



مستشفى الملك فيصل التخصصي ومركز الأبحاث  
King Faisal Specialist Hospital & Research Centre  
Gen. Org. مؤسسة عامة

رؤية VISION  
2030  
المملكة العربية السعودية  
KINGDOM OF SAUDI ARABIA



# PERFORMANCE IMPROVEMENT EXECUTIVE REPORT 2017

## All Commit to Improve

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

In the name of Allah,  
Most Beneficent, the Merciful

---

# TABLE OF CONTENTS

---

Vision, Mission and Values	Page	2
Chief Executive Officer Message	Page	3
Chief Operating Officer Messages	Page	4
Chief Quality Officer Message	Page	5
All Commit to Improve	Page	6
Celebrating Our Successes:		
1 <sup>st</sup> Place Project Winners	Page	8
2 <sup>nd</sup> Place Project Winners	Page	12
3 <sup>rd</sup> Place Project Winners	Page	14
4 <sup>th</sup> Place Project Winners	Page	16
5 <sup>th</sup> Place Project Winners	Page	18
All Commit to Improve 2017 At-a-Glance	Page	22
Congratulations	Page	23
With Gratitude	Page	24

*The contents contained within this report are based on activities, organizational structures, strategic objectives, vision and values in effect as of 31 December 2017. The published information in this report is for educational purposes only and should not be considered or used as a medical opinion.*

# VISION, MISSION AND VALUES



At KFSH&RC over 13,000 staff at our Riyadh and Jeddah sites provide care to hundreds and thousands of patients and families each year.

## Values

### PATIENT FOCUS

We put the needs of our patients first

### INTEGRITY

We adhere to high ethical principles to be truthful, transparent, equitable, and trustworthy

### QUALITY

We strive for excellence and high quality through creativity and innovation

### COMPASSION

We treat patients, families, and team members with dignity and kindness

### TEAMWORK

We work well together to ensure that knowledge and wisdom are shared for the benefit

## Vision

To be a world-leading institution of excellence and innovation in healthcare

## Mission

KFSH&RC provides the highest level of specialized healthcare in an integrated educational and research setting.

At KFSH&RC, we aim to continuously improve the quality of our patients' lives, to provide our colleagues with an exceptional working environment with prospects for learning and development, and to serve our communities through scientific and applied research, innovative partnerships, and health education programs. In all our efforts, we are guided by a strong set of values that sets us apart as a reputable and well-recognized healthcare institution in the region.

# CHIEF EXECUTIVE OFFICER MESSAGE

Since King Faisal Specialist Hospital and Research Centre (KFSH&RC) opened its doors in 1975 to care for those in greatest need, we have steadily advanced and endeavored to provide services in line with our values: safety, compassion, excellence, patient-centric and innovation. We have been recognized as a global healthcare leader, a success which has stemmed from a passion to embrace and adopt new therapies and pursue research to discover endless possibilities.

Amidst a rapidly changing healthcare system in a country pioneering a trajectory of global excellence, we have a responsibility to fully unlock our strengths and capabilities. *All Commit to Improve* demonstrated what is possible when we harness an innovative spirit and aim higher. As you will read in this report, some of the improvement projects undertaken in 2017 relate to ensuring timely access to care, introducing new best practices, enabling research and stewarding our environment. The common thread running through the 151 projects is the impact that reaches beyond our hospital walls and deep into our communities. Together, these projects contribute to building a stronger hospital, community, and country, demonstrating that the whole is greater than the sum of its parts.

I would like to thank Dr. Rashed Al Rashed Alhmaid, former Chief Operating Officer-Riyadh, and Dr. Tariq Linjawi, former Chief Operating Officer-Jeddah, for their leadership and for creating a culture that fostered and enabled improvements in 2017. I would also like to thank Dr. Mohammed Hijazi, Chief Quality Officer and the entire Quality Management Division for leading the performance improvement initiative and encouraging colleagues to realize their full potential. The success of *All Commit to Improve* was only possible due to the unwavering commitment of all staff across KFSH&RC; their achievements fill the pages of this report and their contributions make a lasting impact on the lives of the patients and families in our care. I am inspired by what has been accomplished and grateful for the talent and dedication bestowed upon KFSH&RC and its staff.

