

DASMAN DIABETES INSTITUTE ANNUAL REPORT 2019



معهد دسمان للسكري
Dasman Diabetes Institute



أحد مراكز
Center





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Center



**H.H. Sheikh Sabah Al-Ahmad
Al-Jaber Al-Sabah**

AMIR OF THE STATE OF KUWAIT



**H.H. Sheikh Nawaf Al-Ahmad
Al-Jaber Al-Sabah**

CROWN PRINCE OF THE STATE OF KUWAIT



**H.H. Sheikh Sabah Al-Khalid
Al-Hamad Al-Sabah**

PRIME MINISTER OF THE STATE OF KUWAIT

INNOVATION

MISSION & VISION

PLAN

RESEARCH

STRATEGY

MISSION

To address the diabetes epidemic in Kuwait through focused diabetes research, integrated prevention, training and education.

VISION

To be the leading diabetes institute in the MENA region and to be recognized internationally.

VISION



DR. QAIS AL DUWAIRI
Director-General,
Dasman Diabetes Institute

A MESSAGE FROM THE DIRECTOR-GENERAL

It gives me pleasure to present Dasman Diabetes Institute's 2019 Annual Report which provides an overview of DDI's major achievements and activities during the year. This report also sheds light on our endeavors in 2019 to improve the management and prevention of diabetes in the State of Kuwait.

Dasman Diabetes Institute was established under the patronage of His Highness Sheikh Jaber Al Ahmed Al Sabah, the late Amir of the State of Kuwait, and the Kuwait Foundation for the Advancement of Sciences to combat the confounding prevalence of diabetes in Kuwait. Since its inauguration in 2006 by His Highness Sheikh Sabah Al Ahmed Al Sabah (the current Amir of the State of Kuwait), the Institute has aimed to address the diabetes epidemic in Kuwait through focused diabetes research, integrated prevention, training and education.

Throughout 2019, Dasman Diabetes Institute has strived to facilitate projects that translate our research from the bench to the bedside. We continue to focus our research on improving diabetes prevention and management in Kuwait. By sharing diabetes-related knowledge to the public,

we aim to engage the medical and scientific communities and encourage innovation and research excellence. With the guidance of our International Scientific Advisory Board (ISAB), we aspire to create research projects that are tailored to our community and improve the overall quality of life.

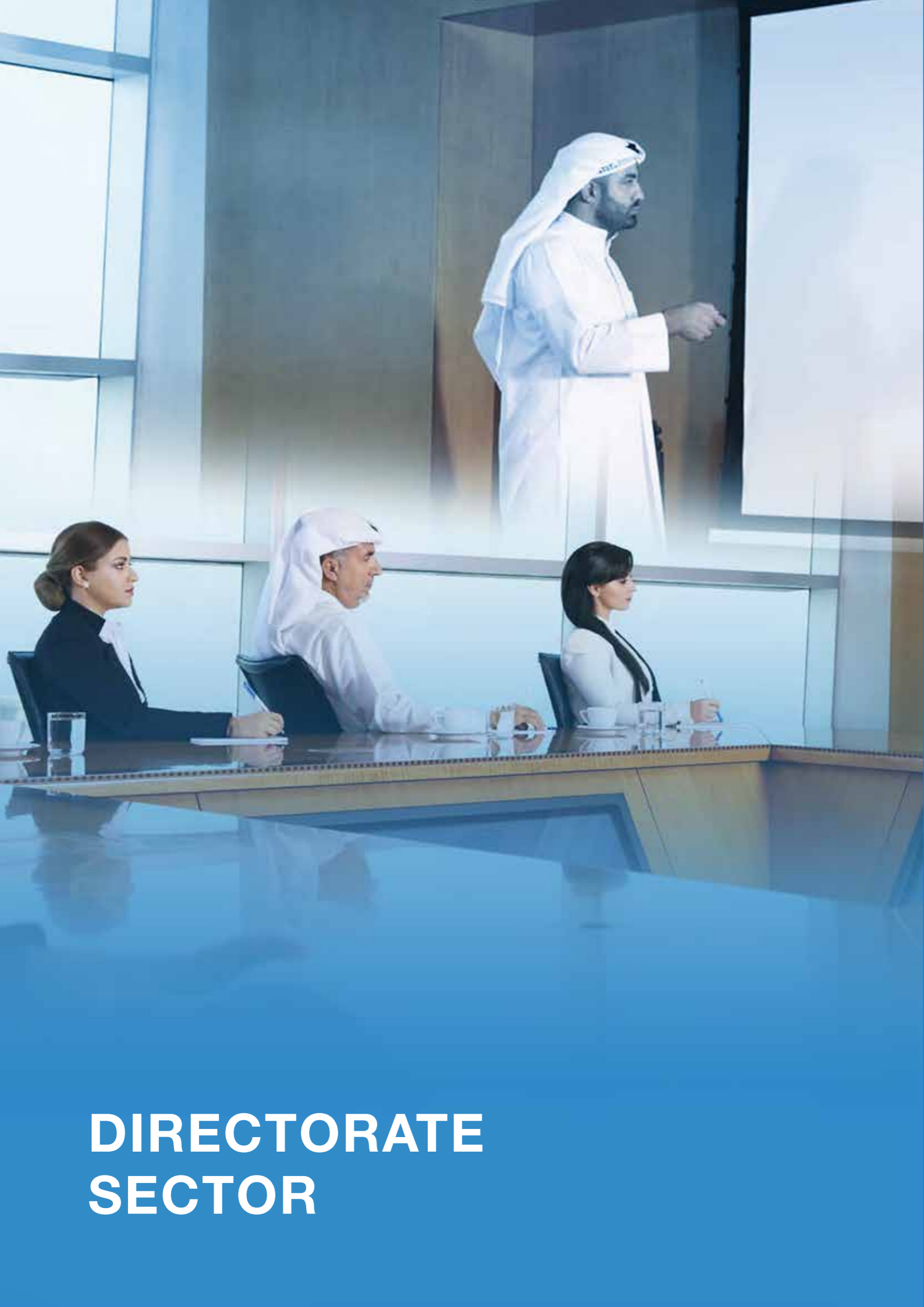
Our Medical Sector uses advanced behavioral interventions to develop educational programs that improve healthcare delivery, patient and diabetes outcomes. We are the only training center in the Middle East for Dose Adjustment For Normal Eating (DAFNE). Our collaboration has been extended for clinical training, expansion of the DAFNE pump program, health economist training and qualitative training. In 2019, we launched our Kuwait Obesity Academy. This certified course targets healthcare professionals and provides evidence-based obesity management resources.

In 2019, we also received the HIPAA Compliance for our data protection procedures. Our Clinical Laboratory also received the College of American Pathologists (CAP) accreditation for test accuracy and patient care procedures. Our Institute attained Unconditional Diamond Accreditation from Accreditation Canada recognizing our continuous efforts to improve safety, efficiency and provide the best quality of care.

In collaboration with the Ministry of Health and other stakeholders, our Kuwait National Diabetes Registry (KNDR) created a database for type 1 diabetes, type 2 diabetes and other forms of diabetes in all age groups. I avail this opportunity to express my sincere gratitude to the Ministry of Health for their continuous support of DDI's mission and vision.

Finally, on behalf of DDI's management and team, I would like to express appreciation and gratitude to His Highness the Amir of the State of Kuwait Sheikh Sabah Al-Ahmad Al-Jaber Al-Sabah, His Highness the Crown Prince Sheikh Nawaf Al-Ahmad Al-Jaber Al-Sabah and His Highness the Prime Minister Sheikh Sabah Al-Khalid Al-Sabah. We wish them continued success in leading our beloved country towards further prosperity and better future.

Dr. Qais Al Duwairi
Director-General
Dasman Diabetes Institute



DIRECTORATE SECTOR

PR AND MEDIA SERVICES

UNIT BRIEF

The Public Relations and Media Services Department works with all DDI Sectors (Directorate, Research, Medical and Operations) to deliver all above-the-line and below-the-line promotion of DDI's strategic objectives and initiatives. The Department uses multiple forms of communication to:

1. Raise awareness on diabetes management, treatment, and prevention;
2. Promote all DDI ongoing activities, campaigns, initiatives and events;
3. Reinforce the Institute's Mission, Vision, Values and Strategic Objectives; and
4. Continuously highlight DDI's accomplishments on mass and social media.

This is achieved via various media outlets such as print advertising, broadcasting stations, and social media channels which include Instagram, YouTube, Facebook, and Twitter. The PR and Media Team is responsible for creating all the Institute's design material, from forming the layout to the final printed product. All processes and procedures are completed in a professional manner, ensuring that DDI maintains its proficient and high standard.

Key Objectives

1. Define DDI's Mission: To address the diabetes epidemic in Kuwait through focused diabetes, research, integrated prevention, training, education and treatment.
 - a. Establish clear and concise communication platforms for the delivery of a cohesive message.
 - b. Facilitate and promote the delivery awareness-raising programs and initiatives to its stakeholders.
2. Promote DDI's Vision: To be the leading diabetes Institute in the Gulf Region and the Middle East.
 - a. Facilitate the development of training and educational programs through DDI's national, regional and international collaborations.

Achievements

71 | Total number of Activities

11 | Total number of Conferences

15 | Total Number of Lectures

20 | Total number of Outreach

5 | Total Number of Seminars

7 | Total Number of Workshops

13 | Total number of Events

List of Events and Activities of DDI 2019

Date	Description
JANUARY 2019	Dr. Nicola Guess, Head of the Nutrition Unit at Dasman Diabetes Institute (DDI), presented a scientific lecture titled "The Science Behind the New DDI Type 2 Diabetes Remission Service." This lecture aimed to introduce the science behind DDI's new Remission Clinic.
FEBRUARY 2019	The University of Dundee and DDI Held their Annual Graduation Ceremony of delivering postgraduate diabetes education in Kuwait in Postgraduate Masters program in Diabetes Care, Education and Management.
	PALI, in collaboration with DDI, started a three-day course today titled "Advanced Trauma Life Support (ATLS)." This course provides participants with a safe, reliable method for immediate management of the injured patient and basic knowledge, necessary for doctors who infrequently treat trauma.
	DDI participated in The Ministry of Health's (MoH) celebration for National and Liberation Day. This celebration took place in MoH headquarters in Doha, where several medical/healthcare institutions shared their contributions to the State of Kuwait.
	DDI took part in "The First Conference for Child's Social, Educational and Psychological Protection" organized by Arab Planning Institute in collaboration with the Public Authority for Applied Education and Training. DDI set a booth in the exhibition which was organized as part of the conference.
	DDI organized a Mobile Clinic Outreach at the Sheikh Abdullah Al-Salem Cultural Centre where a multidisciplinary team was on board to offer blood glucose testing and medical consultations to the staff and visitors.
	DDI in collaboration with Sanofi, hosted a two-day training workshop titled "Fundamentals of Clinical Research and Good Clinical Practice" in the Courtyard Marriott. This workshop was delivered by the Brookwood International Academy.
	DDI organized a Mobile Clinic Outreach to the American International School (AIS) where a multidisciplinary team was on board to offer blood glucose testing and medical consultations to the staff and students.

Date	Description
MARCH 2019	DDI organized a Mobile Clinic Outreach at the Public Authority for Applied Training where a multidisciplinary team was on board to offer blood glucose testing and medical consultations.
	DDI held a Laboratory Quality and College of American Pathologist (CAP) Accreditation Workshop for healthcare professionals interested in attaining a CAP Accreditation for their clinical laboratories. The Workshop was instructed by Dr. Aaron Han and Mr. Carlo Kaabar.
	DDI participated in the EXTREME Health Expo at Sirb Circuit. The Expo was under the patronage of Shiekha Intisar Al Sabah. The DDI team was there to answer questions regarding the Institute, its activities and any other diabetes related questions.
	DDI organized the French Diabetes Days Conference in collaboration with the French Embassy in Kuwait, Sanofi, URGO Medical and Université Côte d'Azur.
	Dasman Diabetes Institute (DDI) collaborated with Blue Circle in "The Blue Race" to support diabetes. Participants had the choice to do 5 km or 10km. This race took place in Green Island.
	DDI hosted a full-day symposia titled "The Collaborative Advantage", in collaboration with Mount Sinai and Jaber Al Ahmad Center for Molecular Imaging. The Symposia were held in the Institute.
	Dr. Pierre Drapeau conducted lectures themed around "Genome Editing." At DDI. Pierre Drapeau is a professor and the Canada Research Chair in Neuroscience at the Université de Montréal.
	DDI hosted the 4th Al Jahra International Pediatric Conference. This conference was a comprehensive two-day workshop aimed at sharing the most up-to-date scientific discoveries and medical practices in Pediatric medicine.
APRIL 2019	DDI visited the Kuwait Investment Company (KIC) to promote awareness about diabetes and its related conditions to all KIC staff. The initiative provided nutritional consultation, checkups and glucose testing.

List of Events and Activities of DDI 2019

Date	Description
APRIL 2019	The Research Division at DDI hosted two guest speakers to present lectures titled "Biology and Structure of Integrin" delivered by Prof. Amin Arnaout from Harvard University and the other lecture titled "Rescuing Mutants of TP53" delivered by Sir Alan Roy Fersht from the University of Cambridge.
	DDI participated in The First Gulf Council Conference at the Four Seasons Hotel by setting a booth for the Institute. This conference attracted scientists, academic leaders, researchers, public health professionals and healthcare professionals, organizations, institutions. This conference aimed to create a platform for the exchange of experiences and research in all areas of sustainable healthcare and discuss the most salient challenges to attempt to develop solution.
	DDI participated at SCOPE School Kuwait Conference held in Sheikh Jaber Al-Ahmad Cultural Center.
MAY 2019	DDI hosted a scientific lecture titled "Playful Modular AI technology for health" by Professor Henrik Hautop Lund from the Technical University of Denmark.
	DDI organized a Corporate Wellness week for its staff. This week aimed to address staff well-being with a series of lectures targeting key issues that staff may face.
	DDI celebrated its annual "Graish" which is known as the last meal before Ramadan in the atrium of the Institute.
JUNE 2019	DDI organized an interactive workshop titled "Type 1 Diabetes Mellitus and Fasting" for kids and their families. Dr. Fahed Al Jaser, Diabetologist presented and spoke at this workshop, in addition to members from the Education and the Nutrition Departments at DDI.
	Dasman Diabetes of Institute, in cooperation with the Kuwait Finance House, held their annual Girga'an celebration for children with diabetes and their families in Kuwait.
JUNE 2019	DDI's GeoHealth Lab 4-8 weeks Summer Internship for students trained Geographic Information Systems.

Date	Description
JUNE 2019	DDI Participated at the American Diabetes Association's 79 th Scientific Sessions in San Francisco, with 6 Poster Presentations
	DDI held a scientific lecture titled 'Dietary Intake and Glycaemic Control of Children and Adolescents with Type 1 Diabetes: Kuwait's Experience', by Fatma Ismail
	DDI held a scientific lecture titled 'Effect of Sudarshan Kriya Yoga (SKY) on Depression, Anxiety and Quality of Life in People with Type 2 Diabetes: A Pilot Study in Kuwait', by Rashmi Shiju
JULY 2019	Outreach campaign at the Commercial Bank of Kuwait - DDI's Mobile Clinic offered complimentary medical tastings for all staff and visitors
	Hajj and Diabetes Workshop – Sessions, 18 th July & 24 th July
	Research Lab Summer Internship Program Completion Event at DDI
AUGUST 2019	DDI held a scientific lecture titled 'Non-Fasting Lipid Testing: The New Standard for Cardiovascular Risk Assessment', by Dr. Ahmad Al-Sarraf
	DDI organized a scientific lecture titled 'Introduction to Insulin Pump Therapy (CSII) and Continuous Glucose Monitoring (CGM) Systems', by Abeer El Samad
SEPTEMBER 2019	Geo-health (GIS) Summer Internship Event at DDI
	DDI held a scientific lecture titled 'Scientific Proposal Submission Process at DDI', by Amnah Al-Sayyar
SEPTEMBER 2019	DDI held a scientific lecture titled 'Fatty Liver, A Hidden Epidemic in Adults and Children', by Dr. Nicola Guess.
	Patients Safety Day Event – on the occasion of the International Patient Safety Day (IPSD) initiated by the World Health Organization (WHO).

List of Events and Activities of DDI 2019

Date	Description
OCTOBER 2019	AACE 7 th Annual Clinical Congress – Gulf Chapter Conference in Oman, which Dr. Ebaa Al Ozairi was the president of.
	Healthy Food, Healthy Lifestyle Conference by the Netherlands Embassy in Kuwait, at Dasman Diabetes Institute.
	Group of research scientists from DDI including Prof. Fahd Al Mulla attended the ASHG 2019 Annual Meeting in the USA, where they presented lectures, posters and showcased an impressive video about the Institute to all attendees from all over the world.
	Dasman Diabetes Institute organized an outreach event at the Kuwaiti Parliament where a multidisciplinary team from the Institute participated in their health awareness day.
	DDI hosted students from the New English School for two consecutive days for a full-day of health awareness activities at the Institute.
	Dasman Diabetes Institute participated at the 7 th Annual Kuwait Society of Nuclear Medicine and Molecular Imaging Meeting, at Jumeirah Hotel.
	Scientists from Dasman Diabetes Institute are presenting Genetics findings at the American Society for Human Genetics Conference (ASHG 2019) in Houston (Texas), USA.
NOVEMBER 2019	Ahmed Al Bisher Al Roomi School Outreach visit to Dasman Diabetes Institute
	Outreach campaign at the Public Authority for Applied Training and Education, Students Affairs Department, by Dasman Diabetes Institute
	Outreach event at K-net Headquarters in Kuwait, by Dasman Diabetes Institute
	Outreach campaign at the Community Service Center at Kuwait University, by DDI
	Digital Marketing Workshop by AstroLabs, organized by KFAS and held at DDI in participation of PR and Media Team of DDI.



