultrasound & X Ray.*
- ◆ *Dialysis lab (Newly built)*
- ◆ *Sleep Lab (Polysomnography)*
- ◆ *Pulmonary Function Test*
- ◆ *EMG / NCV*
- ◆ *EEG*
- ◆ *CTG*
- ◆ *VEP*
- ◆ *G.A Fitness*

IN SUMMARY, DOW HOSPITAL PROVIDES FOLLOWING SERVICES AND FACILITIES TO THEIR PATIENTS:

1 24 hours Emergency Service Department

2 Out Patient Department (OPD Block)

3 Intensive Care Unit (ICU)

4 High Dependency Unit (HDU)

5 Neonatal Intensive Care Unit (NICU)

6 Dialysis Department

7 24 hours Emergency Service Department

9 Vascular Interventional Radiology (VIR), highly specialized procedure for various diseases minimizing major surgeries

10 Living donor Liver transplant

11 Hepato-pancreatic biliary surgeries

All types of medical & surgical treatments to cardiac patients

Operation Theatre (OT) Complex for all major & minor surgeries

Dow Diagnostic Research and Reference Laboratory (DDRRL)

Dow Diagnostic Research and Reference Laboratory (DDRRL) was established in October 2007 to provide reliable, high quality diagnostic services of International standards for routine and specialized tests at economical rates (i.e. approximately at 30% as compared to private rates), for all socioeconomic segments of the population. The laboratory is the fastest growing lab in Pakistan, whose internal quality assurance is guaranteed by daily controls. DDRRL also has the provision of online electronic reporting and Image transfer facilities for all patients.

Radiological Testing Services

The Dow Institute of Radiology and Dow Diagnostic Complex are facilitated with services that include the provision of all modern diagnostic facilities like:

- X-rays
- Ultrasound
- Computed Tomography (CT) Scan
- Magnetic Resonance Imaging (MRI)
- Fluoroscopy
- General Radiography
- Dual Energy X-Ray Absorptiometry (DEXA) Scan
- Echocardiography □ Mammography

Operation Theatre (OT) Complex

Dow University Hospital established a huge operation purpose-built theater i.e. OT Complex of International standards having 80,000 sq. ft. area which is fully equipped with most modern equipment. The OT Complex has nine 09 operation theatres. Two are designated for Liver Transplant and hepato pancreatic biliary surgeries while two theatres are designated for Cardiac and Orthopedic Surgeries; the required special instruments and gadgets for the purpose are installed and provided.

The remaining five Theatres are also fully equipped with most modern equipment to have operations of General Surgery, Urology, ENT, Plastic Surgery, Neuro Surgery and Thoracic Surgery, Bariatric Surgery etc. This complex also has fully equipped recovery room. The operation floor has a unique channelizing operating in automation to collect the dirty liner with safety, which is then washed, sterilized and stored hygienically preventing infection.

The OT complex has state of art equipment including ventilators, invasive hemodynamic monitoring system and hemodialysis. Since various specialties also provide Postgraduate training, camera recording and CCTV system is also installed for telecasting live operative procedures. This new OT complex has lot of facilities for the doctors, staff and students, including rest rooms, canteens and separate lockers besides other facilities.

Physiotherapy Services Department

Dow University of Health Sciences also offers physiotherapy services to outpatients through the attached department of the School of Physical Therapy at Institute of Physical Medicine & Rehabilitation (IPM&R). This department provides comprehensive rehabilitation services, i.e. cardiac, neurological musculoskeletal and pediatric rehabilitation, currently providing physiotherapy services to more than 55 patients per day. Since its establishment 14000 patients have been provided with physiotherapy services.

(Prostheses) Artificial Limbs and Braces/Supports (Orthoses)

Department of Prosthetics & orthotics at IPM&R, DUHS is providing (Prostheses) artificial limbs and braces/supports (orthoses) to person with disabilities. Around 975 appliances are delivered free of cost.

Dow Artificial Limb Centre

The Department of Prosthetics & Orthotics is serving the community by providing high quality prosthetics & orthotics appliances. During the year 2014, approx. 1580 patients benefited from the services of this department. Other than serving patients arriving at the center, this center is also facilitating other medical institutions for artificial limbs and appliances. Some of these services include facilitation offered to Jinnah Post Graduate Medical Centre for the Department of Orthopedics Club Foot Clinic by providing 300 Dennis brown splints for their congenital talipesequi-varus patients and providing Deniss Brown Splints for CTEV Patient (Clubfoot clinic).

Blood Transfusion Services Program

Safe blood is a crucial and irreplaceable component in the medical management of many diseases. In Karachi, because of the massive influx of patients from interior Sindh and other rural countryside, the demand of safe blood for transfusion could not be met with only replacement donors. Blood shortage in Pakistan is documented to be about 40% and this problem is further accelerated by inappropriate use of blood and its products.

Dow University of Health Sciences has taken the initiative towards provision of safe blood products to the needy patients. The overall project objective is to contribute to lowering hemorrhage mortality and to reduce the risk of transfusion transmitted infectious diseases and provision of safe and efficacious blood and blood products. The Voluntary non-remunerated blood donation (VNRBD) is the ideal source of quality blood, which forms less than 15 % of the demand of the blood in Pakistan. Under this initiative, Safe Blood Transfusion Services have been initiated with the strong pillars of voluntary blood donation with considerable community outreach, training of human resource in blood banking and transfusion medicine as per the recent scientific techniques and under the WHO recommended Quality Management principles, developing service delivery in blood banking and transfusion laboratory sciences with continuous education and research in transfusion medicine.

DUHS blood donation services are extremely active under Donor Management Department of the Centre and disseminating the message of Voluntary Blood Donation to the population at large.