As we look towards the future, King Faisal Specialist Hospital and Research Centre must continue to channel its innovative spirit. The people of this country deserve exceptional and efficient care; thus, we must work together to support a capable and reliable system that delivers. Together, we will continue to build our reputation for excellence and create a legacy that will benefit the nation for generations to come.

Sincerely,

Majid Al Fayyadh, MD, MMM  
Chief Executive Officer



*His Excellency, Dr. Majid Al Fayyadh  
Chief Executive Officer  
King Faisal Specialist Hospital and  
Research Centre*



# CHIEF OPERATING OFFICERS' MESSAGES



Dr. Rashed Al Rashed Alhmaid  
former Chief Operating Officer-Riyadh



Dr. Tariq Linjawi  
former Chief Operating Officer-Jeddah

This past year it has been my sincere pleasure to see teams from across King Faisal Specialist Hospital and Research Centre – Riyadh collaborate for a common purpose, to become even more exceptional. KFSH&RC is renown around the world for excellence, and through the performance improvement initiative, *All Commit to Improve*, we achieved a new benchmark.

As an academic medical centre, we have a responsibility to relentlessly pursue innovation and support the transformation of care for patients and families at KFSH&RC and beyond. Through the 91 performance improvement projects completed at the Riyadh site, this is just one example of how we fulfill this responsibility and are changing the future of healthcare.

I would like to expand my deepest gratitude and congratulations to each of the 1,312 people who contributed to *All Commit to Improve*. You have unquestionably made an impact. To the Quality Management Division, thank you for leading this initiative and helping KFSH&RC - Riyadh be at our best.

Warmest congratulations,

Dr. Rashed Al Rashed Alhmaid  
former Chief Operating Officer  
Riyadh

King Faisal Specialist Hospital and Research Centre is home of the brightest minds and biggest hearts in healthcare. In 2017, it was this talent at KFSH&RC – Jeddah that helped inspire 45 departments to complete 60 performance improvement projects to ensure we provided the best care.

Across the entire Organization there is an unwavering commitment to quality in support of efficient, effective and safe care. *All Commit to Improve* has further strengthened our resolve. This report highlights some of our performance improvement successes last year and hope it serves as inspiration for the endless opportunities for achieving excellence.

Thank you to all the staff who came together to support *All Commit to Improve*. You have demonstrated the power of team work and inter-professional collaboration and set a new standard for others to reach. Thank you also to the Quality Management, your leadership on this project was invaluable.

I look forward to continued success in 2018.

Sincere congratulations,

Dr. Tariq Linjawi  
former Chief Operating Officer  
Jeddah

# CHIEF QUALITY OFFICER MESSAGE

It is my honour to submit the 2017 Performance Improvement Executive Report, *All Commit to Improve*.

King Faisal Specialist Hospital and Research Centre has earned its reputation as one of the top hospitals in the world in part due to an unwavering commitment to providing excellent patient care through exceptional quality. It was in this spirit of continuous improvement that last year teams across King Faisal Specialist Hospital and Research Centre undertook 338 projects to ensure the provision of care is safe, timely, efficient, effective and patient-centred with 151 completed in 2017.

Centred around our corporate strategic priorities, *All Commit to Improve* was an enterprise-wide initiative in which every department was asked to seek out opportunities which continued to pave the way to excellence. Last year, projects ranged from patient-focused initiatives to prevent infections, to improving access to services, to environmental stewardship. The following report provides a strategic overview of performance improvement initiatives undertaken in 2017 and highlights project winners in Riyadh and Jeddah. I sincerely hope that you will find the report both informative and inspirational.

On behalf of the Quality Management Division, I would like to congratulate all the teams and individuals who made the commitment to improve in 2017 and undertook a project to make a meaningful and sustained impact. I would also like to extend my profound appreciation to the former COOs of the Jeddah and Riyadh sites, Dr. Tariq Linjawi and Dr. Rashed Al Rashed Alhmaid and His Excellency, Dr. Majid Al Fayyadh, Chief Executive Officer, for their support and creating an environment that enables us to be better every day.