List of Events and Activities of DDI 2019

Date	Description
NOVEMBER 2019	Outreach campaign at the Life Sciences College “Nutriviva Project”, Kuwait University, by Dasman Diabetes Institute
	DDI Presented lectures and presentations at the Australian Business Meeting Group in the Ambassador’s residence in the occasion of World Diabetes Day
	World Diabetes Day Annual Event at Dasman Diabetes Institute
	Al Nibras School Bus Outreach event – by Dasman Diabetes Institute
	Jaber Al Ahmed Armed Forces Hospital Outreach event by Dasman Diabetes Institute
	Al Resalah School Bus Outreach Event by Dasman Diabetes Institute
	Insulin Pump and Advanced Glucose Monitoring Systems Two-Day Workshop at Dasman Diabetes Institute
	Maria Al Qobtia School for Girls visit to DDI for awareness and health education lectures
“Excellence in School Sports Award” event by Fantasy World and CP Magazine, at Crowne Plaza, where Dr. Nicola Guess presented a lecture on the occasion of WDD.	
DECEMBER 2019	Iqraa Bilingual School’s educational and awareness visit to Dasman Diabetes Institute
	Dasman Diabetes Institute organized a health awareness outreach event at the ITS Co. for all staff
	Dasman Diabetes Institute participated in the IDF World Diabetes Congress held in South Korea

Date	Description
DECEMBER 2019	DDI organized lectures and presentations titled “Lessons Learned from DiRECT – Achieving Diabetes Remission in Kuwait” and “Counterweight: Weight Management and Intervention Workshops”, by Nicole Allison.
	DDI hosted Prof. Stuart Egginton, University of Leeds who presented a lecture titled “Skeletal Muscle Angiogenesis – Physiological Capillary Growth & Diabetic Rarefaction”
	DDI hosted Prof. Eamon Gaffney, University of Oxford who presented a lecture titled “Modelling Oxygen Transport in Diabetic Skeletal and Cardiac Muscles”
	DDI organized two lectures titled “Success in Weight Maintenance” and “Bariatric Surgery: Pre and Post Guidelines” by Nicole Allison
	DDI hosted Prof. Farid Saad, Consultant, Medical Affairs, Bayer AG, who presented a lecture titled “Testosterone Therapy in Men with Hypogonadism from Treatment of Erectile Dysfunction to Type 2 Diabetes and Obesity”
	DDI through KFAS hosted Dr. Waddah Al Refaie, Surgeon and Regional Chair for Tumor and Cancer, George Town Center, USA, who presented a talk titled “Facing Challenges and Using Them as Tools for Success”
	DDI organized a lecture titled “Autoimmunity to Post Translational Modifications in Type 1 Diabetes” by Ghadeer AlHamar, Universita Campus Biomedico Di Roma, Italy
	DDI Held GeoHealth Lab Inauguration Ceremony which consisted of many presentations and talks
	DDI Inaugurated its Kuwait Obesity Academy, where many presentations, workshops and lectures were presented

DDI’s Clinical Skills Center throughout the year organizes continuous training courses, i.e. First Aid, Basic Life Support, Airway Management, Trauma Management, CPR, etc. and participates in outreach to promote their courses*

List of Events and Activities of DDI 2019

February 2019

University of Dundee Graduation Ceremony

The University of Dundee and DDI held their Annual Graduation Ceremony of delivering postgraduate diabetes education in Kuwait in Postgraduate Masters program in Diabetes Care, Education and Management. This program offered face-to-face classes which utilized the latest standards of diabetes care in an innovative and interactive teaching environment. Graduates gained specialized knowledge of diabetes with educational and management training, allowing them to deliver high-quality patient care. DDI started the Postgraduate Master's program in 2011, in partnership with the University of Dundee, Scotland. The program was concluded in 2019 with a total of 210 graduates across Kuwait.

Dasman Diabetes Institute and Sanofi host a two-day workshop on the Fundamentals of Clinical Research and Good Clinical Practice

DDI in collaboration with Sanofi, hosted a two-day training workshop titled "Fundamentals of Clinical Research and Good Clinical Practice" in the Courtyard Marriott. This workshop was delivered by the Brookwood International Academy, which aims to provide excellence in clinical-based research and good clinical practice (GCP). By developing a workshop centered around clinical research and clinical trials, participants learned how to setup clinical trials and the importance of understanding and complying with GCP during this process.



This course was intended for healthcare professionals working in the Ministry of Health, who care to improve research quality and patient outcomes. It included interactive presentations and exercises and qualifies participants for the optional examination for the Certificate in Clinical Research and GCP. GCP is a pre-requisite to conducting any clinical trial.



March 2019

French Diabetes Days at Dasman Diabetes Institute

In collaboration with the French Embassy in Kuwait, Sanofi, URGO Medical and Université Côte d'Azur, DDI held the 'French Diabetes Days' Conference at its' premises. This conference offered a platform for attendees to discuss the latest issues and findings on diabetes and its complications. It also offered opportunities for networking and forming new partnerships. Many international guest speakers from Imperial College, Weill Cornell, Nice University presented at the conference, in addition to chairpersons and speakers from the Institute, Kuwait University and the Ministry of Health.

The Collaborative Advantage Symposium

DDI hosted a full-day symposium titled 'The Collaborative Advantage', in collaboration with Mount Sinai and Jaber Al Ahmad Center for Molecular Imaging. The Symposium was inaugurated by the Undersecretary of the Ministry of Health, Dr. Mustafa Reda, followed by a presentation delivered by Dr. Adnan Shihab Eldin, the Director-General of KFAS. The American Ambassador to Kuwait H.E. Lawrence Silverman also delivered a presentation titled 'Welcome to International Collaboration'. The symposium consisted of a presentation delivered by Dr. Qais Al-Duwairi, Director-General of DDI, titled 'State-of-Art Diabetes from Bench to Bedside at DDI', who emphasized on the benefits of research collaboration and the world-standard integrated facilities under DDI's roof. Dr. Fahad Marafi, Director-General of Jaber Al-Ahmad Center for Molecular Imaging delivered several lectures highlighting the latest research findings and technologies utilized in the Center.



List of Events and Activities of DDI 2019

April 2019

'Obesity in your clinical practice - What you need to know,' SCOPE Conference

DDI partnered with the World Obesity Federation, American Association of Clinical Endocrinologists (AACE Gulf Chapter), and the International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO) to champion a conference dedicated to delivering the latest in the medical management of obesity. The conference, titled "Obesity in your clinical practice - What you need to know," was organized by the Strategic Centre for Obesity Professional Education (SCOPE) School and held at Jaber Al-Ahmed Cultural Center. Dr. Ebaa Al Ozairi, President of the AACE Gulf Chapter and Chief Medical Officer of Dasman Diabetes Institute, and Dr Salman Al Sabah, President of the American College of Surgery opened the conference.



Speakers from prominent institutions shared their knowledge and experience in medical and surgical management of patients with obesity. By redefining the basics in human physiology of body weight and fat regulation, participants can utilize their multidisciplinary teams to implement obesity treatment approaches, including diet, physical activity, behavioral therapy, pharmacotherapy and metabolic and bariatric surgery.

May 2019

Girga'an at Dasman Diabetes Institute



DDI, in cooperation with the Kuwait Finance House, held their annual Girga'an celebration for children with diabetes and their families in Kuwait.



List of Events and Activities of DDI 2019

October 2019

'Healthy Food, Healthy Lifestyle' Seminar

DDI hosted the 'Healthy Food, Healthy Lifestyle' seminar, in collaboration with the Netherlands Embassy in Kuwait. A group of local and international professionals delivered talks and held group work sessions during this seminar in attempts to increase awareness towards building a healthier next generation in Kuwait.



The seminar was inaugurated by Dr. Qais Al Duwairi, Director-General of the Institute who highlighted the importance of hosting health education seminars and fostering international collaborations. In addition, H. E. Mr. Frans Poutyt, Ambassador of the Kingdom of The Netherlands to Kuwait, presented an opening speech, followed by a keynote speech by Mr. Erik Smidt, Agricultural Counsellor GCC. Other speakers included Dr. Ebaa Al Ozairi, Chief Medical Officer at DDI, Mr. Maarten Smit, Director of GMBS Business Support, and Mr. Rutger Schilpzand, Expert Food Quality Labels & Executive Director Healthy Choices Program.

This is the second collaboration between the Embassy and Dasman Diabetes Institute. In 2017, the Institute hosted the "Healthy Food, Healthy Lifestyle" as a joint initiative to develop and deliver awareness-raising programs for healthcare professionals, caregivers and the public.



October 2019

Scientists from Dasman Diabetes Institute are presenting Genetics findings at the American Society for Human Genetics Conference (ASHG 2019) in Houston (Texas), USA.

The American Society for Human Genetics is holding its 69th annual conference at Houston (Texas), USA during 15-19 October 2019. The ASHG Annual Meeting is the largest human genetics meeting with an expected attendance of over 7,000 attendees this year. The meeting provides a forum for the presentation and discussion of cutting-edge science in all areas of human genetics.

The Genetics & Bioinformatics team from Dasman Diabetes Institute (DDI) gave four presentations at the conference based on their work on defining the genetic components behind metabolic illnesses (such as obesity, diabetes and related complications) in Kuwaiti population. Prof Fahd Al-Mulla, Dr Alphonse Thanaraj Thangavel and Ms Sumi E John are representing the Institute at the conference.

The Genetics and Bioinformatics team, led by Prof Fahd Al-Mulla, translates genes found in Kuwaiti populations that are associated with characteristics relating to the metabolic disorders. In order to achieve this, they collect DNA from people with metabolic illnesses and record the characteristics and their values. The genetic sequences are recorded, and sophisticated techniques are applied to identify the areas that associate with metabolic disorders; such areas show different characteristics among individuals depending on their risks for metabolic illnesses.

The team has recently identified gene regions and their variations that causes these metabolic disorders. These findings have been published in four different research articles that were shared in the conference.



List of Events and Activities of DDI 2019

November 2019

World Diabetes Day at Dasman Diabetes Institute



DDI held an informative event to commemorate World Diabetes Day on November 14, 2019, at its premises. The event allowed visitors to consult with diabetes specialists and dietitians, as well as gather medical information from booths that explained various facts of diabetes and promoted healthy lifestyle modification.

DDI's medical teams offered medical and educational support to its visitors on proper dietary habits, physical activities, first aid techniques, diagnostic imaging services and more. The event, in collaboration with Kuwait Finance House, helped people living with diabetes and the general public. The primary goal of the event was to promote awareness about diabetes, work towards achieving long-term positive health outcomes for diabetes management and empowering those affected by diabetes to proactively improve their quality of life.

December 2019

Kuwait Obesity Academy



DDI, in collaboration with the World Obesity Federation and the Strategic Centre for Obesity Professional Education (SCOPE), established the Kuwait Obesity Academy. The Academy is dedicated to delivering the latest in the medical management of obesity. The program offered a certification in 'Obesity Management' upon the successful completion of the course.

STRATEGY MANAGEMENT OFFICE

Strategy Management Office distribution:

Role	No of staff
Acting Strategy Management Office Manager	1
Strategy Senior Specialist	2
Quality Specialist	1
Total	4

Unit brief:

The Strategy Management Office (SMO) was established in February 2019 to improve the level of strategy management, strategy alignment, accountabilities, resource coordination and organizational productivity for the overall Institutional Strategy. The SMO's aim is to act as the pivotal key link in providing precise and transparent communication to all pertinent stakeholders with respect to the Institution's Strategic Plan implementation, Sectorial Workplans strategic alignment and annual deliverables and Quality Assurance across the Institute.

The SMO is responsible for three programs within DDI:

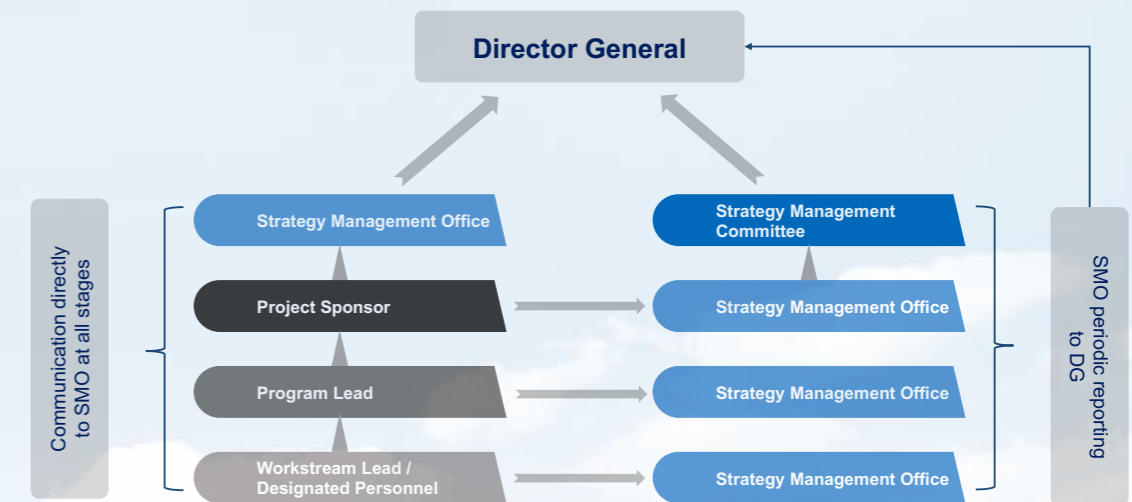
- I. **DDI Strategic Plan:** The SMO streamlines the monitoring and reporting for all programs of work relevant to the DDI Strategic Plan 2018-2023.
- II. **DDI Institutional / Sectorial Workplans:** The SMO finalizes the DG/Chief approved Institutional / sectorial workplans and communicates with relevant internal and external stakeholders.
- III. **SMO Quality Assurance:** The SMO is the lead for the Accreditation Canada QMEN-TUM International Program, DDI Policy and Procedure management, and International Standard Working Group Updates

The Strategy Management Office activities revolve around the following implementation disciplines which are underpinned by strong project management principles:

Program Governance	Mobilisation	
Strategy Implementation Management		
Risk Management		
Relationship Management		Execution
Communications Management		
Knowledge Management		
Institutional Sectorial Workplans		
Quality Assurance		Monitoring
Stakeholder Management		

The following diagram illustrates the established communication channels available for SMO monitoring, escalation and reporting.

SMO Communication Flow



SMO Activity Milestones Completed in 2019 vs. Plan	Q1	Q2	Q3	Q4
Planning				
SMO Established	■			
Strategy Management Committee (SMC) ToR	■			
SMO Communication Plan / Authority Matrix & Sector Mapping	■			
Institutional Alignment with Strategy				
SMC Kick Off		■		
Mapping Initiatives 1, 4 & 5		■		
Mapping Initiatives 2 & 3		■		
Governance Structure & Framework			■	
MoU & Collaboration / QA / Knowledge Management Frameworks developed			■	
Update Strategic Plan				■
Develop & Realign 2019 Institutional Work Plans to link to Strategy				■
ERM and QSMC Frameworks				■
Implementation & Roll out				
Initiative Monitoring		■		■
Strategic Management Office Q1 Dashboard & Mid-Year Report (& Dashboard)			■	
Develop 2020 Institutional Workplans				■
Strategic Management Office Q3 Dashboard				■

Key:
 MoU: Memorandum of Understanding
 ERM: Enterprise Risk Management
 QSMC: Quality & Safety Management Committee
 QA: Quality Assurance
 ToR: Terms of Reference
 RASCI: Responsible/Accountable/Support/Consult/Inform

Number of Plans/Reports Generated by SMO in 2019:

Plans/Report	Quantity
Frameworks	6
Reports	1
Dashboards	3
Institutional Workplans (2019 & 2020)	8
Strategy alignment	1
Total	19

Strategy Plan 2018-2023: 2019 Initiative / Program Activity / Strategy Status

INITIATIVE	DDI SECTOR	2019 PROGRAMME ACTIVITY STATUS	STRATEGY STATUS
		DDI Strategic Programmes	
Initiative 1	Research	1A - Genetics	
Research		1B/1C/1D - Epidemiology & Public Health (includes National Diabetes Registry)	●
Charters 1-3		1E/1F - Pathophysiology	
Initiative 2	Medical	2A - Create a CT unit and implement clinical trials	●
Research Charter 4		2B - Use interventions / imaging for DM prevention & management	
Initiative 3	Medical	3A - 3G Educational and Skills Development	●
Initiative 4	DG & Operations	4A - 4G Organizational Transformation	●
Initiative 5	DG & Operations	5A - 5I Financial Sustainability & Revenue Generation	●

INSTITUTIONAL STRATEGIC PROGRAM STATUS

Strategy Status
 ● On Target
 ● Risk
 ● Issue

DDI 2019 Achievements

ACCREDITATIONS



Accreditation Canada (AC)
Unconditional Diamond Level

- 2 HIPAA Compliance (Data Governance)
- 3 7 patents are in various stages
- 4 College of American Pathologists

DAFNE (DOSE ADJUSTMENT FOR NORMAL EATING)

- 1 572 graduates
- 2 60% reduction in ambulance calls
- 3 50% reduction in admission to hospitals

ESTABLISHMENTS

- 1 Kuwait Obesity Academy Established
First event in Kuwait offering a certification in "Obesity Management"
- 2 Strategy Management Office (SMO) Established
- 3 GIS Canberra Collaboration
Established a Committee chaired by the MOH Undersecretary. GeoHealth Lab was inaugurated.