The purpose is:

1. *Creation of a culture of voluntary blood donation through communication and education.*
2. *Build a stable blood donor pool by motivating and recruiting new donors from low-risk populations, and encouraging existing or lapsed donors to become regular donors and to recognize the contribution to society made by blood donors.*
3. *Provide quality donor care, so that blood donation is not onerous*
4. *Provide quality assured blood products to all the needy patients*
5. *And create a sustainable foundation of advanced WHO recommended blood banking in Pakistan.*

OJHA Institute of Chest Diseases (OICD) & Chest Disease Clinics

OICD was established in the early forties, as a TB sanatorium and now recognized as a center of excellence for Tuberculosis by the World Health Organization (WHO). The services provided here are free of cost and normally such type of ICU services costs around Rs. 20,000 - Rs. 50,000 / day in private hospitals.

The facilities provided to patients include high quality diet, recreation environment with TV, cable etc. and vocational training and support in the form of training for candle making and stitching etc. The Dow University takes the responsibility to sell their products for them.

Four out-patient clinics of OICD in the periphery of the city are also functioning, these are chest clinics of Iqbal Yad, Nazimabad, Lyari and Malir. Each clinic has a well-organized DOT (Directly Observed Treatment), where these patients with TB are provided medicines and health education.

Daily about 600 patients visit these TB clinics for DOTS treatment and follow up.

TB HOSPITAL of 250 beds provides all possible facilities to indoor and outdoor patients for diagnosis and treatment of tuberculosis.

MULTI DRUG RESISTANT (MDR) TB is a great problem. In Pakistan about 15,000-20,000 tuberculosis patients presently suffering from Multi-Drug Resistant (MDR TB), each patient requires approx 500,000 Rs. for management including costly medicines and other logistics but at OICD their treatment is free.

15.2 Counseling for Stress Reduction

For Students:

Dow University of Health Sciences, Karachi, has taken the initiative to council the University students for their stress reduction by facilitating or providing financial assistance through various Institutions/Organizations. There are various organizations which are not in connection with the University, in such organizations University still facilitates students as a forwarding authority like others. Currently University signed MOU with various philanthropists, to facilitate students as well as channelize system. Meanwhile, University forwarded applications to the following Institutions with respective assistance/facility;

15.3 Health Insurance for DUHS Employees

Financial responsibilities are considered as the main source of stress. To reduce the financial burden of its employees; DUHS provides medical insurance coverage to its all employees appointed on Regular basis and to /Contractual basis with at least one-year service.

The insurance coverage is currently provided by Asia Care Health & Life Insurance Co. Ltd. The details of this health insurance scheme are discussed here as under:

The Employees & their dependents covered are divided in the following categories: -

Benefit Structure for Employees and Staff of DUHS

Benefits / Coverage	Categories and Annual Entitlements in Rs.			
	Plan -A B-21 & 22	Plan -B B-19 & 20	Plan-C B-16 to 18	Plan-D B-1 to 15
Hospitalization Coverage per Insured per Annum	650,000	500,000	350,000	250,000
Daily Room / Bed limit per Insured	Deluxe Room	Private Room	Semi Private Room	General Ward / Room
Maternity Limits for Normal Delivery / Forceps	50,000	30,000	25,000	20,000
Maternity Limits for C-Section / Multiple Births	80,000	45,000	40,000	30,000
Out-Patient Reimbursement per Family per Annum	35,000	20,000	15,000	12,000

Break- Up of DUHS Employees Covered under Health Insurance Plan:

	PLAN A	PLAN B	PLAN C	PLAN D	TOTAL
EMPLOYEES	80	380	746	1160	2366
SPOUSES	38	299	517	825	1679
CHILDREN	77	661	845	1986	3569
PARENTS	32	392	1034	1348	2806
TOTAL	227	1732	3142	5319	10420

Benefits of Employees Covered under IPD/ Hospitalization

1. *Daily Room & Board Charges.*
2. *Miscellaneous Hospital Services and Supplies. Drugs, Dressings, Prescribed Medicines, Laboratory Examinations, Physiotherapy, intravenous injections & solutions, administration of blood and blood plasma including cost and any other fluids administered during surgery.*
3. *Emergency Room treatment for Accidental and Non-Accidental emergencies.*
4. *Doctor's visits. (Consultant, Specialist, etc.)*
5. *Surgical Operation Charges.*
6. *Local Ambulance Charges.*
7. *Pre-Post Hospitalization covered including Diagnostic Tests, Consultation Charges & prescribed Medicines within 30 days prior to or after Hospitalization.*
8. *ICU and Operation Theatre Charges.*
9. *Specialized Investigations & Day Care Surgeries. Dialysis, MRI, CT Scan, Thallium Scan, Angiography, `Cataract, Endoscopy, Echo, Treatment for Fractures, Lacerated wounds, Emergency Dental Treatment due to accidental injuries, Day Care surgical Charges including medicines and investigations.*
10. *Psychiatric Treatments.*
11. *Congenital Birth Defects.*
12. *Interferoherapy of Hepatitis „B“ and „C“.*
13. *Maternity related complications.*
14. *Radiotherapy and Chemotherapy.*

BENEFITS of Employees COVERED UNDER MATERNITY

1. Daily Room & Board Charges / Labor Rom Charges.

2. *Ante-Natal Care such as Ultrasound scans, Lab Tests and examinations.*

3. Hospital Charges & Obstetricians Fee for Childbirth

4. *Midwife Charges if delivery takes place at home.*

5. Operation Theatre /Physician's /Surgeon's Charges

6. *Prescribed Medical Supplies & Services during Hospitalization.*

7. Anesthesia Charges.

8. *Blood Transfusion including Cost of Blood.*

9. ICU Charges.

10. *Baby Nursing Care while the Mother is confined to the Hospital.*

11. Circumcision Charges of Newborn Baby Boys.

1. **Post- natal Care immediately following childbirth such as Stitches, Follow up Visits & Prescribed Medicines.**

2. **Secondary Conditions brought about by Pregnancy such as Backache, High BP, Vaginal Bleeding, Nausea & Vomiting, requiring Hospitalization.**

In the event of D&C, Normal delivery benefits as mentioned in Benefits Schedule.

