

DASMAN DIABETES INSTITUTE

Annual Report **2015**



حضرة صاحب السمو الشيخ صباح الأحمد الجابر الصباح
أمير الكويت

His Highness Sheikh Sabah Al-Ahmad Al-Jaber Al-Sabah
Amir of the State of Kuwait



سمو الشيخ نواف الأحمد الجابر الصباح
ولي عهد دولة الكويت

His Highness Sheikh Nawaf Al-Ahmad Al-Jaber Al-Sabah
Crown Prince of the State of Kuwait

Table of Contents

Public Relations & Media Services	2-8
Healthcare Planning and Development	9-13
RESEARCH DIVISION	14-26
MEDICAL DIVISION	27
• Fitness and Rehabilitation Center	27-37
• Podiatry	37-39
• Nutrition	40-43
• Education & Training	44-45
• Clinical Skills Center	46-49
• Nursing	50-62
• Diagnostic Imaging Center	62-64
• Pharmacy	65-67
• Clinical Services: Laboratories	67-69
• Health Information Management	69-71
OPERATIONS DIVISION	72
• Biomedical Equipment & Maintenance Service	72-73
• Finance	73
• General Services	73-74
• Human Resources	74-76
• Information Technology	77-80
• Procurement & Purchasing	80-81

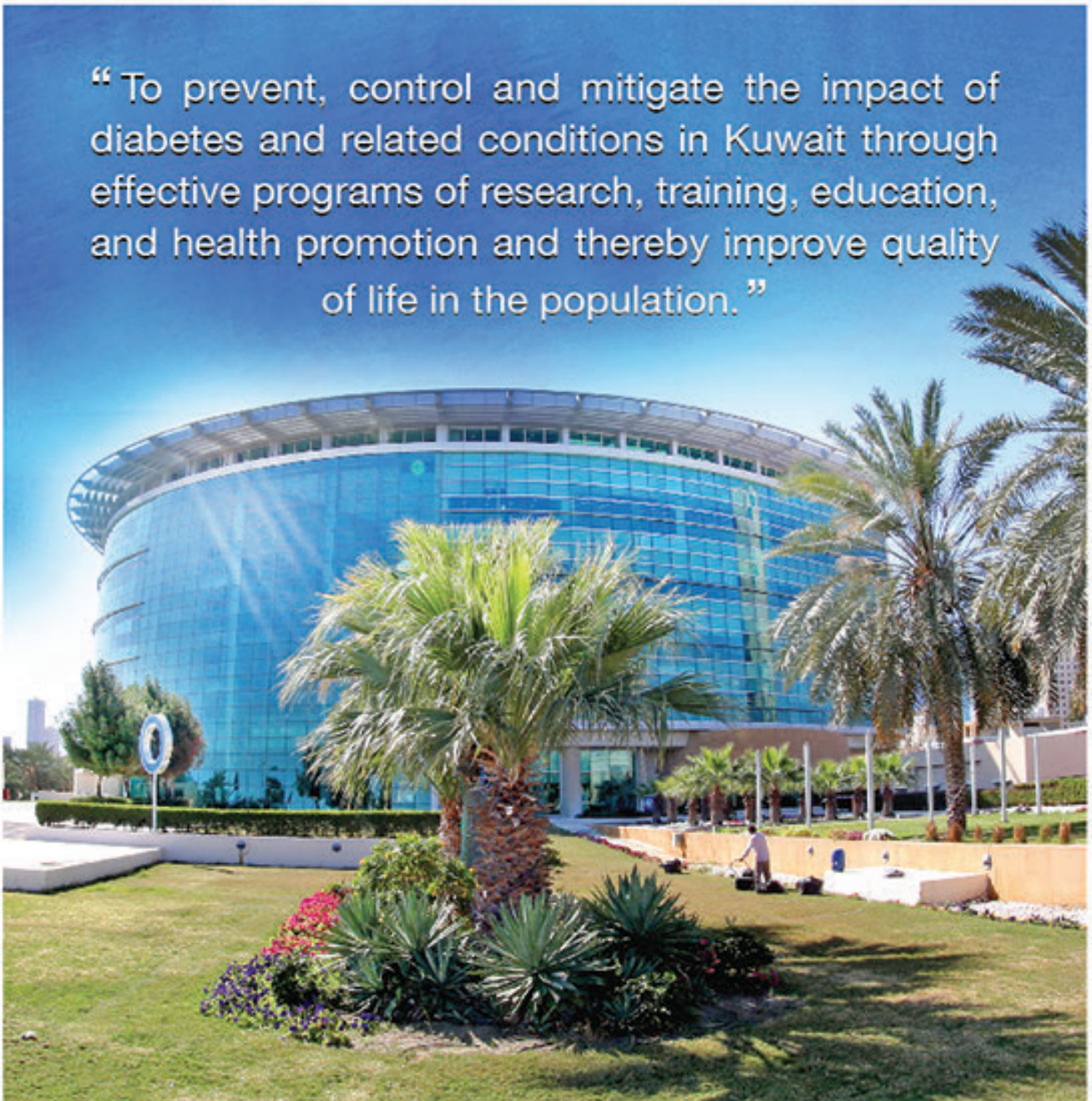


معهد دسمان للسكري
Dasman Diabetes Institute

أُنشأته مؤسسة الكويت للتقدم العلمي
Founded by Kuwait Foundation for the Advancement of Sciences

MISSION STATEMENT

“ To prevent, control and mitigate the impact of diabetes and related conditions in Kuwait through effective programs of research, training, education, and health promotion and thereby improve quality of life in the population. ”



PUBLIC RELATIONS AND MEDIA SERVICES

1.1 OVERVIEW

The Public Relations and Media Services Department falls under the DG-Directorate. The PR and Media team supports Dasman Diabetes Institute in all DDI divisions with all its public relations and media related activities such as; liaising for hosting conferences, outreach events, organizing seminars, coordinating with the various mass media outlets to promote the Institute. In addition, the PR and Media team sheds light on the Institute's activities and promotes it through the different social media channels, such as Instagram, YouTube, Facebook and Twitter. The PR and Media team maintains and updates the newly revamped website of the Institute on regular basis in order to keep the visitors of the Institute's website updated with the latest news and activities of DDI. The PR and Media team handles all graphic design, publishing and printing requests in a professional manner to reflect a positive image of the Institute.

1.2 ACCOMPLISHMENTS

The PR and Media Department is integrally involved in a number of activities that provide and promote support for the Institute's essential functions. These activities include, but not limited to:

- Organizing frequent media appearances on various TV channels and newspapers highlighting the various activities, events and updates relating to the Institute.
- Maximize the use of social media networks; the department manages a Twitter feed, an Instagram account with more than 1300 posts and 13000 followers from the medical field and the public, an active Facebook page with more than 3300 followers and a YouTube channel which now has over 500 interviews/videos uploaded, 350 subscribers and 100000 views.
- Website updates
- The 'Be Dasmani' intervention program for adults with type 2 diabetes was delivered, helping patients better understand and manage their condition. 88% of patients were satisfied with the program.

- Coordinating travel arrangement for visitors and guests to the Institute, which includes booking hotel accommodation, flight tickets, and Hala (Meet and Greet) service. Often times staff from the Department are involved in taking visitors on sightseeing tours.
- Assisted in executing the postgraduate courses presented by the University of Dundee at DDI.
- Executed outreach campaigns to promote knowledge and awareness about diabetes among the public.
- In April 2015, DDI held a ceremony to honor the 62 healthcare professionals who had successfully completed the innovative 'Fundamentals on Diabetes: Primary Care Perspectives' one-year course by the world-famous Joslin Diabetes Center, affiliated to the Harvard Medical School. Additionally, in 2015, 52 students graduated, (double the number from the previous year) enrolled in a three-year postgraduate program with a Certificate, Diploma and Master's in Diabetes Care, Education and Management offered by the University of Dundee, in collaboration with DDI. A further 250 students are also currently enrolled on the joint program.
- DDI participated at the Expo Milano 2015, showcasing the Institute's research at an event that attracted more than 20 million people in September 2015.
- In November 2015, DDI completed and submitted a final survey from Accreditation Canada International (ACI) for its prestigious QMENTUM International Accreditation program.

ACI is a worldwide leader in raising the bar for quality healthcare and their program is designed to improve client outcomes and enhance the performance of care systems. DDI has now completed two full cycles



for accreditation. During the first ACI cycle DDI received gold level recognition and accreditation. The preliminary results for the second cycle, showed an achievement of 98-100 percent compliance within the accreditation program's 10 standards, highlighting the quality of the work being carried out in the heart of Kuwait.



- DDI held its Annual World Diabetes Open Day event in November 2015, resulting in over 1,000 attendees. The event allowed visitors to consult with diabetes specialists and dieticians to gather healthy information from booths that explained the different aspects of diabetes and its related complications.



participants who attended this marathon.

- DDI welcomed more than 8,000 participants to the yearly 'Beat Diabetes Walkathon', raising awareness of the condition and helping people adopt healthier lifestyles in November 2015.
- In November 2015, DDI joined forces with Pro-Vision Sport Management in their recent 642 Marathon that was held on World Diabetes Day. There were over 1,400



- The Obstructive Sleep Apnea Lab was inaugurated in collaboration with Sabah Al Ahmed Center for Giftedness and Creativity in December 2015 at DDI.
- Over 25 conferences and seminars and more than 65 training courses and workshops were organized by DDI in 2015. More than 1,000 student workplace projects were completed in 2015, giving the scientists and doctors of tomorrow valuable experience to complement their studies; 3301 students participated in national public health awareness events; 1400 students participated in the Prevention of Diabetes Complications Campaign; 370 personnel took part in the Screening & Awareness Campaign for the Kuwait National Guard; 100 nurses participated in the International Diabetes Federation's Diabetes Education Course for Healthcare Professionals; 85 healthcare professionals trained in Pump Therapy and Continuous Glucose Monitoring; 61 healthcare providers interned at the Pediatric & Adult Education Clinic. 3791 patients received one-to-one education; 94 patients benefited from group education; 75 patients installed with insulin pumps; 45 participated in the diabetes camp.

1.3 FUTURE PLANS

The Public Relations and Media Services Department expects to continue rising its impact through its different social media channels, promoting awareness to the public. Whether it be via in-house events or outreach initiatives, the Department will continue to try its best to be pioneers in the right direction about the worldwide increase in diabetes. This can be done through nationwide scheduled seminars, conferences, and other educational methods. Together, in collaboration with other reputable organizations, prevention of the onset of type 2 diabetes, and the number of individuals suffering from diabetes in Kuwait, will slowly begin to decrease, and the pathway for a brighter future will continue to be paved.

LIST OF EVENTS AT DDI:

1	The University of Dundee held its second graduation ceremony at the Dasman Diabetes Institute	8 th February, 2015	The graduation marked the successful achievements of over 50 postgraduate students, including the first Masters level graduates.
2	DDI Featured on CNN TV Channel	28 th February, 2015	Dr. Sanjay Gupta, Medical Correspondent for CNN visited DDI to film an episode of the weekly programme 'Vital Signs'.
3	Has the Time Come to Take Genomics to Diabetes Centers Lecture	15 th March, 2015	In collaboration with the Indian Doctors Forum. The lecture was presented by Dr. V. Mohan, Chairman & Chief of Diabetology. The lecture was well attended by more than 100 healthcare professionals from different academic and medical backgrounds from Kuwait University, Ministry of Health and the private medical/health sector.
4	Pregnancy Complications and Type 2 Diabetes Risk in Women Lecture	16 th March, 2015	The lecture was presented by Dr. Tamarra James-Todd, MPH, PhD, Mark and Catherine Winkler Assistant Professor of Environmental Reproductive and Prenatal Epidemiology, Department of Environmental Health, Harvard T.H. Chan School of Public Health.

5	Diabetes & Obstructive Sleep Apnea in Adults: New Updates from Kuwait	23 rd March, 2015	The symposium addressed the relationship between obstructive sleep apnea & diabetes, with the participation of fifth year students from Kuwait medical school, a visiting professor from Holland, Dr. Nico De Vries, one of the pioneers of sleep surgery, and also Dr. Abdulmohsen Al Terki, Chairman of the ENT post graduate training at Kuwait Institute for Medical Specializations (KIMS).
6	DDI Holds 'Joslin Diabetes Center' Graduation Ceremony	9 th April, 2015	The honoring ceremony was inaugurated by former Minister of Health Prof. Hilal Al-Sayer in the presence of the Executive Director of International Initiatives and Associate Clinical Professor of Medicine at Harvard Medical School. Dr. Al-Sayer congratulated the 62 students who graduated with honors from this one-year course.
7	DDI Hosts "Transfusion Medicine" Conference	26 th – 28 th April, 2016	DDI hosted this conference which was organized by the Amiri Hospital. The conference was well attended by over 90 healthcare professionals, laboratory technologists and technicians and many others from all over Kuwait.
8	DDI Participates at the "8 th CEO Annual HSE Performance Award"	30 th April, 2015	DDI participated at Kuwait National Petroleum Company in line with its mission & vision in organizing this event with an aim to encourage society participation in HSE activities.
9	The Collaborative Health Campaign - Dasman Diabetes Institute and Kuwait National Guards	24 th May, 2015	DDI and Kuwait National Guards organized a one-week health campaign to promote awareness about diabetes and all its related conditions among Kuwait National Guards staff and their families, at the Kuwait National Guards' Headquarter.
10	Dasman Diabetes Institute Organizes a National Workshop on Gestational Diabetes	3 rd and 4 th June, 2015	The workshop brought together over thirty clinical experts and research scientists in the area of diabetes, obstetrics, pediatrics and epidemiology to review the global evolution of gestational diabetes and its many implications in Kuwait.

11	The PG Cert/Dip/MSc in Diabetes Care and Education with Dundee University	5 th – 10 th June, 2015	Face-to-face teaching sessions with enrolled students.
12	Health informatics conference kicks off at Dasman Diabetes Institute	14 th June, 2015	The first conference on health informatics kicked off at DDI with the presence of over 50 participants in the field and other doctors and specialists.
13	MERS Lecture for DDI Staff	29 th June, 2015	In pursuing its continuous efforts, and in compliance with Accreditation Canada standards, DDI held a lecture titled "MERS" for all the staff.
14	KISR Internship Programme in Collaboration with Dasman Diabetes Institute	12 th August, 2015	As a part of the 38 th internship programme organized by Kuwait Institute for Scientific Research (KISR), DDI received various students from different schools through the Ministry of Education for a field trip and introductory, informative tour at the Institute.
15	Dasman Diabetes Institute Collaboration with Cuba	1 st Sept., 2015	DDI has signed an agreement with Cuba to bring 10 nurses to work at the Institute. They will be focusing on podiatry, as Cuban researchers found a way to treat the diabetic foot.
16	Expo Milano 2015	20 th - 25 th Sept., 2015	The Ministry of Information endorsed DDI and sent 10 of its employees to man a booth provided for the Institute, located in the Kuwait Pavilion. Several departments contributed their efforts to this Expo including: Nutrition, Education & Training, Clinical Services, Fitness & Rehabilitation Center, and Public Relations. The booth received a considerable amount of visitors where questions about the Institute were asked, and multi-dimensional professional advice was given.
17	The PG Cert/Dip/MSc in Diabetes Care and Education	3 rd – 8 th Oct., 2015	Face-to-face teaching sessions and new modules.
18	Introduction to Clinical Trials & Clinical Trials Practice Course	19 th – 21 st Oct., 2015	The workshop was conducted by Dr. Alison Messom, MICR, Director of the Institute of Clinical Research in the UK. The aim of the course was to educate the participants on Good Clinical Practice (GCP) in accordance with the legislations and regulations put forth in the UK and the rest of the world. All the attendees sat for the certification and/or diploma exams conducted at the end of the course.

19	World Nutrition Day: Police Force Federation Initiative	21 st Oct., 2015	DDI participated in the Police Force Federation's initiative on the occasion of World Nutrition Day, under the patronage of Lieutenant-general Sulaiman Fahad Al-Fahad, Undersecretary at the Ministry of Interior. The event took place at the Jumeirah Messilah Beach Hotel.
20	Be Healthy Exhibition	21 st Oct., 2015	DDI participated in the exhibition organized by and held at Intellectual Education School for Girls – Ministry of Education. The exhibition attracted many visitors from all walks of life; students and their parents, teachers and administrative staff of the school and the Ministry of Education.
21	World Diabetes Day 2015	12 th Nov., 2015	DDI a leading campaigner for diabetes awareness in Kuwait, held a beneficial event to commemorate World Diabetes Day at its premises. The event allowed visitors to consult with diabetes specialists and dieticians, gather healthy information from booths that explained the different aspects of diabetes and its related complications, as well as promoted healthy lifestyle modification. Around 1,000 guests attended the event, underlining the interest Kuwait possesses to prevent and manage this escalating lifestyle disease.
22	Beat Diabetes Walkathon 2015	14 th Nov., 2015	Over 8,000 people joined the fifth annual "Beat Diabetes" Walkathon. The event, which was held under the patronage of the Ministry of Health and Dasman Diabetes Institute, marked a very successful completion for the sixth year in a row.
23	642 Marathon	14 th Nov., 2015	Participants received health advice from the dieticians and health experts from the Institute at the start point. Part of the proceeds gathered from the Marathon was attributed to DDI to support the funding of diabetes research.
24	DDI Opens Obstructive Sleep Apnea Lab, to Diagnose and Aid Diabetic Patients	17 th Dec., 2015	In the attendance of Dr. Hilal Al-Sayer, Chairman of the Board of Trustees, at Dasman Diabetes Institute, Dr. Adnan Shihab Eldin, Director-General of Kuwait Foundation for the Advancement of Sciences (KFAS), the Obstructive Sleep Apnea Lab was inaugurated in collaboration with Sabah Al Ahmed Center for Creativity and Giftedness.

2. Healthcare Planning and Development

2.1 QUALITY MANAGEMENT & SAFETY UNIT

I. Maintaining Accreditation Canada International (ACI) Accreditation in Cycle 2

The Institute's accreditation 2nd (3 year cycle) journey began in 2013. The Healthcare Planning and Development Department (HPD) oversaw the 8 working groups which cover the 9 ACI standards required for DDI.

a. Self-assessment Questionnaire

The self-assessment questionnaire process started on March 2015 and the online questionnaires were completed on the ACI Portal for the 9 international standards.

b. ACI Simulated Survey (Mock Survey) 18th – 20th May 2015

The simulated (mock) survey interview is to assist organizations in preparation for the QMENTUM International Accreditation Program.

The aim of the mock survey is to confirm and ensure that the facility is in compliance with the Accreditation Canada International Standards. The surveyors provided DDI with a feedback report on the team process three weeks after their visit.



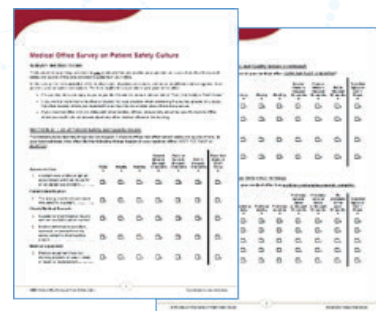
c. Accreditation Canada Final Survey 15th – 18th November 2015

In November 2015, DDI received a visit from ACI for the final survey. The surveyors met with various staff within the Institute to conduct the final survey with tracer methodologies. In addition, the surveyors met with the Board of Trustees and stakeholders as one of the requirements.

In the final survey's preliminary findings DDI achieved 100% for the majority of required quality dimensions except for 2 dimensions which received 98%. All the scores were considered excellent and very promising for the final report.

d. Medical Office Survey on Patient Safety Culture

In compliance with ACI Accreditation Process and as one of the Leadership standard criteria, the Medical Office Survey on Patient Safety Culture was administered to reflect DDI performance for the 2nd Cycle. This survey is standardized by ACI to assess all applicable DDI criteria. A total of 104 surveys were received covering most of DDI areas and consisted of 57 items categorized into 9 sections. The survey results are available for all staff on the DDI portal.



II. Safety

a. Dasman Incident Reporting System

The department at DDI received 42 incidents reports from the various departments, units and facilities at the Institute with the exception to clinical laboratories and research facilities. Each report was investigated independently and results were communicated accordingly. The analysis revealed three (3) major root causes, common across the different reports:

- Human Errors
- Inadequate design or absence of clear, approved guidelines concerning healthcare facility planning, design and renovations
- Inadequate or absence of clear service level agreements with vendors.

2.2 PLANNING UNIT

I. DDI Department Work Plans & KPIs

The HPD began assisting the strategic planning officer in quarter two of 2015. They were trained to cover when leave was taken. As the strategic planning officer did not resume working at DDI after the leave, the department took on this role to date.

- a. 2015 3rd Quarter: Once all meetings concluded, the department completed 28 progress reports and provided them along with the individual departmental updated work plans to upper management.
- b. 2015 4th Quarter: Meetings were conducted with all DDI directors and their plans were received. The department worked with all involved to make sure the end-of-year Work Plans are accurately represented with the departmental activities for 2015.

2.3 HEALTHCARE INFORMATION UNIT

Health information works on identifying, capturing, assessing, and sharing information needed. Some of the information include policies and procedures, documents and statistics.