NATIONAL DIABETES REGISTRY (NDR)

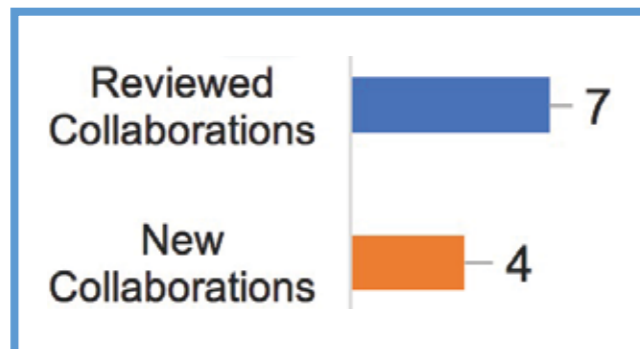
- 1 Infrastructure completed
- 2 Pilot Region Farwaniya Governorate
- 3 Launched 22 primary healthcares

DDI 2019 Achievements

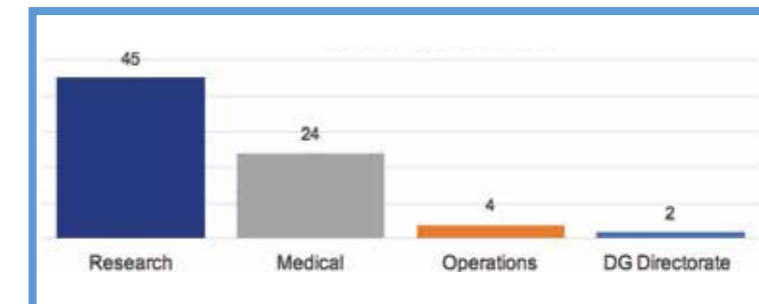


COLLABORATIONS

2019 KEY COLLABORATIONS



PROJECTS



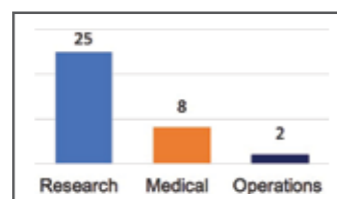
75
ongoing projects



NATIONAL COLLABORATIONS

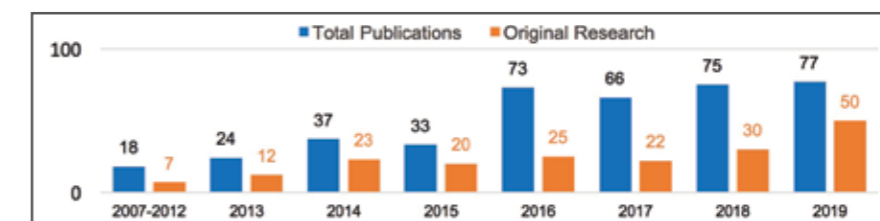


SUMMER INTERNSHIP PROGRAM



PUBLICATIONS

2007 - 2019



IMPACT FACTOR 2018 VS 2019



DDI 2019 Achievements

POSTERS AND PRESENTATIONS

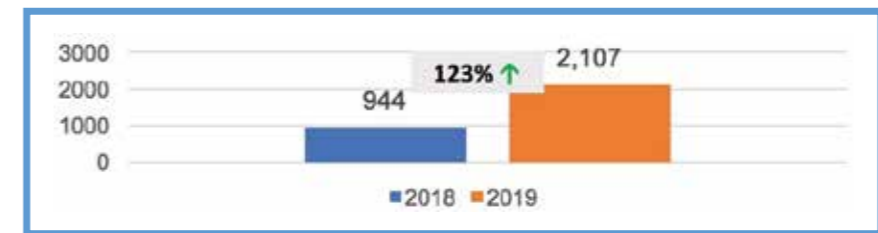
2019 POSTERS / ORAL PRESENTATIONS



37
research posters and oral presentations presented in 2019



RESEARCH PARTICIPANT: SPECIAL SERVICES SAMPLES 2018 VS. 2019

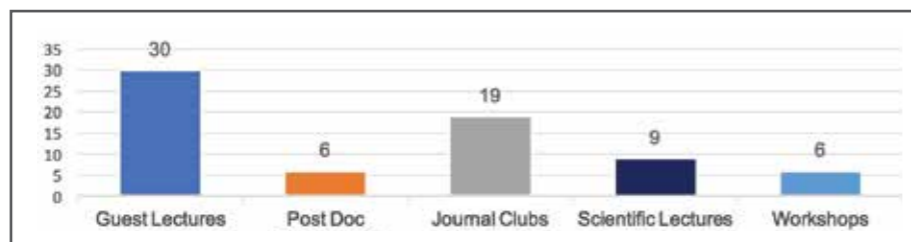


2,107
samples collected at DDI Biobank by end of 2019



123%
increase from 2018

2019 LECTURES AND PRESENTATIONS



MEDICAL EDUCATION AND SKILL DEVELOPMENT PROGRAMS

1



FIRST PRE-RAMADAN EDUCATION EVENING
initiated for children with T1DM and their parents

2



35
children attended

3



50
adults attended

DDI 2019 Achievements



MEDICAL EDUCATION AND SKILL DEVELOPMENT PROGRAMS

1



12-WEEK PROGRAMME of clinical and research seminars delivered

2



30-40 dieticians from MOH attended

3



ADVANCED TRAUMA LIFE SUPPORT (ATLS) PROVIDER COURSE

4



70 trained doctors



MEDICAL EDUCATION AND SKILL DEVELOPMENT PROGRAMS

Implemented Accredited Training and Development for Professionals

•DDI provided accredited training and development opportunities for **507 professionals**

Delivered Initiatives for Schools and the Public for Diabetes Awareness

•DDI delivered **20 programs** in 2019 with a total of **1,243 participants**



≥ 0.5% HbA1c reduction was achieved in 36.9% patients



4170 one-to-one diabetes education



190 school nurses trained on Diabetes E-learning Program & Basic Introduction to Insulin Pump Therapy



477 HCPs trained on educational programs



ACHIEVEMENTS

4



Dr. Sulaiman Marafie
1st place at the National Diabetes Institute "Diabetes Asia Conference"



ACHIEVEMENTS



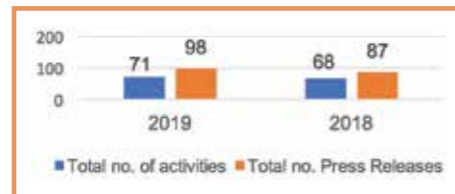
Dr. Dalal Alsaeed
3rd place at the Gulf Chapter of the Seventh Annual Clinical Congress by the American Association of Clinical Endocrinologists

DDI 2019 Achievements

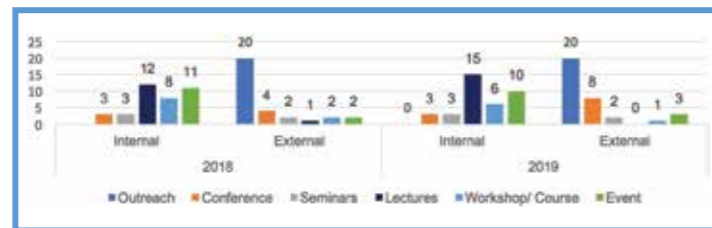


PUBLIC AWARENESS

ACTIVITIES & PRESS RELEASES



2019 PUBLIC AWARENESS ACTIVITIES



RESEARCHERS PROFILES

RESEARCH MANAGEMENT SYSTEM showcases the Institute's researchers' profiles publicly on the web
<https://research.dasmaninstitute.org/>



CAPACITY BUILDING



72%
Kuwaitis in management positions

31%
Kuwaitis in DDI



PUBLIC AWARENESS

1



DDI Website revamped and redesigned in 2019 with 360 interactive tour of DDI

2



Public Office for Research Translation and Liaison (PORTAL) established in 2019 to educate and engage the public about research and scientific breakthroughs in a simplified way

3



12 research newsletters published in 2019



RESEARCH SECTOR

RESEARCH SECTOR

Sector Brief

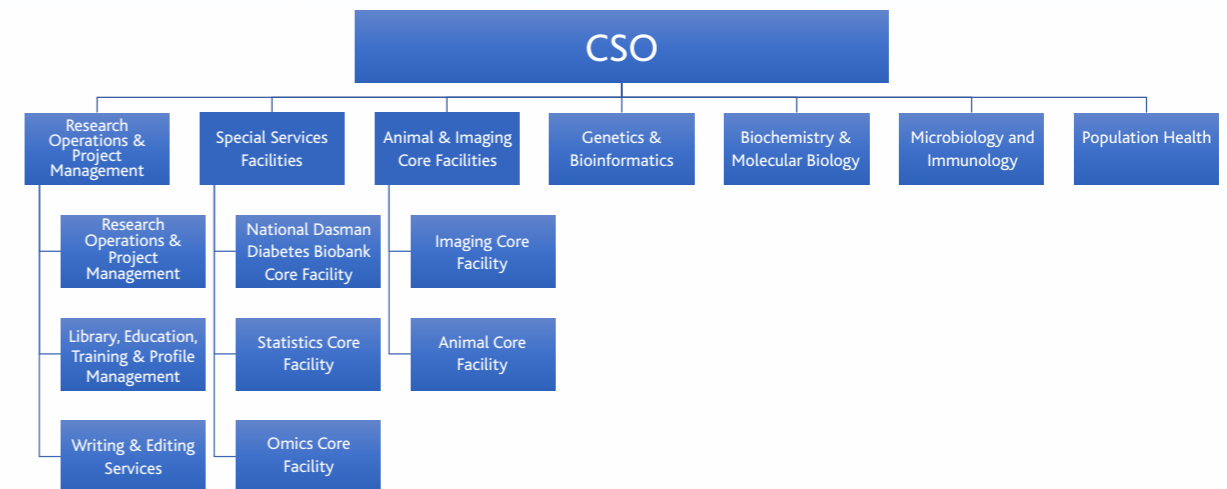
The Research Sector occupies a central position within DDI, comprising a pool of experienced researchers who apply a multi-disciplinary approach in the study of diabetes and its complications. To achieve DDI's mission of addressing the diabetes epidemic in Kuwait, the research strategy is encompassed within the first two DDI strategic initiatives:

1. **Epidemiology, Etiology, Genetics and Pathophysiology of Diabetes:** Encompassing biomedical, population health, genetics and clinical research through a multi-disciplinary involvement focused on the identification of determinants to prevent and manage diabetes.
2. **Prevention and Management of Diabetes:** Involving research activities to identify interventions for the management of diabetes and associated conditions across various population segments

Research Sector Structure

The Research Sector comprises of four Biomedical Research Departments that carry out the research activities, which are overseen by the Chief Scientific Officer (CSO). The Research Departments are supported by Research Operations and Project Management and Core Facilities. The new research departments focus on specific research themes:

1. Genetics/genomics related to diabetes and metabolic diseases
2. Epidemiology and public health aspects of diabetes and its complications
3. Pathophysiology of diabetes and its complications
4. Clinical care research and clinical trials



RESEARCH SECTOR MANAGEMENT

1. CHIEF SCIENTIFIC OFFICER

The Chief Scientific Officer (CSO) oversees the research activities carried out at DDI, providing a high-quality, solid infrastructural platform for all aspects of research. The CSO responsibilities include:

- Critically evaluating the research methods and findings of health outcome studies
- Leading and maintaining DDI's reputation by fostering the highest level of cooperation, integrity, objectivity, responsiveness, and overall transparency in the analysis of evidence on health care interventions
- Participating as an active member of the senior management team with the Director General, Chief Operations Officer (COO), and Chief Medical Officer (CMO), to shape the strategic direction and ensure the operational excellence of DDI
- Managing a multi-center network of academic collaborators at the domestic and international level
- Oversee, direct and coordinate the implementation of the research strategic plan and ensuring collaboration among departments, enable succession planning and skills transfer
- Creating a multi-disciplinary research approach that enhances inter-collaborations to achieve strategic goals and objectives

The CSO is responsible for the overall steer and direction of research at DDI, and thus ensures DDI's research is focused on four key areas:

- **Basic Science:** Basic science researchers seek to understand fundamental aspects of genetics, molecular biology, cell and developmental biology, and tissue regulation.
- **Translational Research:** Translational research facilitates the movement of new ideas and treatments from the laboratory to the clinic, as well as the movement of clinical observations from the clinic to the laboratory.
- **Clinical Research:** Pushing the envelope of early detection and treatment, personalized care, and immunotherapy are key to achieving our mission.
- **Prevention and Personalized Risk Assessment:** Prevention is a cornerstone of DDI in preventing diabetes.

Major Achievements 2019

- Officially established and launched the Patent and Research Translational Office, with 4 filed patents and 2 in-filing process (9 reviewed)
- Enhanced Research productivity:
 - Creation of Research Groups within Research Departments
 - 123.5% increase in number of proposals submitted
 - 66.7% increase in DDI original research publications

- The development and launch of the Research Information Management System (PURE)
- Launch of the Research Evaluation Criteria
- Establishment and launch of the Public Office for Research Translation and Liaison (PORTAL)
- Launch of the Research Newsletter with 12 newsletters issued

Committees

- Vice-chair of the Research Audit and Review Committee (RARC)
- Member of the Data Governance Council (DGC) at DDI
- Member of the MMI-DDI Supervisory Committee
- Member of the Patent and Research Translational Office
- Member of the Senior Management Committee

International collaborations

- Agreement of the MMI-DDI Collaboration "Knowledge Sharing and Innovation in Diabetes Care", involving 5 projects across a multi-site collaboration network that includes:
 - McGill University (Faculty of Medicine, McGill University Health Center and Research Institute, McGill University Simulation Center)
 - Montreal Diabetes Research Center, Sunnybrook Health Science Center
 - Sunnybrook International
 - University of Glasgow

2. RESEARCH OPERATIONS AND PROJECT MANAGEMENT

Department Brief

The Research Operations and Project Management (ROPM) was integrated in the Research Sector to provide administrative support in all areas of DDI research, and to facilitate the communication among the different departments. Working alongside the different Research Departments and Core Facilities, the ROPM department is a management platform responsible for standardizing project and operations-related governance processes and enabling the sharing of resources, methodologies, tools, and techniques.

The functions of the ROPM department include:

- **Research Operations, Project Management and Strategy Planning:** All research-related projects are coordinated by the ROPM department, which ensures the appropriate use of resources, budgets and timelines, compliance with guidelines, analysis of research outputs and overall management of research activities. In addition, the ROPM supports Research Departments achieve their objectives by monitoring and managing their activities according to the DDI research 5-year strategic plan.

- **Library, Education, Training and Profile Management:** In the scope of ROPM, the library provides a collection of print and electronic resources that support the research needs of the Institute and offers a variety of educational programs for effective use of information sources. The library services also coordinates the organization of research scientific programs, seminars and lectures, and catalogues all new publications from DDI.
- **Publication Management, Writing and Editing Services:** ROPM supports researchers delivering their research outputs, in the form of publications in peer-reviewed journals, abstracts and presentations in internationally recognized conferences. The writing services provide a streamlined process to facilitate the writing and editing of research publications, by ensuring compliance with plagiarism and ethical guidelines, and improving the overall quality of the manuscripts prior to publication.