BENEFITS COVERED UNDER OPD

1. *Physician / Consultant's fees for consultations.*

2. *Psychiatrists and Psychologist's Fee for Psychiatric Treatment.*

3. *Prescribed Drugs and Dressings.*

4. *Pathology, Radiology and Diagnostic Tests, X-rays & Ultrasounds.*

5. *Vaccinations.*

6. *Out-Patient Surgical Operations.*

7. *Wellness Mammogram, Pap smear, Prostate Cancer Screening or Colon Cancer Screening.*

8. *Dental Treatment including Extractions Teeth, Root Canaling or Capping or Similar Treatment.*

9. *Accident Related Dental Treatment.*

10. *Costs for Treatment by Therapists and Complementary Medicine Practitioners.*

11. *Declared / Undeclared Pre-Existing Conditions.*

12. *Coverage / Treatment from any Hospital / Clinic of the Patient's Choice.*

CHAPTER 16
UNIVERSITY SUSTAINABILITY REPORT

16.1 Good Health & Well Being - SDG 03

Collaborations

The Dow University of Health Sciences collaborated with different organizations / bodies at local, national and international levels to improve health and wellbeing related to Tuberculosis care and outcomes. In this context, DUHS participated in quarterly meetings on 10th-11th July, 2018, 11th-12th Sept, 2018, 10th-11th April, 2019 and 25th-26th June, 2019 with Health Department of Sindh in collaboration with Provincial TB Control Program (PTP) and other stake holders for Tuberculosis control and management as Pakistan is ranked 5th among high burden countries worldwide.

Moreover, DUHS participated as implementing partner in the meeting on Programmatic and Clinical Management of Drug Resistance Tuberculosis organized under National TB Control Program on April 9th – 10th, 2019.

Community Outreach Programs

The Department of Community Medicine and Department of Community Dentistry, DUHS delivered various outreach programs regarding community dentistry, community medicine, public health in the local community to improve/promote health and well-being. The programs included; free dental camps, promotion of breastfeeding, management of diarrhea & pneumonia, improving routine immunization, Adverse Event Following Immunization (AEFI) and polio eradication activities.

Oral health promotion programme, DDC

IRACHI - The Department of Community Medicine and Preventive Dentistry of Dow Dental College (DDC) conducted an Oral Health Promotion programme at Malala Government School. The programme was held under the supervision of Assistant Professor Adnan Sukkarwalla, and supported by the team of lecturers, including Dr Hina Rafique, Dr Babar Zia, and Dr Nabeer Saad.

The students of 3rd year BDS gave presentations to promote oral health and spread awareness among the students of Malala Government School, through video demonstration. They were provided guidance about correct brushing and flossing techniques to protect their teeth from dental caries, and informed them about healthy and unhealthy foods. The techniques were demonstrated on a typodont.

Furthermore, all school students received an intra-oral examination using a mirror which dental caries, plaque and staining were commonly reported.

Before departing, a kit containing a tooth paste, tooth brush, and brushing chart were given to each student to encourage them to improve their oral hygiene, and remain motivated regarding the implementation of newly learned oral hygiene skills.

Following the success of this programme, Principal DDC Prof. Dr Arshad Hassan is now planning and supporting the idea of having a Model school, where regular visits and treatments can be provided free of cost for all students for the following years. **-PR**



DENTAL NEWS / October 2018

School of Public Health, DUHS conducted school health program funded by National Research Program for Universities under HEC funded project, "Association between Micronutrient's Levels and Cardiovascular Risk Factors among Pakistani Adolescents". The research project focused on micronutrient deficiency among school going adolescents in order to understand the complex relationship between dietary and circulating levels of micronutrients with CVD risk factors. The students and faculty held sessions to help students establish healthy eating behaviors, consistent and accurate messages about good nutrition and ways to learn about and practice healthy eating.

Transient Walk for Breast Feeding Awareness

School of Public Health, DUHS organized a walk for breast feeding awareness in August 2018 as Breastfeeding is linked to better nutrition, health and greater well-being for children and mothers, which contributes to ultimate goals of the 2030 Sustainable Development Agenda.



Project- Plates from 'Fruit and Vegetable Peels'

An Ad-hoc program where the students of BS Nutrition program at School of Public Health, DUHS came with a concept called Orgoserve in which they made biodegradable/decomposable plates out of fruit and vegetables peels. The innovation came in order to put a complete stop on using products made of plastic to avoid pollution. The project was presented at different platforms including DUHS-DICE 2019 & Dawood University at National Project Competition. The project was appreciated by the Governor of Sindh and the students had a long discussion with him regarding its execution on a large scale.



Services available

In addition, DUHS provides access to its students regarding sexual and reproductive health services including on-campus awareness campaigns and also through the Midwifery clinic, that is operating in the OPD at Dow University Hospital, which also provides reproductive health services to the surrounding population.

DUHS provides free psychological health counselling to all students and faculty at both campuses and also through paid health care services to external customers through Institute of Behavioral Sciences and Dr. Ruth Pfau Civil Hospital, Karachi, where psychiatrists are available to cater to all, to ensure good health and wellbeing and contribute to sustainable development goal.

16.2 Quality Education – SDG 04

With the establishment of Dow University of Health Sciences (DUHS) in 2004, it was envisioned that continuing education should be promoted within the faculty and students of Dow University of Health Sciences and to general public as well.

Public Awareness Events

National Institute of Diabetes & Endocrinology (NIDE) hosted **Public Awareness Seminar & Diabetes Awareness Walk** on the occasion of “**World Diabetes Day**” on November 14, 2018 in order to aware and discuss about diabetes concerning to individuals and provided free medical consultation, screening tests to general public.