I. DDI Policy & Procedures Management/Tracking:

When a department works on a new or existing P&P they must complete and submit a New Change Request Form to track the progress and note important information/changes. Over 39 requests were received from DDI departments. Once every P&P is approved and signed by all essential staff, the original is scanned and uploaded onto the portal. A total of 330 new and updated P&P were uploaded. The original is kept in a secure documentation room. If any P&P(s) are in process of being reviewed or created but have not yet been fully approved, they are not included in the statistics.

In 2015, over 390 Policy and Procedures (P&P) from 29 DDI areas were accessible on the Policy and Procedures Site Portal for all DDI personnel.

In July, Health Policy Journal accepted the submission request for the manuscript, "National transparency assessment of Kuwait's pharmaceutical sector." The object for the manuscript was to evaluate the level of transparency in its pharmaceutical sector using an established assessment tool adapted by the World Health Organization. The article was published in the 119th issue.

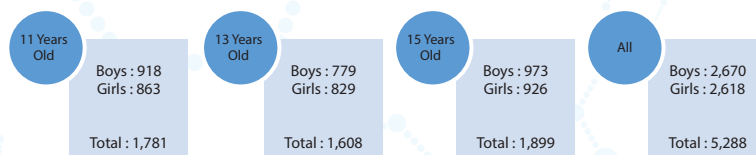
b. Health Behavior in School Aged Children (HBSC) in Kuwait

DDI was a part of a research collaboration with the World Health Organization to become a linked project for the Health Behaviors in School Aged Children project.

The project aim was, "to better understand the health status of the young and identify health behaviors that affect their health in their social context."

A cross-national survey on Health Behavior in School-Aged Children was conducted across 39 public sector schools in Kuwait. The second phase of the project began in January 2015. The survey was approved and the MOE Headmasters from each school governorate randomly selected the schools. The student sampling was based on a weighted average of all governorates. The survey approved was modified for Kuwait culture from the HBSC original questionnaire. Initial survey questions received from WHO were in English and had been translated and approved in Arabic.

REDCap was used to create the HBSC survey data. The REDcap survey was in English. Once surveys were completed they were collected and returned to DDI. At DDI each survey was sorted and labeled with the following information: recap number, age, sex, school name and governorate. Once labeled they were processed at DDI. REDcap was used to insert all data collected. Data entered from surveys were double checked before the analysis phase. There were 5,288 questionnaires collected in 2015.



IV. Joslin University for Kuwait at Dasman Diabetes Institute (JUI) Project Management

Overview

Joslin University for Kuwait at the Dasman Diabetes Institute was the first innovative program of its kind applying a "do it at your own pace blended e-learning style" which has a large focus on knowledge exchange and was introduced through a collaboration with Joslin



Diabetes Center, affiliated with Harvard Medical School, Kuwait Ministry of Health and DDI, which was established by KFAS. The program was for Primary Health Care Professionals providing Diabetes Care in Primary Healthcare Centers.

Details

An important aspect of the knowledge exchange was instructor interaction. All participants had portal access for ongoing online education which included lectures, live video/teleconferences, CME activities, journal club, and patient education materials, along with Joslin Kuwait Guidelines.

Results

Of the 131 Physicians from Primary and Secondary Health Care settings who registered and participated, 62 physicians successfully completed all program requirements with 11 receiving an additional certificate for their outstanding work. Graduation commenced on April 9, 2015.



RESEARCH DIVISION ANNUAL REPORT

1. RESEARCH UNITS OVERALL OBJECTIVES

1.1 BIOCHEMISTRY AND MOLECULAR BIOLOGY UNIT

The research of the unit is focused on enhancing the molecular understanding of metabolic signaling pathways involved in obesity, insulin resistance and Type 2 Diabetes (T2D) and translating this knowledge to more applied clinical research. Our multi-system approach utilizes cutting edge techniques in Molecular Biology, Cell Biology, Transcriptomic, Proteomic and Metabolomics that enables identification of clinically relevant biomarkers of obesity and diabetes. Data generated from the different assays are merged together to generate models allowing us to integrate our findings with known pathways and potentially uncover new players that modulate obesity and diabetes to foster drug discovery for effective therapeutic development.

1.2 GENETICS AND GENOMICS UNIT

The unit is primarily focused on identification and characterization of the genes and gene variants that confer risk to obesity, diabetes and related complications using high throughput genome-wide methodologies with emphasis on genome-wide association studies (GWAS), whole genome/exome sequencing, whole transcriptome profiling and high resolution HLA typing. Our study



objectives extend to regulatory genomics understanding the functional consequences of GWAS-identified variants by intracellular signaling studies and by generation of gene-knockouts using the most advanced CRISPR/cas9 technology. Other contemporary areas of research include investigating epigenomic alterations, gene-gene interactions, exosomal microRNA profiling and the development of panels consisting of population-specific markers for predicting the risk outcomes of complex disorders.

1.3 BIOINFORMATICS UNIT

The Unit aims (i) to develop research platforms that are able to analyze the disparate data resources (from the domains of Genetics & Genomics, of Population Health and Epidemiology) in isolation as well as in integrative context; and (ii) answer questions relating to causal genetic variants and epidemiology risk factors responsible for the



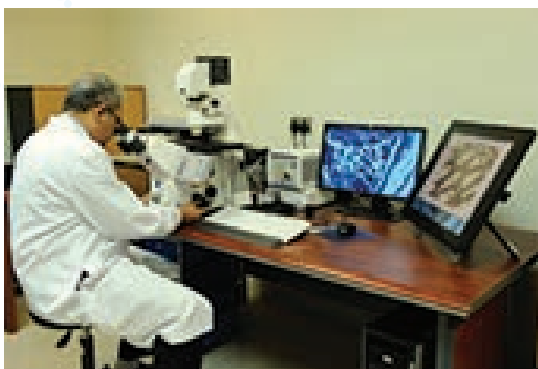
onset of diabetes and related disorders. The program is expected to expand the domain-specific risk factors to the unified list of optimal risk factors. The Unit made significant progress in both the domains of Health Sciences and Genomics/Genetics – the progress is reflected in the following three publications made during the year. We further worked on predicting future risk of T2D

and hypertension using non-invasive parameters: A cross-sectional study using national health data from the State of Kuwait in Arabian Peninsula. This work will be taken up further in the succeeding years.

1.4 IMMUNOLOGY UNIT

The incidence of metabolic diseases is increasing globally and Kuwait, in particular, faces tremendous public health challenges due to alarmingly high prevalence rates of diabetes in both Kuwaiti adults and children. In T2D, not only is the trend unfavorable but also the age of T2D onset in Kuwaiti population tends to be significantly lower. The current research initiatives of immunology research group at DDI involves the central mechanistic theme that relates to immunometabolism of diabetes. The overall goal is to identify novel immune and metabolic biomarkers/targets of preventive and therapeutic significance in relation to diabetes and its complications. Our current research objectives/activities focus on the following: a) Transcriptional regulators of metabolic inflammation, adipogenesis, lipogenesis and lipolysis, fat browning, glucose uptake and energy expenditure; b) Role of high fat diet, free fatty acids /bioactive lipids in Inflammation, Insulin resistance/T2D and associated complications; c) Epigenetic landscape changes underlying the effects of high fat diet components and cytokines/chemokines/adipokines in metabolic inflammation and diabetes; d) Mechanistic role of fatty acids receptors in metabolic inflammation; e) Molecular immune mechanisms involved in etio-pathogenesis of diabetic complications.

1.5 PANCREATIC ISLET BIOLOGY TRANSPLANTATION UNIT



The main focus of Islet Biology Unit (IBU) activities are to study mechanisms involved in the pancreatic islet and beta cells malfunction and failure in diabetes, and to investigate different clinical applicable strategies to prevent and treat pancreatic islet and beta cells malfunction and failure. These activities will be carried by using biological specimens, cell lines, laboratory animal

models, and eligible human subjects enrolled in well designed and approved clinical trials that follow “Bench to Bed”.

1.6 PUBLIC HEALTH UNIT

The aim of the Unit is to minimize inequalities in health and create situations in which all people can enjoy the highest quality of life possible within the settings and health systems they live in. The Public Health approach to diabetes is predicated on the understanding that health and disease are always a function of complex interactions between biological, social, behavioural, economic and other factors. It sets out to: (a) create a critical mass of like-minded researchers, (b) encourage a sharing of knowledge, ideas and research methods, (c) identify new needs in public health research, (d) explore innovative research methods, (e) discuss policy and program implications of findings, (f) help translate findings into policy and program options.

1.7 PEDIATRIC UNIT

The overall Unit goal is to improve the health and wellbeing of children in Kuwait by conducting high quality research in relevant priority areas and sharing the information with policy makers for translation into policy and large-scale implementation. Type 1 diabetes (T1D) is common in Kuwait and the unit is carrying out a nationwide register for childhood diabetes and research activities in T1D. Prevention of childhood obesity reflects the growing concern of Kuwait's very high prevalence of childhood obesity and metabolic complications related to obesity.

1.8 TISSUE BANK CORE FACILITY

The Tissue Bank Core Facility (TBCF) is a centralized, comprehensive, core laboratory that provides nucleic acid extractions (blood, saliva, buccal swab and urine), histology, immunohistochemistry, and tissue microarray for approved projects. TBCF also maintains a cell line repository, wherein cell lines are procured from commercial sources, passaged and stored. Around 26,000 research participants' samples were accrued between 2010 and 2015 from more than 25 approved research projects. A total of over 160,000 vials (DNA, Plasma, Serum, Urine and saliva vials) are stored in the ultralow temperature -80 degree freezers, about 8,000 blood vials are stored in liquid nitrogen tanks; over 8,000 samples are stored in refrigerator (Blood spot cards and hair samples) and remaining are biopsy tissue samples. TBCF is focusing on developing a diabetes biobank to support the research community within DDI to enrich the research publications.



1.9 ANIMAL CORE FACILITY

The Animal Core Facility is engaged in performing two main types of activities that relate to: (1) Laboratory Animals; and (2) Experimental Medicine. The Laboratory Animals platform offers opportunities to visiting students and DDI researchers under the Summer Internship Program (SIP) to acquire knowledge and learn hands-on skills related to laboratory animal

care, handling, and use for teaching and research purposes. Our mission is to maintain a healthy balance between the animal care & use and the animal model-based research activities. The SIP has been essentially designed to comply with the international and DDI animal care and use guidelines & principles and, therefore, it ensures a high standard of animal care and safety for teaching and research purposes. The SIP comprises of the following 5 typical components: (1) Core component modules (text-based, including ethics in animal research courses); (2) Specific modules (text-based, including animal models used in diabetes research); (3) Animal handling and manipulation skills (hands-on training at the facility); (4) Practical skills evaluation; and (5) Documenting the training. The training course materials are divided into separate modules and each module is a self-contained unit with a formal examination at the end of each module to allow assessment of participants' knowledge, competency, and proficiency.

1.10 APPROVED ONGOING PROJECTS LISTS

Research at DDI is evaluated through a series of processes as depicted in the Policies and Procedures of Office of Research Affairs (ORA) (DDI/ORA/003) under Research Operations and Project Management Department. The first step of this process is the scientific evaluation, which is done by Chief Scientific Officer (CSO), external reviewers and by Research Audit and Review Committee. Once the research is scientifically evaluated, the research undergoes ethical evaluation by the Ethical Review Committee (ERC). Ethical approval is provided to the research for a period of one year. Reminder for the submission of progress report is provided to the investigators 60 days prior to the expiry of approval. Investigators submit the progress report of their research to ORA to be evaluated for continued approval of research. ORA performs compliance surveys (audit) of the research yearly to evaluate that the research is being conducted according to the national and international guidelines. The audit report is then reviewed by the ERC. If any major misconduct and/ ethical violation is observed during the audit then ERC evaluates the misconduct as per the Policy and Procedures of ORA (misconduct in research DDI/ORA/016, handling ethical violation DDI/ORA/012). Based on the committee's decision, the research project is either suspended or terminated. Apart from the misconduct, the research project can be terminated based on the criteria mentioned in the policies and procedures of ORA (research termination and suspension policy DDI/ORA/010).

List of approved ongoing research projects:

#	Project Title	Lead Unit
1	Kuwaiti Wellbeing: A population based study of the interaction between environment and genetic factors in determining obesity, insulin sensitivity, allergies and hyperglycemia in the State of Kuwait	Public Health
2	Health Bioinformatics – Integrative Informatics of Health, Biomolecular, and Life-Style Sciences – A Knowledge-based Information System for Obesity and Related Disorders in Kuwait	Bioinformatics
3	Investigation of the cellular and molecular anti-inflammatory response in obese individuals subjected to a defined exercise protocol	Immunology
4	Delinating the underlying genetic risk factors of obesity in Kuwaiti children and adults	Genetics & Genomics
5	Training courseware & pilot proposal: Diabetes; what school personnel should know	Pancreatic Islet Biology Transplantation
6	Obesity, Metabolic Syndrome, and Type-2 Diabetes in Children & Adolescents from Multiethnic Origins in Kuwait: A Prospective Cohort Study	Pediatric
7	Development of Childhood-Onset Diabetes Registry in Kuwait	Pediatric
8	Framework for Kuwaiti Hereditary Disorders: Gene Mapping Functional and Molecular Investigation	Genetics & Genomics
9	Elucidating the mechanism of remission of type 2 diabetes in morbid obese patients after bariatric surgery-focused on beta-cell function and insulin sensitivity changes	Pancreatic Islet Biology Transplantation
10	Application of a breathing exercise program to improve asthma in obese patients: Effects on clinico-immunological parameters	Immunology
11	MSBASIS: An international registry dedicated to evaluating outcomes data in Multiple Sclerosis	Clinical
12	Children Obesity Program “Cellular and Molecular Basis Underlying Childhood Obesity in Kuwait: Dissection of the Inflammatory and Stress Responses”	Biochemistry & Molecular Biology
13	Monogenic diabetes in the Young: A study from Kuwait	Pediatric
14	Adipokines induced modulation of the matrix metalloproteinases and osteopontin in human epithelial breast cancer cells: Implications for obesity related cancer metastasis	Immunology

15	Umbilical cord and ECS-derived pancreatic endocrine progenitor cells: Therapeutic approach for diabetes.	Immunology
16	Better control in Pediatric and Adolescent diabetes: working to create Centres of Reference	Pediatric
17	The Real Life Effectiveness and Care Patterns of Diabetes Management Study for Eastern Europe, Middle East, Africa Region (RECAP-DM EEMEA STUDY)	Clinical
18	Incidence of complications in young adults with type 1 diabetes in Kuwait	Pediatric
19	Betatrophin a New Hope: Clinical and Biochemical Characterization of Betatrophin and its role in obesity and diabetes: A pilot study	Biochemistry & Molecular Biology
20	Diabetic Nephropathy study from Kuwait	Genetics & Genomics
21	A pilot study to assess the effect of Sudarshan Kriya Yoga (SKY) on stress management and quality of life of type 2 diabetic patient after a 15 week intervention	Clinical
22	Unravelling the role of micro RNA-103,143 and 181 in obesity and diabetes	Biochemistry & Molecular Biology
23	Preventing Type 2 Diabetes Mellitus and obesity through sound infant and young child feeding, especially breastfeeding	Public Health
24	Thyroid and celiac Autoimmunity and Diseases in Children and Adolescents with Type1 Diabetes in Kuwait: Results of the Childhood Onset Diabetes electronic Registry (CODeR)	Pediatric
25	DISCOVERING Treatment Reality of Type 2 Diabetes in Real World Settings	Clinical
26	Audit of healthcare for children and young people with Type 1 diabetes in Dasman Diabetes Institute	Pediatric
27	Population genetics studies on Kuwait and the region-important for diabetes genetic endeavours	Bioinformatics
28	Structural variants(CNV) and inherited genome segments(ROH and IBD) as markers for diabetes risk in Kuwaiti population	Bioinformatics
29	Adherence to Insulin therapy among adolescents with Type 1 diabetes-Extent and factors affecting it in Kuwait	Pediatric
30	Investigation of the immunometabolic roles of IRF5, IRF7, and FOXO1 transcription factors in macrophages and adipocytes in obesity and type-2 diabetes	Immunology
31	Non-proteinuric Diabetic Kidney Disease: Study On Demographic, Biochemical And Molecular Perspectives	Biochemistry & Molecular Biology

32	Biological characterization of Kuwaiti-Associated Diabetes and Obesity Genes	Genetics & Genomics
33	Deciphering G6B Gene Role as Potential Effector in Diabetes & Obesity Pathogenesis and Cellular Differentiation	Genetics & Genomics
34	A Phase 3, Double Blind, Placebo controlled, Randomized, Multi-Center study to assess the safety and efficacy of exenatide once weekly in adolescents with Type 2 Diabetes	Pediatric
35	Identification of OSA Related Biomarkers and their Relation to Metabolic Disorders	Biochemistry & Molecular Biology
36	The Role of HSP40 Proteins in Obesity and Diabetes and its Clinical Implications	Biochemistry & Molecular Biology
37	Meteorin-like hormone, a potential regulator for obesity, diabetes and energy expenditure	Immunology
38	Observational, prospective, parallel cohort study to evaluate tolerability of Canagliflozin and sulphonylurea on a background therapy of metformin with or without DPP-4 inhibitor during Ramadan Fasting in Patients With Type 2 Diabetes	Clinical
39	The Diabetes and Tele-mobile study (DATES): A randomized controlled trial of mobile health intervention to support self-management for people with type 2 diabetes	Clinical
40	The use of cooking classes, structural nutritional education and goal setting intervention to improve health and quality of life in overweight and obese children and their families in Kuwait Pilot Trial 2	Nutrition
41	Assessing the validity and reliability of the Kuwait child food knowledge questionnaire.	Nutrition
42	Comparison of laboratory changes, food intake and metabolic profile in patients with obesity and Type 2 Diabetes Mellitus: Before, during and after taking Aphoeline Brake TM	Clinical
43	TIBIAL INTIMA MEDIA THICKNESS in type 2 diabetes mellitus with and without critical limb ischemia: A comparative study	Diagnostic Imaging
44	Prospective evaluation of diabetic foot with 3T MRI using IDEAL	Diagnostic Imaging
45	Outcome of diabetes education among renal transplant recipients with new onset diabetes after transplantation (NODAT)	Education
46	A Double-blind, Placebo-controlled, Parallel Design, Randomized Phase 2A Trial Evaluating the Potential Activity and Safety of hMaxi-K Gene Transfer in Males with Erectile Dysfunction	Clinical

47	The Role of Proinflammatory Cytokines in Diabetic Nephropathy patients with type 2 diabetes mellitus	Clinical
48	Immunogenetics of new onset of diabetes post-kidney transplantation.	Education
49	Investigation of the protective effect of incretin mimetics on heat shock and endoplasmic reticulum stress responses: An in vitro pilot study	Biochemistry & Molecular Biology
50	Emerging role of DUSP1 in obesity and diabetes: Effects on adiposity-induced insulin resistance	Biochemistry & Molecular Biology
51	Potential role of Abscisic acid (ABA) in protecting beta cell function under glucolipotoxicity conditions	Pancreatic Islet Biology Transplantation
52	Investigating the Role of mTORC1 and FFAR1 Signaling in Insulin Resistance in the Pancreatic β -cell Line INS-1	Pancreatic Islet Biology Transplantation
53	Oxygen Sensor Functionality in a Diabetic Rat Model – A Pilot Study	Pancreatic Islet Biology Transplantation

International Collaborations:

1. Obesity Center Amsterdam, Sint Lucas Andreas Hospital, Amsterdam, The Netherlands on project title Biomarker study in bariatric surgery patients with and without obstructive sleep apnea.
2. Harvard Medical School on Role of IRF3 as a Key Regulator of Immunometabolism in Macrophages and Adipocytes.
3. Stony Brook University NY, USA on the roles of high fat diet and bioactive lipids in breast and colon cancer.
4. Department of Surgery, Faculty of Medicine, Kuwait University on Elucidating the mechanism of remission of type 2 diabetes in morbid obese patients after bariatric surgery-focused on beta-cell function and insulin sensitivity changes.
5. PROFUSA, Inc., USA on Oxygen Sensor Functionality in a Diabetic Rat Model – A Pilot Study.

Journal Wise Distribution of Research Publications:

Distribution of DDI's primary diabetes-related research publications with journal name and Impact Factor value indicated for 2015.