Department Distribution

Role	No of staff
Head of Department	1
Library Manager	1
Scientific Writer	1
Specialist	2
Total	5

Key Objectives

The key objectives of the ROPM Department are to establish, implement and maintain robust supportive platforms across the Research Sector, which include:

- Research Management System: for research proposals and project management, strategy roll out, implementation and monitoring, research outcome/output reporting
- Integrated Interface for both the Research and Operations Sectors: streamline all related operations-related activities within the Research Sector
- Publication Management and expert scientific writing/guidance platform
- Library management, education and training support: a facilitative platform for journal and library access and researcher profiling

Committees

The ROPM team is part of multiple committees within DDI, which include:

- Research Audit and Review Committee (RARC)
- MMI-DDI Supervisory Committee
- Patent and Research Translational Office
- Purchasing and Procurement Committee

Major Achievements 2019

- Official launch of the Research Information Management System (PURE)
- Official launch of the Research Evaluation Criteria
- Launch of the Research Newsletter

• Number of Project Proposals:

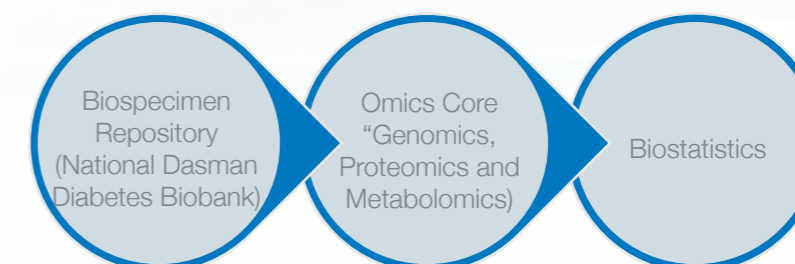


RESEARCH SECTOR DEPARTMENTS

1. SPECIAL SERVICES FACILITY

Department Brief

The department of Special Services Facility is a Core Facility and is composed of three main domains:



National Dasman Diabetes Biobank

The National Dasman Diabetes Biobank (NDDDB) offers DDI and collaborators repository services to conduct short and long-term research projects related to diabetes and its complications. The NDDDB's wide range of services include sample processing and fractionation, storage, testing and nucleic acid isolation, among others. The NDDDB is a member of the European, Middle Eastern and African Society for Biopreservation and Biobanking. It is a Biosafety Level 3 laboratory which specializes in the processing of blood and other body fluids, tissue samples (for histology and immunohistochemistry purposes) and cell culture. The NDDDB facilities include secure sample storage rooms with -80°C freezers and liquid nitrogen tanks. NDDDB houses over 32,000 research participants' samples and tracks more than 300,000 biological specimens for freezer inventory using a sample management system (Tissue Auditor, Infonetica Research Solutions, United Kingdom).

Omics Core Facility

The Omics Core Facility houses high-end genomics, proteomics and metabolomics specialized equipment.

The Genomics Core, one of the most advanced facilities of its kind in Kuwait, is aimed at deciphering the genetic determinants of obesity and diabetes in Kuwait and its associated traits. Given the uniqueness of the genetic component of the population of Kuwait, special attention has been given to establishing a state-of-the-art facility that can decode the Kuwaiti Genome. This platform provides research technologies and instrumentation for high-throughput genomics, epigenomics and transcriptomics complemented with an extensive set of technologies to study genome structure, dynamics and function. The Genomics Core facility is equipped with high-throughput sequencing systems, including the HiSeq 2500, MiSeq, iSCAN System and the 3730xl genetic analyzer, as well as gene expression profiling technologies such as Real-Time PCR.

Complementing its Genomics Core, DDI is also equipped with advanced Proteomics and Metabolomics Core equipment. Equipped with state-of-the-art mass spectrometry instrumentation (which include the Thermo Scientific™ Q Executive™ HF hybrid quadrupole-Orbitrap and the Orbitrap Velos mass spectrometer), the Proteomics/Metabolomics Core is able to accurately identify and quantify proteins, peptides, lipids, glycans and other small molecules. In addition, untargeted proteomics/metabolomics profiling helps identify and pathway-map the proteins and metabolites present in a biological system. Given that metabolites are the end-products of processes occurring in cells, tissues, and organs, metabolomics provides a snapshot of the biological system not possible with other techniques.

Biostatistics

To provide statistical consultation to DDI researchers and collaborators in project planning, study design, implementation, analysis and presentation of research findings, ensuring statistically sound approaches for publication in peer-review journals.



Department Distribution

The Department includes the following staff:

Role	No of staff
Head of Department	1
Statistical Consultant	1
Biobank Manager + Research Associate II	1
Omics Manager + Senior Research Assistant	1
Team Leader	1
Research Associate	2
Senior Research Assistant	2
Research Assistant	1
Senior Research Coordinator	1
Research Coordinator II	2
Research Coordinator	1
Research Technical Specialist	1
Total	15

Key Objective

The main objective of the Department is to facilitate human sample collection and storage in the biobank, as well as providing a well-established omics platform for biospecimen analysis and statistical support for data analysis.

Major Achievements 2019

All projects in DDI are supported by the Special Services Facility resulting in the involvement of special service facility activity in almost all DDI publications.

- Number of Research Participants in 2019: 2,017 participants

Number of Research Publications supported by Special the Services Facility in 2019: 24 publications

2. ANIMAL AND IMAGING CORE FACILITY

Department Brief

The Animal and Imaging Core Facility offers researchers useful biological systems and imaging tools to facilitate diabetes research. Animal models are common in biomedical research since their biological systems, genetic structure and immunological responses closely mirror those of humans. Animal models are used at different stages of the research process, including the discovery, development and testing of new pharmaceuticals.

The Animal and Imaging Core Facility provides training on the use of animals for research, according to international guidelines and standards, and offers animal care and handling services, including animal breeding, drug treatment and blood/tissue collection. The department has a state-of-the-art zebrafish housing facility, which aims to promote zebrafish research techniques, including embryo microinjection, CRISPR/Cas9 technology and morpholino oligonucleotide-mediated antisense gene-specific knockdowns. In addition, the department is equipped with advanced imaging systems and equipment, which allow tissue microdissection using the Laser Microdissection System, intracellular trafficking of fluorescence proteins using Live Cell Image systems, and organ and tissue specific trafficking of molecules using in vivo imaging (IVIS) spectrum CT imaging system.

Department Distribution

Role	No of Staff
Head of Department/Senior Scientist	1
Manager of Animal Facility/Scientist II	1
Veterinarian	1
Research technician	3
Total	6

Key Objectives

- Conduct animal model research as per international guidelines and standards.
- Train DDI researchers and interns regarding animal care and handling, biocontainment, inoculations, blood/tissues sample collection, survival surgeries, euthanasia, etc.
- Provide rodents/fish for research through in-house breeding.
- Provide in vivo imaging facility (IVIS).
- Broaden the scope of techniques available to DDI researchers.

Major Achievements 2019

- Trained six research staff on the use of animals for research, including husbandry, handling, breeding and animal pathophysiology.
- Trained three research staff on the use of the Operetta Imaging System.
- In-house breeding animal models:

Zebrafish	WT AB
	WT LT
	Transgenic Albino
	Transgenic LT
	Transgenic ABCC*
	Transgenic GCGRb*
Mice	C57BL/6
	BALB/c
Rat	Sprague Dawley

*under development

- Established a technology transfer/training initiative with Montreal Diabetes Research Center as part of MMI-DDI and ZFIN (Pierre Drapeau) Lab in Montreal, with the objective of training DDI researchers on the use of zebrafish as a promising and cost-effective animal model for diabetes research.

Number of Publications supported by Animal and Imaging Core Facility: 9

3. GENETICS AND BIOINFORMATICS

Department Brief

The Department primarily focuses on the identification and characterization of genes and gene variants increasing the risk of obesity, diabetes, and related complications in Kuwaiti populations. We utilize high throughput genome wide methodologies, including genome-wide association studies (GWAS), whole genome/exome sequencing, whole transcriptome profiling and high-resolution genotyping. The Department also focuses on the clinical significance of the identified gene/variants to map a translational medicine approach. The molecular function of the identified variant is investigated using different cell types and animal models through innovative techniques: intracellular signaling studies, CRISPR/cas9 technology, gene over-expression and chromatin immunoprecipitation (ChIP). Other current areas of research include investigating epigenomic alterations, gene-gene interactions, microRNA profiling and development of panels consisting of population-specific markers for predicting the risk outcomes of complex disorders.

Department Distribution

Role	No of Staff
Head of Department	1
Principal Scientist	1
Scientist	2
Post-doctoral Fellow	3
Senior Research Associate	2
Research Associate II	4
Research Technical Specialist	1
Total	14

Support (Secondments/Other Departments)

Role	No of Staff
Other Departments	
Senior Scientist (Animal & Imaging Core Facility)*	1
Research Technicians (Animal & Imaging Core Facility)	2
Secondments	
Scientist	2
Post-doctoral Fellow	1
Total	6

*Head of Animal and Imaging Core Facility

Key Objectives

- Establish a next generation sequencing (NGS) and bioinformatics pipeline for RNA sequencing, genome-wide miRNA sequencing and high-resolution human leukocyte antigen (HLA) typing.
- Delineate genetic factors predisposing to different forms of diabetes by family-based linkage studies, focusing on single/multigenerational Kuwaiti families with maturity onset diabetes of the young (MODY), latent autoimmune diabetes in adults (LADA), gestational and neonatal diabetes, other congenital diabetes (autosomal dominant, recessive), and rare metabolic diseases.
- Develop Kuwait-specific risk assessment tools and panels for metabolic disorders.
- Perform genetic characterization of mitochondrial DNA variants linked to diabetes and related metabolic disorders.
- Establish functional assays and animal models to elucidate the regulatory role of specific variants/genes implicated in diabetes and obesity.
- Develop a Kuwait Variome database cataloging population and/or disease-specific genetic variants.

- Evaluate the role of identified risk *loci* in the prevention and treatment of diabetes through close collaboration with the medical sector.
- Validate electrochemiluminescent (ECL) assays for the precise detection of diabetes-related autoantibodies.

Major Achievements 2019

Number of Research Publications (including inter-departmental collaborations): 19*

*Includes one book chapter

Number of Projects: **14**

1 | Completed **1** | Postgraduate Project **12** | Ongoing

Number of Patents: **1**

A Method for determining predisposition to Metabolic Syndrome Patent Filed

International Collaborations

The department is involved many international collaborations - most notable ones are:

- Consortiums of Genetic Investigation of Anthropometric Traits (GIANT)
- Global Lipids Genetics (GLGC) at Broad Institute (USA)
- McGill University on Kuwaiti Familial Diabetes Genetics
- Weill-Cornell Medicine (Qatar and New York), on genome data sharing & integration
- Genomics England, on mapping Arab genomes and genetics to the global genomics.
- Science, Technology and Innovation Partnership
- European Union and GCC Personalized Medicine Coalition

4. BIOCHEMISTRY AND MOLECULAR BIOLOGY

Department Brief

Type 2 Diabetes has reached alarming rates worldwide, in particular in the Gulf region and Kuwait due to high rates of obesity. The research of the Biochemistry and Molecular Biology Department is focused on enhancing our basic understanding of metabolic signaling pathways involved in dyslipidemia, oxidative stress and insulin resistance, which will allow researchers to develop improved identification methods for those at risk of T2D. It will also advance the ability to predict the complications of the disease and aid in the design of precisely tailored different therapies. The department has been actively applying a multi-systems approach, utilizing cutting edge proteomics and transcriptomics techniques to identify clinically relevant biomarkers and establish their role in diabetes and its complications. Data generated from the different assays are merged together to generate models, allowing researchers to integrate their findings with known pathways and uncover new players that modulate obesity and diabetes. The detection of novel biomarkers is crucial in the drug discovery process, important for effective therapeutic development.

Department Distribution

Role	No of Staff
Head of Department/Senior Scientist	1
Senior Scientist	1
Scientist II*	1
Scientist	2
Scientist (secondment)	1
Post-doctoral Fellow	2
Research Associate II	1
Research Associate	3
Research Assistant	1
Total	13

* Head of Special Services Facility Department

Key Objectives

- Understand the role of SGLT2 inhibitor and GLP1 agonist on ANGPTL related proteins as well as other related diabetic biomarkers.
- Establish the role of key heat shock proteins, mainly DNAJB3, DNAJC27 and HSP60 proteins in obesity and T2D and understand their role in insulin signaling pathways.
- Understand the interplay between previously identified biomarkers and complications of diabetes, such as diabetic nephropathy, sleep apnea and cardiovascular diseases.
- Establish the link between existing biomarkers and their regulation by microRNAs (miRNAs).
- Identify the targets genes of miRNAs that are affected by obesity and diabetes and their signaling networks.
- Deciphering the role of Urocortin 3, a novel insulin secretion regulator in diabetes
- Understanding the effects of various lifestyle interventions (physical exercise, diet, metabolic surgery) on dyslipidemia, oxidative stress and insulin resistance.

Major Achievements 2019

- Dr. Sulaiman Marafie won the 1st prize for the best poster award at the National Diabetes Institute (NADI)-Diabetes Asia Conference (DAC) 2019, in Malaysia

Number of Research Publications (including inter-departmental collaborations): 13

Number of Projects: 15

2 | Completed 1 | Postgraduate Project 12 | Ongoing

Number of Patents: 2

Use of MicroRNA-103 as Inhibitor for dyslipidemia by repressing ANGPTL8 gene Patent Filed

Use of MicroRNA-181d as Inhibitor for dyslipidemia by repressing ANGPTL3 gene Patent Filing Process

International Collaborations

- Dr. Marc Prentki MDRC - Lipolysis - ANGPTL
- Prof. Abdul Ghani, UT health San Antonio, TX, USA
- The Forsyth Institute, Cambridge, USA
- Obesity Center Amsterdam, Saint Lucas Andreas Hospital, Amsterdam, The Netherlands on project "Biomarker study in bariatric surgery patients with and without obstructive sleep apnea"

5. MICROBIOLOGY AND IMMUNOLOGY

Department Brief

Obesity/Type 2 diabetes and associated complications are rapidly growing and representing a serious threat to Kuwaiti population as well as worldwide. There is an urgent need to identify the novel immune/metabolic markers and signaling pathways to understand the mechanisms underlying high-fat diet-induced inflammation/T2D and related complications.

The department of microbiology and immunology studies the immune-metabolic changes in adipose tissue driven by imbalances in high-fat diet, as well as their interaction with high levels of circulatory adipokines (individually or interactively). These may play a key role in inducing, sustaining or promoting inflammation, which results in disrupting glucose homeostasis and insulin sensitivity. Our main research goal is to study the immuno-metabolic mechanisms to target metabolic inflammation associated with dysregulation of glucose homeostasis and insulin sensitivity.

The research of our current projects is addressing the following key questions:

- What are the immuno-metabolic risk factors and signaling pathways for inflammation, insulin resistance and associated complications?
- How inflammatory mediators interact with high fat diet components and trigger inflammation/insulin resistance?
- How genes are turned on and off (epigenetic modifications) under the influence of different nutrients or adipokines?
- What are the target genes of inflammatory signal pathways?
- What are the transcriptional regulators for adipose tissue remodeling?
- How gut influences metabolic inflammation?

Department Distribution

Role	No of Staff
Sr. Scientist/Head of Department	1
Scientist II*	1
Scientist	2
Post-doctoral Fellow (Secondment staff)	1
Research Associate II	2
Research Associate	1
Senior Research Assistant	1
Research Assistant II	3
Research Assistant	1
Research Assistant (Secondment staff)	1
Total	14

*Manager of the Animal Core Facility/ Group Leader of the Oxidative Stress Group

Key Objectives

Our current activities focus on the immune receptors/bio-markers as well as their mechanistic interactions with high fat diet components and their role in the development of inflammation, reducing browning of adipose tissue, insulin resistance, diabetes and associated complications. The ongoing work is thematically summarized below:

- To identify innate immune TLRs and their association with metabolic inflammation/T2D
- To study the epigenetic changes underlying effects of high fat diet in metabolic inflammation and insulin resistance
- To determine whether crosstalk between IL-6 and TNF- α is a key regulator of metabolic inflammation, insulin resistance and glucose homeostasis
- To assess the role of high-fat diet and bioactive lipids in inflammation, insulin resistance/diabetes
- To investigate the role of transcription factors IRF3/IRF5/IRF7 and FOXO in obesity/T2D.
- To elucidate the role of TLR2 and TLR4 on islet inflammation in diet-induced obesity mouse models
- To determine transcriptional regulators of brown and beige fat
- To study the role of oxidative stress in metabolic inflammation

- To study the cellular and molecular immune mechanisms involved in etiopathogenesis of diabetic complications, such as neuropathic pain and cardiovascular disease
- To study the role of gut microbiota in metabolic disease, and the use of probiotics/dietary interventions for the prevention and treatment of diabetes and associated complications

Major Achievements 2019

- Dr. Fatema Al-Rashed, was awarded “Most Promising Scientist” at the DDI Annual Award Ceremony.