26th Annual National Neurology Conference, Karachi was organized by the Department of Neurology, DUHS on April 1, 2019. The conference was addressed by the President of Pakistan Society of Neurology, Prof. Athar Jawed, Chairperson Neurology Conference and the Head of Neurology Department, Dow University of Health Sciences, Prof. Naila Naeem Shehbaz, Co-Chairperson of Neurology Conference and Professor of Jinnah Postgraduate Medical College, Prof. Khalid Sher and other specialists. Neurology Conference is highly appreciated for the promotion of neurology in Pakistan. Through this conference, new doctors enhance their skills and capabilities of research. The conference has significantly increased the number of neurologists in Pakistan. But even today, it is insufficient as compared to the population here.



First International Family Medicine Symposium “Family Physician: The Pillars of Health Care, DUHS Karachi held at Arag Auditorium, Dow Medical College on March 31, 2019. The symposium was addressed by Dr. Riaz Qureshi, Director of Family Medicine department, Aga Khan University, Dr. Janet Healey from United Kingdom, Dr. Anum Arshad Baig, Dr. Fatima Jahangir, Dr. Faisal Ahmed, Dr. Sidrah Kanwal, Dr. Fareeda Ameen, Dr. Ayesha Faisal, Dr. Wajiha and Dr. Tayyaba Kanwal. The Vice Chancellor- DUHS, Prof. Mohammed Saeed Quraishy said that the provision of basic healthcare facilities to the doorsteps of our masses has opened up a new era of quality healthcare system. The speakers, emphasized upon students to study and seek training in this field to serve the humanity. Further they said that serving 10 minutes on each patient will let a person learn a lot. The seminar was concluded with the distribution of certificates and shields to the participants by Prof. Mohammed Saeed Quraishy.



Public Awareness Walk and Symposium on Heart Disease in Women was organized by Cardiology Department of Dow University of Health Sciences on April 09, 2019 in collaboration with Gynecology Department of Dr. Ruth K.M. Pfao Civil Hospital and Pakistan Cardiac Society. The symposium began with an awareness walk from Arag Auditorium to Civil Hospital on cardiovascular diseases in women and followed by the symposium regarding the general perceptions, facts and figures, the facilities available and the precautions and care needed to prevent from the heart diseases in women.

Public Awareness Seminar “World Asthma Day” was organized by Ojha Institute of Chest Diseases, DUHS on May 7, 2019. Various speakers talk about asthma and spread awareness among general public about the best way to control asthma, its causes and prevention as it is increasing due to the increase in environmental pollution.



Awareness Walk and Seminar on “World Kidney Day” at DUHS on March 15, 2019. The awareness walk and seminar was aimed at creating awareness of the importance of kidney related problems, associated risk factors and its treatments.

Public Awareness Walk and Seminar on World TB Day was conducted by Ojha Institute of Chest Diseases on March 25, 2019. At the seminar, Head of Ojha Institute of Chest Disease, Prof. Nisar Ahmed Rao, Director Sindh TB control, Miss. Ismat Ara Khursheed, representative of Bridge NGO, Miss Shaheena Qayyum, Dr. Saifullah and Dr. Nadeem Ahmed addressed the event emphasizing that early diagnosis along with appropriate and complete treatment is the most effective way to prevent the disease. The seminar was ended with the distribution of certificates and gifts to the 26 people serving in the institute since years. These are the people who are filled with the actual feeling of humanity and, despite knowing that this disease can be transmitted through coughs and sneezes, they still serve the TB patients wholeheartedly.



Public Awareness Seminar on Safe Fasting during Ramadan on March 28, 2019, was organized by National Institute of Diabetes and Endocrinology at Dow University of Health Sciences, Ojha Campus. The seminar was addressed by Director NIDE, Prof. Akhtar Ali Baloch, Dr. Syed Mohammad Hasan, Dr. Mohammad Shahid, Dr. Zareen Kiran, Dr. Fareed and renowned TV actor Anwar Iqbal. The seminar was attended by senior faculty members, students and a large number of patients suffering from this disease. At the end, Prof. Akhter Ali Baloch distributed free tokens to diabetic patients for lab test, which were valid for ten days, which included the tests for; Glucose, HBAIC, Cholesterol, Micro-Albumin, Creatinine. The patients can use those tokens for free test from Any Dow Lab of the city.



Lecture on "Behavior Change Science for More Effective Communication Strategies in Pakistan" at School of Public Health- DUHS was organized on 18th April, 2019 by an international speaker Dr. Tahir Turk - Curtin University, Australia.

The lecture aimed to develop understanding why people change or avoid change in relation to smoking, helmet use- road safety, nutrition, communicable and NCD risk behaviours. This lecture contributed to capacity building of faculty and postgraduate students for qualitative research.

Furthermore, School of Public Health, DUHS is working to help achieve Sustainable Development Goals (SDGs) through research, innovation and outreach, and teaching work. SPH hosted, **learning about cultural competencies** in September-October 2018. A series of innovative lectures, incorporated with cultural factors for preparing culturally competent public health workforce (masters and graduate) to deliver health care services that meet the social, cultural, and linguistics needs of patients. A culturally competent health care team force can help improve health outcomes and quality of care, and can contribute to the elimination of racial and ethnic health disparities.

In addition to this, **SPH - DUHS celebrated March Nutrition Month**, in which each day was celebrated during the month of March, an annual campaign created by academy of Nutrition and dietetics. On 26th March 2019, the event celebrated to create awareness regarding food and nutrition and focused on the importance of making informed food choices, developing sound eating habits and physical activity habit, understanding malnutrition (awareness regarding what is malnutrition, its forms, its causes and way to overcome malnutrition), myths debugging (correction of wrong concepts related to different food items) and calculation of individual weight status, caloric and water requirement (to help individuals to make better food choices, improve water intake and physical activity).