No.	Journal	Impact Factor Value	No. of Publications
1	Biomarker Research	15.843	1
2	BioMed Central (BMC)Genomics	4.34	1
3	BMJ open	2.97	1
4	Cardio Vascular Diabetology	4.534	1
5	Clycomics & Lipidomics Journal	2.52	1
6	Diabetes Research and Clinical Practice	3.045	1
7	Diabetology & Metabolic Syndrome	2.5	1
8	Health Policy Journal WHO	2.035	1
9	Hepatitis Monthly	1.932	1
10	Indian Journal of Ophthalmology	0.61	1
11	Journal of Diabetes Research	2.431	1
12	Journal of Genomics Data	0.52	1
13	Journal of Glycomics & Lipidomics	2.52	2
14	Journal of Inflammation	1.975	1
15	Journal of Proteomics & Enzymology	2.62	1
16	Journal of the Neurological Sciences	0.36	1
17	Kuwait Medical Journal	0.08	1
18	Lipids in Health and Disease	2.61	1
19	Mediators of Inflammation	3.89	1
20	Medical Principles and Practice	1.24	1
21	Neurology International	0.28	1
22	OAT open access	N/A	1
23	Pediatric Obesity	3.689	1
24	PLOS One	3.54	5
25	Scientific Reports	5.228	2
26	Translational Proteomics	2.04	1

Research Publication List:

1. Abu-Farha M, Abubaker J, Al-Khairi I, Cherian P, Noronha F, Hu FB, et al. Higher plasma betatrophin/ANGPTL8 level in Type 2 Diabetes subjects does not correlate with blood glucose or insulin resistance. *Scientific Reports*. 2015; 5:10949.
2. Abu-Farha M, Abubaker J, Noronha F, Al-Khairi I, Cherian P, Alarouj M, et al. Lack of associations between betatrophin/ANGPTL8 level and C-peptide in type 2 diabetic subjects. *Cardiovascular Diabetology*. 2015; 14:112.
3. Abu-Farha M, Behbehani K, Elkum N. High adiponectin levels in lean Arab women compared to Asian women. *Biomarker Research*. 2015; 3:7.
4. Abu-Farha M, Cherian P, Al-Khairi I, Tiss A, Khadir A, Kavalakatt S, et al. DNAJB3/HSP-40 cochaperone improves insulin signaling and enhances glucose uptake in vitro through JNK repression. *Scientific Reports*. 2015; 5:14448.
5. Ahmad R, Al-Roub A, Koshy M, Sindhu S, Behbahani K. Relationship of IL-5 with Th1 and Th2 Cytokines in Individuals with or without Type-2 Diabetes. *Journal of Glycomics & Lipidomics* 2015; 5(4):1-4.
6. Ahmad R, Shihab PK, Thomas R, Alghanim M, Hasan A, Sindhu S, et al. Increased expression of the interleukin-1 receptor-associated kinase (IRAK)-1 is associated with adipose tissue inflammatory state in obesity. *Diabetology & Metabolic Syndrome*. 2015; 7:71.
7. AlArouj M. Risk stratification of Ramadan fasting in person with diabetes. *JPMA the Journal of the Pakistan Medical Association*. 2015; 65(5 Suppl 1):S18-21.
8. Ali H, Al-Yatama MK, Abu-Farha M, Behbehani K, Al Madhoun A. Multi-lineage differentiation of human umbilical cord Wharton's Jelly Mesenchymal Stromal Cells mediates changes in the expression profile of stemness markers. *PLoS One*. 2015; 10(4):e0122465. **
9. Al-Khawari M, Shaltout A, Qabazard M, Al-Sane H, Elkum N. Prevalence of thyroid autoantibodies in children, adolescents and young adults with type 1 diabetes in Kuwait. *Medical Principles and Practice: International Journal of the Kuwait University, Health Science Centre*. 2015; 24(3):280-4. **
10. Alqaderi H, Goodson JM, Tavares M, Al-Mutawa S, Behbahani K, Behbehani J. Short sleep duration as a risk factor for obesity in Kuwaiti children. *Integrative Obesity and Diabetes*. 2015; 1(5):151-6. **
11. Alroughani R, Thussu A, Guindi RT. Yet another Atypical Presentation of Anti-GQ1b Antibody Syndrome. *Neurology International*. 2015; 7(2):5770.
12. Al-Temaimi RA, Al-Enezi A, Al-Serri A, Al-Roughani R, Al-Mulla F. The Association of Vitamin D Receptor Polymorphisms with Multiple Sclerosis in a Case-Control Study from Kuwait. *PLoS One*. 2015; 10(11):e0142265. **

13. Badawi D, Saleh S, Natafji N, Mourad Y, Behbehani K. Quality of Type II Diabetes Care in Primary Health Care Centers in Kuwait: Employment of a Diabetes Quality Indicator Set (DQIS). *PLoS One*. 2015; 10(7):e0132883.
14. Badawi DA, Alkhamis Y, Qaddoumi M, Behbehani K. National transparency assessment of Kuwait's pharmaceutical sector. *Health Policy*. 2015; 119(9):1275-83.
15. Behbehani R, Al-Hassan AA, Al-Khars A, Sriraman D, Alroughani R. Retinal nerve fiber layer thickness and neurologic disability in relapsing-remitting multiple sclerosis. *Journal of the Neurological Sciences*. 2015; 359(1-2):305-8. **
16. Abu-Farha M, Behbehani K. Characterization of Protein Complexes and Their Implication in Biological Processes. *Journal of Proteomics & Enzymology*. 2015; 4(2).
17. Channanath AM, Farran B, Behbehani K, Thanaraj TA. Association between body mass index and onset of hypertension in men and women with and without diabetes: a cross-sectional study using national health data from the State of Kuwait in the Arabian Peninsula. *BMJ Open*. 2015;5(6):e007043.
18. Elkum N, Al-Arouj M, Sharifi M, Shaltout A, Bennakhi A. Prevalence of childhood obesity in the state of Kuwait. *Pediatric Obesity*. 2015.
19. Hartman ML, Goodson JM, Barake R, Alsmadi O, Al-Mutawa S, Ariga J, et al. Salivary glucose concentration exhibits threshold kinetics in normal-weight, overweight, and obese children. *Diabetes, Metabolic Syndrome and Obesity: Targets and Therapy*. 2015; 8:9-15. **
20. Hassoun AA, Abdella N, Arouj MA, Awadi FA, Futaisi AA, Lamki MA, et al. Driving and diabetes mellitus in the Gulf Cooperation Council countries: Call for action. *Diabetes Research and Clinical Practice*. 2015; 110(1):91-4. **
21. Janahi EM, Al-Mannai M, Singh H, Jahromi MM. Distribution of Hepatitis C Virus Genotypes in Bahrain. *Hepat Mon*. 2015; 15(12):e30300. **
22. John SE, Thareja G, Hebbar P, Behbehani K, Thanaraj TA, Alsmadi O. Kuwaiti population subgroup of nomadic Bedouin ancestry-Whole genome sequence and analysis. *Genomics Data*. 2015; 3:116-27.
23. Khadir A, Tiss A, Abubaker J, Abu-Farha M, Al-Khairi I, Cherian P, et al. MAP kinase phosphatase DUSP1 is overexpressed in obese humans and modulated by physical exercise. *American Journal of Physiology Endocrinology and Metabolism*. 2015; 308(1):E71-83.
24. Khadir A, Tiss A, Kavalakatt S, Behbehani K, Dehbi M, Elkum N. Gender-specific association of oxidative stress and inflammation with cardiovascular risk factors in Arab population. *Mediators of Inflammation*. 2015; 2015:512603.
25. Raizada S, Al Kandari J, Al Diab F, Al Sabah K, Kumar N, Mathew S. Pars plana vitrectomy versus three intravitreal injections of bevacizumab for nontractional diabetic macular edema. A prospective, randomized comparative study. *Indian Journal of Ophthalmology*. 2015; 63(6):504-10. **

26. Schwartz D, Bergsten P, Baek H, Barba De La Rosa A, Cantley J, Dayon L, et al. The Human Diabetes Proteome Project (HDPP): The 2014 update. *Translational Proteomics*. 2015;8–9:1-7. **
27. Shi P, Goodson JM, Hartman ML, Hasturk H, Yaskell T, Vargas J, et al. Continuous Metabolic Syndrome Scores for Children Using Salivary Biomarkers. *PLoS One*. 2015; 10(9):e0138979. **
28. Shihab PK, Al-Roub A, Al-Ghanim M, Al-Mass A, Behbehani K, Ahmad R. TLR2 and AP-1/NF-kappaB are involved in the regulation of MMP-9 elicited by heat killed *Listeria monocytogenes* in human monocytic THP-1 cells. *Journal of Inflammation*. 2015; 12:32.
29. Sindhu S, Thomas R, Kochumon S, Alshawaf E, Hasan A, Alghanim M, et al. Changes in the Adipose Tissue Expression of CD86 Costimulatory Ligand and CD163 Scavenger Receptor in Obesity and Type-2 Diabetes: Implication for Metabolic Disease. *Journal of Glycomics & Lipidomics*. 2015; 5(4):1-8.
30. Sindhu S, Thomas R, Shihab P, Sriraman D, Behbehani K, Ahmad R. Obesity Is a Positive Modulator of IL-6R and IL-6 Expression in the Subcutaneous Adipose Tissue: Significance for Metabolic Inflammation. *PLoS One*. 2015; 10(7):e0133494.
31. Sindhu S, Wilson A, Akther N, Shenouda S, Kochumon S, behbahani K, et al. Increased Adipose Tissue Expression of Toll-Like Receptor (TLR)-7 in Obese Individuals: Significance in Metabolic Disease. *Journal of Glycomics & Lipidomics*. 2015; 5(4):1-6.
32. Thareja G, John SE, Hebbar P, Behbehani K, Thanaraj TA, Alsmadi O. Sequence and analysis of a whole genome from Kuwaiti population subgroup of Persian ancestry. *BMC Genomics*. 2015; 16:92.
33. Ziyab A, Behbahani K, Carballo M. Diabetes: A Fast Evolving Epidemic. *Kuwait Medical Journal*. 2015; 47(4):291-301. **

Note: ** Denotes articles published by DDI staff in collaboration with and coordinated by Other Institutions.

International Conferences Research Participation: Poster Presentations:

1. Altered expression of CD86 and CD163 in obese individuals: significance in obesity-induced inflammation.

R. Ahmad, Shihab K, Al-Ghanim M, Hasan A, Sindhu S, Bebehani K,

Meeting -Dendritic Cells and Macrophages Reunited (C4), Keystone symposia march 8-13, 2015, Montreal.

2. Diabetes and Metabolic Dysfunction

Al Madhoun A, Ali H, Abu-Farha M, Behbehani K Al-Yatamah M
Keystone Symposia, Santa Fe, NM, USA, Jan 27th-Feb 1st, 2015.

Educational Events Conducted at DDI-Research Division in 2015:

Various educational activities were successfully organized during the past year in relation with research either within the frame of Research Continuing Professional development (R-CPD).

1. Journal Clubs and Research Seminars.

Journal Clubs and Research seminars: 18 sessions were organized from April till November 2015 with attendance of 20-30.

2. Workshops

Workshop 1: Advanced Integrated Lab Safety and Management Workshop Dasman Diabetes Institute. March & April 2015,

This training module is for all lab personnel at DDI who may come into contact with different hazards and has already taken the Fundamental Lab Safety Principles Training previously. This training reviews how your work at DDI labs can maintain compliance with the most current guidelines and regulations.

Workshop 2: Research Methods Workshop, July- August 2015

The main purpose of this workshop is undertaking research in the selection of appropriate methods; Making decisions about the type of research methods to be used in a particular project. Planning of a research strategy where it is necessary to make explicit judgements about a hierarchy of evidence, the weight afforded to the various elements, and how they might combine to give a rounded perspective. Understanding research proposals, and the methodologies presented to address a particular research question. Capacity to use a range of research methods in developing work policies. Overseeing or commissioning research activity, to know what the purpose of particular research methods are which enables you to assess the appropriateness of their use.

MEDICAL DIVISION ANNUAL REPORT

1. Fitness and Rehabilitation Center

I am pleased to submit the Annual Report of 2015 for the Lifestyle Program (LSP) and other Fitness and Rehabilitation Center (FRC) activities at Dasman Diabetes Institute (DDI) from January 1st 2015 till 31st December of submitting this report, as follows:

1.1 OVERVIEW OF FRC PROGRAMS

The Fitness and Rehabilitation Center (FRC) has continued to support the mission of Dasman Diabetes Institute by providing fitness and wellness programs. These programs aim to promote a healthy lifestyle to the Kuwaiti public. This is accomplished primarily by the FRC main program: The lifestyle program (LSP). What's more, FRC coordinated and participated in numerous in-house and out-reach activities in order to educate the public and raise their awareness about physical activity and exercise.

FRC continued to conduct comprehensive assessments for all members prior to starting LSP. This assessment includes the following: Medical clearance by a doctor, 6- minute walk test, body composition, anthropometric measurements and fitness assessment.

All members received individualized exercise prescriptions based on the results of their comprehensive assessment. FRC trainers provided continuous supervision and training instructions for all members while performing exercises at FRC. Daily records were kept documenting vitals and progress.

FRC coordinated and delivered a diabetes intervention program called "Be Dasmani" with the aim of educating overweight diabetics about lifestyle modifications to help them lose weight and manage their blood glucose levels. Be Dasmani was delivered in April 2015.

The FRC had designed and delivered children's program called "Teen Dasmania". This is a group exercise class for teens that runs twice a week. The children undergo a comprehensive assessment that includes: height, weight, anthropometric measurements, and fitness assessment. Participants in Teen Dasmania also receive one educational session about healthy eating. The aim behind this fun and interactive program is to motivate children to be more active in their daily lives, and to make healthier choices in their diet.

FRC participated in the delivery of numerous in- house and out-reach activities. The goal of all these activities was to raise awareness about physical activity and exercise as an important part of a healthy lifestyle through education and advice provided for the general public as well as the delivery of exercise classes.

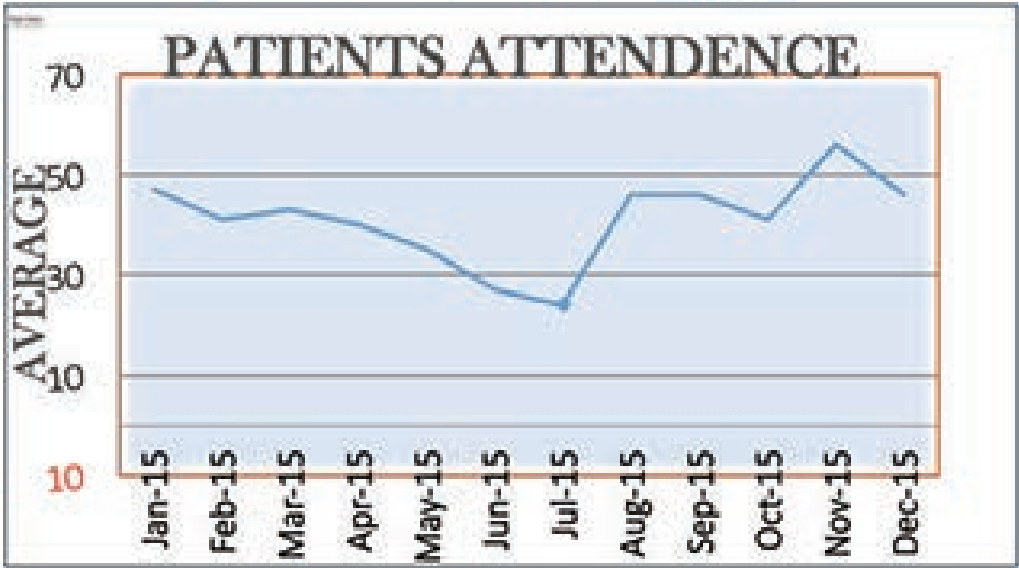
Staff and Recruitment

The FRC staff members (number in parentheses) currently working are, Manager (1), Senior Fitness Instructor (1), a Secretary (1), a Receptionist (1), Nurses (3), Fitness Instructors and Lifeguards (5). A Fitness Instructor has been recruited and will be joining us in 2016.

1.2 PROGRESS OF PROGRAMS AT FRC

i) **The Life Style Program (LSP)**

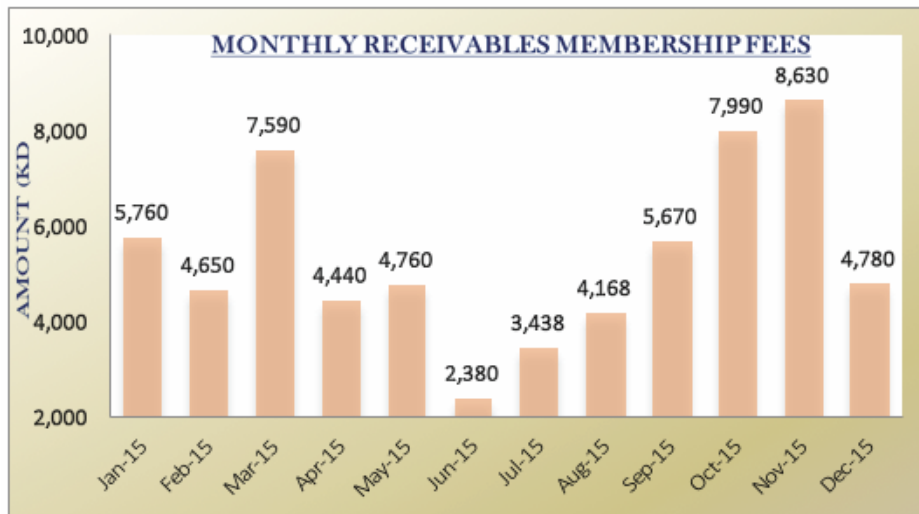
- FRC opens for its members six days a week. The working hours are from 8 AM to 8 PM (closed 1:00-2:00 PM). Saturday’s working hours are 8:00 AM to 5:00 PM.
- The average daily visit to FRC in 2015 was 41. Sunday to Thursday attendance is three times higher than Saturday attendance.



- The LSP Fitness Clearance Clinics: 221 patients were assessed at the LSP Fitness Clearance Clinic.
- The FRC Nutrition Clinic: The clinic was operated by dietitian Hyatt Al Sayegh. This clinic provides dietary assessment and provision of a meal plan with tips for optimal health and weight loss. Frequent follow-up are made to ensure achievement of nutrition goals. A total of 107 members were assessed in the Nutrition Clinic in 2015.
- Fitness Assessment Parts I & II (FAP1 & FAP2): This includes 6-minute walk test, body composition, anthropometric measurements, and fitness assessment. A total of 147 members were tested at the FRC in 2015.

- Financial Revenue:

The revenues received member's enrollment and testing; the FRC submitted these revenues to Finance by the end of every month. Below is the graph that shows revenues deposited with the corresponding months.



- 171 new members joined the FRC in 2015, and 214 members renewed their memberships.
- Customer satisfaction for the year 2015 is 90.4 %.
- Most members who attended the gym on regular basis have shown significant improvement in their health-related fitness parameters.

ii) Be Dasmani Program

Be Dasmani is an Intervention program designed for overweight individuals with Type 2 diabetes. The program aims to provide strategies to help overweight diabetics lose weight and manage their blood glucose levels. Participants in this program have the benefit of working closely with a team of health professionals that includes a licensed physician, a registered dietitian, physical therapists, nurses and fitness trainers. After a comprehensive assessment (medical clearance, CPET, body composition analysis, anthropometric measurements and fitness assessment) participants are scheduled for one on one consultations with the fitness trainer, nutritionist and medical doctor. The group then attends daily lectures about nutrition, exercise, blood glucose monitoring, diabetes complications and behavioral modification followed by exercise workshops. Participants in this program are enrolled in a one month membership package that includes the three educational days.

FRC delivered "Be Dasmani" Program in collaboration with the Nutrition Department and Education and Training Department from 7th till 11th April 2015. "Be Dasmani" Intervention participants reported overall satisfaction rating of 88%, demonstrated better understanding of their condition and improved ability to manage their blood glucose levels.

iii) Dasmanite Summer Program

This program was delivered in collaboration with the Nutrition Department. Seventeen children ages 10 to 15 years participated in this educational summer program. Its main aim was to raise awareness about nutrition, exercise, and health. The program ran over 3 weeks from Aug 2 to Aug 20. The daily schedule consisted of educational talks and workshops as well as exercise classes. The Dasmanite program participants demonstrated improved learning, as well as a reduction in weight and waist circumference. Participants and their families expressed overall satisfaction with the Dasmanite program.

iv) Teen Dasmania

TEEN DASMANIA is a program designed for children ages 10-15 years old. It is a fun and interactive group exercise class. The program consists of eight one hour sessions delivered twice a week. Classes include circuit training, boot camp, swimming, cycling, obstacle course, and agility/sports drills in addition to one brief nutrition class. These classes aim to burn fat, calories and help build muscle.



This program promotes self-esteem, confidence, sportsmanship, teamwork, and social skills. One of our main objectives is to encourage children to move more and sit less. Height, weight, BMI, and anthropometric measurements were assessed to help track participants' progress. Fitness Assessment was performed on each participant (one mile walk test, push-ups, curl ups, and sit & reach test).

The FRC delivered TEEN DASMANIA program four times in 2015 (January- October). The first batch started from January 12- February 9, 2015 with 15 children. Second batch was in March 11- April 1, 2015 with 10 children. The third batch was in April 20- May 13, 2015 with 10 children and the last batch was October 19- November 11, 2015 with 7 children. Almost 70% of the children attended classes regularly.

Overall, children had a positive experience and favorable results. Their cardiovascular fitness improved. Some lost weight and dropped a few inches. Most reported more energy, better sleep, and decreased stress.

In order to promote the aforementioned FRC programs, the FRC team members engaged in the following marketing and promotional activities in 2015.

1.3 MARKETING/PROMOTIONAL ACTIVITIES

* **New Schemes were introduced in June to attract new members and to incentivize membership renewals:**

- a. Summer Special offer: A one month membership offer for KD 50 was effective from June 18 to August 31.
- b. Refer a friend incentive: Members get 10% discount on their next payment for renewal if they referred a friend to join the FRC. Discount is capped at 30%.
- c. 30% discount was given for immediate family members of DDI Staff on their annual membership fees.