As an organization, through our quality agenda, we have made significant progress in supporting our vision of being a world-leading institution of excellence and innovation in healthcare. I look forward to continuing to harness this momentum and doing more for the patients we care for and the future of healthcare in the great Kingdom.

Respectfully submitted,

Dr. Mohammed Hijazi  
Chief Quality Officer



Dr. Mohammed Hijazi  
Chief Quality Officer  
King Faisal Specialist Hospital and  
Research Centre

# ALL COMMIT TO IMPROVE

Quality is a value that stretches across King Faisal Specialist Hospital and Research Centre from Jeddah to Riyadh. Each and every day, our unwavering commitment to quality guides our standard of care, our research and our teaching. Quality underpins our mission and is the beacon for our vision.

Healthcare is changing because the needs of our patients are changing. KFSH&RC is focused on remaining at the forefront of change by harnessing innovation and the collective experience and expertise across the organization to achieve excellence. *All Commit to Improve* is an enterprise-wide initiative to foster a culture of performance through a concentrated focus on improvement. By building a commitment to performance improvement, and implementing innovative health solutions, we are ready to address the changing needs of our patients, our healthcare system, and our nation.

Adopted by the Corporate Performance Improvement Council in October 2016, *All Commit to Improve* is guided by the corporate strategic priorities as well as the domains of quality healthcare. All departments across KFSH&RC were asked to find one project that would have a positive impact on:

- safety
- timeliness
- efficiency
- effectiveness
- equitable
- patient-centered care

In a matter of months, 95 departments rose to the challenge and led 151 projects to completion.

## Committed to Excellence

This past year has been marked by a palpable energy and renewed passion which propelled KFSH&RC forward along a pathway to excellence. With a united focus on being better every day, across all areas of the organization we made exceptional progress.

The following report highlights the award-winning projects recognized at the 2017 Performance Improvement Annual Awards in Riyadh and the Quality Day Poster Competition in Jeddah. These 12 projects are just a sample of what was accomplished and illustrate what is possible when teams work together, think big, and aim to be the best.

Whether it was through the development of new clinical pathways, implementing international best practices, or simply fine tuning existing processes, teams made meaningful and sustained improvements. The impact of this work has been felt by staff and patients alike, but also extends beyond the borders of KFSH&RC and into communities across KSA.

## Meaningful Impact

Over the past year, because of *All Commit to Improve*, wait times for appointments in some clinics dramatically decreased. In some instances, small changes in protocols were made to optimize appointment usage,

## Domains of Quality Healthcare





# A PATHWAY TO EXCELLENCE

All Commit to Improve Initiative 2017



in another a “super team” came together to eliminate the waiting list. The net outcome however was the same: access to care increased and the clinics can care for more patients.

Technology played a significant role in delivering performance improvements as teams either adopted cutting-edge solutions or simply reimaged the use of existing technology. Emerging technology was the critical turning-point for heart-failure patients being able to regain their lives. Rethinking technology helped connect with patients and physicians in communities across KSA and fast-track screen programs. These fresh approaches helped us become more efficient and reduce costs while still ensuring patient-centred care.

The prevailing theme across each of the 151 completed projects was team work. Interprofessional teams and inter-departmental collaboration was the driving force behind every single initiative. By working together and building relationships, teams evolved care to prevent infections with our most fragile patients, improved the transition of patients home, and

developed new practices that are now the standard for the entire nation. These teams touched lives and made a difference.

## Foundations for the Future

As an academic medical centre, we think about research, discovery and innovation every day. The future of healthcare depends on our ability to harness creative energy and develop new and better ways of doing things. The benchmark for success is not only our capacity to generate knowledge, but to also adopt research and innovation into practice to make a meaningful impact.

Through *All Commit to Improve*, we have made tremendous strides, but our journey is not over. The successes from the past 12 months are the foundation on which we will continue to build performance improvements. We must continually look forward and ask how we can aim higher, set new benchmarks, and achieve new pinnacles of success. As an organization we are committed to performance improvement and sincerely hope our journey inspires others.

## STRATEGIC PRIORITIES 2013-2020

In 2012, KFSH&RC introduced its 2020 Vision and Strategic Plan, with the goal of positioning the hospital as a leading healthcare provider, not only in the Kingdom, but in the region and around the globe.