Dow University of Health Sciences
School of Public Health
invites you to a lecture on

Behavior Change Science For More Effective Health Communication Strategies In Pakistan

Thursday, 18-April-2019
10:30 am - 12:30 pm
Dr. Abdul Qadeer Khan (Lecture Hall -1)
DUHS-DJia Campus

Dr. Tahir Turk

- Dr. Turk has a PhD in Communication Research & Social Marketing from Monash University Victoria, Australia.
- He has over 35 years' experience in strategic behavior change communication, public health promotion, advocacy, community social mobilization in 40 countries including fragile & conflicting economies.
- Dr. Turk has conducted numerous Behavior Change Communication (BCC) projects in Pakistan since 2005, including TB advocacy communication and social mobilization evaluations for WHO and Global Fund, Bloomberg.
- He is a pioneer of the Rapid Assessment and Response (RAR) needs assessment approach.
- Currently an adjunct faculty at Curtin University, Australia and a Senior Partner of Communication Partners International CPI, Australia.



DUHS organized 4th All Pakistan DUHS-DICE Health Innovation Exhibition on 12th and 13th October 2018. This event provided a platform to DUHS & students from other schools/ colleges/ universities to share their innovative health-related projects and ideas such as NUTRA COMBO (android application), Standard Diet Utensils and contribute to the Sustainable Development Goal- Industry innovation and infrastructure.



4th All Pakistan DUHS-DICE Health Innovation Exhibition 2018
 October 12th - 13th, 2018 | Karachi Expo Center, Hall # 5 & 6
DOW-DICE SHARK Session



Dow Shark session is basically a pitching session where students from different universities present their health innovative projects to industrialists who aspire to sponsor their projects to make them commercial ready.



4th All Pakistan DUHS-DICE Health Innovation Exhibition 2018
 October 12th - 13th, 2018 | Karachi Expo Center, Hall # 5 & 6

Dow University of Health Sciences (DUHS) in collaboration with Distinguish, Innovation, Collaboration & Entrepreneurship (DICE) Foundation, USA is organizing 4th All Pakistan DUHS-DICE Health Innovation Exhibition. The idea is to motivate academia, industry, government, entrepreneurs and expatriates to showcase health innovations and technologies, share knowledge and collaborate on innovative ideas, necessary for social and economic development of Pakistan.

Showcasing over 150 Innovative Research Projects from 35+ Universities across Pakistan

DUHS Institutes/Colleges information Desk & Career Counseling

- Dow Medical College (DMC)
- Dow International Medical College (DIMC)
- Dr. Iqbal Ul Ebad Khan Institute of Oral Health Sciences (DIKIOHS)
- Dow Dental College (DDC)
- Dow International Dental College (DIDC)
- Institute of Physical Medicine & Rehabilitation (IPMR)
- Institute of Medical Technology (IMT)
- Institute of Nursing (ION)
- Institute of Health Management (IHM)
- Dow College of Pharmacy (DCOP)
- Dow College of Biotechnology (DCOB)
- School of Public Health (SPH)
- Institute of Biomedical Sciences
- National Institute of Diabetes & Endocrinology
- Dow Institute of Radiology
- Dow Institute of Health Professionals Education
- Dr. Abdul Quadeer Khan Inst. of Behavioral Sciences

Free Medical & Dental Checkups | Free Eye Checkup | Workshops & Seminars (CMEs)

For further details, please contact:
 Office of Research, Innovation & Commercialization (ORIC) | 1st Floor, Institute of Nursing Building,
 Dow University of Health Sciences Campus Gulzar-e-Hijri, Scheme 33, Karachi
 Tel: 021-38771111 (Ext: 2409) | Email: dice@duhs.edu.pk | Website: www.duhs.edu.pk

Sponsors: Bosch, NOVARTIS, surge, Pharm, ICD, Mezzan Bank, FERROZSONS LABORATORIES LIMITED, brookes, BRUNNEN, FUJIFILM

Executive Training or Vocational Training Programs

Dow University of Health Sciences in collaboration with PIQC Institute of Quality organized four-month Postgraduate Certified Healthcare Quality Professional Course (Batch 07) started from January 26th, 2019. This course was designed to enhance the competency of health care professionals. Furthermore, the body of knowledge used for this course also leads towards the preparation of Certified Professional Healthcare Quality –CPHQ. The program was administered by the Healthcare Quality certification Commission of National Association of Healthcare Quality, USA. The executive education program, Certified Healthcare Quality Professional is open to all those not just from the University and is a professional course that provides lectures and interactive discussion sessions, each semester, open specifically to personnel working in health services or healthcare management.



PIQC Certified Healthcare Quality Professional (BATCH-07)

Introduction: Healthcare services today are scrutinized, measured, evaluated and published as never before. An increasingly educated public expects to receive nothing less than excellent care and services and it must be the mission of every healthcare organization to deliver that excellence. Quality improvement is the process of continually evaluating existing processes of care and developing new standards of practice and decisions has to be a core competency for every healthcare professional. This course is designed to enhance the competency of healthcare professionals. The Body of Knowledge used for this course also lead towards the preparation of "Certified Professional in Healthcare Quality (CPHQ)". A program administered by the Healthcare Quality Certification Commission of the National Association for Healthcare Quality, USA. This course will enhance your career and facilitate the quality transformation in your hospital or healthcare organization.

Methodology: This is a professional course and will involve a number of higher level teaching methodologies like didactic lectures and interactive discussion sessions. The course is spread over four months to allow inter-session study. In this respect participants will have to carry out timely study, investigations, and assignments to grasp the subject. Discussions in the class are focused on the key points, critical thinking, experience sharing of fellow professionals and building professional maturity.

Course content: The comprehensive course content includes quality management, quality improvement, case / care / disease/condition management, and risk management at all employment levels and in all healthcare settings.

REGISTRATION FEES: Rs. 1,000/-

Starts From: January 26, 2019



Certified Healthcare Quality Professional

Target Audience: CEOs, Quality Directors, Medical and Nursing Directors, Quality Managers, Quality Officers and Coordinators, Accreditation Officers, Senior Nurses, Risk Managers, Case Managers, Healthcare Administrators and Managers, Health care professionals interested in managerial or quality jobs.