* **Visits to Primary Care Clinics:**

Visits to various primary care clinics to promote FRC services and programs to the clinic doctors. The FRC team members visited the following primary care clinics: Bayan, Mishref, Salwa, Rumaithiya, Sabah Al Salem and Mansouriya on February 24. We visited Yarmouk, Adailiya, Qurtoba and Khaldiya on 7th July. On October 26, a team member visited Mansouriya, Bneid Al Gar & Daiya.

Additionally, a FRC team member visited the school counsellors of ASK and UAS to distribute the Teen Dasmania flyers.

* **Publicity on Media:**

- KTV Sports Channel: The FRC Manager was invited to a TV interview on KTV Sports Channel. During the interview, Ms. Samar covered important topics related to living a healthy life style and described programs offered by the FRC.
- KTV Filming: Mr. Dennis talked about the services offered at FRC. Members were also interviewed to describe their experience in the FRC.
- Kuwait National Guard (KNG) Filming: 15 seconds clips filmed by KNG were uploaded on Instagram. 40 seconds clips of filming were broadcasted on TV during Ramadan.
- Newspaper: Newspapers Advertisement: Summer Special Offer.
Press release for "Be Dasmani" program
Press release for "30 A Day" Walking Campaign
Press release for Dasmanite Camp (2nd to 20th August)
- Radio Interview: The FRC Manager was interviewed on FM 99.7 during Ramadan on the topic Fasting & Exercise during Ramadan.

* **Social Media (DDI):**

Regular updates of the FRC news through DDI social media in collaboration with Public Relations and Media Services Department in DDI.

Other Activities in 2015:

“30 A Day” Walking Campaign: 30 A Day walking campaign was launched on May 13. Its main objective was to encourage the DDI staff to walk for 30 minutes a day during their breaks after obtaining their line manager’s approval. FRC aimed to promote this walking campaign Kuwait- wide.

Team Building Activity: This was done on 9th June for all FRC staff to encourage cooperation, foster team spirit and embolden unity among the staff.

Job Descriptions: The Job Descriptions for all the FRC Staff were updated, shared with FRC team and sent to HR.

Enrollment Forms: The Patient History forms were improved. It was uploaded to the FRC system by IT department.

Physical Activity Readiness Questionnaire (PAR-Q) – This form was translated to Arabic and added as a required form to complete for those who decline to undergo medical clearance.

Staff Meetings: This was held on monthly basis to discuss FRC issues, needs, updates, etc. Minutes of all meetings are recorded and kept.

Policies & Procedures: Edited, updated, and uploaded to the portal.



1.4 COLLABORATION

Internal Collaboration: FRC collaborated with the following DDI departments on different programs and activities:

o Pediatric Diabetes Clinic:

- The KICK OFF program: Dr. Azza Shaltout conducts the Kick off Program in collaboration with the University of Sheffield and the department of Nutrition at (DDI). An Exercise session was delivered at the FRC on March 19, as part of this program.
- The KIDSS research project: Several meetings were attended to finalize the scope of the FRC involvement in this research project. FRC will provide exercise classes twice a week for 4 weeks, on an ongoing basis with new batches of participants. This project starts in mid- January, 2016 and continue for 12-18 months.

o Department of Business Development and Communications:

- Participation in Let’s Get Healthy Today, Kuwait, Let’s Stay Healthy, Kuwait, and the Injaz program.
- British Embassy: Collaboration is ongoing to enroll the British embassy staff into an exercise program.

o **Department of Education and Training (E&T):**

- The Education & Training Department participated in the Be Dasmani program and delivered lectures and individual counseling.
- FRC participated in the School Awareness Program.
- FRC participated in the IDF education.
- FRC has asked the E&T Department to deliver basic diabetes education knowledge to FRC fitness instructors.
- Meetings and discussions are underway to provide diabetes education to FRC diabetic members.

o **Department of Nutrition:**

- The FRC continued to collaborate with the Nutrition Department at the DDI to service its valued patients and members.
- Weekly nutrition clinic: FRC members received nutritional counseling.
- Dr. Amna Al Akari, a Dietitian from Al Amiri Hospital, completed an internship with the Nutrition Department and spent some time in the FRC to learn about FRC services and programs.
- FRC delivered a talk about exercise on 17th March to participants of the Alternate Day Diet, a Nutrition Department research project.
- The FRC delivered a weekly yoga class to female DDI participants of the alternate day diet research project.
- FRC also assisted the Nutrition department with their research project " AGDAR". We provided the 5th floor space and equipment for the participants as well as brief instructions to the group leader as needed.
- The Nutrition Department participated in the Be Dasmani program and delivered lectures and individual counseling to all participants.
- The Dasmanite Summer Program was delivered in collaboration with Nutrition.

o **Information Technology:**

FRC staff met with the IT Department and discussed the required FRC system changes. IT is currently working on updating and improving the FRC system as per our guidelines.

o **Clinical Skills Center:**

Collaborated with the Clinical Skills Department on the Sabah Al Ahmed gifted school visit, as well as the KNG out-reach event.

o **Public Relations & Media Services:**

Collaborated with PR and Media Services in several school visits, the Milan Expo Kuwait Pavilion, Diabetes Day event at DDI, among others.

These internal collaborations translated to the following in-house and outreach activities:

In-House Activities:

- o Sabah Al Ahmed Giftedness School: On January 28, there were 22 boys of age group 11-12 coordinated by department of clinical services.
- o Let's Get Healthy Today, Kuwait: The FRC participation includes a brief presentation followed by an exercise session by FRC staff. A total of 25 days of LGHTK with 1414 Students and 98 Teachers were served throughout 2015.
- o INJAZ Students: This job shadow program was held on Feb 10, with 21 children from Khalid M Zaid High School and on March 3, with 21 children from Government School Lubayd Al Rabea. On Feb 5, 25 children from Duaij Al Salman High School. On 3rd May, there were 25 children from Sabah Al Salem High School.
- o School Awareness Program: This was held on 19th April for 19 students from Jaber Al-Ahmed Secondary School for boys.
- o School Awareness Program on 16th November: Fatima Al Misbah School visited DDI, 20 girls and 3 teachers with ages 11-12 years.
- o School Awareness Program: This was delivered to girls of Surra Intl School on December 9.
- o Participation in the IDF sessions in collaboration with E&T department: Ms. Samar delivered two talks to MOH clinical instructors & Nurses on 16th & 23rd November.
- o Participation in IDF training module for KNG staff: Ms. Samar delivered the physical activity lecture for the KNG staff.
- o MEPI Program (Let`s Stay Healthy, Kuwait) on 25th November: Ms. Samar delivered lecture to the students of Bibi Al Salem Al Sabah.
- o MEPI Program (Let`s Stay Healthy, Kuwait) on December 1: Ms. Samar delivered lectures on Exercise physiology to the students of Al Najat Bilingual School.
- o Kick off Program: An exercise session was delivered at the FRC on March 19, as part of this program.

Outreach Activities:

- o Go Blue Campaign: A walkathon was organized by Business Development Department and NBK. Mr. Moayad contributed to this event on 3rd March.
- o Diabetes Awareness Program: On June 2 for "Your Health during Ramadan" at Al Salaam Health Center in South Surra. Also, on May 27 for Sabah Al Salem primary care clinic.
- o GCC Health Promotion Day: This was organized by MOH, coordinated by E&T dept, on May 27.
- o Health Promotion Activity: This was held in Zahra Co-op on June 15 and was attended by Ms. Samar in collaboration with the Nutrition department.
- o Kuwait Pavilion Milan Expo: Ms. Samar and Mr. Moayad went to Milan to represent DDI at the Milan Expo Kuwait Pavilion from 19th to 26th September 2015. They answered various questions about DDI services to the public. They also, advised people on lifestyle enhancement for good health.

- o The Fourth Annual Health Festival for Kids Coordinated by PR & Media- on Dec 8.
- o The Kuwait Society of Engineers: Coordinated by PR & Media- on Dec 12.
- o Kuwait National Guard Diabetes Prevention Campaign: Participated at the KNG headquarters on May 24, 25, and 26. Presentations were delivered by Ms. Samar. Eng. Osama and Mr. Moayad manned the FRC booth, performed the step test to assess heart fitness, and answered questions.

Accreditation and Related Aspects:

- The department continues to be actively involved in different accreditation groups for the Accreditation Canada International. The Ambulatory Care Service and Emergency Codes and Disaster Preparedness. Representatives from the department attend the accreditation groups meeting on a regular basis and share the latest updates with the FRC team.
- The FRC continues to deliver high quality services.
- The FRC also has a link in the Infection Control Committee with the aim of adhering to the international IC guidelines and regulations to control the spread of infection and maximizing the cleanliness and hygiene of all FRC facilities. The FRC received positive feedback from the Infection Control committee on doing a better job for following guidelines.
- All policies and procedures were reviewed, revised and updated.

External Collaboration:

Kuwait National Guard (KNG)

- i. Visit to KNG Fitness Center: For needs analysis purposes to determine nature of future collaboration on lifestyle modification for people with diabetes.
- ii. Participated in KNG Diabetes Prevention Campaign at their headquarters on May 24, 25, and 26.
- iii. Ms. Samar delivered the physical Activity lecture as part of the IDF education for KNG health staff module that was organized by the E&T Department.

Ministry of Health (MOH):

The Kuwait Institute for medical specialization (KIMS): The FRC participated in the collaborative training program for third year family medicine residents. 6 doctors attended an orientation at the FRC on March 11. They received an overview of FRC functions, as well as the role of a supervised exercise program in helping people with diabetes manage their blood glucose levels and improve their overall health. The FRC also assisted in the training of the KIMS endocrine/ DM fellows on Feb 10.

Ministry of Information:

Two FRC staff members attended the Milan Expo- Kuwait Pavilion from 19th to 26th September 2015. This event was coordinated through the PR & Media Services Department of DDI. The FRC was involved in improving public awareness of diabetes, educating the pavilion visitors about the role. DDI plays an important role in mitigating the problem of diabetes in Kuwait as well providing advice regarding physical activity and exercise as an important element in preventing and managing diabetes.

1.5 PROFESSIONAL DEVELOPMENTS/IN-SERVICE SESSIONS

In-Services:

- MRSA lecture: This was delivered to FRC staff by the Infection Control Unit on Feb. 15.
- The Emergency color code workshop: This was attended by Mr. Osama and Mr. Moayad on Feb.19.
- Infection Control & Recommendations: Ms. Reina from Infection Control Unit delivered a talk to all FRC staff regarding IC findings and recommendations on March 18.
- Fitness assessment guidelines: This was prepared and delivered by Dennis for all the FRC fitness instructors on March 17.
- Competency assessment on Diabetes and Exercise: Created a new competency assessment for fitness instructors- all were required to take the test on July 27. All passed.
- BLS Training and certification course: Ms. Leaticia completed on Jan. 30, Ms. Maria Bada and Ms. Rhea on 30 March. Mr. Dennis and Ms. Aprile on 21st April. Mr. Andrew and Ms. Victoria on 31st August and Ms. Nannette on 26th Nov.
- Body Mechanics: An In-Service on "Body Mechanics" was delivered to the Nursing Department by the FRC fitness trainer Mr. Dennis Taliping in Sept.
- Orientation to the new DDI Fall Risk Assessment Checklist: This was delivered by the Nursing department on November 4.
- ACLS Review Course: This was completed by Ruby Padaon on Oct. 4 & 5.
- PD session on Osteoarthritis: Mr. Moayad & Mr. Dennis delivered PD session on Osteoarthritis to all trainers on Dec 20.

1.6 PROFESSIONAL DEVELOPMENT

- Functional Rehab Training workshop: Mr. Moayad attended the Functional Rehab Training workshop in Dubai on March 23 and 24.
- American Swimming Academy: This Level 2 certification was completed by Ms. Victoria in June.
- "3rd Amiri Diabetes Conference": This conference was attended by Ruby on May 2.
- Risk Assessment workshop: This was coordination between KFAS and HCP. Ms. Samar and Eng. Osama had attended this workshop on June 17.
- Life Guard Certification Training: This training was completed by Ms. Victoria, Ms. Tatsiana and Ms. Aprile in September and Mr. Dennis, Mr. Moayad and Mr. Yehya completed the training in October.
- The Four Disciplines of Execution Workshop: This workshop was organized by KFAS and was attended by Ms. Samar on September 16.
- European Association for Cardiovascular Prevention & Rehab: Ms. Samar attended the workshop in Italy on 6th & 7th Nov.
- "7 Habits of Highly Effective People" workshop: This workshop was attended by Ms. Samar on November 11.
- Kinesiology Tape Workshop: This workshop as attended by Dennis on Dec 4 & 5.

1.7 SUMMARY

The FRC started 2015 with the goal of increasing numbers of new members joining, as well as membership renewal, improving attendance, increasing revenue, positively impacting our members` health and wellbeing, delivering new programs, contributing to research as well as health awareness activities. FRC has been successful in meeting its goals.

1.8 FUTURE PLANS

1. Focus on children:

- Teen Dasmania: Group exercise classes for children between ages of 10-15 will continue to be offered. KD 30 is charged for a course of 8 classes.
- Encourage members with children between the ages of 11-17 to enroll their children in FRC. These children must be accompanied by an adult family member at all times.
- The summer overweight children intervention program can only be offered in the summer of 2016 if FRC staff number allows. We are currently understaffed which will impact our ability to offer additional programs. Charges will be KD 100 per child.

2. Diabetes Education for diabetic FRC members:

FRC plans to collaborate with Education and Training Department in offering diabetes education to FRC diabetic members experiencing poor blood glucose management.

3. Continue to contribute to and engage in research projects involving exercise and diabetes and/or obesity intervention programs for adults and children.

4. Continue to promote FRC services to the public through social media, radio and TV segments, out-reach and in-house events, and primary care clinic visits.

5. Increase number of new members joining and membership renewals, improve attendance, and positively impact the health and wellbeing of our members.

I hope you find this report satisfactory to meet your expectations. For any further inquiries, please do not hesitate to contact me.

2. Podiatry

2.1 GENERAL DEPARTMENTAL INFORMATION

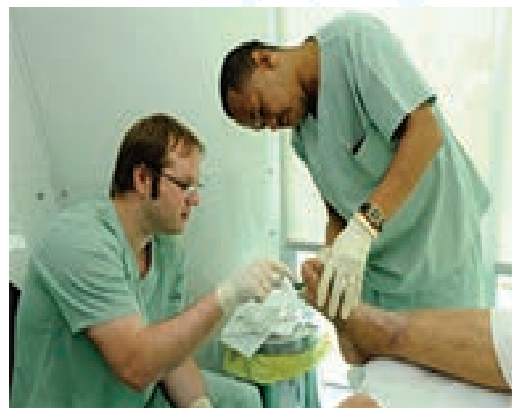
The Podiatry Department is functioning with three full time Podiatrists. The Podiatry Department is complemented with five Registered Nurses, two nurses from MOH, two agency and one full-time DDI employee.

2.2 CLINICAL OUTCOMES

From January 2015 to December 2015, the Podiatry Clinic had 5375 consultations (Graph 1).

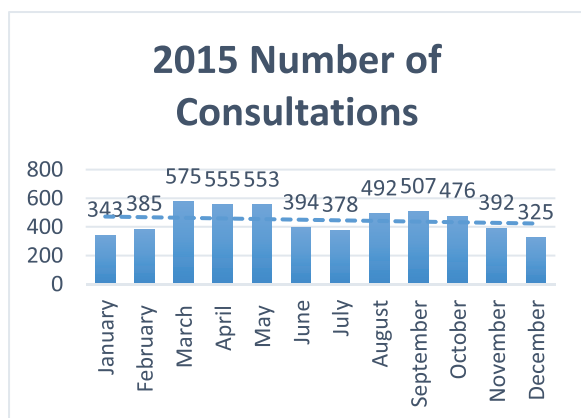
The consultations are broken down as follows; 91.5% were follow-up consultations, 7.2% were new referrals, and 1.3% were walk-in patients. On average there were 448 consultations per month.

The department saw 125 diabetic foot ulcers of which 75% have healed in this period (Graph 2). Which compares favorably with data from Nottingham Hospital who reported a healing rate of 48% at 6 months suggesting ulcer healing rate in the Podiatry clinic is within acceptable limits.

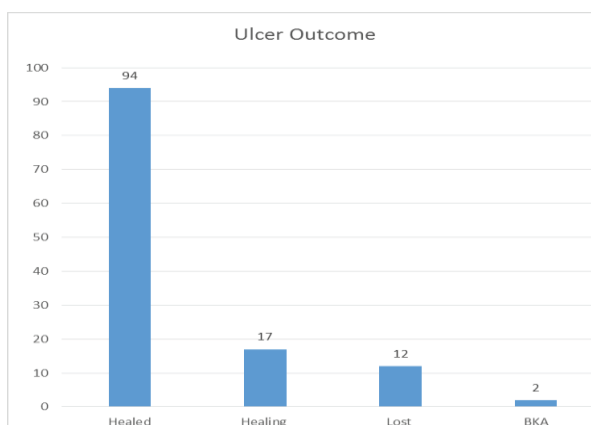


Graph 3 and Table 1 show 62% of patients were assessed as having neuropathic ulcers and 35% neuro-ischaemic ulcers with the remainder purely ischaemic. Although a higher incidence of neuropathy has been reported in the Middle East. 55% of patients presented with an active or a history of osteomyelitis. Previous studies have shown that osteomyelitis is present in 20%-60% of cases, while 48% had a history of either major or minor amputation.

Graph 1: Consultations 2015.



Graph 2: Ulcer Outcomes 2015.



Graph 3: Aetiology of Diabetic Foot Ulcers.

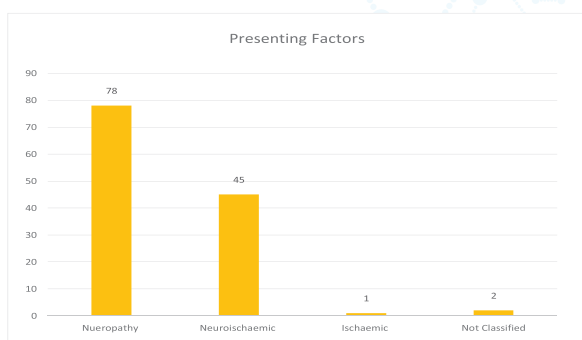


Table 4: Foot Assessment Results.

	N	Percentage
Neuropathy	78	62
Ischaemia	1	1
Neuroischaemic	44	35
Amputation	61	48
Osteomyelitis	71	55

2.3 TRAINING AND EDUCATIONAL ACTIVITIES

1. Deliver lectures on behalf of MSc Kuwait-Scotland Degree program, IDF Training Program for Nurses and IDF Diabetes Education Program for Healthcare Professionals (internal and external professionals).
2. Kuwait National Guard Nurses shadow the Podiatrists as part of training in Diabetic Foot Screening.
3. Physicians/KIMS shadow Podiatrists as part of training in Diabetic Foot Screening.
4. Successful collaboration of MOH Foot Group to encourage timely and appropriate Diabetic Foot Ulcer or other complex Diabetic Foot Syndrome referrals.
5. Diabetic foot care education awareness campaigns and drives.

2.4 RESEARCH PROJECTS

In Development	Submitted	Active
Descriptive Study: The Impact Long Term Diabetic Complications have on patients and their significant others.	Epidemiological study: The Prevalence of Diabetic Foot Complications in Kuwait.	Tibial Artery Intima Media Thickness in T2DM with and without Critical Limb Ischemia comparative study (in collaboration with Radiology).

Assess the evidence in the management of fungal infection in Diabetic Foot Ulcer Infection: a systematic review.	Is bathing or Showering a risk factor for Diabetic Foot Infection?	Prospective evaluations of diabetic foot 3T MRI using IDEAL (in collaboration with Radiology).
A study to determine the association between cigarette smoking and time taken to heal Diabetic Foot Ulcers.		
Comparative Cross Sectional Study: Prevalence of Diabetic Peripheral Neuropathy in sample population of Kuwait compared with global trends.		
Association between Thyroid health and Charcot Neuro-Arthropathy.		
Case Series: Is there a role for Sanuwave in the Treatment of Diabetic Foot Ulcer.		
The relationship between cardiomyopathy and Peripheral Diabetic Neuropathy.		
Anemia, HbA1c and Diabetic Foot Ulcer healing		
Determine the maximum pressure threshold in the development of plantar diabetic foot ulcer using computerized gait analysis system.		

2.5 SUMMARY/FUTURE PLANS

1. Increase the number of patients with complex diabetic foot syndrome by promoting referral criteria into Podiatry clinic from external clinics.
2. Establish care pathway for patients with Diabetic Foot Ulcers and other complex foot syndromes between MOH and DDI podiatry clinics for both treatment and research purposes.
3. Establish working relationship with vascular surgeon, who patients can be referred to for re-vascularisation and major debridements.
4. Develop links with MOH Diabetic Foot clinics.
5. Continue to treat patients with Diabetic Foot diseases.
6. Publish research results in peer reviewed journals.
7. Presenting at Diabetic Foot national and international conferences.
8. Establish links with Kuwait University to collaborate in research proposal to exchange ideas and experience.
9. Establish links with other GCC Podiatry departments to collaborate in research in diabetic foot.
10. Source and secure Gait analysis system (see attached proposal and quote).
11. Motivation for an Orthotist.
12. Continue to promote DDI Podiatry Clinic nationally and internationally.
13. Podiatry initiative to train DDI Nurses in International Foot Screening.
14. To continue giving education and training to other health care professionals through lectures, seminars, workshops, etc.