Number of Publications (including inter-departmental collaborations): 12

Number of Projects: 12

1 | Completed

11 | Ongoing

Number of Patents: 3

Targeting Long Chain Acyl-CoA synthetase (ACSL1) for preventing obesity-triggered inflammation

Patent in Filing Process

The IL-33/ST2 axis is dysfunctional in the adipose tissue of early-stage untreated metabolic disease

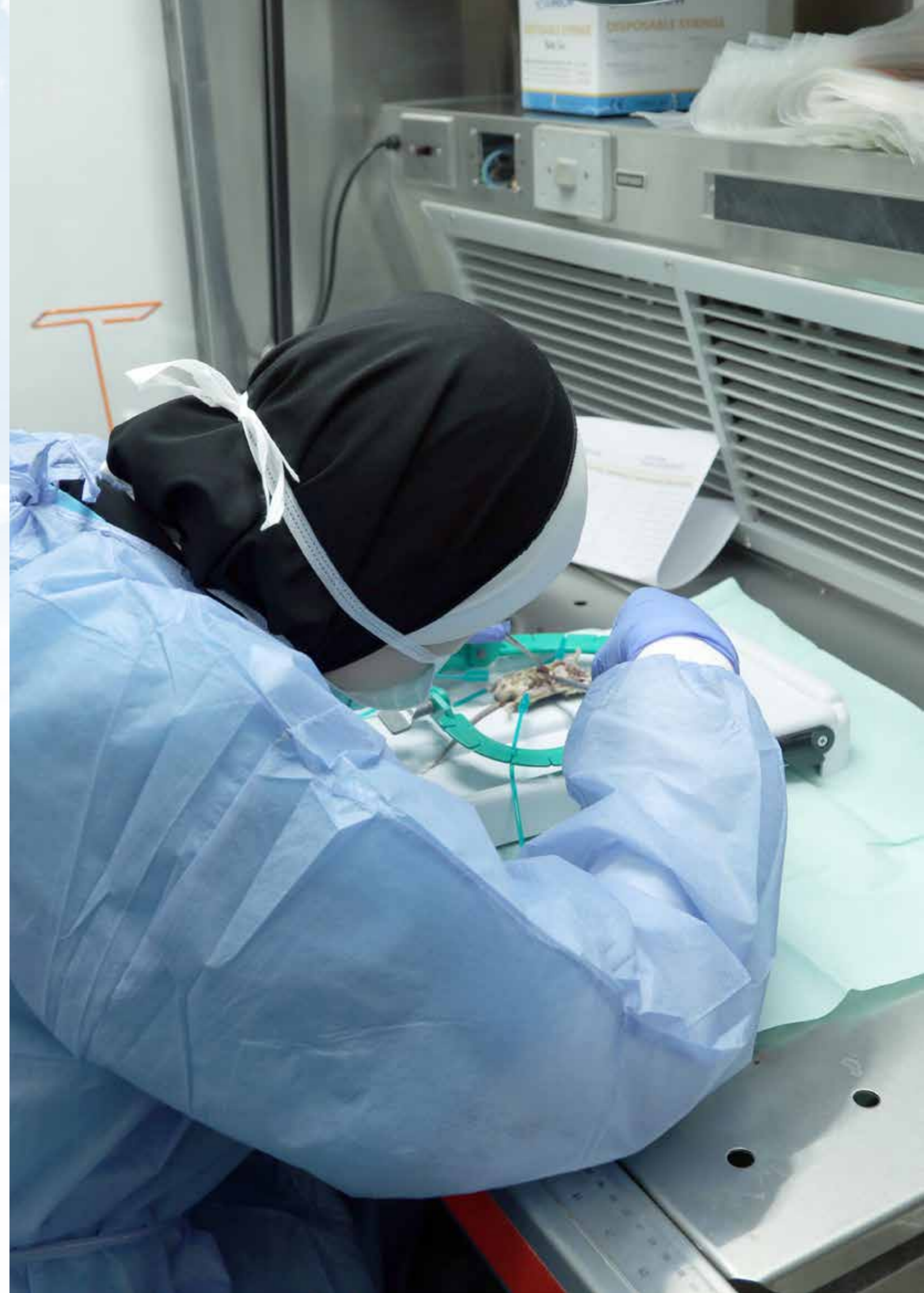
Patent Filed

Soluble ST2 is directly correlated with HbA1c in individuals with an average glycaemia in the normal/prediabetes range

Patent Filed

International Collaborations

- Harvard Medical School
- University of Central Lancashire, UK
- Stony Brook University, USA
- VSL Pharmaceutical INC



6. POPULATION HEALTH

Department Brief

The Department of Population Health's overall goal is to contribute to improved health and well-being of individuals living with diabetes, or at high risk of developing diabetes, in Kuwait. The department focuses on planning and implementing high quality research in close collaboration with the Ministry of Health (MOH) to provide evidence-based information for policy makers to translate into large-scale implementation programs. Traditionally, the department has had a strong focus on clinical research in vulnerable groups, in particular children with type 1 diabetes and rare forms of diabetes (monogenic diabetes). During the last few years, the research agenda has expanded to focus on childhood obesity, pre-diabetes and T2D, as well as gestational diabetes, to address urgent public health needs in Kuwait. An initiative to create a National Diabetes Registry, spear-headed jointly by DDI and MOH, represents a major focus of their efforts to contribute to improved diabetes care in Kuwait and the close working relationship with MOH.

Department Distribution

Role	Secondment from	No of Staff
Head of Department/Consultant Pediatric Endocrinologist	MOH	1
Senior Scientist	-	1
Pediatric Endocrinologist/Associate Professor	KU/Medical Faculty	1
Pediatric Endocrinologist	MOH	2
Senior Diabetes Specialist	MOH	1
Epidemiologist/Associate Professor	KU/Faculty of Public Health	1
Senior Research Assistant	-	1
Research Assistant	-	1
Total		9

Key Objectives

- Establish a National Diabetes Registry
- Address childhood obesity and associated health effects, in particular pre-diabetes and T2D
- Estimate the prevalence of gestational diabetes and macrosomia in Arab women

Major Achievements 2019

Number of Publications (including inter-departmental collaborations): 4

Number of Projects: **10**

3 | Completed

7 | Ongoing

International Collaborations

- The Swedish Diabetes Registry
- AstraZenca
- London School of Economics



MEDICAL SECTOR

MEDICAL SECTOR

Sector brief

The Medical Sector at DDI uses a multi-faceted approach to deliver the best medical care and research outcomes by using unique and innovative methods. The Sector tackles all aspects of clinical care, research, training, education and health promotion to achieve DDI's mission.

The Medical Sector supports and delivers the following DDI strategic initiatives in 2019:

1. The Medical Sector supports the Research Sector in the delivery of the research strategy e.g. genetics and pathophysiology of diabetes and clinical and multi-disciplinary human research focused on identification of determinants to prevent and manage diabetes.
2. Management of Diabetes and its complications: Research activities to identify lifestyle and other interventions to manage diabetes and associated conditions across various population segments.
3. Education and Training Development: A framework for training, development and delivery of awareness-raising programs for patients, caregivers and the public through collaboration with the Ministry of Health (MOH) that will lead to the improvement of healthcare delivery services, patient well-being and diabetes outcomes using technology, behavioural interventions and therapeutics

MEDICAL SECTOR STRATEGY

Through effective collaborations with internal and external entities, the Medical Sector has aligned its outcomes with DDI strategic objectives and initiatives. Using clinical expertise, the Sector initiates research activities for the treatment, management and prevention of diabetes and its associated complications. By measuring the impact and outcomes of the research initiatives, the Medical Sector continuously maximizes the use of its resources. These resources include:

1. Education and Training
2. Clinical Skills Centre
3. Clinical services: Physicians, Clinical Laboratory, Pharmacy, Podiatry, Nursing and Health Information Management
4. Diagnostic Imaging
5. Lifestyle and Wellbeing: Medical Fitness Center and Nutrition
6. Clinical Care Research and Trials
7. Dose Adjustment for Normal Eating (DAFNE)
8. Healthcare Quality and Patient Safety

All initiatives and research projects are overseen by the Chief Medical Officer (CMO).

CLINICAL OPERATIONS & GOVERNANCE OFFICE

Clinical Operations and Governance Office, headed by Clinical Operations Manager, was established to facilitate the daily operations of all Medical units to ensure high-quality outcomes and safety standards. The Office is responsible for organizing and maintaining the Medical Sector's Workplans, Key Performance Indicators (KPIs), budgets, procurement orders, and daily operations. The Clinical Operations and Governance Office is also responsible for the management of clinical services, which include the: patient flow, clinical pathway, clinic schedule, healthcare professional training, patient liaison, health information management, supporting research and recruitment, insurance claims and integration of quality indicators throughout the Sector.

CLINICAL CARE RESEARCH & TRIALS

With the unique setting of the clinical services of DDI, clinical research and trials are conducted in an easy and smooth manner, where all the needed recruitments and procedures are conducted within the Medical Sector. The head of Clinical Research has been establishing gold standard methods in terms of Hyperglycaemic and Euglycaemic clamp since joining DDI in December 2018, with two ongoing studies taking place.

The Medical Sector has various national (MOH and Kuwait University), regional (Weill Cornell, Qatar) and international research collaborations (University of Glasgow; Sunnybrook Research Institute, Toronto). Furthermore, we are a recruitment site for several observational studies in collaboration with pharmaceutical companies. One such study is the Multi-Center Open-Label Parallel Group Randomized Controlled Trial to Compare iGlarLixi Versus Premixed Insulin in Patients with Type 2 Diabetes Who Have Failed to Achieve Glycemic Control with Basal Insulin and Oral Antidiabetic Agents (Global Premix) funded by Sanofi. We achieved 100% in recruitment and have added more participants, where other sites in different countries have failed to achieve their targets.

In terms of publications, 2019 has seen a surge across the Medical Sector in comparison with previous years.

26 | Manuscripts

18 | Original research

2.785 | Impact factor

DAFNE (Dose Adjustment for Normal Eating)

The DAFNE program is a structured education program for people living with type 1 diabetes. The program centers around teaching patients how to adjust their insulin doses according to the carbohydrate content of their meals, manage their blood glucose more effectively and empower them to take control of their diabetes to reduce the dependence on health care professionals. DAFNE started in 1984 in Germany, and was later adopted in the UK, and has been implemented with 43,880 people living with diabetes.

DAFNE was initiated in Kuwait in 2010 and 86 courses have been completed since then, with 570 graduates. The success of the program can be measured through a reduction in patients' insulin doses, and reduction in severe hypoglycaemia episodes that require hospital care by 70% in comparison with pre-DAFNE. In addition, hospital admissions due to diabetic ketoacidosis (DKA) were reduced by 50% since joining DAFNE.

In 2019, the DAFNE team have presented in various conferences which include the International Diabetes Federation (IDF) conference in Busan, South Korea, and the Diabetes UK Conference in Liverpool, UK, as well as the AACE Gulf chapter conference in Muscat, Oman. In addition, two publications were accepted.

DDI is the only licensed training center in the Middle East approved by DAFNE UK.

DIAGNOSTIC IMAGING CENTER

Diagnostic Imaging Center (DIC) is a state-of-the-art facility with the latest equipment used for imaging that supports both DDI medical services as well as the various research projects conducted across all Sectors of DDI.

The following hardware/software were upgraded:

- Integration between DDI health information system "Hello Health" & Radiology Information system (RIS) was established in Sep-Oct 2019. MR Elastography, a new scanning protocol added in DIC-DDI.
- 1.5T MRI was comprehensively upgraded to SIGNA Artist platform with upgrades of software & hardware.

DIC performed approximately 4057 investigations in 2019, providing comprehensive range of MRI, CT, X-Ray, Ultrasound, BMD and Vascular Examinations.

Addition of new services at DIC: Vascular services were started at DIC-DDI from 1st November 2018. In 2019 a separate area for Vascular lab staff is constructed which includes vascular room, ultrasound room, Dr Abdulaziz Almuzaini office and typist room. Total revenue generated in DIC = 88028 KD.

LIFESTYLE & WELL-BEING

One of the main approaches for diabetes prevention is maintain optimum lifestyle and wellbeing through healthy eating and exercise. The Medical Sector combines both in a unique setting of nutritional clinics alongside the Medical Fitness Center, where participants go through regular exercises under the supervision of the medical team who regularly monitor and control the participants blood glucose levels and overall performance and progress.

Nutrition

In 2019, the Nutrition Unit underwent a variety of changes to improve the high do not attend (DNA) rates (which were 40% previously), poor weight outcomes (on average in 2018 patients with T2D and a BMI > 25kg/m² stayed the same weight and a large proportion gained weight (>20% gained >4kg)), structuring clinics around outcomes, and encouraging patients to accept referral to a dietitian.

To achieve that, the new head of unit set out the below plan:

- Reduce DNA rates so that we can see patients more frequently
- Become outcome-focused - linked to staff performance
- Fast weight loss (this motivates patients)
- Contract for all patients to sign
- Delivered individualised-care (training delivered)
- Remission clinic
- Ongoing - work with Public Relations to “sell” outcomes

There have been changes in patient outcomes from 2018-2019:

- Mean weight loss:

2018 | -0.43 +/- 2.09

2019 | -2.09 +/- 2.71

- Mean HbA1c:

2018 | 7.98 +/- 1.7

2019 | 7.59 +/- 1.3

- DNAs

2018 | 30%

2019 | 24%

Other achievements in the unit include delivering a 12-week programme of clinical and research seminars, with 30-40 dieticians from MOH and topics that ranged from, cardiovascular disease, obesity management and dietary intake collection. In addition, the first pre-Ramadan education evening for children with T1DM and their parents was initiated. This event was attended by 35 children and 50 adults. Furthermore, the first remission clinic in the region commenced. This is unique because it accepts patients with type 2 diabetes on any medication and any duration. This clinic was initiated in June 2019; 2 patients have completely come off their insulin.

The unit also aimed to use data from audits and studies to:

- Improve the service by targeted changes
- Increase research output

The Nutrition Unit is also heavily involved in research, with 3 studies initiated in 2019 which include Assessment of dietary intake before, during and after Ramadan, a modification in the Kick-off program, and a trial of time-restricted feeding within the clinic setting.

Medical Fitness Center

The Medical Fitness Center (MFC) provides fitness and wellness programs to promote healthy lifestyle to the community as continuous support to the mission.

The MFC continued to conduct comprehensive assessments for all members prior to starting their fitness program. This assessment includes the following: Medical clearance by the medical doctor, blood tests, ECG, body composition analysis, anthropometric measurements and fitness assessment.

All members received individualized exercise prescriptions based on the results of the comprehensive assessment. MFC fitness instructors provided continuous supervision and training instructions for all members while performing exercises at MFC. Daily records were kept documenting vitals and progress. Fitness progress was tracked and assessed quarterly for members who attend the MFC regularly. HbA1c and waist circumference were also assessed quarterly for members with regular attendance.

The MFC participated in several in-house and out-reach activities to educate the public and raise awareness about physical activity and exercise.

Furthermore, the MFC has supported the health and wellbeing of DDI employees by providing discounted membership fees and allowing DDI staff to use the walking track for free.

- The average daily visits to MFC in 2019 was 41.
- The Clearance Clinic: 83 patients were assessed at the Clearance Clinic
- The MFC Nutrition Clinic: This clinic provides dietary assessment and provision of a meal plan with tips for optimal health and weight loss. A total of 7 members were assessed in the Nutrition Clinic in 2019.

- Member Assessment at the MFC: This includes body composition and anthropometric measurements. A total of 149 members were tested from January to December 2019.
- 47 new members joined the MFC from January to December 2019, and 125 members renewed their memberships.
- Customer satisfaction for the year 2019 is 80.4%
- Most members who attended the gym on regular basis have shown significant improvement in their health-related fitness parameters.

The Total annual revenue collected from January to December 2019 was KD 53,560.

The MFC also supports research activities, which is enhancing the experience and knowledge of trainers. One study is the exercise Research Study: this is an ongoing research in collaboration with the University of Glasgow and is the first study conducted with the MFC team. The study involves Kuwaiti nationals living with type 2 diabetes in either a gym-based or home-based exercise program to study the effect of resistance exercise on their glycaemic control and the difference between both programs.

The MFC is also highly involved with in-house and outreach programs, such as Kick-off with the Nutrition Unit, school programs, and Diabetes Awareness days.

The MFC is continuously achieving its goal to increase the numbers of members joining, to generate more revenue as well as focusing to improve the health of our members and wellbeing and also participating in DDI health awareness programs.

CLINICAL SERVICES

A variety of clinical services are provided at DDI that deliver therapeutic and patient care within the Medical Sector. This is established as an outpatient setting to deliver optimum medical services, educational sessions as well as to support clinical research and trials. The clinics tackle all aspects related to diabetes and its complications through the following patient-centered clinics:

- Adult Diabetology
- Pediatric Diabetology
- Ophthalmology
- Dental
- Neurology
- Nephrology
- Cardiology
- Dermatology
- ENT
- Physical Medicine & Rehabilitation
- Painful Diabetic Neuropathy
- Dispensing medications
- Pharmacotherapy and medication reconciliation
- Multidisciplinary DAFNE
- Podiatry

PODIATRY

The Podiatry Department consists of 3 full time podiatrists and 1 full time nurse. The Department operates 3 clinics, 5 days a week.

The Podiatry Department provides high-quality, evidence-based assessment and treatment of patients with diabetes. All patients are assessed, screened and given their risk of foot ulceration category according to National Institute of Clinical Excellence (NICE) guidelines. Patients are given an individualised care plan and structured education tailored to their individual needs and are reviewed in a timely manner according to their risk status and current foot health status.