Eligibility: There is no minimum education or work experience requirements that specifically need to be fulfilled in order to get admission in PIQC course however, a minimum of two years experience in the field of healthcare quality management is recommended.

Course Duration: This is four months course (Every Saturday)

Contact for Registration:

PIQC Institute of Quality
C-15, Block 1D-A,
Gulshan-e-Iqbal,
Karachi.

Tel: (92-21) 34177278-34177609,
0333-2163620
Email: piqci@cybernet.pk
Web: www.piqc.edu.pk

Furthermore, Ojha Institute of Chest Diseases - DUHS conducted **12th Certificate course on TB on 24th April, 2019**, which was open to all. It was a Continuing Medical Education – CME and considered as a short course lecture for postgraduate, medical officers, family physicians & public practitioners.

Additionally, Dow University of Health Sciences has a separate department for training with the name of **Dow Vocational Training Center**. It is registered/ affiliated with Sindh Board of Technical Education Karachi and National Vocational & Technical Training Commission (NAVTTTC) and conducted regular vocational trainings for faculty/ staff. However, there are some trainings that are specifically designed and offered to women's of DUHS. The girl's vocational training courses includes:

- Basic Dress Making
- Advanced Dress Making
- Fabric Painting
- Candle Making
- Glass Painting
- Mehndi (Basic)
- Macramé Work
- Fashion Designing
- Ceramic Dough
- Sewing
- Textile Designing
- 3D Japanese Paper Art
- Mehndi (Advance)

Educational Outreach Activities

Dow University of Health Sciences delivered outreach programs for general public or community regarding dental health, community medicine, preventative medicine activities, and nutrition awareness demonstrations in local schools, in the community, and through student run schemes. Particularly, the School of Public Health, the Department of Community Medicine, Dow Medical College and Oral Health department are involved in the local community to improve/promote health and wellbeing. Free dental camps, promotion of breastfeeding, management of Diarrhea & Pneumonia, improving Routing Immunization, AEFI Adverse Event Following Immunization and polio eradication activities were carried on throughout the year. The other constituent institutes of DUHS are also involved in promoting awareness about adult nutrition. Moreover, DUHS delivered CME Lectures on various healthcare topic at **4th All Pakistan DUHS-DICE Health Innovation Exhibition** on 12th and 13th October 2018.

 4th All Pakistan DUHS-DICE Health Innovation Exhibition 2018  Office of Research, Innovation & Commercialization (ORIC), DUHS	
October 12 th - 13 th , 2018 Karachi Expo Center, Hall # 5 & 6 CME / WORKSHOPS PROGRAM SCHEDULE (CME hours Accredited by Dow University of Health Sciences)	
CME Focal Persons: Ms. Sanam Soomro, Dr. Qasim Ahmed, Dr. Naveed Akhtar & Ms. Badher Hina	
Day 1: October 12th, 2018 (09:00 am - 05:00 pm)	
Expo Center (Hall # 6) Inauguration Ceremony Time: 9:00 am to 10:45 am Focal Person: Mr. Iqtidar A. Siddiqui (Director, ORIC-DUHS) & Team	
Expo Center (Hall # 5) CME: "Cardiology & Lifestyle Management" Time: 11:00 am to 1:00 pm Program Director: Prof. Nawaz Lashari (Chairperson Dept. of Cardiology, DUHS) CME: "e-Health & Personalized Medicine" Time: 3:00 pm to 5:00 pm Guest Speaker: Mr. Abdullah Butt (CEO Educast) Dr. Mohsin Wahid (Assitant Professor Pathology, DRIBBS-DUHS)	Expo Center (Hall # 6) CME: "Basic Life Support (Hands only CPR)" Time: 11:00 am to 01:00 pm Program Director: Dr. Qasim Ahmed (Training Center Faculty, American Heart Association & Senior Lecturer, PDC-DUHS) CME: "Diabetes & Lifestyle Management" Time: 3:00 pm to 5:00 pm Program Director: Prof. Akhtar Ali Baloch (Director, NIDE-DUHS)
Day 2: October 13th, 2018 (09:00 am - 06:00 pm)	
Expo Center (Hall # 5) CME: "Digital Health" Time: 9:15 am to 10:15 am Guest Speaker: Dr. Zakiuddin Ahmed (CEO, Digital Care) Project Director, RIHS, Chairman (CPS) CME: "Breast Cancer Awareness Program" Time: 11:00 am to 2:00 pm Program Director: Dr. Noor M. Soomro (HOD, Dept. of Oncology, DMC/CHC DUHS) CME: "Stress Management" Time: 2:50 pm to 4:00 pm Program Director: Brig. Shoaib Ahmed SI (M) Rtd. (Head of Psychiatry Department & Executive Director, IBS-DUHS)	Expo Center (Hall # 6) CME: "Healthcare & Patient Safety" Time: 9:00 am to 1:00 pm Guest Speakers: Dr. Lubna Mushtaque, Ms. Umairra Muzammil, Dr. Ittikharuddin, Dr. Zakiuddin Ahmed CME: "Poison Management" Time: 2:00 pm to 2:30 pm Program Director: Prof. Sumbul Shamim Speaker: Dr. Ale Zehra (Asst. Professor Pharmacy Practice DCOP, DUHS) CME: "Different Aspects of Burn Management" Time: 2:30 pm to 4:00 pm Program Director: Dr. Ehter-al-Ibram (Consultant Plastic Surgeon, Head Burns Center, DMC/CHC DUHS)
Closing Ceremony Time: 4:00 pm to 6:00 pm	

Access to the activities

DUHS has a faculty handbook that contains the diversity statement of DUHS, which ensures access to these activities that ensures that access to these activities is accessible to all, regardless of ethnicity, religion, disability or gender along with equal opportunity and inclusion for all.