3. Nutrition

3.1 GENERAL UPDATE ON THE DEPARTMENT

The Nutrition Department strived throughout the year 2015 to continue working on 4 dimensions stated in Dasman Diabetes Institute's (DDI) mission statement.

The dimensions are:

- 1- Training
- 2- Raising nutrition awareness
- 3- Conducting research
- 4- Offering medical nutritional therapy for management of diabetes and its complications

The administrative, operational, clinical, educational, training, and research services are provided by the same manpower of 5 people from 2014;

- Director (PhD Nutrition, TDip Health Education- Honorary Faculty of University of Dundee)
- Senior dietitian/ team leader (MSc. In Diabetes Care in Diabetes and Management – Honorary staff associate)
- 2 dietitians (BSc in nutrition)
- 1 Chef

The Nutrition Department embraced DDI's values, Dedication, Innovation, Collaboration and Excellence to overcome challenges and barriers as well as maintain the high quality of service deserved by our clients.

3.2 OVERVIEW OF THE DEPARTMENT

The department of nutrition was involved with several activities, services, projects, research collaborations and services. On training professionals dimension 299 healthcare professionals benefited from 12 different programs offered by members of the Nutrition Department, along with 2 graduate Kuwaiti students that were supervised and supported by the Nutrition Department, and in addition to being part of planning activities and training staff from the DDI-Kuwait National Guard Collaboration. While on the raising nutrition awareness dimension; 100 healthy eating cooking sessions served around 1200 customers. The department participated in at least 2 local exhibitions and one international exhibition (Expo Milan) catering to nutrition and healthy eating questions of over 1300 individuals. The nutrition department continued to host and visit schools to promote healthy eating among students and teachers with at least 10 participations. The Nutrition Department's work on childhood obesity was aired on CNN which contributed to placing DDI as one of the active institutes in combating obesity in the Middle East. Also 2 department members ran 2 seasons of successful TV series on national Kuwait TV named "Diet Myths" which rated as one of top 3 shows followed on KTV2; a total of 215 participations in TV programs, interviews, and other media and social media were covered by the Nutrition Department.

The research programs are still active and proceeding slowly but surely, namely the AGDAR study and KICK-OFF study, where recruiting children is proving challenging, given school days workload and holidays travels. Also a small pilot study about food labels reading habits is still in progress, while a pilot study on using liquid formula in an alternate day diet from adherence, tolerance and palatability perspective resulted in positive feedback and proof of concept which warrants running a fully designed study using this meal plan pattern looking at clinical and biochemical parameters. As for the clinical services; over 1400 consultations were provided throughout the year for adults and children visiting DDI in one on one face to face manner. While over 300 individuals were seen through several group sessions, research programs and education programs designed for patients.

3.3 DETAILS OF EACH PROJECT

Training professionals: The Nutrition Department offered as stand-alone and/or collaborated with other departments in taking part in delivering one or several sessions for health care professionals through 12 programs throughout the year of 2015. These activities differed in nature and duration; methods and modes of delivery ranged from presentations, participation in conferences, holding out workshops and offering shadowing services for departmental activities serving over 299 trainees. These programs were designed and specially tailored to develop skills and competencies of dietitians, physicians and other healthcare providers and ranged in duration between one day and one month. These activities are: 1) Training Family Medicine Residents (KIMS); where physicians do different rotations with different department in DDI. The physicians attend the department for 3 visits where they are given an overview of the department's role and tasks as well as they get to shadow the dietitians in action. 2) The nutrition department took on a new training program for KIMS residents in Endocrinology and Diabetes, where they shadow the dietitians for one week in addition to attending presentations and discussing current practices applied in nutritional management of diabetes. This year 6 residents benefited from this training course. 3) Training dietitians from different hospitals for a duration of 2 weeks on nutritional management of type 1 and type 2 diabetes for adults and children along with dietary interventions to address related conditions and diseases related to diabetes. This year 9 dietitians from Al Farwaniya and Al Amiri hospitals were trained. 4) Training of 25 nutrition students from Kuwait University (KU) through delivering lectures at KU. 5 & 6) Training around 100 health care professionals enrolled in University of Dundee program in the Modern Diabetes Care Module (two different sets of lectures). 7) Training 4 batches of nurses and dietitians in a program offered by the Education and Training Department applying the International Diabetes Federation curriculum for diabetes educators. 8) Training 2 pharmacy students on dietary management of diabetes and offering shadowing dietitians. 9) Training nurses from KNG. 10) Training a dietitian from KNG. 11) Participating in a Medtronic initiative on insulin pump training for healthcare professionals (the nutrition component of carbohydrate counting).

12) A Dundee program MSc. Candidate, a dietitian from MOH supervised by the Nutrition Department last year, successfully submitted his thesis, passed and earned his MSc. Degree. Also, the nutrition department is supporting a Kuwaiti, PhD student from Reading University conduct her study at DDI named Eat Well Q8.

Raising Nutrition Awareness: The Nutrition Department, through its experimental kitchen manned by our talented chef and a professional dietitian, successfully delivered over 100 cooking sessions of local and international cuisine modified in terms of adapting healthier cooking techniques or replacing some food ingredients with healthier ones. A total of 1200 attendees benefited from these classes which were offered for the public, through in house school or outreach programs. Cooking activities supported research programs which required cooking as an integral part of the research (Agdar and KICK-OFF) or support of carb counting food demos (DAFNE and Dundee). Also, preparation of healthy snacks or food demos which took place in exhibitions and outreach participations such as the "Taste of Kuwait Exhibition", "Open University outreach program" and "Expo Milan 2015". Raising nutrition awareness also was demonstrated through lectures and seminars held in in-house or outreach activities in both governmental and private schools in addition to supporting events held at different health care facilities. The Nutrition Department continues to participate in media initiatives to promote healthy eating or management of different ailments and diseases through different dietary approaches. Participations were spread out throughout the year via local radio shows and programs, national TV channels like KTV1, Al Kout, Al Rai or international Like CNN and Al Hurra. Also the Nutrition Department covered two seasons of a daily show on KTV2 named "Diet Myths", which had high rating as one of the top 3 watched shows which warranted a new season which will be filmed in 2016 as well. Also, the nutrition department held a campaign at Al Zahra Co-op upon their request to help shoppers learn healthy shopping on the holy month of Ramadan. The Annual Girgean event which is highly appreciated and welcome by children with diabetes and their parents was unfortunately cancelled for security and compassion purposes.

Research: Dimension is progressing as three intervention groups have been investigated and will be followed up as per research protocol of the "Agdar Study: The Use of Cooking Classes, Structural Nutrition Education and Goal Setting Intervention to Improve Health and Quality of Life in Overweight and Obese Children and Their Families". A preliminary pilot study/ proof of concept study was held to investigate the palatability and the adherence to an alternate day diet held for three months on healthy adults enrolled for weight management. Results were promising and warrant proceeding with a new design targeting a more specific audience. Communication on collaborating with Dr. Azza Shaltout on KIDDS study was finalized on December 2015. A manuscript titled "Dietary Intake and Glycaemic Control of Children and Adolescents with Type 1 Diabetes: Kuwait's Experience" has been

prepared and is being revised for submission. An invitation as a speaker on “the 6th Global Diabetes Summit and Medicare Expo: November 02-04, 2015 Dubai, UAE” was offered to Mrs. Fatima Ismail, Senior Dietitian and Team Leader.

Clinical: Dietetics services offered 1467 consultations to children and adults with diabetes in one on one consultation, overweight and obese staff members and FRC clients spread out in four clinics. Group sessions covered needs of insulin pump users, teens and adults through the collaboration with FRC on several programs with nutrition component like Be Dasmani, Teen Dasmania, and Dasmanite. Also, several pre Ramadan sessions addressed needs of groups to know how to manage their diabetes in the holy month of Ramadan in the program MADAR. Group nutrition education sessions were provided to overweight, obese children and children with Type 1 diabetes were different nutrition tips, knowledge and skills were introduced to help them manage their conditions through the research studies Agdar and KICK-OFF. A new nutrition template was designed with the help of IT department and KBHR developers to help better document and retrieve clinical information from attendees of our clinics which will commence in 2016 to help better serve our patients. Over 100 food items were photographed and food analysis was performed to help present in an educational booklet about content of carbohydrates and calories in local and commonly consumed foods in Kuwait.

3.4 SUMMARY/FUTURE PLANS

The department managed to achieve its targets and met its key performance indicators set earlier this year on all four key activities. The department wishes to maintain services offered, but may have to cut back on outreach programs to support the institution’s financial and manpower challenges. The department wishes to focus on research activities which will require pulling our limited resources to support the 2 ongoing research projects and 2 proposed researches to be submitted. The department will take every opportunity to report outcomes from other non-research services in publishable formats such as abstracts or share the outcomes in conferences and workshops. The department will try to seek funding for other non-research activities such as training healthcare professionals as the need is growing to meet the nutritional management demands of overweight, obese, pre-diabetes and people with diabetes, as well seek funding through themed cooking classes which address issues of diabetes, obesity and related conditions.

4. Education & Training

4.1 OVERVIEW

Consistently, the Education & Training Department has been providing effective care services and educational programs to the Institute's clients and health care professionals respectively. In 2015, the Department has:



- Delivered individualized One-to-one and Group Diabetes Education Sessions in the Pediatric and Adult Education Clinics to (3365) DDI patients.
- Installed insulin pumps to the total number of (75) patients, (40) in the Pediatrics Unit and (35) in the Adults Unit.
- Delivered 6 IDF Diabetes Education Programs for Healthcare Professionals (HCPs), where the total of 100 nurses participated in the programs.
- Delivered the total of 4 Insulin Pump Therapy & Continuous Glucose Monitoring Program (Basic, Advanced & Carb Counting Workshops) for Healthcare Professionals, where the total of 85 participated in the program.
- Offered clinic shadowing services in the Adult and Pediatric Education Clinics for KIMS Residency Programs' interns from the Family Medicine and Endocrinology & Diabetes, the Kuwait National Guard nurses, and the Farwaniya Hospital Dietitians. Where the total of (61) HCPs participated in the program.
- Supported two (2) "Exploratory Visit for Students from PAAET" by delivering the "Basics of Diabetes" program to a total of 46 students.
- Delivered an "Introduction on Pump Therapy" lecture for the "Nursing School" to a total of 15 students.
- In a step to assist Kuwait National Guard (KNG) in the preparation for the operation of its new Diabetes Center, the Education & Training Department prepared a comprehensive training proposal which comprised of several programs with their delivery schedules for the training of KNG healthcare professionals in an effort to mirror the Institute's clinical care model for Diabetes.
- Partnered with other DDI departments to organize and launch a 3 days full-fledged awareness campaign on diabetes titled "DDI-KNG Screening & Awareness Campaign" for the Kuwait National Guard officers, cadets and forces which were held at the KNG Headquarters. The total of 370 participated in the screening and educational sessions.
- Partnered with Kuwait Diabetes Society (KDS) in the organization and support required to launch the 2nd "Future Diabetes Camp for the Children & Adolescents", where the total of (24) children and adolescents participated in the Camp.



- Increased public health awareness state-wide through the delivery of various health awareness lectures and blood glucose screening events to various ministries, institutes, companies, associations and banks. The total of 3301 individuals from 10 various organizations participated in the events. To name a few:
 - o PAMA
 - o Ministry of Justice
 - o NBK Walkathon
 - o Kuwait Kerala Association
 - o Kuwait University
 - o 6th Kuwait Medica Conference
 - o KNPC Exhibition
 - o Ministry of Information
 - o Awqaf Public Foundation
 - o Fourth Annual Health Festival for Kids at the Mishref Fairground
- Developed the "Student Ambassadors Program", which is aimed at developing the university graduates skills and to allow them to gain real-life experience at DDI. In 2015 the total of 19 students from the Faculty of Health Science were enrolled on the program in the Public Health Research Unit to assist in data collection.

4.2 MAIN ACHIEVEMENTS

The University of Dundee Postgraduate Program in Diabetes Care, Education & Management Update: 294 Students are enrolled on the program in total. Over 1000 student workplace projects and 25 dissertation projects were completed. As of Sunday 31 January, the total number of 93 students has graduated from the UoD postgraduate program, 23 at the Certificate level, 44 at the Diploma level, and 26 at the Master's level.

In-House Activities:

o **Let's Get Healthy Today, Kuwait:** The total of 24 schools participated in the LGHTK program with a total of 1414 students.

o **DISA Program:** The total of six schools participated in the program with a total of 223 students.

o **MEPI Program (Let's Stay Healthy, Kuwait):** The total of six schools participated in the program where 120 students attended the Science of Diabetes lecture delivered by the Education & Training Department educators.



Total number of students served in all in-house activities: 1757 students

Outreach Activities:

o **DOSA Program:** The total of nine schools was visited to deliver a diabetes related lecture, with a total of 751 students.

Total number of students served in all outreach activities: 751 students

5. Clinical Skills Center

5.1 GENERAL UPDATE ON DEPARTMENT

During 2015 the Clinical Skills Center developed new courses and skills training. To reach out to both public and private sectors, during the 12 months period the Clinical Skills Center had trained about one thousand people in various courses offered on daily basis, that ran mornings, afternoons, evening and even sometimes weekend to be available to as many people as possible.

The Clinical Skills Center has expanded its training from medical/dental students and doctors, to reach the public and educate them about the initial and crucial moments in the saving of lives. In 2015 the Clinical Skills Center has trained people in various sectors, a bank, a military cooperation, universities, schools, and various retail companies.

The goal of 2015 was to expand on where we had left off in 2014 to reach as many people in

society as possible to enlighten them about the importance of the First Aid Courses, CPR, BLS, Safe Injection and a lot more. The Clinical Skills Center reached out to people using social media and phone applications to reach people at the comfort of their home. People can browse the Clinical Skills Center website, or reach us out on Social media such as Instagram and Twitter , on the other hand people can call the Clinical Skills Center or send an



email to register and inquire about the courses that are available and being conducted at the CSC. The Clinical Skills Center Internship Program which gives an opportunity to Students to have a hands-on experience of educating and helping others when needed. These interns helped in the growth of students' training that's being conducted at the Clinical Skills Center.

5.2 OVERVIEW OF THE DEPARTMENT'S ACCOMPLISHMENTS IN 2015

- Maintaining American Heart Association accreditation
- Generate AHA semi-annual and annual reports
- KIMS –examination (OSCE)
- KIMS 2nd year residence training program
- Kuwait University student OSCE
- 7th year Student OSCE
- Training of private companies (school, retail companies, banks, Kuwait University staff)
- Training of teachers from Ministry of Education
- Training of Kuwait University staff

- Conducted a BLS instructor course
- Enrolled 7 instructors at the CSC
- Train Nursing staff to become BLS instructors
- Renewal of CME credits from KIMS
- 2015 Internship Program ended with a graduation ceremony at the CSC
- Clinical Skills Center participated at Kuwait University fairs to increase awareness of Dasman, and the CSC
- Maintained policies and procedures for AHA accreditation
- All Dasman nursing staff trained at the CSC
- The Clinical Skills Center provided support and assistance to the following:
 - o Dundee Courses
 - o Multiple Scleroses – Dr. Raed Al-Logane

5.3 DETAILS OF EACH PROJECT

- KIMS – Kuwaiti Board conducted its examination at Dasman – CSC

For the following boards:

- Physical Medicine – September 1st, 2nd & 3rd, 2015
 - Ophthalmology Oral Exam – September 6th & 7th, 2015
 - Ophthalmology Final Exam – September 8th & 9th, 2015
 - Dermatology Oral Exam – September 13th & 14th, 2015
 - Dermatology Final Exam – September 15th & 16th, 2015
 - Family Medicine – October 19th, 20th & 21st, 2015
- Kuwait University OSCE – physical assessment in variable dates in preparation in their clinical skills examination from the university.
 - KIMS courses were conducted weekly (Every Wednesday) over the duration of six months in preparation for the exams.
 - In 2015 the Clinical Skills Center has conducted CPR with AED courses for the Ministry of Education.
 - Renewal of CME credits was done in December for all Clinical Skills Center courses that are listed below.

Courses List
ACLS
Arterial Line
BLS
Central Line
ECG
ECG with Pharmacology
First Aid
IV
NGT
Phlebotomy

Physical assessment
Safe Injection
Suturing
Airway Management
Scrubbing Gowning and Gloving
Vital Signs
Urinary Catheterization
Advanced First Aid
ACLS Preparation Course

- Marketing of CSC courses.
- The Clinical Skills Center regularly views and maintains its policies and procedures for American Heart Association and Society for Simulation in Health Care.

Policies are the following:

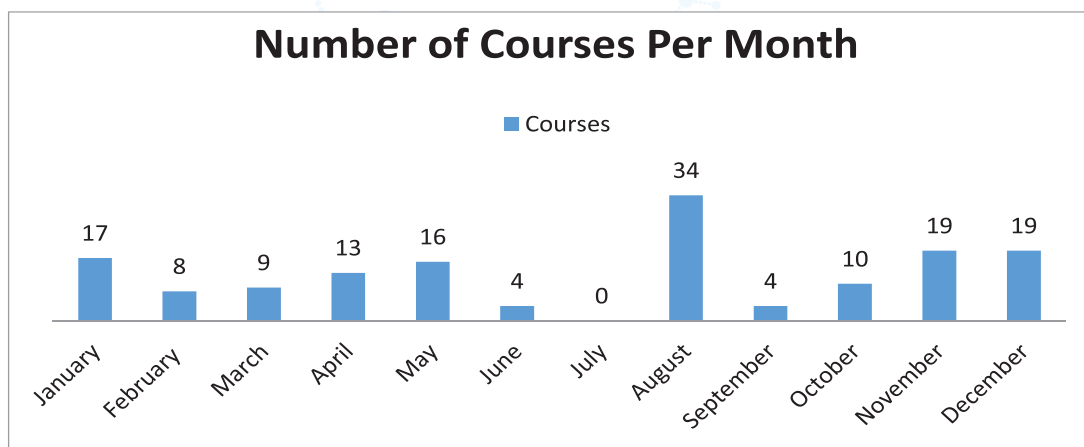
- o Mandatory training policy
- o Dispute resolution policy
- o Card issuance policy
- o Remediation policy
- o Late comers to courses policy
- o Guide lines on how to replace lost training card and certificate
- o Needs sticks / sharp injure prevention and management
- o AHA quality improvement policy
- o Work place communication policy
- o Training equipment disinfection policy
- o AHA instructors TC transfer request

Month	AHA Courses	CSC Skills Courses	Total
January	9	8	17
February	4	4	8
March	7	2	9
April	7	6	13
May	10	6	16
June	2	2	4
July	0	0	0
August	19	15	34
September	4	0	4
October	3	7	10
November	1	18	19
December	11	8	19
Total	77	76	153

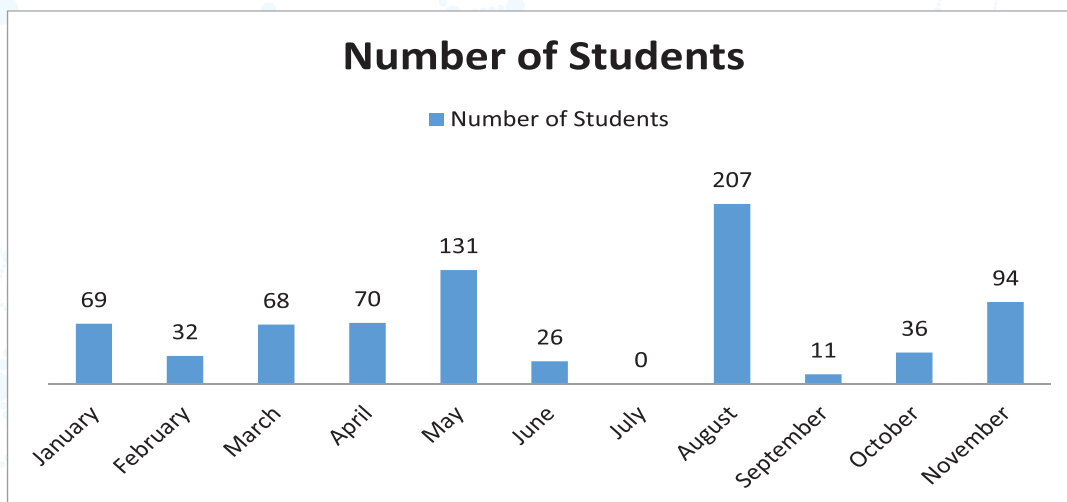
- The Clinical Skills Center reached out to the public, by training various sectors in the society ranging from public sector to private sector which helped in increase of awareness between society and family members. The Clinical Skills Center did reach to the public in different ways, and with success it was able to train over a thousand people from different backgrounds, from housewives to CEOs and Managers in both public and private sectors. The graph below shows the number of Courses conducted at the Clinical Skills Center in 2015 from January up to December.

* In the month of June and July, the Clinical Skills Center did not have any instructors to conduct courses.