### Strategic Priority 1

Develop world-leading healthcare and research

### Strategic Priority 2

Increase capacity and patient access

### Strategic Priority 3

Improve efficiency and decision-making

### Strategic Priority 4

Enhance staff recruitment and retention

### Strategic Priority 5

Promote external relationship and funding



*You will never change your life until you change something you do daily.  
The secret of your success is found in your daily routine.*

- John G .Maxwell

# CELEBRATING OUR SUCCESSES

## 1<sup>st</sup> PLACE PROJECT WINNERS

### A NEW LEASE ON LIFE

#### Pathway from heart failure to ventricular assisted device

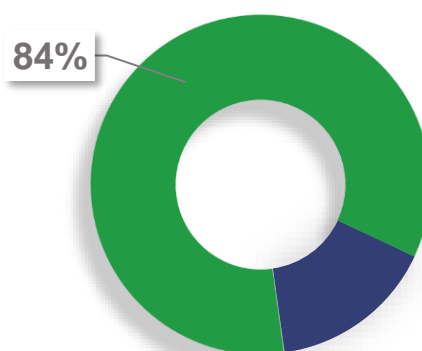
Riyadh (Tied for 1st Place)

The Heart Centre at King Faisal Specialist Hospital and Research Centre is internationally renowned for highly specialized cardiac care, especially in the areas of heart failure and transplant. Driven by excellence, this deeply dedicated team relentlessly pursues technological breakthroughs to ensure their patients receive the very best care. When a new generation of a left ventricular assist device (LVADs) was introduced in 2016, the Heart Centre team knew this could be a renewed hope for patients with heart failure.

Any diagnosis regarding the health of your heart, especially when it involves the word failure, is intimidating. A serious and costly condition with no cure, heart failure develops when the heart becomes damaged or weakened as a result of a heart attack or other acute condition. When your heart is too weak to properly pump blood, and transplantation is not an immediate option, living with heart failure can be a burden to patients and their families requiring a dramatic change in lifestyle and frequent hospital readmissions. An LVAD can change this.

A LVAD is a mechanical pump implanted inside a person's

#### % one year patient survival post LVAD



Quality of Life



Decreased length of time spent in hospital



Decreased readmission to hospital

chest to help a weakened heart pump blood. While LVADs have been readily used for decades, recent developments are reducing complications and significantly improving survival and quality of life for patients with advanced heart failure.

In 2016 the Heart Centre became the first hospital in the Gulf and Middle East area to implant a new generation of LVADs, Heartmate 3. Ten patients were selected to receive the new device and the first implantation of Heartmate 3 was done in April 2016. The procedure was supported by new evidence based clinical practice guidelines, an

enhanced discharge and follow up process, as well as a satisfaction survey to measure the impact on quality of life.

The results were truly life changing.

First year survival rates for patients with the Heartmate 3 went up over 84%. Patients were also able to return home sooner with the length of stay in hospital being reduced by 36 days and readmissions declining 60%. The real impact however was with quality of life. Nine out of ten patients said they felt better about their health and were able to return to many activities independently after returning home.

## CONTINUITY OF CARE

### Improving the transition for neurology outpatients

#### Jeddah

Healthcare is a finite resource that must be used wisely. To provide world-class care within an efficient healthcare system, patients must receive the right care, in the right place, at the right time. This ensures access to tertiary care when patients need it.

Within the Neurology Department in Jeddah, the outpatient clinic did not have clear processes or protocols to help transition patients back to their primary care provider. As a result, only 3.2% of patients were discharged from the clinic and less than 1% of patient charts were closed. This meant patients were being retained in the system unnecessarily for services that could more effectively be provided by primary care providers, while also limiting access to this service for new patients. For those who were discharged, the process was fragmented and ineffective.

Discharge planning is a vital service which ensures the continuity of care for patients as they move between care environments. Effective planning includes ensuring that appropriate treatment plans have been developed, proper referrals have been made, and a follow up plan with the primary healthcare centre is planned. Clear expectations should be established at the first encounter so that patients and families have realistic expectations on

care. Failure to do this can result in a never-ending loop of visits to a clinics or hospital because the patient is unable to achieve the next milestone in their care.