16.3 Gender Equality – SDG 05

The Dow University of Health Sciences practices equal access to resources and opportunities, regardless of gender, including employment, admission and decision-making.

The admissions in undergraduate and postgraduate programs at Dow University of Health Sciences are granted purely on merit basis, irrespective of gender or sexual orientation, and the information is disseminated to the general public through publishing in the prospectus of the province in the 'Rules of Admissions'.

At DUHS, there are multiple forums/ mechanisms in place which deals or allows to report cases regarding discriminations. "Dow Connect" (<http://dc.duhs.edu.pk/>) is the confidential e-portal for registering complaints/requests of faculty, staff & students regarding discrimination from educational or employment disadvantage. The students can also register their educational matters/complaints to the Academic Committee, which meets as and when required and furnish its recommendations/suggestions to the competent authority for approval. Also, the faculty and staff can put up their concerns in the "Grievance Committee", which resolves the cases accordingly.

Moreover, maternity policy in the university was in place from 2007 as mentioned in the Statutes of DUHS which are translation of the Act (policy document for every university). However, the formal policy was created in 2019. As a semi-autonomous organization, DUHS follow all Sindh government rules and regulations, which has granted paternity leave to employees as allowed through the Gazette of Pakistan 2019.

16.4 Water and Sanitation SDG-06



Dow University of Health Sciences has a functional and reliable water system and proper sanitation facilities, providing adequate levels of clean, safe and sufficient water for all needs of the whole university, especially for toilet use, hand-washing and drinking purposes. DUHS measures the total volume of water used in the university that is taken from main supply, desalinated, or extracted from rivers, lakes, or aquifers.

The total volume of water used in cubic meter is 7361 in Ojha Campus and grand total is 7423 so the total volume of water used in

University is 7423 m³ in both campuses per day approximately that is taken from Karachi water broad main supply during 2018-2019.



Volume is measured by the size of O/H tanks and the flow meter in both the campuses. Water is also extracted from dial bore for old building DMC Campus.



Process to Treat Waste Water:

DUHS encourages the sustainable and eco-friendly environment. Sewerage Disposal is separated out and is prevented from entering the main water system. We collect waste water from building in septic tank then treat it gradually. After treatment, it goes in the main sewerage line of the city. The septic tank is sludge by pumps and are maintained quarterly. The Septic tank (left) is where it is treated gradually before being sent to the main sewerage line of the city (right).



Prevention of Polluted Water Entering in the Water System:

DUHS has a proper process to prevent polluted water entering in the water system, including pollution caused by accidents and incidents at the university. Furthermore, DUHS also support water conservation off campus & utilizes sustainable water extraction technologies on associated university grounds off campus.

Dow RIVA Premium Drinking Water / Health Water Plant

The Ojha Campus has its own water purification plant, called DOW RIVA Premium Drinking Water, which also delivers water to each campus and surrounding areas. The water is collected from an underground source within the campus, for use in the campuses and surrounding areas.

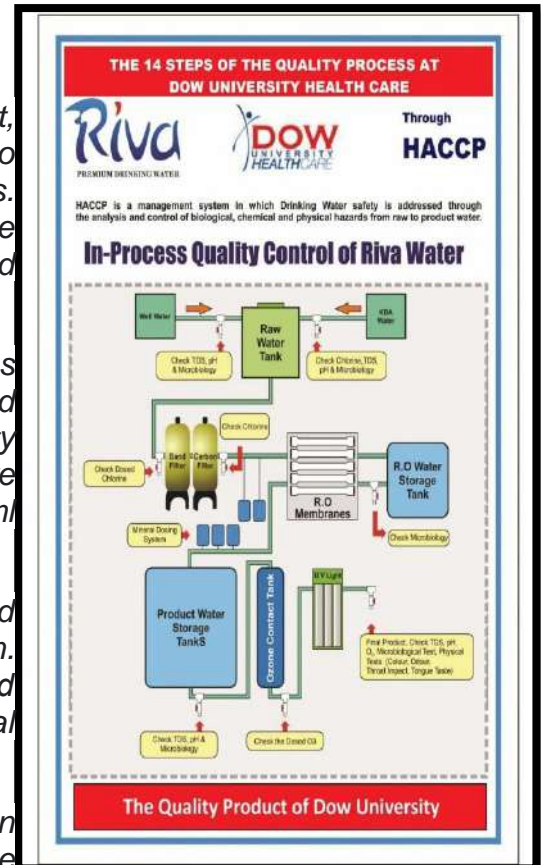
Dow's Riva Premium Drinking Water Plant has manufacturing facilities of international standards and can prepare premium quality drinking water up to thirty thousand gallon per day. The water is filled in 19 litre food grade polycarbonate bottles, 1.5 liters and 600 ml PET bottles

DOW RIVA premium Health water can be recognized as the Purest, Safest, and Healthiest water in Pakistan. DOW RIVA water's production, filling, packaging, and distribution are truly in line with established international standards.

Riva Premium Drinking Water is processed from an underground source and follows state of the art reverse osmosis (R.O) desalination technology, which is a semi permeable membrane separation process. It completely removes viruses, bacteria, pyroxene and most of the organic compounds. Food grade minerals of best quality are automatically dosed strictly keeping in view of WHO and PSQCA drinking water quality standards. Finally water is disinfected through ozonation and ultraviolet system. Disinfection of water using ozone and UV is a proven technology.

RIVA Premium Drinking Water is purified through following eleven steps:

1. Chlorination
2. Sand Filtration
3. Activated Carbon Filtration
4. Fine Filtration
5. First Pass RO
6. Microfiltration
7. Second Pass RO
8. Mineralization
9. Microfiltration
10. Ozonation
11. UV Sterilization



Free drinking water for students, staff and visitors, e.g. drinking water fountains):

RIVA drinking water is available for free for students, faculty and staff as well as for visitors of Dow University of Health Sciences. These are water dispensers used for drinking water in both campuses of the university.