** In September and October the Clinical Skills Center was booked for Dundee University Training and KIMS OSCE exams.



- Number of Trainees at the Clinical Skills Center in 2015.



- In 2015 the Clinical Skills Center started the third internship program which chose five interns in the 6th and 7th year in the Faculty of Medicine. These students were given an opportunity to experience the educational and training part of their studies. They were given an opportunity to assist and conduct courses for their fellow school mates. By the end of the internship, the best, most active, and well informed interns were chosen to become BLS and First Aid instructors, and a graduation ceremony was held at the CSC. The Clinical Skills Center hosted the instructor course in December.

6. Nursing

Dear Colleagues

The Annual report is built on the accomplishments done by nursing staff. This annual report will highlight the key initiatives, activities and achievements by nurses across all units and specialties during the year 2015.

Nursing is a profession that combines science and art to care for patients and their families. Our patient and family care system focuses on collaboration with our physicians and colleagues, technology, resources, safety, and quality outcomes.

We have specified our goal in 2015 "To provide safe, effective, efficient, quality nursing care to patients of DDI through competent and accountable staff focusing on a holistic patient care approach within the integrated model of care at DDI and actively participate and contribute in educational, research and health promotion activities."

Our Objectives were chosen to:

1. Provide safe high quality patient care
2. Enforce positive work environment
3. Enhance professional development and engagement in research endeavors
4. Augment productivity through efficient utilization of resources
5. Abridge system processes

To achieve our objectives many initiatives were put in place during the year 2015 and will be addressed through this document.

I am often asked, "Where are we at our accreditation status?" My personal thoughts that I share with all nurses about this matter is that being accredited is not about the title; it is about being an organization that puts clinical excellence, quality, and evidence-based practices at the forefront of everything we do. This requires commitment, offers a long term framework for quality-improvement efforts, and is a means for engaging and motivating nurses at all levels.

We have many accomplishments to be proud of over this past year, and much more work to do in the coming year. We believe that

"Success is not final, failure is not fatal: it is the courage to continue that counts."

Winston Churchill

High Quality Safe Care

6.1 NURSING QUALITY PROGRAM

The program was established and facilitated by the senior staff nurse in the department. The goals of the program were set to:

- √ Learn & understand the philosophy of Total Quality Management and accordingly study areas for improvement and implement actions using different approaches.
- √ To structure a system of systematical assessment, monitoring and recommending interventions to maintain the standards of care.

6.2 OBJECTIVES

1. Educate Nurses on quality management concepts
2. Implement assessment techniques and improvements as needed
3. Adopt the PDCA as a process for performance Improvement Plans
4. Assist nurses to develop action plans & follow up implementations
5. Train nurses and assist in designing story boards & DASH boards
6. Communicate results
7. Develop quality databases to support decision making initiatives
8. Use team dynamics & approaches to improve processes
9. Manage cost through performance Improvement projects

6.3 ACHIEVEMENTS

- ❖ Audits were specified, data collected monthly & reported quarterly. The concern was to conform to standards & basic requirements.
 - o Assessment parameters: to ensure all patients will have checked & recorded before each clinic visit % compliance 98.38%
 - o Pain as the fifth vital sign introduced and documented 98.23% compliance
 - o Quality control for Point of Care Testing (POCT) and process in coordination with Lab
 - o Policies and procedures: Revised and devised 54 evidence based policies 3 of these are institution wide. Staff were trained on development of policies and involved as per specialty area. Compliance with dissemination of policies = 81.2%
 - o Compliance with education: monitored through database specifying mandatory versus continuing education. Policy devised. compliance 73.74%
 - o Competency Based training: Competency Based Orientation checklists developed for each specialty (total 10) and for each procedure a competency checklist was devised (48) . Cross training of staff is done utilizing the competency program

❖ Staff Competency: based on a SWOT analysis the basic functions and assessment parameters were missing. To ensure quality practice competency validation is done for:

- o Vital signs
- o Ht.-Wt.-BMI
- o Pain ass.
- o Visual acuity screening
- o Body composition
- o ECG
- o Insulin pump downloading
- o Wound Care & dressing
- o IV insertion

❖ Staff awareness related to quality and safety through educational sessions/workshops.

❖ Implementation of Fall Prevention program as institutional wide initiative, developed tools and patient education leaflets.



❖ Accreditation: Core accreditation team of staff nurses was created to collect evidences for the standards to ensure involvement, create awareness & ownership to process. Sessions (6) disseminated. Surveys conducted and tip of the day.

❖ Material Safety Data Sheets “MSDS” files created for all areas and updated with chemical’s information in coordination with pharmacy and purchasing. Awareness sessions were held for staff.

❖ Staff Safety: Workshop conducted to elaborate on essential health safety issues. A brochure circulated summarizing basic & essential information as a quick reference.



1st rank : Mohammad Jalali

2nd Rank : Crispy Cabuenas

3rd: Reina Cabana

Consolation: Shintu Yohannan

6.4 POSITIVE WORK ENVIRONMENT

❖ Enhance Staff Satisfaction: A base line survey was conducted utilizing a valid tool "Spector; Job Satisfaction Survey SSJ".

- o The survey consisted of 20 questions addressing 9 domains (Pay - Promotion - Supervision - Benefits - Rewards - Operating Conditions - Coworkers - Nature of Work and Communication). Surveys were distributed to staff and responses were anonymous.
- o General satisfaction score was 68.65%. Lowest satisfaction was with: Pay-benefits-reward and communication.

o Subjective comments by staff:

- Provide annual salary raise or "Pay per performance"
- Decrease shift hours
- Sponsor training regardless of status (MOH /DDI)
- Allocate over time
- Develop a fair appraisal system
- Review salary scale

o Nursing management addressed the areas and submitted recommendation to higher administration. The following was submitted pending approval:

- Recommended new salary scale, recruitment criteria
- Submitted recommendation for salary adjustments and working hours
- Appraisal: structured and all staff were involved
- Raise the concern regarding MOH staff benefits to HR to follow up
- Established clear communication lines in the department
- More staff were sent for training (6). 1 staff sponsored fully, others partially by external sponsorship. 4 out of these are MOH

❖ **Reward Recognition:**

- o Four staff members were recognized for their special contribution in patient care (best catch for a near miss- Patient advocate – 1st performance improvement). recognition was held during staff meetings.
- o Departmental awards: decided to provide 3 awards for the best portfolio based on set criteria, however budget restrictions did not allow us to implement the process.

❖ **Communication:**

- Established open door policy.
- Established committees to involve staff, encourage contribution and develop abilities as part of succession planning.
- Created the Nursing Team Leader group of 10 senior staff. Meetings are held bi-monthly to discuss departmental issues and set actions.
- Held monthly staff meeting to address and elaborate on nursing activities.
- Assigned area leaders to facilitate communication and develop abilities.
- Meetings with specialties are scheduled on need basis.
- Individual meetings held to set IPPs for each staff.
- Staff gatherings done in occasions as much as feasible.
- Gifts distributed for involvement in departmental activities.

❖ **Enhance Patient Satisfaction:**

- o Conducted random survey on patient satisfaction with nursing care.
- o Included an action item on staff meeting agenda on monthly basis to elaborate on success stories.
- o Ordered complaint boxes and 1 installed in ground floor.
- o Captured incidents related to patient care and elaborated to close the gap.
- o Developed patient education booklets – Ophthalmology related to procedures process. Patient feedback is captured and reported.
- o Installed a hotline for call back on reported /communication regarding lab panic values. The process structured through the policy in coordination with lab.

6.5 PROFESSIONAL DEVELOPMENT

❖ In-service committee established to oversee and plan educational activities.

The following was conducted during 2015:

- o 12 committee meetings
 - o Issued 12 monthly educational calendars & delivered 35 educational sessions (appendix)
 - o Submitted 3 quarterly reports
 - o Conducted 1 nursing orientation for 5 staff
 - o Conducted 1 preceptorship workshop and implemented process
 - o Finalized policy related to Professional Development & mandatory education
 - o Integrated multidisciplinary team speakers in the educational offerings
- ❖ **Learning Needs Assessment:** conducted through “Basic Knowledge Assessment of Diabetes”. Domains included: physiology & pathophysiology, signs & symptoms, medication, and diagnostic procedures.

❖ Educational database: developed and centralized. Process of capturing attendance, session evaluation and speaker recognition established.

❖ **Instituted Competency Based Practice:**

- o Finalized the “Competency Based Orientation Check lists” for the 10 clinical areas
- o Developed 48 competencies related to policy/procedure
- o Established cross training utilizing competency verification and validation

❖ **International / national conferences: staff attending shared their experience with others.**

- o Multiple Sclerosis, Turkey: 2 staff members
- o DF Con Diabetic Foot Global Conference: 1 staff member
- o 20th Health Sciences Center Poster Conference, KU: 1 staff member
- o 5th Emirates Diabetes & Endocrine Congress 2015 (EDEC 2015): 1 staff member
- o New Treatment in Multiple Sclerosis, Kuwait: 5 staff members
- o Complications & Excellence of Treatment, Kuwait, 3rd Amiri Diabetes Conference 2015: 7 staff members
- o 51st EASD Annual Meeting 2015, European Association for the Study of Diabetes, Sweden: 2 staff members
- o First Kuwait Healthcare Safety Conference: 2 staff members

❖ **Research Engagement:**

- o Developed policy on “Nurses Involvement in Research”
- o Captured research involvement in database to reflect on staff utilization (appendix)
- o 24 staff passed the “NIH” online course
- o Four staff attended & certified “Good Clinical Practice” research through workshop
- o One poster accepted in international conference
- o Four staff officially assigned as “Research Coordinators”

6.6 ABRIDGE SYSTEM PROCESS

➤ **Consumables and Supplies:**

- o Clinic standard utilization: Store Request for supplies and consumables initiated to document utilization
- o Database for clinic utilization established to estimate average assumption and establish yield level
- o All store items are requested once/week utilizing a standard format, verified and countersigned
- o Purchase requests are checked against last request to establish a pattern



➤ **Outreach/Community Involvement: Activities performed captured in database:**

- o Outreach: 35 activities screening 19,780 patients. The anticipated cost is 6,930 KD considering blood glucose to cost 0.300 KD/test and the staff hour is 2.500 KD.

2015 Outreach Activities

Month	No. of activities	No. of patients	Cost (KD)	No. of staff	Total Nursing Hrs	Nursing Cost (KD)	Total Cost (KD)
Jan.	5	1392	417.6	16	86	215	632.6
Feb	2	390	117	4	14.3	35.75	152.75
Mar	9	12923	3876.9	22	116.6	291.5	4168.4
Apr	4	539	161.7	7	22.5	56.25	217.95
May	4	912	273.6	12	46.5	116.25	389.85
Jun	0	0	0	0	0	0	0
Jul	0	0	0	0	0	0	0
Aug	0	0	0	0	0	0	0
Sep	0	0	0	0	0	0	0
Oct	2	1385	415.5	4	20.5	51.25	466.75
Nov	7	2137	641.1	15	75	187.5	828.6
Dec	2	102	30.6	3	17	42.5	73.1
Total	35	19780	5934	83	398.4	996	6930

Recommendations: Outreach activities need to be restructured to achieve set outcomes. With the current situation we are not studying the impact of these activities other than creating awareness which can be planned in a more efficient manner.

🔗 Central Sterile Supply:

o Supplies Integrity: monthly un-announced round is conducted to ensure compliance with required standards. Based on the improvement plan set in 2014. Results are good and areas for improvement are addressed as observed.

o Instrument Recall: conducted twice this year to ensure the process is disseminated with no gaps. Non-compliance observed in Podiatry area where an action plan was set and recall of instruments was conducted for two consecutive months, policy disseminated, and KBHR audits is maintained for proper documentation. Improvement is observed, staff are aware and process is being implemented as per policy. Next year it will be planned on quarterly basis.

o Monthly reports submitted regarding the following:

- Washing disinfectant log sheet
- Daily steam sterilizer process log sheet
- Foil-soil and sealing machine test-report
- Steam sterilizer preventive maintenance
- Washing disinfectant preventive maintenance
- Monthly disposable items statistics
- Monthly instruments statistics
- Humidity & room temperature log Sheet
- Cleaning schedule
- Water testing
- CSSD checklist
- Equipment usage log sheet

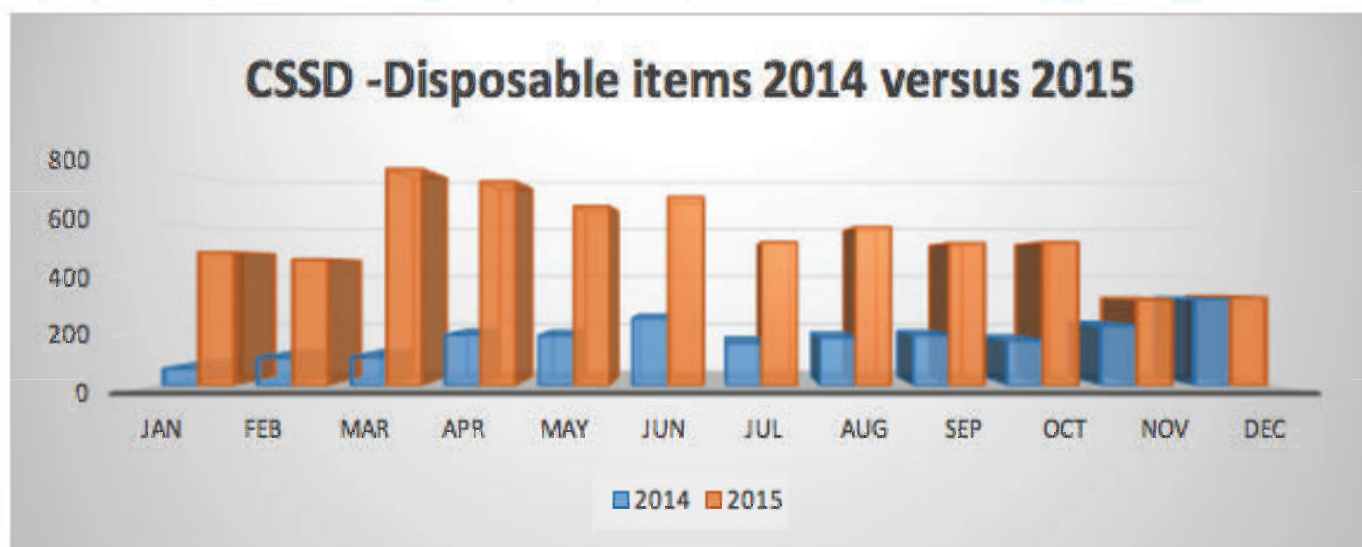
Table: Monthly statistics of sterile disposable item use - 2015

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
PODIATRY	496	538	662	734	623	616	575	770	648	615	546	404	7227
DENTAL	34	64	165	119	129	100	41	55	38	79	73	62	959
ENT	39	68	78	87	61	58	36	57	43	34	77	78	716
FRC	0	4	7	0	7	7	0	4	0	5	7	10	51
LAB	107	0	226	82	80	76	110	63	0	89	4	0	837
ANIMAL F.	85	53	93	29	34	11	25	29	13	41	23	0	436
DIC	0	0	0	4	0	0	0	0	0	0	0	11	15
TOTAL	761	727	1231	1055	934	868	787	978	742	863	730	565	10241

- o Disposable Sterile Supplies: increased demand was observed last year relative to 2014 basically due to the podiatry research

Table: Consumption of disposable sterile items in 2015 versus 2014

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2014	63	103	105	188	185	249	157	177	185	165	220	318	2115
2015	488	462	795	749	658	692	526	581	522	525	317	325	6640



The high demand was managed by:

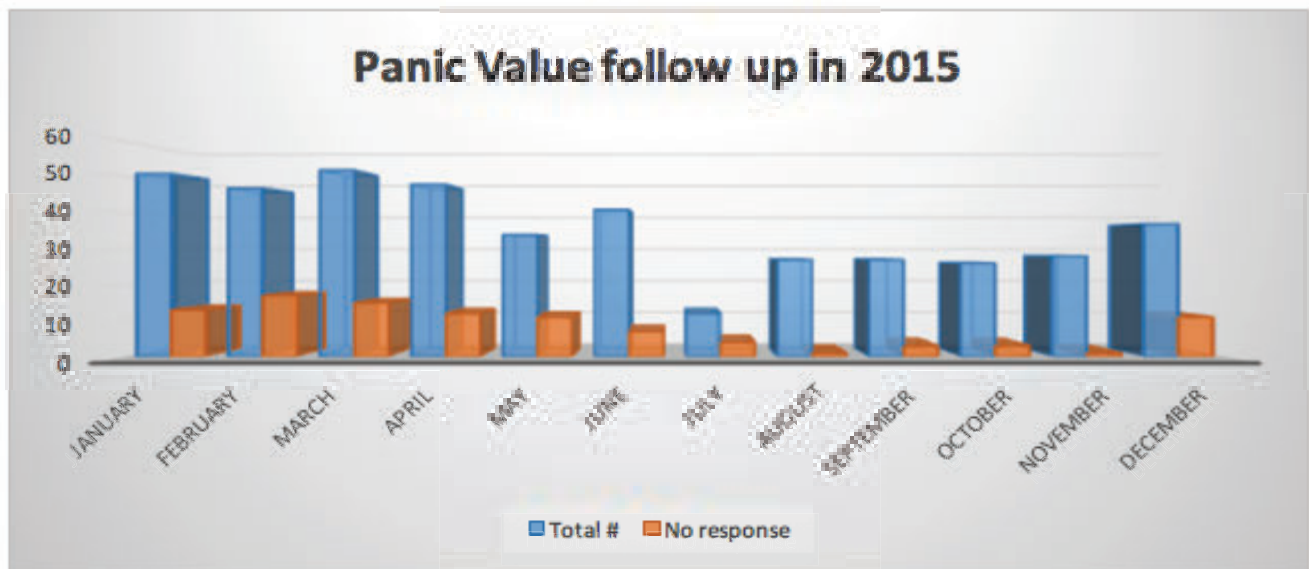
- Orienting 1 staff in the area to cover leaves & emergencies
 - Developing Competency Based Orientation check lists for CSSD
 - Assigning staff on rotational basis to assist CSSD in high load during their low peak clinic hours
 - Developing check lists for set content
- o Policies/procedures/competencies:
- Revised /reviewed 9 policies & 9 competencies
 - Developed 4 new competencies
 - Pending 6 policies for finalization
- o Accreditation: Staff awareness was insured through surveys and clinical rounds. One in-service session presented to staff on “event related sterility”. Tips of the day circulated. All standards were met including:
- Positive/negative room pressure
 - Water testing
 - Environmental conditions
 - Evidences and documentation
- o Problems encountered:
- Inadequate assessment method used to verify room +/- ve pressure: Biomedical & general services contacted to adjust and new procedure followed by the company.
 - High temperature / Humidity in CSSD: incident reports sent after daily checking. Many measures implemented to be validated during high humidity season.
 - Other technical failures were addressed promptly.
- **Biomedical Engineering collaboration:**
- o Process for preventive maintenance record established
 - o Service request for maintenance introduced to capture requests and follow up specially after few incidents of company rep. are attending to clinics without notice or nurses are asked to escort the technicians
 - o Inventory: Equipment lists /clinic not generated as promised
 - o MOH inventory: completed on Dec. 2015 – complete
 - o Cost savings:
 - 3 hydraulic beds were not working since 2 years (Podiatry & 1 Cardiology). The biomedical reported that the maintaining company closed and require replacement with total cost of ~6000 KD. Efforts continued till we identified a company to maintain and repair for a cost of 450 KD for the 3 beds.
 - Body composition faulty recording of date & time: the company requested 600 KD to update the software. Insisted that it is not a software however a feature in the application. Biomedical in coordination with nursing fixed the faulty feature with no cost.

↗ Coordination of Care with Laboratory:

o Panic value follow up:

- One staff assigned to follow up the lab. Panic values.
- The nurse will check the medical record to identify plan of management, medication, last & next visit schedule.
- The nurse will inform the treating physician by email, message and phone call if needed to provide directives.
- The nurse contacts the patient to guide for steps to follow.
- All panic values are logged in KBHR and reported monthly with physician response.

Month	Total #	Dr. did not respond	Referred to hosp./specialist	Reschedule appointment	Medication modification	Repeat tests	Other
January	51	13	8	8	0	1	
February	47	17	2	3	0	1	
March	52	15	4	3	3	1	
April	48	12	4	7	1	4	
May	34	11	0	4	0	2	
June	41	7	4	4	0	1	Diet mod.
July	12	4	0	0	0	10	
August	27	1	0	9	0	0	
September	27	3	0	2	0	0	
October	26	3	0	1	0	0	
November	28	1	1	0	2	0	
December	37	11	4	3	4	2	
Total	430	98	27	44	10	22	
		23%	6%	10%	2%	5%	



o Issues /difficulties faced with the lab processes:

1. Many of the doctors don't know the policy on "Panic Values" issued by the Lab. Accordingly either they express being not happy for alerting them or they don't respond. We do recommend circulating the policy to all and highlighting their responsibility in that direction.

2. Lab reports through KBHR: Modification to current template of lab results forwarded to IT and shared with Lab. The application in KBHR is not friendly, can be clearly viewed or tracked, ranges are different between KBHR and LIS, comments on the system do not appear in KBHR and accordingly not seen by Lab tech. Many rejected tests take place with no notification. All problems were communicated to IT /KBHR and lab.