In 2019 the Podiatrists were actively involved in participant recruitment for one international collaboration two Podiatry led research projects, which are ongoing in 2020. The podiatry team boast multiple achievements which include:

- Participation in World Diabetes Day - The Podiatry team were involved in foot screening and assessment of patients
- The Podiatry Department have recruited over 660 Patients to research in 2019
- Patient Group Education sessions - Four group sessions were given to patients to aid knowledge and skills of the diabetic foot and its complications.
- Ministry of Education secondary school visits - Six sessions given by the Podiatry department to school children.
- Training of Diabetes Educators in collaboration with DDI Education department
- Four Medical Interns sessions
- Nurse training - 10 nurses completed the foot screening programme in 2019.
- A poster was presented at Diabetic Foot Australia conference in September 2019 :
- Diabetic Foot Complications IDF training, in DDI in collaboration with DDI Education department. Four Sessions were given by the Podiatry team in 2019
- Wound management in the Diabetic Foot presentation was given in collaboration with, DDI 4 doctors and one Senior Nurse

Number of patients

From 1st January 2019 - 31 December 2019 the Podiatry department had **3,774 consultations**, an average of 314.5 contacts per month.

From 1st January 2019 - 31 December 2019 we saw **85 ulcers**, of which **54 healed (64%)**, **8 were referred** on and **9 were lost to follow-up**.

HEALTHCARE QUALITY AND PATIENT SAFETY

Since 2009, the Medical Sector has provided diabetes-related activities integrating clinical care research and trials, education, prevention and management ensuring patient safety and quality. It is a fundamental pillar for promoting enhancements in prevention, education, diagnosis and therapies by combining disciplines, resources, expertise, and techniques within its function. Quality activities were focused on a defined set of quality dimensions that were proposed by Accreditation Canada; population focus, accessibility, safety, work-life, client-centred services, continuity of services, effectiveness, and efficiency.

Quality Plans

- In collaboration with the Quality and Patient Safety (QPS) team, each Unit at the Medical Sector works toward raising the level of quality through incorporating quality activities into their workplans.
- Units were encouraged to use quality improvement tools such as the Plan-Do-Study-Act (PDSA) cycle in conjunction with quality indicators results to guide improvement efforts in the Medical Sector.
- Patient complaints are being reviewed and managed through the Public Relations to improve the quality of services provided to patients. In addition, a Patient & Family Advisory Council (PFAC) has been introduced and is planned to be operational once patients are being recruited as members.

Standards of Care

The Medical Units comply with the Accreditation Canada standards, and policies and procedures are continuously being developed and updated in alignment with these standards. The patient care pathway has been redesigned to be aligned with the strategic objectives of prevention and management of diabetes and its complications

Patient Safety

- Patient safety activities are implemented through the joint effort of the Medical Sector Units, QPS Team, and the Emergency & Safety Committee at DDI.
- On 17 September 2019, held a Patient Safety Day event to join the world on the International Patient Safety Day (IPSD) that seeks to raise awareness and hosts activities to drive improvement and stimulate innovative solutions by emphasizing the importance of establishing a safety culture at all levels of an organization.

Performance Measurement

- Through the Quality & Patient Safety Team, several quality indicators were developed to measure processes and outcomes of healthcare and safety to ensure the continuous improvement of quality of care for patients using the services offered, evidenced by the process and outcomes of care.
- Data collection and analysis methods underwent major modifications and updates in order to extract data directly from the electronic medical record (Hello Health) in collaboration with the Information Technology Unit
- Improvement was noted in the following:
 - Percentage of patients with type 1 diabetes who have been referred for the DAFNE education package (32.5%) has increased by 28% from last year
 - Percentage of adult patients with recorded HbA1c in preceding 4-mths (93.2%) have exceeded the target by 13.3%
 - Percentage of patients with a recorded lipid profile within the last 12mths (96.9%) have exceeded the target by 2%
 - In the Laboratory, the turnaround time for sent out samples, urinalysis, clinical chemistry, and phlebotomy services (93.35%) have exceeded their target by 5.85%
 - Correct laboratory reports, and laboratory sample identification have exceeded their target by 5% and 10%, respectively.

Policies and Procedures

- Policies and procedures have been developed encapsulating all units.
- All units create policies to support clinical practice and promote quality of care and safety. Editing and reviewing policies is the responsibility of Heads of Units.
- All policies are updated at 3 yearly cycles, except for Clinical Laboratory which up-date departmental policies at two years and one-year respectively. These policies and procedures are tracked and shared by the Healthcare Planning and Development.
- All procedures are made available on the DDI staff SharePoint to ensure the updated policies are readily accessible.
- In 2019, the total number of policies at the Medical Sector has reached over **280 policies**.

Ethical Framework

- DDI worked closely with its Sectors to develop DDI's Ethical Framework, a resource to improve and guide ethical practice to all DDI employees and patients/clients who are faced with difficult ethical decisions

HEALTH INFORMATION MANAGEMENT:

The HIM team has facilitated the initiation of new services and clinics this year, such as new ophthalmology clinics and extra dental clinics, as well as new services where patients are seen by the multidisciplinary team. A total of 4,237 patients were seen, with 41,328 appointments and 8,501 no-show appointments.

In addition, the Unit has made efforts in developing additional reports and statistics (Discharge patients reports, patient's insurance status reports, waiting-list reports, no show reports, updating patient's files and AFYA statistics and revenue reports in order to establish and creating the database). Furthermore, patients' statistics regarding Pre- Reg & Active files were created to monitor the increase in the number of patients and participation in research.

HIM Accomplishments of the Team

1. Updating 94% from adult and pediatric clinics patient's files.
2. Confirming 91% of all patient's appointments.
3. Updating the DIC reception guideline and training process and the DIC receptionist responsibilities.
4. Establish a new process for dispatching the examination reports.
5. Establishing the queue machine for waiting patients in the first floor and adult reception.
6. Focusing on reducing "No Show" patient's appointments of all DDI clinics.
7. Creating an audit system and procedures for the all HIM staff tasks and responsibilities.
8. Improved accuracy of patient's data through regular file audits.

The HIM plans to improve many of its services assist with DDI research.

NURSING

The Nursing Department is contributing to DDI strategic plan by implementing, auditing, and monitoring a multitude of activities and parameters that are significant to nursing practice, patients', and staff safety. By providing safe, effective, efficient, and high-quality nursing care, the department aligns with the Mission and Vision of DDI.



A number of 6 quality indicators are assessed and reported to the Quality and Patient Safety committee. All targets for 2019 were met through the efforts of the whole team.

Indicator	Sample Size	Target	Actual Achievement	Remark
1. EHR- Electronic Health Records-documentation of vital signs	100 files/ month	99%	99.98%	Achieved
2. FRAC- Fall Risk Assessment Checklist	All files	97%	98.17%	Achieved
- Nursing intervention section	50 files/month	75%	98.99%	Achieved
3. Panic lab values- response from physicians	All labs reported in 2019-399	80%	98.83%	Achieved
4. Hand Hygiene compliance	200 opportunities/ area	95%	95.51%	Achieved
5. CSSD tracking of batch number	All instruments used in 3 clinics	99%	94.93%	Achieved
6. Allergy documentation	55 files/month	75%	99.65%	Achieved

1. EHR (Hello Health) and files audits

Q1	Q2	Q3	Q4	Annual average
100%	100%	99.33%	100%	Target 99% 99.98%

2. Allergy documentation

Q1	Q2	Q3	Q4	Annual average
96.97%	100%	100%	100%	Target 75% 99.65 %

3. Incident reports

Incident reports filed from nursing department:

Q1	Q2	Q3	Q4	Total (Q1-Q3)
3-closed	3-closed	1 closed	1 pending	6- closed

4. Medication Administration Record (MAR) - Since the performance improvement project done in 2017, the MAR is constantly at **100%**.

5. Safety - patients' safety is paramount to all clinical staff. **Fall risk assessment** is done in all clinics, a high compliance rate noted. FRAC (Fall Risk Assessment Checklist) done as per protocol:

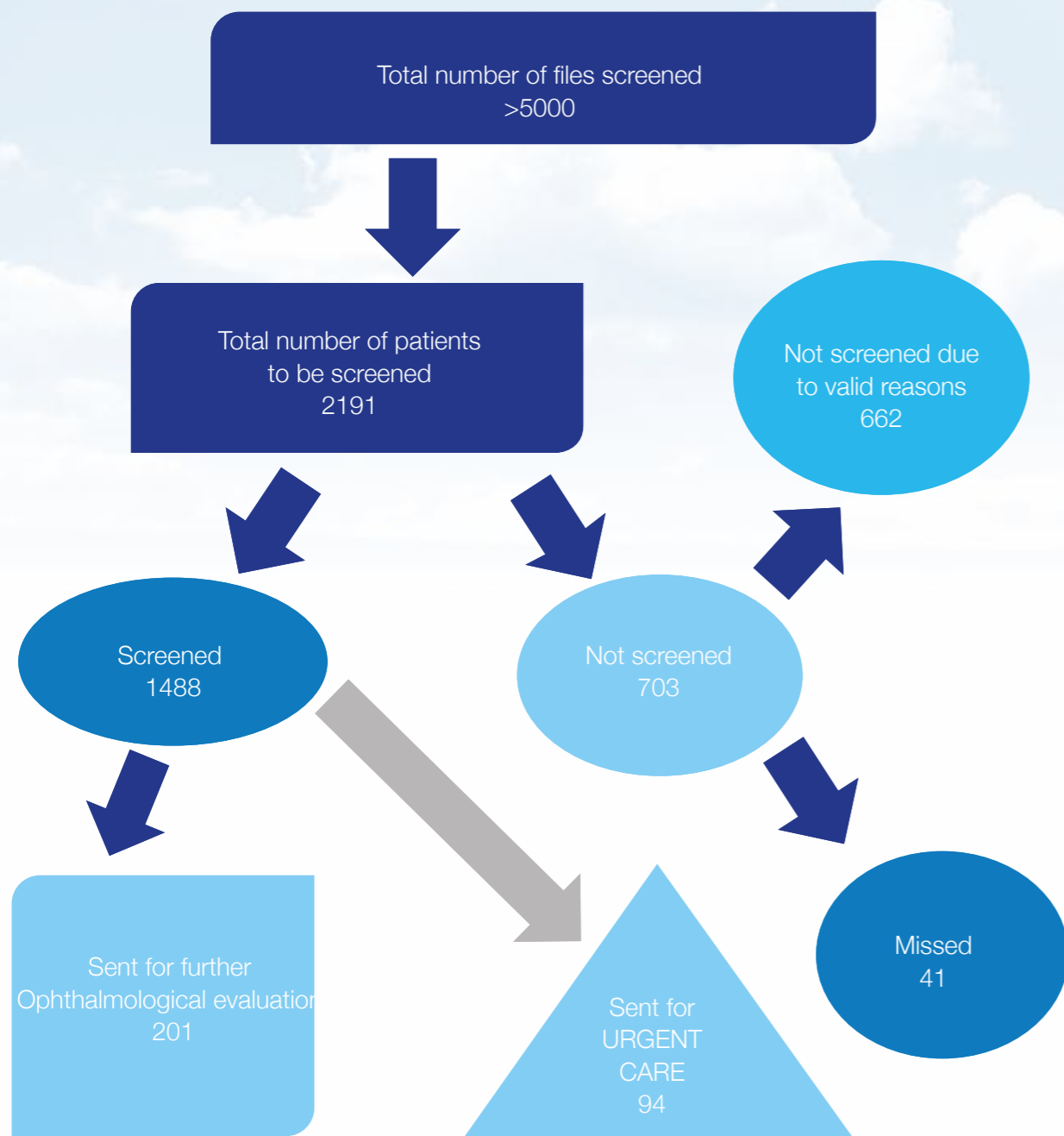
Quarterly reports	Q1 2018	Q1 2019	Q2 2018	Q2 2019	Q3 2018	Q3 2019	Q4 2018	Q4 2019	Annual average 2018	Annual average 2019
FRAC compliance	96.46%	98%	96.3%	97.66%	98.76%	98.50%	97.3%	97.66%	97.15%	97.8%
High risk%	42%	39.43%	33.43%	42.70%	40.3%	41.43%	46.43%	40.03%	40.54%	40.08%

The new FRAC form introduced in 2018, has the **"Nursing intervention"** section added, and allows a better monitoring of nursing involvement in patient's care. In 2019, 50 random files/month (with High Risk of fall) were audited for the actions taken following the nursing assessment. They were monitored for compliance in filling the **"Nursing intervention"** section. Target was **75%**, Annual average achieved was **98.99%**.

In clinical area, **no fall incidents** were recorded in 2019.

6. Retinal Screening program was initiated in 2017, as a part of the Patient Care Coordinator role that several nursing staff are already undertaking. During 2019 a significant number of files are screened for patient's eligibility to have the annual retinal screening performed.

Due to nursing staff effort and dedication, 94 patients were discovered to have urgent ophthalmological problems, who were have otherwise gone undetected and eventually lead to loss of vision. 201 patients were scheduled for a comprehensive eye exam with the specialist ophthalmologist.



7. Mandatory education is scheduled throughout the year.

8. Continuous education - is also organized by the "In-service and Education" committee and is carried out on a weekly basis.

9. Work Environment Safety - the Infection Control (IC) nurse and the IC links are conducting regular environmental rounds, based on checklists approved by the Nursing Manager and IC Consultant. They also observe the compliance with the hand hygiene practice and prepare monthly reports.

• **Environmental safety** - evaluates the cleanliness and state of repair of the equipment, furniture, floors, walls, etc., in clinics, patients' waiting areas, DIC, MFC, and Phlebotomy.

Q1	Q2	Q3	Q4	Annual average
99.8%	99.8%	99.9%	99.9%	99.85 %

10. Hand hygiene (HH) compliance - the WHO "5 moments for hand hygiene" program was monitored across DDI, in all clinical areas. Healthcare providers were observed for a minimum of 200 opportunities for hand hygiene (HH) actions (either by soap and water or alcohol-based hand rub).

Semester 1 (Jan-June)	Semester 2(July-Dec)	Annual average
95.5%	95.7%	95.6%

11. Tracking of sterilized instruments - this process was initiated since 2016, in order to conduct a recall of the sterilized instruments, in the event of autoclave failure.

Q1	Q2	Q3	Q4	Annual average
99.09%	99.76%	85.37%	95.48%	94.92%

12. Processing of panic lab values - Clinical is communicating specific lab test results, as per the established list of tests and agreed upon values. According to treating physician's response, there will be different actions taken (referral to hospital, early appointments, repeat labs, patient education, etc). The number of reported labs where the physician did not answer is being monitored and reported. Target is < 20% "no answer".

Q1 - 122 labs - (2.22 %) physicians did not answer - target exceeded

Q2 - 86 labs - (0 %) physicians did not answer - target exceeded

Q3 - 86 labs - (1.97 %) physicians did not answer - target exceeded

Q4 - 101 labs - (0%) physicians did not answer - target exceeded

Total 395 labs, (1.04%) physicians did not answer, target met.

13. Nursing staff involved in research: A significant number of nursing staff are dedicating a considerable part of their time to research projects. Some staff nurses are involved in more than one project, some are fully dedicated to research.

	Q1	Q2	Q3	Q4	Annual average
No of nurses	18	26	30	25	
New research projects	1	5	2	-	
On-going research projects	11	10	13	14	
No. of hours spent in research	593.73	1591.75	1699.12	2033.08	5917.68 hrs

14. DDI celebrated World Diabetes Day on November 14th, 2019. Nursing contributed to this event by checking the height, weight, blood pressure, blood glucose and HbA1c for 166 patients. For selected participants foot assessment was performed.

15. Outreach campaigns - In 2019, Nursing department participated in 20 outreach campaigns, with 51 staff, screening 1451 patients.

16. CSSD - in 2019, 95 steam sterilization cycles were performed, serving Podiatry, Dental, ENT clinics, as well as laboratories and animal facility.

17. Point of Care Testing (POCT) - quality control was performed for all instruments- glucometers and HbA1c analyzers- with 100% compliance in testing and passing of quality parameters. Results are submitted to Clinical Laboratory Manager, as part of the CAP accreditation requirements.

18. Foot assessment done by nursing staff - as part of a research project studying the prevalence of diabetic neuropathy and foot ulcer in Kuwaiti population, nurses were trained and passed the competency validation for the foot assessment. Since the start of the project - May 2019 - until November 2019, **1046 patients** were screened.

19. Clinical Skills - courses held by nursing staff - nursing staff are trained as instructors for multiple courses offered by the Clinical Skills. The number of courses delivered, during weekdays and on weekends, exceeded the estimated number:

Course	Planned	Achieved	Q1	Q2	Q3	Q4
Basic Life Support (BLS)	40	89	11	36	23	19
Cardio-Pulmonary Resuscitation (CPR)	20	43	6	12	12	13
First Aid	20	33	8	4	4	17
Intravenous catheter insertion- Phlebotomy	15	59	18	30	11	-
Safe Injection	15	63	1	20	42	-
Naso-gastric tube (NGT) and Foley catheter insertion	15	22	19	-	3	-
Coordinating Advanced Trauma Life Support (ATLS) course	3	3	3	-	-	-

20. Providing Basic Diabetes Knowledge course to newly joined staff – it was done in collaboration with DAFNE unit. The course was delivered twice this year, for DDI staff only in Q1-13 staff- and for 6 DDI and 2 MOH staff in Q3. For Q3 course, a pre-course test was administered, average mark was 65%. The post -course test had an average of 87%.