Building Standards to Minimize Water Use:

DUHS also minimize the water use in both campuses by using automatic switch system to operate the water supply motor and also by manual valve system which support to over flow the water, losses of water and avoid the damages of buildings.

Plant landscapes to minimize water usage (e.g. use drought-tolerant plants):

Aloe Vera, Euphorbia and Moringa plants are used in the landscaping of Ojha campus DUHS to minimize water usage, as these plants are drought tolerant and require minimal water usage.



Educational opportunities for local communities to learn about good water management & Conscious Water Usage

Dow University of Health Sciences actively promote conscious water usage on campus, and in the wider community. Office of Research & Innovation Center, DUHS organized an event “Waste not, want not” on 25th July, 2018 to create an awareness in the wider community about best practices regarding conservation of water.

Dow International Medical College-DUHS, also participated in this awareness campaign in local communities about good water management. Local communities include; Safoora Goth, Memon Goth and Sachal Goth. This event was organized in collaboration with Ministry of Federal Education and Professional Training, Government of Pakistan, Islamabad in order to cooperate with government bodies on water security.

Dow University of Health Sciences

Waste Not, Want Not

in collaboration with
Ministry of Federal Education & Professional Training,
Government of Pakistan, Islamabad

to create
Public Awareness
about
Water Conservation

All students of Dow University are encouraged to
participate in competition to present
Innovative Posters

The Best Poster will be telecast on
All TV Channels

Deadline for Poster Submission
25th July - 2K18

Posters will be submitted
@ **ORIC Office**
1st Floor Nursing Building, Ojha Campus
For queries and information contact:
Dr. Sonia Siddiqui 0300-2578583
Mr. Zaka Uddin 0334-3422140
m.zaka@duhs.edu.pk

Day: Thursday, 2nd Aug, 2018
Time: Exhibition : 10:00 am to 12:00 noon
Prize Distribution : 12:00 noon to 1:00 pm
Venue: Lecture Hall-1 DIMC Building, Ojha Campus

16.5 Partnership for the goals – SDG 17

DUHS has direct involvement and participation at national level in National Tuberculosis Program and at provincial level in Provincial Tuberculosis Program, Sindh, for identification of problems and challenges in order to develop policies and strategies for further implementation in capacity-building on latest WHO diagnostics and treatment guidelines, program evaluation, technical support for the management of MDR- TB, resource mobilization and support for research and development. Pakistan is ranked 5th worldwide in the national burden of the disease. **DUHS participated in the Provincial meetings organized by the Provisional TB Control Program Sindh in collaboration with National TB control program on 11-12 September 2018, 30-31 January 2019, 10-11 April 2019, 25-26 June 2019.**

The food and agriculture organization of the United Nations (FAO) and Dow University of Health Sciences has collaboration agreement for the provision of development of nutritional behavior change strategy in Baluchistan province.

DUHS in collaboration with Distinguish Innovation Collaboration and Entrepreneurship DICE foundation, USA organized 4th All Pakistan DUHS-DICE Health Innovation Exhibition on 12-13 October 2018 at Expo Centre Karachi. The idea is to motivate academia, industry, government, entrepreneurs and expatriates to showcase health innovations and technologies, share knowledge and collaborate on innovative ideas necessary for social and economic development of Pakistan.

Patients Welfare Association (PWA) is a non-government, non-political entity run by the students of Dow Medical College. PWA was established to help those in need, to remove the despair and unease from the lives of those patients who are struggling with poverty. PWA's Drug bank provided the basic medicinal needs of patients admitted in Dr Ruth K. M. Pfau Civil

Hospital (Karachi) for almost four decades. However, since the need of it was no longer there as the Civil Hospital started providing medicines to the patients, they decided to use their resources in other departments to provide the best to the patients. PWA's Voluntary Blood Bank provides services of quality assured, screened blood products such as packed cells and fresh frozen plasma. It is being recently upgraded to the status of one of 4 regional Blood Centers planned by the government to fulfil the blood related needs of Karachi. PWA TB Follow-up Clinic was started in 1984, shortly followed by its General Follow-up Clinic. These departments catered to patients' suffering from long term ailments. TB follow-up annually cater to more than 500 patients suffering from Tuberculosis Infections. Since the Hospital itself started providing these services, they shifted their focus and funds to other departments. Moreover, PWA Diagnostic Lab was started in 1986 to provide baseline hematological and biochemical tests to the patients free of cost. The laboratory performs complete blood count (CBC) with peripheral film study amongst many other important investigative tests. These tests are now provided by the lab of Civil Hospital, Karachi. PWA's Thalassemia Services started in 2011, holds the ambition of a long and prosperous life for the poor innocent children, diagnosed with the blood disorder - Thalassemia at birth. Many of these individuals have found themselves unable to handle the financial burden of the lifelong treatment of this ailment, which PWA is currently providing to 245 registered patients, all free of cost.

Dow International Patient Care Association (DIPCA) is a non-political voluntary, social, welfare, students-based organization that is run solely by the undergraduate students at Dow International Medical College- DUHS. The mission of this organization is to help the poor patients of Ojha Institute of Chest Diseases and Dow University Hospital initially. The later aim is to provide all the necessary medicines and money for hospital bills and investigations to the patients who are extremely un-affording.

University Courses related to relevant SDGs are offered by the School of Public Health, DUHS which provides meaningful education regarding the SDGs within the University. Furthermore, these courses are approved by University statutory bodies to be offered.

ENDORSEMENT OF THE ANNUAL STANDARDIZED REPORT 2018-19

Prepared by:

Ms. Sanam Soomro
Director
Quality Enhancement Cell
Dow University of Health Sciences

Approved by:

Prof. Dr. Mohammed Saeed Quraishy
Vice Chancellor
Dow University of Health Sciences