🔗 Laundry:

- o Utilization monitored on monthly basis for cost of laundry as per below table. The laundry utilization is for all staff in DDI and not for nursing alone.

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
2014.0	Qt	2618.	2470.	2848.	3742.	3692.	3404.	2208.0	3100.0	3916.0	2898.0	3494.0	3406.0
	Cost	837.0	686.0	783.0	998.0	966.0	936.8	682.7	829.4	1059.4	870.8	1006.8	962.6
2015.0	Qt.	3161.0	3246.0	4054.0	4001.0	3569.0	2885.0	3502.0	3113.0	3082.0	3371.0	3907.0	3827.0
	Cost	985.5	972.6	1219.1	1203.0	1047.8	947.9	994.0	901.2	897.0	958.0	1120.0	1134.0

Laundry Expenses		Total	Average/m
2014	Quantity	37796.0	3149.7
	Cost	10618.3	884.9
2015	Quantity	41718.0	3476.5
	Cost	12380.0	1031.7

- o **Unsatisfactory Laundry service by Brooks company:** Many incidents (19) were reported regarding the quality of service provided by the current laundry (Brooks). Many coats and suits were received with un-removable stains that did not exist when sending these out. In addition discoloration was noted. Many meetings and alerts were discussed with the company with no outcomes. Finally requesting to withhold the invoices and deducting the cost of stained coats was initiated as a measure of penalty for loss property.

- o A bid of 2 other companies were decided on. The issue was raised to the IPAC requesting field visit to other companies to ensure compliance with infection control standards. Price comparison done, testing of service done. A study submitted to Administration and procurement department with recommendation requesting to cancel current contract with Brooks and initiating a new contract. Pending administrative decision.

6.7 AUGMENT PRODUCTIVITY

Staffing Overview 2015:

- 🔗 Outsource staff: decreased to 8 from 12 staff. Assigned to work 6 hours/week. New contract as of April 2015 till end of March 2016. As of March 2016 the outsourced staff will be transferred under DDI as full timers.

- 🔗 Five new staff were recruited as DDI-FT. 1 resigned during probationary period.

☞ 1 staff (Diagnostic Imaging Center) resigned in Nov. 2015.

☞ Leaves:

- o Sick Leaves = 167 days
- o Annual Leaves = 1177 days
- o Maternity Leaves = 4 staff = 275 days

☞ Staff Movement:

	DDI	MOH	O.S	Total Nurses	Tech	Sec	
2013	19	8	16	43	2	1	
2014	18	7	13	38	2	1	
2015	20	7	8	35	2	1	4 recruited Sept. 1 st - 2 resigned

☞ Clinic Workload:

- o 2 pediatric clinics started: 1 is research
- o IONo4 research: expanded 2 days/week
- o Internal medicine research: 1
- o Genetics research: 1
- o Dr. Al Attar: 1 new research
- o Dr. Nadia Zghoul: 1 new research
- o Podiatry research
- o Average of 18 extra clinics/month is scheduled

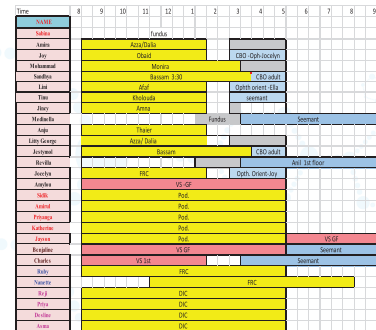


Figure staff time utilization

☞ Staff Utilization: in spite of additional clinics with less staff number the workload was managed through staff rotation, cross training and reallocation with no additional financial cost or overtime.

☞ Enhancing Staff Productivity:

- o Monitoring workflow to ensure adequate utilization of resources as per staff utilization figure.
- o Utilizing low peak hours for cross training /orientation to other areas/competency validation...etc.
- o Schedule educational offerings during low peak clinic hours.
- o Covering extended clinics and grant time back in free schedule slots instead of overtime.
- o Assign projects to be conducted during free time.
- o Schedule /assign audits during free staff times.
- o Scheduling the outsource nurses for 8 extra hours/week to make up for the contract terms thus utilizing the 8 staff as 9.5 FTE.
- o Covering busy areas during peak hours with trained staff rather allocating full time staff to those areas:
 - FRC during swimming pool activities & clinic
 - CSSD during peak supply demand
 - Podiatry increased walk-in patient for research

- Ophthalmology: fundus screening & walk-in patients
- Ambulatory Blood Pressure monitoring
- o Time & motion studies conducted in Podiatry resulted in designing rotational patient assignment to handle patient load.
- o Monitor outreach activities and report monthly supply utilization.
- o Training staff in infection control – quality – policy development – environmental rounds to make sure of utilizing their free time in departmental activities and at the same time develop their abilities and skills.

☞ Utilization of Supplies & Consumables:

- o Developed unit store request & monitor utilization.
- o Assign staff monthly for store management.
- o Request validation for purchase request & justification of demand based on request history.
- o Established unit consumption database.

☞ Financial Sustainability:

- o Rotated near expiry items to high utilization areas.
- o Ensure long expiry dates for requested items.
- o Managed to fix machineries with minimal cost saving on the need to purchase new ones (6000 KD for hydraulic beds & 600 KD for body composition).
- o In-house printing of Fall brochure & FRAC which save 80 KD/1000 copies.

7. Diagnostic Imaging Center

7.1 OVERVIEW

The year 2015 was full operational year with the Diagnostic Imaging Department functioning at its level best with various constructive activities which were launched and completed in order to consolidate the work and measure the output of DIC.

7.2 ACCOMPLISHMENTS

a. DIC Orientation Policy

Diagnostic Imaging Center (DIC) recognizes the importance of new employee orientation as a means of fostering a positive first impression and establishing employee loyalty and retention. To serve this purpose DIC Orientation policy was drafted in September 2015.

b. Implementation of New Policies:

Following policies was drafted and implemented in 2015:

- Fall prevention
- Care giver
- Policy for reporting the urgent cases and communication of results
- Record of Unwarranted Radiological Examinations
- Substitute decision maker policy

c. DIC Work Plan

The detailed work plan was in place which was measured objectively with key performance indicators. Each quarter the data pertaining to work plan was collected and analyzed for annual review. The results obtained were submitted to Healthcare and Planning team. (as per instructions)

The feedback of the annual review states that the work plan of DIC is an exemplary work and signifies great team work.

d. Accreditation Canada International (ACI)

There has been tremendous movement since the last accreditation.

Two significant meetings were conducted in third and fourth quarter of 2015 which show an overall result of 99.7% and 99.9% compliance respectively with regards to achieving ACI standards towards Diamond level of accreditation.

Dasman Diabetes Institute achieved Platinum level Accreditation in 2015. Diagnostic Imaging Centre achieved the highest score in Patient Safety standards.

e. Reception Training Module

Reception training module was revised & updated in 2015 (original draft & implementation was done in 2014).

f. Quality Assurance Audit

A specified audit named "Quality Assurance Audit" was done by Ms. Alyaa Almaraghi, Jency Varghese, Faiza Muhammad & Ally Payot. Four key areas were selected for audit representing important functional elements of DIC which are as follows:

- Fall risk assessment
- Multi-disciplinary notes completion
- MRI safety
- Repeat reject analysis (x-ray)

It was submitted to the Director DIC and later presented to the DIC staff in a meeting. The result showed overall a well-managed Quality control programme in DIC.

g. Research Projects

Two DIC internal research projects were effectively being conducted by the radiologists and staff of DIC which are as follows:

- Tibial intima media thickness in Type 2 Diabetes
- Evaluation of Diabetic Foot with 3T MRI using IDEAL

DIC is actively involved in the following collaborative researches:

- Kuwait Well Being Project (RA 2010-001)
- Open-Label multicenter, multi-dose study of the effect of BG00012 on MRI lesion and Pharmacokinetics in Pediatric Subject with Relapsing-Remitting Multiple Sclerosis Aged 10 to 17 Years. (RA 2015-009)

Collaboration with external institutions and as well as internal DDI researches will be a priority for providing imaging based research at DIC.

- Comparison of Laboratory Changes, Food intake and metabolic Profile in patients with obesity and Type 2 Diabetes Mellitus: Before, during and after taking Aphaoline Brake "A Pilot Study". (RA 2014-019)



h. Equipment

A new 1.5T MRI was installed in 2015 and is being used for clinical and research work.

i. Clinical Radiology

The following table shows the number of studies performed per modality during 2015:

MODALITY	2015
MRI	1247
CT	101
GENERAL XRAY	480
BMD	356
Ultrasound	445
Parkflo	165

j. Conferences, Training Programs & Academic Meetings

The following conferences and workshops were attended by DIC staff in 2015:

1. Dr. Abdelmohsen Bennakhi attended RSNA, ECR Radiology Conference.
2. Dr. Anant Mashankar attended "Introduction to Clinical Trails & Clinical Trial Practice", on-site training "Optima MR450w GEM" and recertification of Advance Cardiac Life Support Radiation Protection Course was attended by Dr. Anant Mashankar & Jensy Varghese.
3. Recertification of Advance Cardiac Life Support (ACLS) by all DIC nursing staff.

k. Others

Various meetings namely Administration meetings, Quality Assurance & Safety and Journal Club were conducted in DIC as per the existing policy and standards.

Academic presentations were given by radiologists, technologists as well as nursing staff to enhance the professional standards.

8. Pharmacy

The pharmacy unit is responsible and accountable for everything related to medications. The unit constantly offers help and support for other healthcare professionals and scientists at DDI in order to deliver optimum practices and best services. The services range from dispensing prescriptions till counseling and education through clinics and consultation room. The unit also has a role in education, public awareness, and research. The unit worked to organize the workflow, developed new services, achieved the tasks required, became more involved in research, and met the standards required by accreditation Canada. The pharmacy team members gave their best to exceed in DDI services for optimum outcome and patient satisfaction.

In the past year, the pharmacy unit developed four workgroups to be responsible for four major tasks in addition to the daily pharmacy duties such as dispensing. The four tasks were Clinics, Compounding, Education and Inventory. The following pharmacy achievements are the results of these four tasks:

8.1 CLINICS

- The pharmacotherapy clinic conduct comprehensive medications review for DDI patients (ex. adherence assessment, counselling, medication effectiveness and safety evaluation, and drug-drug interaction analysis).
- All DDI patients are reconciled on their medications through a systematic medications reconciliation process prior patient visit to the diabetologist.
- The pharmacy unit finalized the design and process of the new medications services and will be advertised for and implemented early 2016.
- According to KBHR, the pharmacotherapy statistics for 2015 are summarized below:

Category	Number
Number of checked-in appointments	431
Number of DNK appointments	318
Number of new appointments	235
Number of follow-up appointments	196
Number of pharmacotherapy notes	752
Number of medication reconciliation notes	273

8.2 COMPOUNDING

- New topical formulations were added to DDI medications list due to the different patients' needs.
- Inventory management of chemicals was established through documentation and monitoring of monthly chemicals consumption and checking expiry dates.
- Compounding products as well as safety data sheet manuals were developed as references.

8.3 EDUCATION

- The pharmacy unit has been involved in training pharmacy students (ex. 4th year), pharmacists (ex. KNG), and other healthcare professionals (ex. nursing staff on a monthly basis).
- The pharmacy team enrolled in different workshops and conferences as part of the continuous education program. Such workshops were drug information services and diabetes conversation maps workshops. Also, every two weeks, one of the team member chooses a medical topic to be discussed with the rest of the team as part of continuously educating team members.
- The pharmacy unit engaged in a lot of outreach programs and campaigns to spread diabetes management awareness. They were conducted in different sites such as KNG, Kuwait University, and in different malls across Kuwait.
- The pharmacy team continues to spread patient awareness when it comes to diabetes and medications via medications leaflets and brochures as well as the media and social networks such as TV, radio, and Instagram.

8.4 INVENTORY

- The pharmacy and its store were rearranged and reorganized based on sound alike, look alike, and expiry dates.
- A system was created to monitor the inventory turnover and control medications stock levels.
- Another system was created to monitor the expiry dates of medications, with a white board hanged in the pharmacy and visible to all team members that shows the medications expiry date within a whole year.
- The contents of the emergency crash carts has been reviewed.
- A more structural clinics orders process has been implemented.
- The drug formulary has been updated, and modified to allow the search for medicines on the basis of generic names, and therapeutic groups.
- Auxiliary labels for special warnings and instructions for medicine usage were created, printed, and used while dispensing.
- Names of medications and warning label (look alike, sound alike, and high risk/high alert) were printed and placed on each medication shelf or cabinet accordingly, with respect to the necessity of the warning labels.

The other shared tasks between all pharmacy staff are:

1. **Dispensing:**

Dispensing new and refill prescriptions to all DDI patients.

2. **Accreditation Canada:**

The team follows the quality standards set by accreditation Canada when it comes to medication management. The team also developed and modified the necessary policy and procedures that explains the general workflow of the pharmacy as well as details each pharmacy task individually.

3. Pharmacy & Therapeutic Workgroup:

The Pharmacy & Therapeutic workgroup meetings are conducted approximately every 3 months and it discusses adding/removing medications from formulary, medications as well as guidelines review.

4. Research:

Everyone in the pharmacy is participating in research in collaboration with other DDI departments.

9. Clinical Services: Laboratories

9.1 GENERAL UPDATE ON THE DEPARTMENT

The following table summarizes the general updates in year 2015.

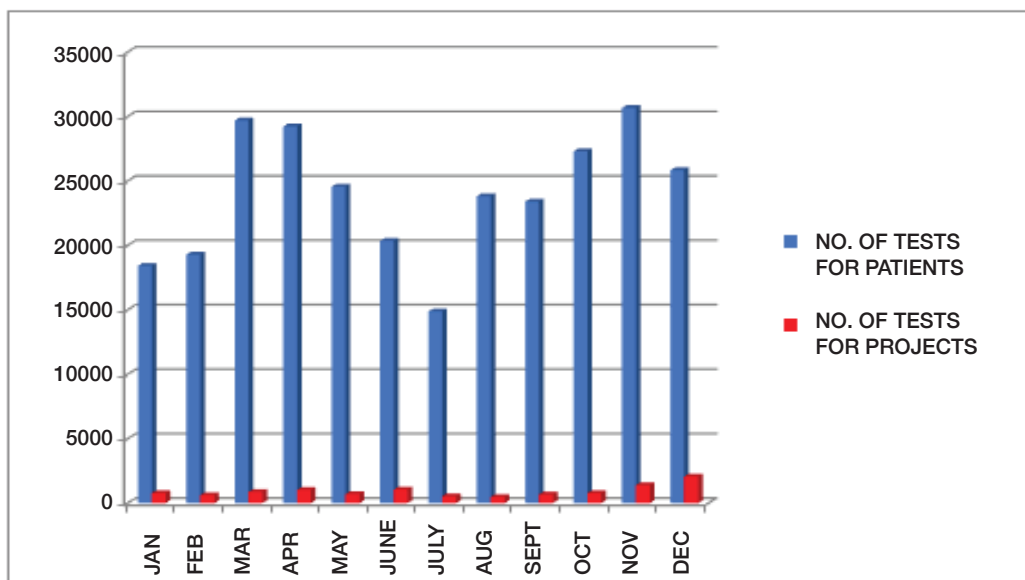
Tasks	Description	Status
Instruments Management	<ul style="list-style-type: none">• The lab received 3 new machines (1 hormonal analyzer, 1 chemistry analyzer, 1 hematology analyzer).• Method validation was done for 2 machines and 1 under validation.• There is a backup for the majority for laboratory tests.	80% Completed
Quality Control	Randox international Quality Assessment Scheme (RIQAS) is applied for all DDI lab tests.	100%
Staff	1 lab receptionist and 2 technologist joined the lab.	Under Training
Standard Operation Procedures	The old policies were reviewed and new policies were added.	95% Completed
General Update	<ul style="list-style-type: none">• Reducing lab expenses by:<ol style="list-style-type: none">1. Ordering more reagents and supplies from medical stores rather than purchasing.2. Implementing the lab frequency testing and rejection criteria to reduce the usage of unnecessary reagents and hence reducing biological and chemical waste generated by the clinical lab.	Completed
Educational Activities	<ol style="list-style-type: none">1. The Department staff were involved in preparing topics represents & educates other lab staff about the lab tests, certain outbreaks & lab methods.2. The lab personnel were involved in the following educational activities:	Completed

	<ul style="list-style-type: none"> - 2 lab technologists attended Arab Health in Dubai. - 2 lab technologists attended (Advanced Medical Waste Management) workshops in FOM. - All attended (Advanced Integrated Safety & Management) workshops done in DDI. - All attended fire drill. 	
Project Activity	<p>Clinical lab completed the services for the following projects:</p> <ul style="list-style-type: none"> • Tracer for Harvard • Prevalence of UTI in diabetic patients with controlled and uncontrolled glycemia in Kuwait, for the Microbiology technologist May and Shinu and Dr. Ali Tiss (from Research Department). • Adgar project for Dr. Azza / Dr. Roula. • Efficiency of Herberprot-P for Dr. Rafael. 	Completed
Ongoing Projects	<ol style="list-style-type: none"> 1. KWB-P- project for Dr. Talal & Dr. Anwar. 2. Asthma and Obesity project for Dr. Rasheed. 3. Cohort Study for Dr. Azza. 4. Cytokines in Diabetic Nephropathy for Dr. Abdulnabi Al Attar. 5. Dates project for Dr. Ebaa. 6. Polymorphism project for Dr. Maisa. 7. ION-04-ed FOR Dr. Fawzi. 8. Comparison of lab changes in patients with obesity & type II diabetes for Dr. Nadia. 9. Mg treatment of inflammation in disorders of Glucose homeostasis. 10. Sleeping Apnea for Dr. Abdulmohsen Al Turki. 	Under Processing

9.2 STATISTICS

GRAPHICAL REPRESENTATION OF PATIENT TESTS vs. PROJECT TESTS DURING THE YEAR 2015

MONTH	No. of Tests for Patients	No. of Tests for Projects
JAN	19168	762
FEB	19889	606
MAR	30551	861
APR	30230	1015
MAY	25324	686
JUNE	21392	1044
JULY	15396	520
AUG	24266	461
SEP	24051	660
OCT	28051	764
NOV	32045	1380
DEC	27875	2049
Total	298238	10808



9.3 SUMMARY/FUTURE PLANS

1. To have the Canadian accreditation logo on each lab report.
2. To continue with ongoing educational program for the lab staff.
3. To participate in other departments educational program.
4. To go for the CAP accreditation program.
5. To update the lab with more efficient machines but with less cost.
6. To continue with reducing lab expenses by:
 7. Getting more reagents and supplies from the Medical Stores and reducing purchasing through Dasman.
 8. Reducing the misuse of lab reagents and supplies by following the lab frequency testing policy.
 9. Continue with the summer training program for the newly graduates, LOYAC students and others.
 10. To continue doing more brochures to educate the public about every lab test done in DDI.
 11. To publish more papers based on clinical lab data.
 12. To update the lab tests list with new, more specific tests.
 13. To provide our services & training (for ACI required standards preparation) for other labs.

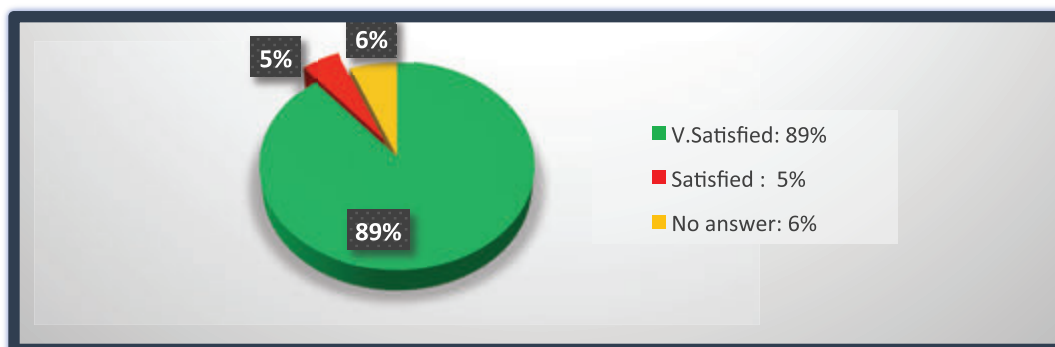
10. Health Information Management

10.1 GENERAL UPDATE

The Department of Health Information Management (HIM) at Dasman Diabetes Institute has faced huge challenges in the past year. While increasing the staff shortage, we assisted the various activities and initiatives for the year of 2015. Although, the number of patients and researches increased. In addition, a Hotline service was created to improve the efficacy of optimized new services. The Department has continued to support the mission of the Institute by promoting outreach activities involving outreach campaign, and expanding the research programs of the Institute. In addition, the department was critical in developing extra numbers of clinics and adding more clinics to the new shift from 13:00 to 17:00,

to give more flexibility to DDI patients. Furthermore patient's satisfaction survey were conducted to monitor our delivery of services. Chart 1 illustrates the survey results.

Chart 1: Patients Satisfaction survey for medical care DDI clinics.