21. Internship for young undergraduates - Nursing unit, in collaboration with Education and Training department, received 30 undergraduates in Q1 and 1 in Q3, who were rotated between various clinics, in order to be exposed to different procedures and patient interaction.

PHARMACY

The Pharmacy is responsible and accountable for all operations related to medications, from ordering the supplies from MOH to dispensing them to patients and clinics stocks. The unit constantly offers help and support for other healthcare professionals and scientists at DDI to deliver best services and practices. The services range from dispensing prescriptions to counseling and education through clinics and consultation rooms. The Pharmacy also has a defined role in education, public awareness, and research. worked to organize the workflow, developed new services, became more involved in research, and met the standards required by Accreditation Canada.

To improve pharmacotherapy services, the following was developed:

- Electronic patient medication list (English and Arabic).
 - Electronic diabetes management during Ramadan plan.
 - List of maximum daily dose of DDI formulary drugs.
- Number of patients seen on the Pharmacotherapy clinics = 359 patients.
 - Number of prescriptions dispensed = 113,366 prescriptions
 - Number of interns, students and healthcare professionals attended pharmacy led educational programs = 3 attendees

CLINICAL LABORATORY

The Clinical Laboratory has received the CAP Accreditation Certificate on April 2018, after considerable efforts and preparations. The CAP and ACI accreditation programs have been developed specially to address requirements for accreditation of medical laboratories. They ensure that the laboratory meets the highest standards, quality and reliability. Moreover, the ACI accreditation program addressed the entire organization quality and safety, to meet customers' expectations.

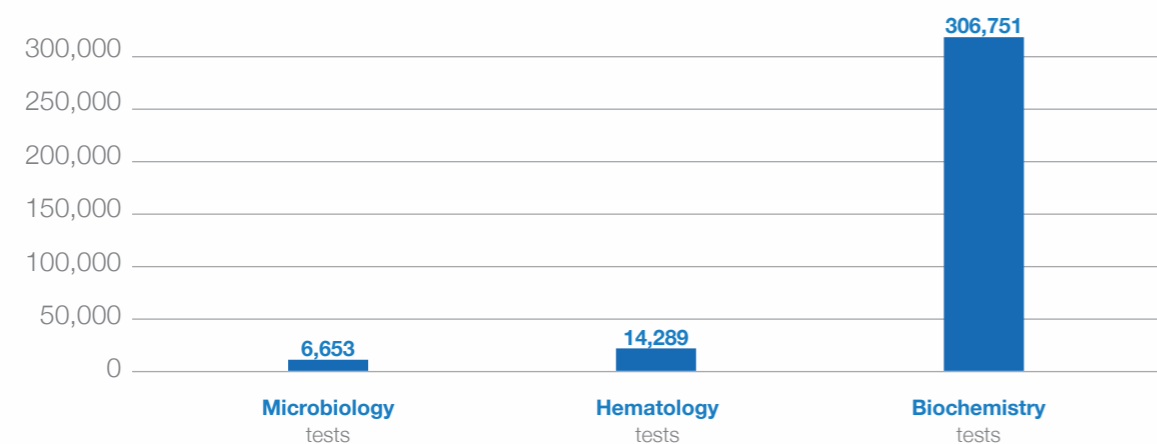
Safety

Currently, the Clinical Laboratory department increased its safety measures to comply with CAP requirements by adding the following:

- 2 digital room self-monitoring devices for Temperature & Humidity.
- The plan is to reduce/minimize using mercury in the lab for safety issues. Therefore, 2 digital thermometers were received for the refrigerators in Phlebotomy room and Microbiology lab. The thermometers shall be supervised by the Biomedical Engineering Department.

Continuous Medical Education: Done for all staff to meet CAP requirements and ensure staff knowledge and improve performance. 16 topics were represented for the staff to update their knowledge. CME points were calculated for all activities.

Statistics



Quality Management Plan

The Quality Management Plan highlights the role of:

Quality Indicators- to measure laboratory progress

- The internal Quality Control
- Calibration and Calibration Verification
- Method validation and report summary
- External Quality Assurance Program, Proficiency Testing (PT)

A new document control program was designed to satisfy the CAP document control requirements and it was based from the CLSI guidelines.

A plan to develop the laboratory processes related policies and procedure was developed and tasks distributed to laboratory management and senior staff. Laboratory policies index prepared, reviewed by the lab head, and introduced to laboratory team.

To improve the communication with the laboratory staff, we created a shared folder to share all laboratory related documents like policies, forms. The most recent revision of policies and procedures is readily available to all laboratory staff on the shared folder. New laboratory forms have been created and implemented to comply with CAP requirements.

Information System

The new software and HIS went live on 9/11/2017, where the laboratory and IT department still working on requirements. Validation study was done for the new LIS software, and validation report was generated.

The new LIS software was improved with the following:

1. Electronic Inventory system.
2. Sample acknowledge system in the lab.
3. TAT for routine lab tests, STAT TAT, Critical values TAT, Samples Transport TAT.
4. Number of pages for the printed lab results.
5. Test methods for some of the lab tests.
6. Generate new lab statistics for the LIS.

Incident reports

There was a total of 8 internal incident reports registered between January 2019 and December 2019. All of them were successfully solved.

Customer Service

Clinical Laboratory continues to monitor the quality indicators that concern both the physicians, nursing and the patients, like turnaround time, critical result reporting, specimen quality and rejection rates. In addition, laboratory staff worked on setting the active menu according to the requirements and modifying the requisition form to facilitate the ordering process for all medical care givers. Patients' /physicians' satisfaction results showed a high rate of overall satisfied patients with our processes and emphasized the high level of professionalism of our phlebotomists. Laboratory's management being aware of the importance of employees' job satisfaction agreed to monitor employees' job satisfaction levels on an annual basis. Feedbacks by the staff showed no crucial issue.

EDUCATION AND TRAINING

The Education & Training Department's (E&T) focus in 2019 covered many areas which are; delivery of educational services to the people with diabetes, delivery of educational programs & workshops for healthcare professionals and delivery of diabetes awareness and prevention programs for the community.

Delivering one-to-one diabetes education sessions has always been the main activity of E&T Department, focusing on quality of service through monitoring measurable outcomes was introduced in 2018 and further developed in 2019 to monitor reduction in Glycosylated Hemoglobin (HbA1c) in patients. In 2019, E&T department has delivered a total of 4758 one-to-one diabetes educational sessions to 1241 patients, resulting in HbA1c reduction of 0.5% or more in 39.42% of the patients compared to 3750 patients in 2018 in both the Adult and Pediatric Education Clinics. Moreover, 40 patients were assessed, trained and initiated on Insulin Pump Therapy.

The Professionals Education & Training Programs

The E&T was involved in several educational programs for healthcare professionals (HCPs). The E&T has facilitated and co-delivered educational programs for a total of 486 as listed below:

- What School Nurses Need to Do During Diabetes Emergencies – A Training Program for Private Schools Nurses for a total of 42 participants.
- Field Training for Graduates of Health Education Diploma from PAAET, where a total of 48 participants attended over 8 weeks.
- What School Nurses Need to Know about Diabetes– A Training Diabetes E-learning Program & Basic Introduction to Insulin Pump Therapy for MoH School Health Department, where 159 school nurses participated in the program over 12 groups.
- E&T Clinical Internship & Shadowing Program for MoH Nurse Educators (from Al-Sabah and Al-Jahra Hospitals), where a total of 7 interns attended in the Pediatric and Adult Education clinics, Insulin Pump Clinics, Clinical Pharmacy and Nutrition.

- Participated in French Diabetes Days Conference 10,11 March 2019
- Participated in Insulin Pump Workshop Conference - Collaboration with MoH & Kuwait Pediatric Diabetes Society: 200 HCPs attended.
- The International Diabetes Federation Basic Diabetes Education Course for Healthcare Professionals & Introduction to Insulin Pump Therapy, where a total of 7 Nurses participated from MoH Hospitals in the 5 days program.
- Inpatient Diabetes Management Workshop for Internal Medicine Physicians, where 20 MD from KOC & KIMS participated in the 1-day workshop.

Non-Professional Education & Training Programs

The Ministry of Education (MoE) have continued to show their interest in the E&T in-house and outreach diabetes awareness programs. In 2019, E&T recognized the need to develop its role in providing diabetes awareness to target risk groups to reduce the risk of developing obesity and diabetes in adolescents. This a customized health awareness program was created to be delivered to Governmental secondary school students. The total of 167 students attended tailored Diabetes Prevention Program in 2019, which focused on prevention of type 2 diabetes and managing pre-diabetes with healthy lifestyle. Additionally, 95 students participated in our outreach school awareness program. Furthermore, the E&T has provided consultations for 250 patients in DDI celebration of the World Diabetes Day. Moreover, E&T have provided awareness for Public and community and schools in events collaborating with other departments, a total of 5 events, 460 attendees.

Patient Education

The E&T educators play a key role in the multidisciplinary diabetes management team, through providing diabetes self-management education and support (DSME/S), Insulin Pump Training and Follow-up to DDI patients. During the period, January – 7 December 2019, the total of 1241 patients received 4758 one-to-one education sessions in the Adult and Pediatric Diabetes Education Clinics at DDI. Moreover, 40 patients were assessed, trained and initiated on Insulin Pump Therapy.

While 3750 one-to-one education sessions were delivered in 2018, in E&T pursuit of excellence, E&T Department focused on quality of service through monitoring measurable outcomes, which was introduced in 2018 and further developed in 2019 to monitor reduction in Glycosylated Hemoglobin (HbA1c) in patients. A percentage of $\geq 0.5\%$ HbA1c reduction was achieved in 39.42% of the patients followed up at the Adult and Pediatric Diabetes Education and Insulin Pump Clinics. Training patients and their caregivers on insulin pump is another main clinic activity of the E&T educators, where 40 patients were assessed, trained and initiated on Insulin Pump Therapy.

In collaboration with the Nutrition Unit, the Kids In Control OF Food (KICK-OFF) Program; which is a 4-days structured education program for youth with type 1 diabetes and their parents was delivered for 5 groups (28 patients) in 2019.

The Department continues to implement various health-related educational programs, Also. the E&T provided 3 group educational sessions (12 patients) about diabetic foot complications and footcare, in collaboration with the Podiatry Unit. Additionally, E&T introduced Educational Events for managing diabetes in special situations, namely Fasting Ramadan for Pediatrics with Diabetes and Managing Diabetes During Hajj where a total of 55 patients participated in both events.

CLINICAL SKILLS CENTER

The Clinical Skills Center (CSC) was established as a training facility to meet the growing needs of students, healthcare professionals and the general public for health, safety, and simulation courses. Since then, it has partnered with the Kuwaiti Boards establishing the Center as an optimal place to hold the Residents' Objective Structured Clinical Examinations (OSCEs). It is also an approved American Heart Association (AHA) International Training Center and all the courses are registered at Kuwait Institute for Medical Specialization (KIMS).

The Center is accredited by:

- American Heart Association
- Public Authority for Applied Education and Training
- Kuwait Institute for Medical Specializations
- Accreditation of the American College of Pathology.
- Accreditation of the Executive Office of the GCC Health Ministers Council as a GCC Reference Center.

The Center offers:

- Life Support courses. These courses are for the general public.
- Simulation courses. These courses are designed for healthcare professionals.
- Internship programs. Summer assistant training opportunities at CSC
- American Heart Association courses designed for healthcare professionals.

Total Revenue generated : KD.49,929.000

Number of courses conducted:

- **AHA COURSES :**
124 CLASSES
TOTAL ATTENDEES : 433
- **SIMULATION COURSES :**
92 CLASSES
TOTAL ATTENDEES : 216

Medical Sector Achievements

The Medical Sector is always striving to continuously develop staff knowledge through scientific lectures and training workshops. In addition, these lectures are attended by other health care professionals and academics in the field. In 2019, we had 18 scientific lectures (presented by national and international speakers) attended by DDI staff and other members from Kuwait University, Ministry of Health, and governing bodies. Furthermore, the Medical Sector boasts ties with various embassies in Kuwait to enhance diabetes awareness; the French Diabetes Day and Dutch Diabetes Day were held in collaboration with the respective embassies and were a great success with attendance surpassing 250. We also initiated the first Kuwait Obesity Academy, attended by over 100 delegates. Below are further activities held in the Medical Sector:

Good Clinical Practice Training Sponsored by Sanofi and provided by Brookwood International Academy	(Attended by 58 DDI staff)
DDI and Mount Sinai Health System Symposium	(Attended by 115)
Inpatient Diabetes Management Workshop	(Attended by 23)
Insulin Pump and Advanced Glucose Monitoring Systems Workshop	(Attended by 13)
Obesity Scope School (attended by 248, largest)	(Attended worldwide)
Lab Quality and CAP Accreditation Training	(Attended by 77)

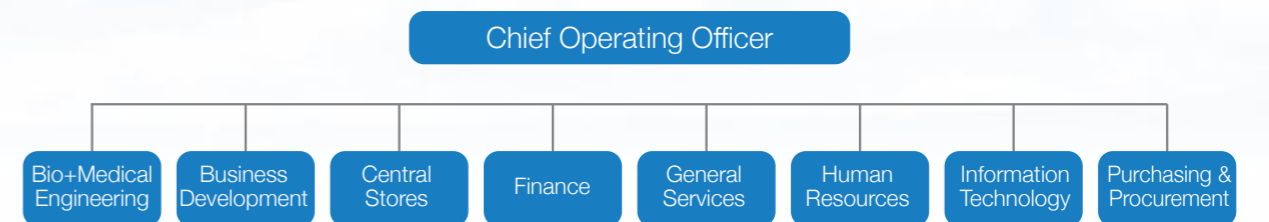


OPERATIONS SECTOR

OPERATIONS SECTOR

The Operations Sector in DDI plays a crucial role in the Institute. The mission of the team rests in being 'enablers' to meet institutional objectives and partner in supporting the Mission, Vision and Values of DDI. The team serves in various capacities of operations including Information Technology, Human Resources, Finance, Business Development, Material Management and Procurement, and General Services. The team also coordinates maintenance, upgrades and contractual duties of all scientific and medical equipment through the Bio Medical Engineering department. The team's ethos is adoption of best practices and innovative solutions to drive continuity, sustainability and improvement of the work carried out in DDI. The Institute has undergone multiple expansion and renovation exercises in infrastructure to enable key scientific projects and remains up to date in all facets of IT solutions and programs by using Cloud-based and other enterprise platforms. The hire of top talent and the continuous training across all departments have added depth to the capabilities and resources of the Operations division through its people.

Organigram



BIO MEDICAL ENGINEERING

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

Departmental Key Objectives

- Continuous operational support for both Research and Medical sectors by
- Ensuring equipment runs properly
- Automating the service request

Major Achievements

- 80 Help Desk requests were resolved in 2019.
- Developed and run interns' program.
- DIC license Renewal.
- Developed and run Corporate Wellness Week

BUSINESS DEVELOPMENT

Business Development department operates under Operation Sector. It assists with the development and execution of marketing strategies of the institute to facilitate branding and create potential avenues for grants and income to aid DDI's mission and objectives. It is also responsible to market the Institute's services and facilities in Kuwait for revenue generation.

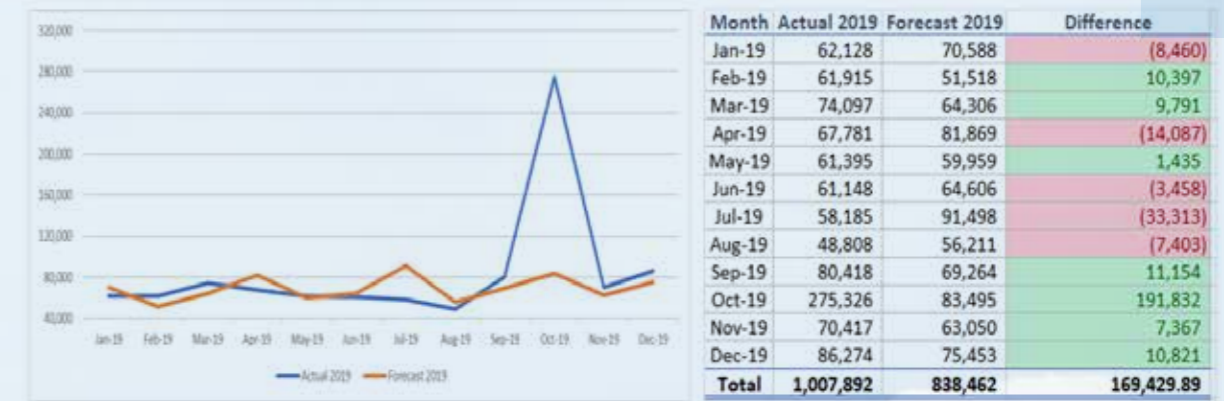
Departmental Key Objectives.