10.2 ACCOMPLISHMENTS

HIM team had several accomplishments for this year as highlighted below:

- A. Assisting KBHR administrator to solve the points of weakness:
 1. Adding proper communication channels with HIM team to appointment list.
 2. Fix the clinics templates for smart appointment search.
 3. Fixing the errors of interfacing KBHR to LIS lab system for lab request and results.
 4. Overriding of the scheduled clinics templates to fix the makeup and reschedule clinics without changing the original clinics schedule timing.
 5. Suggested to create note field on the electronic waiting list.
 6. Preparing to launch the SMS reminder for clinic appointments.
- B. Collaboration with other DDI Departments, research, programs and campaigns:
 1. Participate in DDI campaigns (GO BLUE) in Avenues Mall.
 2. Collaborate with PR department to spread DDI mission in MOH clinics (Mishref Clinic).
 3. Arranging and assisting DAFNE program Activities.
 4. Assisting the fitness center for BE DASMANI program.
 5. Assisting for sleep apnea research.
 6. Preparing and assisting for ENT Dr. Abdelmohsen research.
 7. Arranging and assisting the podiatrists research (Rafael research).
 8. Collaborate with Education Department. To arrange school visit.
 9. Coordinate the MS researches.
 10. Coordinate NODAT study with Education Department.
 11. Assisting on DATES study.
 12. Coordinate the nutrition researches.
 13. Assisting pediatric researches (Dr. Azza).
 14. Coordinate the ION study (clinical trial project).

C. Focusing on staff training, workshops and rotation to update all staff with all clinics procedure:

1. Completed nine workshops to develop HIM staff knowledge and Skills including body language, handling phone call, handling disable patients, Diagnostic Imaging Center procedures, handling patients complaints, solving problems, change strategy, preparing statistics, skills).
2. Exposure to all clinics (adult diabetology, nephrology, podiatry, pediatric, etc) for all HIM staff to develop all experience across the field.
3. Managing all patients requirement at one stop rather than referring patients across the clinics to improve efficacy.

D. Arranging Phlebotomy waiting area:

- For patient increase: HIM created a procedure to control the phlebotomy waiting area. (Line number machine, door access system).

E. Joining the McMaster University HIM events:

- Encourage HIM staff members to attend webinar workshops, leg patient secure data and others.

F. Getting the latest international updates for HIM from (AHIMA) American Health Information Association membership:

- Encourage HIM staff members to join the international HIM organizations.

G. Adding more clinics to the new clinics shift from 13:00 to 17:00:

- Three clinics currently are operating from 13:00 to 17:00 and an increase in number is expected. (Dr. Hessa, Dr. Khlouda, Dr. Nampoory, and Dr. Majdah are some of the make up clinics).

10.3 FUTURE PLANS

1. Develop the phone hotline to assist patients in an easy and speedy fashion for rescheduling their appointments.-
2. Increasing the HIM staff to cover the expanded future activities to match the growth expansion.
3. Collaboration with more international health information organizations (HIMA) aiming for accreditation certification.
4. Improve the hospitality spirit and collaboration as team work for HIM staff by adding new workshops.
5. Creating specific standard for HIM services according to DDI policies and procedures.
6. Proceeding to prepare smart phone application for patients' self-services.
7. Collaborate with MOH to train MOH HIM staff in DDI.
8. To conduct HIM research on Data security.

OPERATIONS DIVISION ANNUAL REPORT

1. Biomedical Equipment & Maintenance Service

1.1 MISSION

To provide the biomedical engineering services required to support the DDI research laboratories and clinical departments.

1.2 DEPARTMENTAL UPDATE AND STATISTICS

The Biomedical Engineering Department serves all Research Departments, Clinics, Medical Fitness Center, Central Sterile Supply Department, Nutrition Department, Education Department, Diagnostic Imaging Center and the Clinical Skills Center.

To better serve DDI, the structure of the department has changed. The Biomedical Engineering Department has been centralized. The staff information is as follows:

Biomedical Engineer	3
Biomedical Technician	1
Medical Gas Technician	1

The key work of the department revolves around four main services; consultancy service, equipment selection, biomedical engineering support and equipment training.

1.3 MAJOR ACHIEVEMENTS

One major achievement of this year is the installation and the commission of the Oxygen Hyperbaric Chamber.

1.4 FUTURE PLANS

Coded Equipment: the idea is to create a special code for all research and medical equipment. This will help with managing the equipment. A list of all equipment will be ready by the end of this year.

Automated Biomedical System: this system will serve as a help desk for the user. The user can request any services through the system. All requests should be traceable. This system will make the work more efficient. The system has been already designed and waiting for the approval of the IT Department.

1.5 SUMMARY

The Biomedical Engineering Department offers services to most of DDI departments. The goal is to have uninterrupted service at all times; to achieve that goal, the Biomedical Engineering Department selects the equipment, installs it, commissions it, trains users on it and keeps maintaining it.

2. Finance

2.1 MISSION

The mission of the Finance Department is to accurately report the financial position of DDI for various stakeholders – including BOT, funders (KFAS), auditors, and others who may have a vested interest in the financial activity of DDI. Within the scope of this mission is the responsibility to coordinate and direct all financial transactions recorded in the accounting system of DDI. This responsibility requires that all transactions adhere to DDI policies and procedures, international financial reporting standards, and rules established by the authoritative governing bodies.

2.2 DEPARTMENTAL UPDATE AND STATISTICS

The Finance Department is undergoing a restructure process to be able to fulfill its mission and role in DDI.

2.3 MAJOR ACHIEVEMENTS

- Hired two new employees during 2015, team increased from 2 employees to 4
- Preparation of 2015 budget

2.4 FUTURE PLANS

- Implementation of new accounting system MS Dynamics
- Preparation of 2016 budget

2.5 SUMMARY

The Finance Department consisted of two employees at the beginning of the year, during the year two new employees were hired, a new accounting software was purchased to be implanted in 2016.

3. General Services

3.1 MISSION

To ensure the proper and efficient operation of all DDI's physical aspects, creating and sustaining safe and productive environments for staff/students and the general public.

3.2 DEPARTMENTAL UPDATE AND STATISTICS.

a) General Services strives to provide quality in-house services, such as renovation projects, electro-mechanical work and related maintenance, carpentry, painting, cleaning, elevator services, security, fire-fighting etc.

b) Major jobs mentioned in Strategic Work Plan 2015 have been completed, except those under scrutiny.

3.3 MAJOR ACHIEVEMENTS

a) Projects completed in 2015:

- Pharmacy expansion
- Oil analysis for centrifugal chillers
- Upgrade – master clock system
- Upgrade – BMS system
- Replaced 10 nos. fountain pumps with existing setup and installed LED under water lighting.
- Installed fire hose reel cabinets for staircases – safety reasons.
- Replaced defective PVC fills for cooling towers No. 3 & 4.
- Planned preventive maintenance for all equipment done as per schedule.
- Reactive maintenance done as and when requested.

3.4 FUTURE PLANS

- Front side compound renovation
- Exterior building painting
- B2 waterproofing
- New Tissue Bank lab
- CCTV upgrade
- B1 car park – Epoxy floor painting
- AC duct cleaning at various locations

3.5 SUMMARY

Some of the jobs were carried forward from 2014 to 2015, re: budget issues.

4. Human Resources

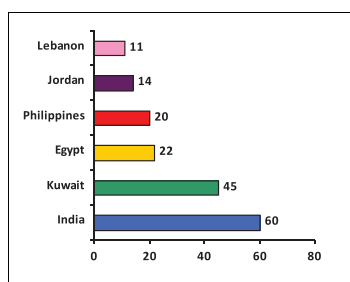
4.1 MISSION

The mission of the Human Resources Department is to be a progressive business partner in enabling DDI to achieve institutional objectives and be a center of excellence on the foundation of professional development and qualitative HR services, programs and initiatives.

4.2 DEPARTMENTAL UPDATES AND STATISTICS

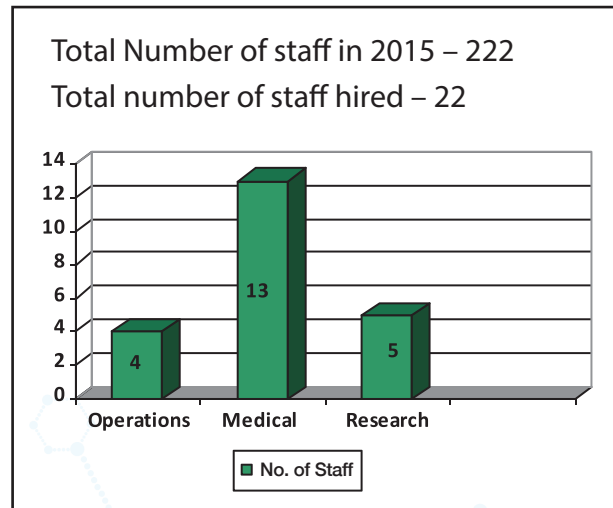
4.2.1. Staff Nationality Composition

Total number of staff in 2015: **222** Total number of nationalities: **30**



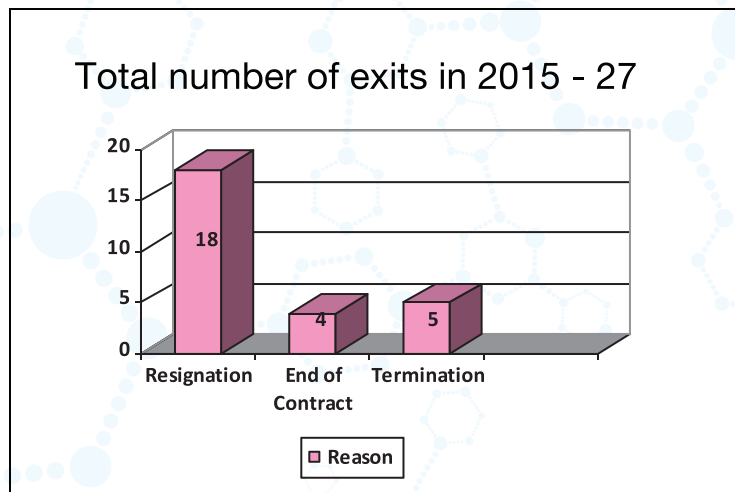
*Figures indicate count of staff per nationality

4.2.2 Recruitment



* Figures indicate count of votes

4.2.3 Attrition



4.2.4 Training & Development

Count of employees trained in external courses - 114
Count of employees trained in internal courses - Nil

No. of trainings	External	Internal
2015	81	-

* Count of trainings & conferences included

Business Travel	Per Diem	Air Ticket
2015	91,572	73,244

i. Payroll

Salary	Q1	Q2	Q3	Q4
2015	770,425	731,951	700,651	723,310
Allowance	Q1	Q2	Q3	Q4
2015	120,700	116,607	114,231	117,730
Overtime	00	07	1	30
2015	2947	4295	2664	3698

4.3 MAJOR ACHIEVEMENTS

- Updated the DDI organizational structure and secured approval from the Board of Trustees (BOT)
- Reviewed and developed six HR policies
- Completed all hiring requirements across departments for 2015
- Updates to the HR system were made; sent templates to Fiduciary systems for faster updates on personnel information
- Improved turnaround time in processing HR certificate requests
- Created contracts for temporary staff
- Cancelled and terminated contracts that did not add value to HR operations
- Documented and tabulated the DDI penalties table
- Prepared, submitted and closed HR budget for 2016

4.4 FUTURE PLANS

- Adopt and implement new salary and grade system for DDI in 2016 with guidelines similar to those used in KFAS
- Update job descriptions (JD) of staff and create new JDs where required
- Source, screen and fill vacancies for chief officers for Operations and Medical Divisions

4.5 SUMMARY

The nationality composition within DDI reflects a good balance within the staff. Recruitment figures indicate a higher trend which is attributed to replacing staff who have left the organization. The attrition records has moved up primarily due to restructuring efforts which has resulted in closure of units or projects that will not move forward anymore. The plan for 2016 include analyzing the attrition figures in detail in order to plan for retention strategies.

Staff have travelled extensively in lieu of research specific conferences or symposiums that aid to their learning development. This has also led to the increased spending for business travel. The payroll spend has remained consistent. With plans to contain the costs in lieu of pending budget trims, HR will work through modelling a stronger resource planning, levelling and pay management process for 2016.

5. Information Technology

5.1 MISSION

The Information Technology (IT) Department is an enabler to the mission set by the Institute. As a service department, the IT Department provides various services to different departments within DDI allowing for their projects to be executed more efficiently. As seen throughout the report the IT Department services include support for DDI activities of both, clinical and research services.

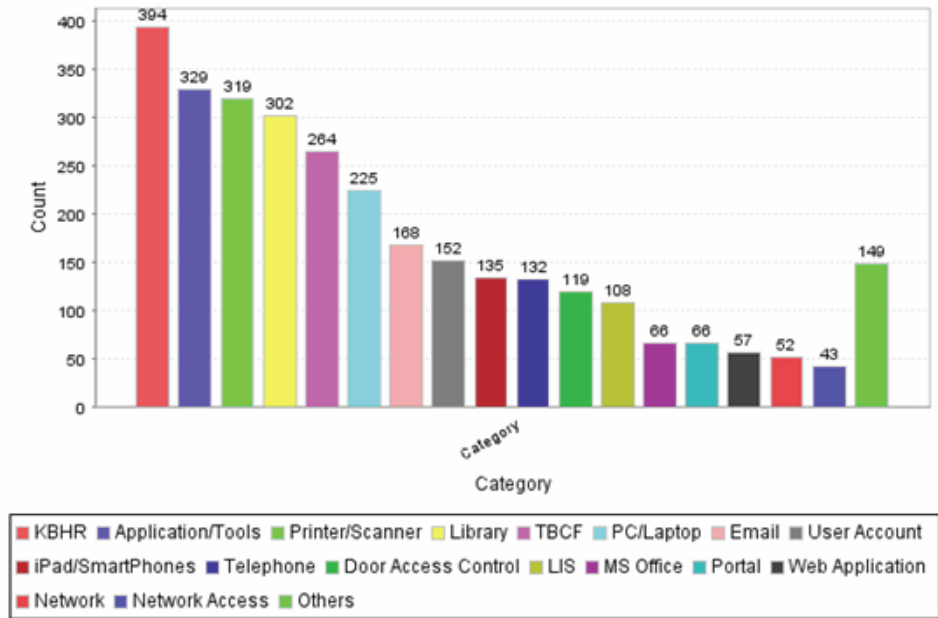
In 2015 the IT Department has structured its operations and work to better align with the Institute's mission and strategy. The IT Department has structured the work around two domains: internal operations, and special projects that are executed externally with DDI's partners in Kuwait's healthcare environment.

5.2 DEPARTMENTAL UPDATE AND STATISTICS.

Operating within its budget, the IT Department was able to meet the goals and performance indicators specified at the beginning of the year. Such targets built around the enhancement and fine-tuning of the EHR used in DDI (KBHR), disaster recovery & business continuity, improving DDI's online presence and information dissemination, resource utilization efficiency, proper data management, and more.

As seen in the previous reports, the Department has been working on several major projects, namely, Disaster Recovery Phase 1, Microsoft Dynamics AX and IVR Auto Attendant System. The department continued to improve on these projects at all levels including the knowledge transfer from partners, application updates that include new features and capabilities, behind-the-scenes infrastructure upgrades to improve performance, etc.

In addition, the range of services provided internally to support DDI's operations includes many categories. The most major ones include services around the applications and tools used by employees, email services, KBHR, network services, computer hardware, printing services, telephone services, as well as web portal. In total, DDI's IT Department has served more than 3080 helpdesk tickets during the year of 2015, and the distribution of those tickets is best illustrated in the following chart. It is noteworthy that the IT Helpdesk Team continued to receive more positive feedback through its annual customer satisfaction report with more than 90% satisfaction rate.



5.3 MAJOR ACHIEVEMENTS

The projects that the IT Department was involved in can be categorized as internal (DDI and departmental) and external projects. As the projects vary in nature and size, the IT Department’s involvement can take different nature and size as well. Below, we offer an overview on noteworthy projects that DDI has either solely worked on, or significantly contributed to, with a brief description of each of the projects as well as the departments with which the IT Department collaborated with:

a) Organizational-level Projects

i. Central System Store

IT Department developed and published a Central Store system which is used in the B2 main store, which effectively helped in inventory counts, inventory control and stock transfers from and to the store.

ii. Research Affairs System

The Department developed and implemented a Research Affairs system which manage submissions and reviews of research proposals.

iii. BOT Document Sharing Application

The Department implemented a document sharing application for the BOT members to easily give them secure access to their shared documents during or after their meetings via iPADS, smartphones or web browsers.

iv. IVR Auto Attendant System (1877877)

The IT Department implemented an IVR auto attendant system which helps the Clinical Services Department to track and manage patient calls.

v. Microsoft Dynamics AX 2012

The Department successfully customized and implemented Microsoft Dynamics AX 2012, an ERP solution for the Finance and Procurement Departments based on their requirements. The system will help to automate the work process and increase the speed of doing business.

vi. DDI Main Website

The IT Department, in collaboration with the PR Department, started the progress of developing and implementing a new DDI website, which will contain all the Institute's news, events, research articles, education materials, that will be accessible to all via the internet.

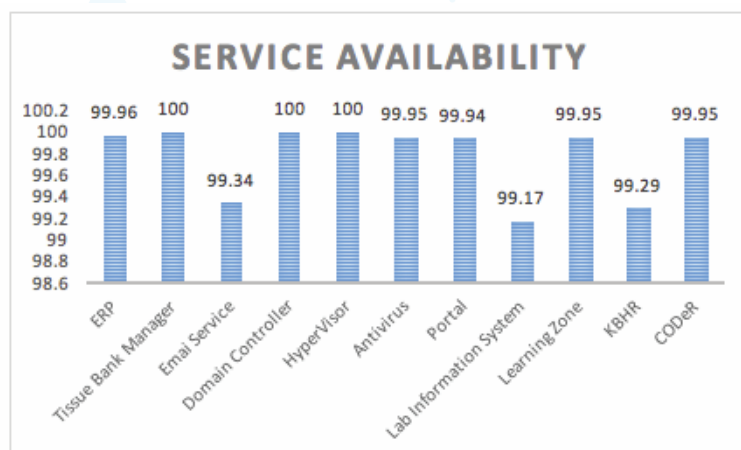
b) Departmental Project

i. Disaster Recovery Site – Phase 1 (Liberation Tower)

The Department implemented and published the Disaster Recovery Phase 1 which takes an online backup of DDI Research, Clinical and Operational data, scheduled as per the business' needs, and stored in our DR site in the Liberation Tower. This task insures the availability of data outside the building in case of any disaster, and considered as Phase 1 of the business continuity plan.

ii. Infrastructure Service Level

The Department was able to remain above the target level of service in terms of availability. All major services maintained service availability higher than 99.5% with an overall average slightly below that. The chart below illustrates the different levels of service for each of the major services:



c) External Projects

Here, you can find a summary of the projects that the Department has been working on benefitting external entities/individuals, which is very much in line with DDI's mission statement.

i. School Electronic Record (SER)

A version of KBHR that is used to capture health records of students in different schools around Kuwait, used for the SER research project.

ii. Student Projects Assistance

Throughout the year, the IT Department has helped multiple students with their graduate studies, either by providing data or even providing insight on how they might want to consider approaching the analysis component of their studies. In addition, the Department hosted multiple student interns.

5.4 SUMMARY AND FUTURE PLANS

In summary, the Department has focused its efforts on helping different departments reach optimal levels of efficiency in utilizing their resources. In addition, the Department helped with empowering DDI staff at all levels with the tools they need to perform their job effectively, and more efficiently. This was reflected in tangible changes end users are able to see and observe, and behind-the-scenes improvements that they might observe, but not necessarily see. In the coming year, the Department plans on continuing the improvement of the service delivered, and maintaining and improving on the level of efficiency the Department operates on. Starting later this year, the focus will be on efforts tackling areas that currently need optimizing.

6. Procurement & Purchasing

6.1 MISSION

To obtain the best possible products or services for DDI at the best possible price, through applying the instructions of the P&P manual in a transparent and fully controlled environment.

6.2 DEPARTMENTAL UPDATES AND STATISTICS

- Issued 1079 approved purchase orders in 2015
- A total of 121 approved purchase orders pending (items not yet received)
- Most of the pending orders were made between the months Aug. - Nov. 2015 for research projects and these types of reagents; consumables take 2-3 months for delivery, then invoiced if the full order is received
- The formation of temporal tendering committee
- Worked on 2016 work plan
- Worked with Deloitte team and provided them with reports
- Generated purchasing reports for the COO

6.3 MAJOR ACHIEVEMENTS

- Updated the policy and procedure manual
- Unified the purchase requisition form

- Participated in the health insurance tender, resulting in a huge reduction in cost of contract, in comparison to the two previous years (from 300 KD/p.person to 215 KD /p.person).
- Successfully negotiated the discounted renewal of Biomedical Engineering contracts in collaboration with Engineer Mariam AlFaresi

6.4 FUTURE PLANS

- MS Dynamics implementation.
- Pending orders follow-up.
- Updating the listed vendors' legal documents.

6.5 SUMMARY

The Procurement and Purchasing Department was assigned its tasks in July 2015. The Department received several comments from the auditing firm and violations/ breach of Purchasing Policies and Procedures Manual. All the raised issues have been noted.

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2015