Creating long term value by introducing e-commerce concepts, maintaining current revenue generation sources, managing strategic initiatives and automating business workflows

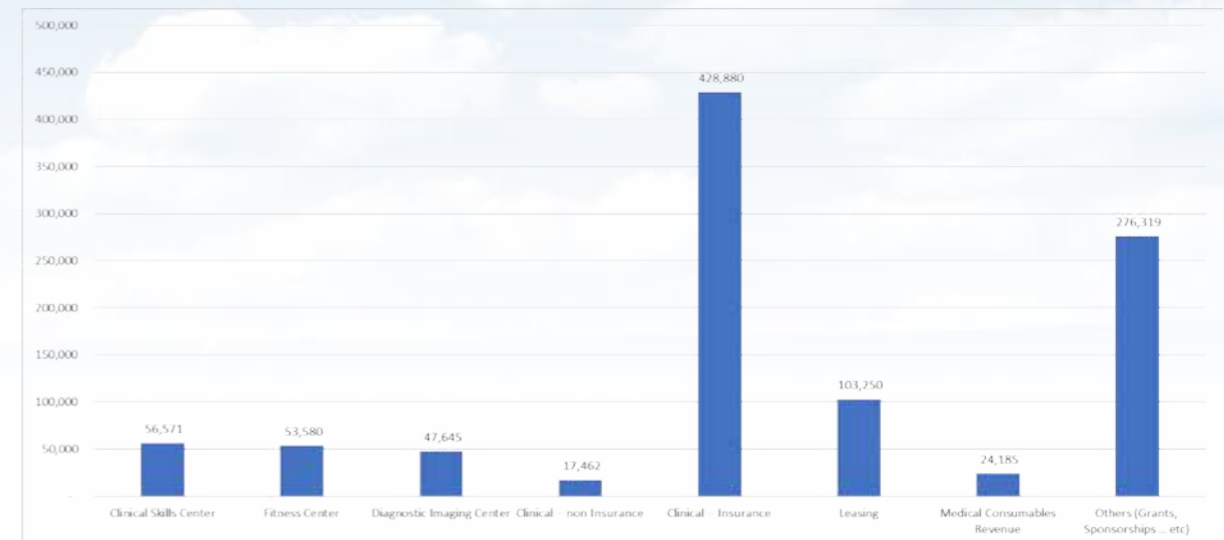
Departmental Update and Statistics

- Total revenue in 2019 is **1,007,892 KD**
- There were **18 projects/proposal** managed by Business Development Department.
- The actual revenue exceeded the project of 2019. Following is the breakdown:
 - Forecast: **838,462 KD**
 - Actual: **1,007,892**
 - Difference: **169,430 KD**

Following figure shows the forecasted monthly figure against the actual revenue.



Following is the breakdown of revenue streamlines:



Major Achievements

1. Established Delivery Service for DDI consumable products.
2. Established accredited ICDL Training Center.
3. Developed an incentive scheme for the Medical Fitness Center & Nutrition Unit.
4. Developed a proposal, plan and wireframe for DDI Mobile Application.
5. Managed Diet Plan Project.
6. Participated in ULC Initiative.
7. Established a proposal to increase the revenue of DDI medical consumable products.
8. Established a pricing mechanism and revamping DDI meeting rooms prices.
9. Developed a business model for leasing DDI clinics afternoon.
10. Established a business model for Digital Signage.
11. Developed business model and proposal to lease locations for medical consumable vendors.
12. Developed proposal, business model and action plan to promote DIC services.
13. Promoting CSC services and conduct outdoor activities.
14. Developed a business model for sponsorship.

CENTRAL STORES

The Central Stores Unit is a storage and issuing facility that makes available required items such as consumables, reagents, stationary, for all Sectors within DDI.

The Central Stores acts as an intermediary between the Purchasing & Procurement Department and the end users.

Departmental Key Objectives

CS's mission is to maintain accurate and up-to-date records of DDI's property and provide reports, and to make sure that all needs are met without any delays.

Departmental Update and Statistics

- Total of 3339 Orders were resolved in 2019.

FINANCE

The Finance Department accurately reports the financial position of DDI to 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.

Departmental Key Objectives

- Support revenue generating units within DDI.
- Continues budget monitor to ensure spending in line with approved budget.
- Provide financial information to all stakeholders.

Major Achievements

- 2020 Budget approved.
- DDI 2020 budget report submitted to BOT.
- Monthly budget reports sent to all units.

GENERAL SERVICES

General Services strives to provide quality in-house services, such as renovation projects, Electro-Mechanical works and related maintenance, carpentry, painting, cleaning, elevator services, Security, firefighting etc.

Departmental Key Objectives

- Ensure the proper and efficient operation of all its physical aspects, creating and sustaining safe and productive environments for Staff/Students and the general public.

Major Achievements

- 1000 Maintenance Help Desk requests were resolved in 2019.
- Maintenance & renovation works done in DDI including the new ICDL Lab & GIS Room.
- Green Building Data has been sent to 2 companies for work evaluation.
- All Emergency and Safety requirements are achieved.

HUMAN RESOURCES

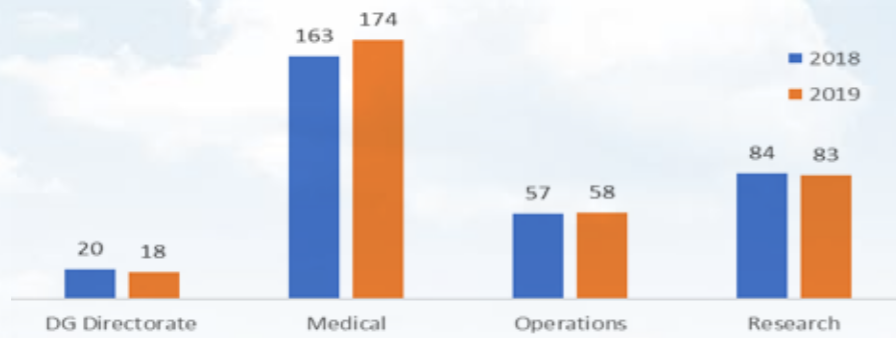
The Human Resources Department is a progressive business partner in enabling DDI to achieve institutional objectives and be a center of excellence on the foundation of professional development and qualitative HR services, programs and initiatives.

Departmental Update and Statistics

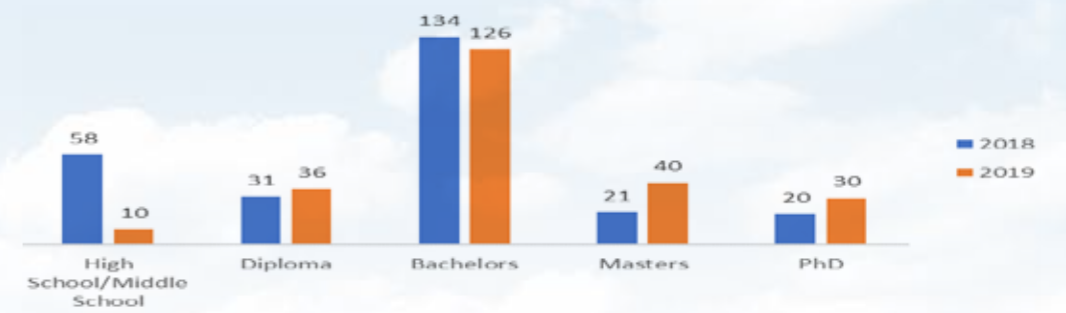
Manpower & Demographics

Total employees per sector

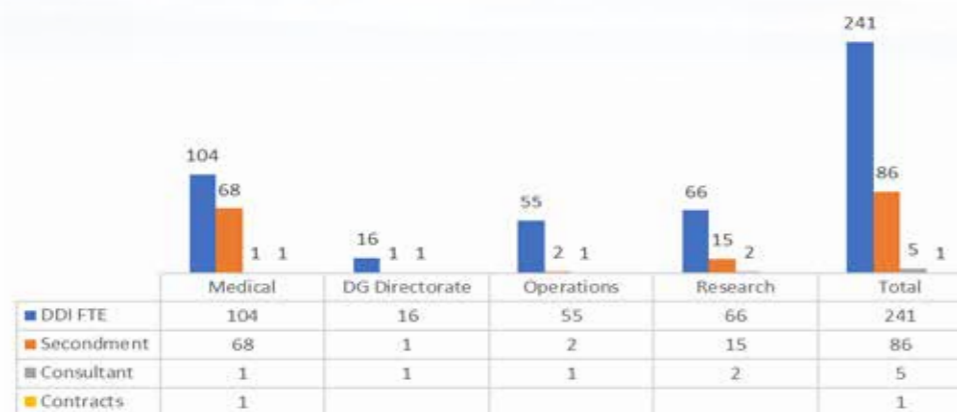
Sector distribution - DDI FTE and Secondment



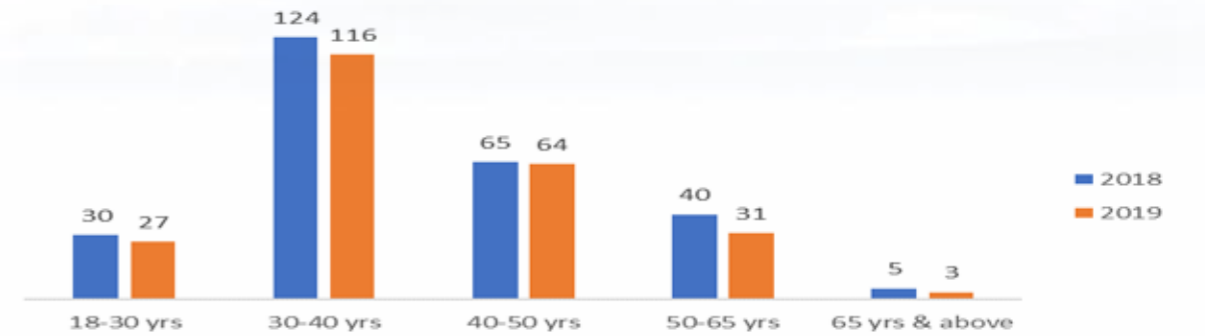
Qualification distribution



2019 Sector - Employment type distribution



Age distribution



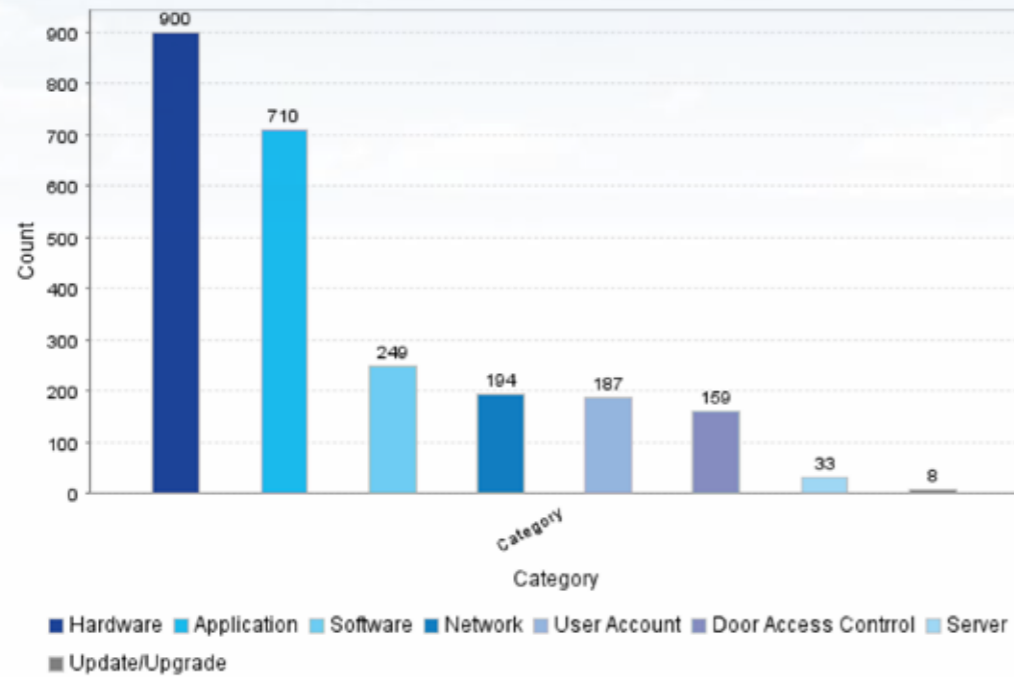
INFORMATION TECHNOLOGY

The Information Technology (IT) Department provides various services to different Departments within DDI allowing for their projects to be executed more efficiently. While efficient operation is core to the IT Department's operations, transfer of knowledge has also been a focus area during this year. As seen throughout the report, the IT department services included support for DDI departments and units in Research, Medical, and Operations Sectors.

In the year 2017, the IT Department has invested various resources in building a robust infrastructure for more effective use of data on an institutional level. After the efforts have shifted to focus on internal operations last year, the IT Department took part in the establishment of various initiatives that can provide DDI with the infrastructure for a data-driven future. This focus is seen in this year's work plan and the projects the Department has taken part of.

Departmental Key Objectives

- Provide various services to all the organization departments to allow their projects to be executed more efficiently
- Transfer of knowledge to all the sectors and staff of DDI
- Building a robust infrastructure for more effective use of data on an institutional level



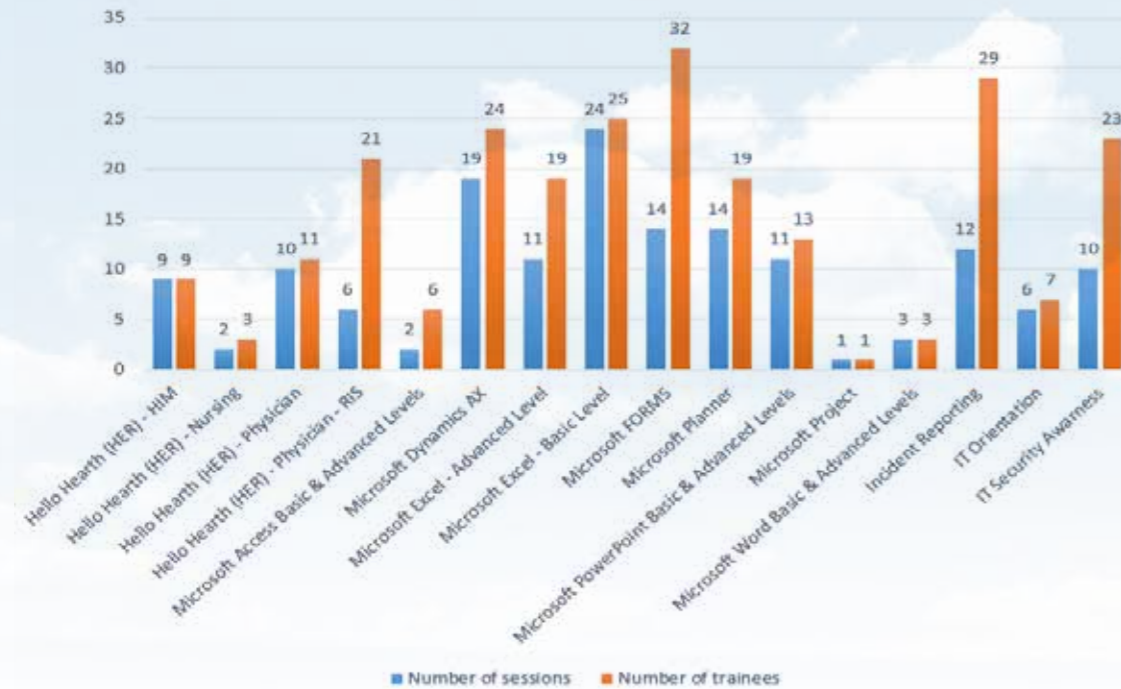
- 2440 helpdesk tickets were resolved during 2019



Major Achievements

- An online stationary/consumable's portal was developed.
- All major and critical services-maintained service availability higher than 99.9%.
- EHR System
- LIS/EHR migration, RIS/EHR integration, major and minor upgrades.
- IT Training

The IT Department held a total of 154 training sessions on multiple applications this year.



- Physician Payment
New policy and dashboard were created (physician payments auto calculation).
- Emergency Intercoms
Installed an emergency intercom system all over the facility to report emergencies.
- Diabetes Registry
A connection and roadmap between DDI datacenter and MoH datacenter were established.
- Civil ID Scanners
Provided civil-ID scanners to HIM to facilitate the patient visit process.
- Research Management System
Integrate the online platform (PURE) with the existing LDAP.
- HIPAA Compliance
Acquired the HIPAA compliance seal.

PURCHASING & PROCUREMENT

Our mission is to improve the procurement process in a transparent and practical manner, and to continuously enhance the procurement process to obtain the best products and services in a timely and transparent manner.

Departmental Key Objectives

To establish strategic thinking in all procurement efforts; resulting in responsible stewardship of organization resources, innovative suppliers, streamlining of business processes while maintaining the compliance, with sustainability and diversity woven into everything we do.

Major Achievements

- Cleared out all pending PRs for 2017, 2018 & 2019.
- Established database for Supplier Exclusivity Letters.
- Established database for Supplier profiles.
- Established action plan for the upcoming two years.
- Identified enhancements in the technical infrastructure (Dynamics).
- Conducted survey to measure end user satisfaction.
- Conducted an assessment and gap analysis to the current situation.