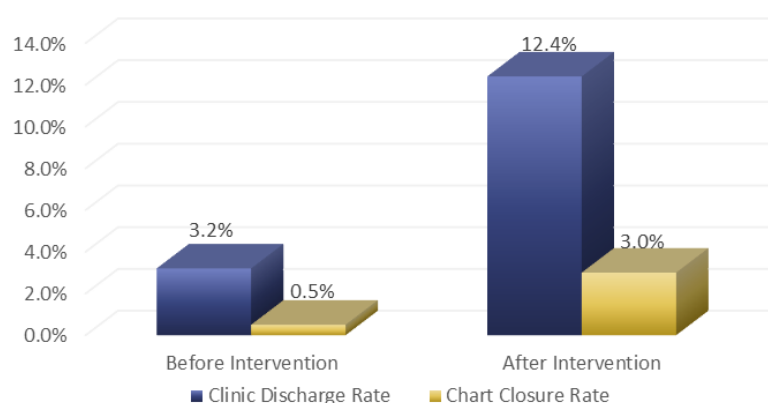
Motivated by ensuring all neurology patients receive the best care and access to services they need, the Neurology Section embarked on a strategy to begin to increase the number of patients discharged from the outpatient clinic and files closed. This work included analyzing what was hindering patient discharges and hiring an interim discharge planner to support the department.

Over the course of three months, the discharge rate grew to 12.4%, and 3% of all open patient files were closed. This change helped to increase access for new patients to the clinic while also effectively moving existing patients to the next milestone of their healthcare journey.



Improved the flow of patients to increase access to specialized neurological care for new patients.

Percentage of Neurology Clinic Discharges and Charts Closed



## A NEW PATH FOR EFFECTIVE AND EFFICIENT CARE

### Establishing a Multidisciplinary Hepatitis Program

Riyadh (Tied for 1st Place)

Receiving a diagnosis of hepatitis C can be an overwhelming experience that fills patients and their families with questions and uncertainty. Exposure to hepatitis C virus (HCV) may result in chronic hepatitis in 80% of cases, with increased risk of liver cirrhosis and liver cancer.

While the treatment of HCV has become highly effective (cure rate 94%), it has also become more complicated, confusing and expensive. Over the past five years, there have been significant breakthroughs that have led to a complex array of treatment combinations, creating confusion for patients and physicians. Added to this are the soaring costs which reached over 200,000 SAR per patient in 2015.

Gastroenterology took the initiative to establish a new multidisciplinary hepatitis program that involves hepatologists, clinical pharmacists and clinical coordinator for treatment of hepatitis C. The program aimed to standardize care, reduce cost, increase compliance and achieve the best possible cure rate. The program was to also ensure that patients have the chance to communicate with the team throughout their treatment.

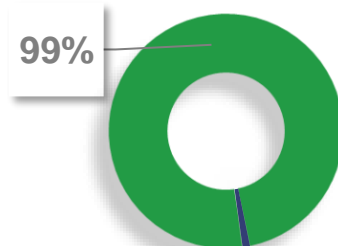
In very short order this approach proved to be a game changer on patient outcomes. Within a year of program launch, patient and

physician compliance with the treatment plans rocketed from 30% to 99%. This was accompanied by an excellent outcome as the cure rate rose from 89% to 98%.

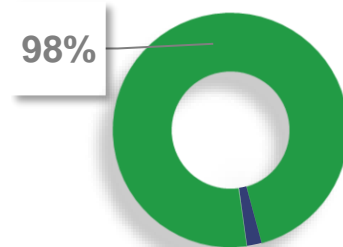
The cumulative impact of new the hepatitis program extends beyond just patient care and reaches to the bottom line of healthcare. The program helped to create a competitive atmosphere for pharmaceutical companies which resulted in medication costs being reduced by 75%. This translates directly to a 75 million SAR savings for every 500 patients treated. Additionally, the program helped to influence the momentum required to seek approvals for medications produced in Saudi Arabia as a local and cost-effective solution. By drawing on local and multidisciplinary expertise, a new combination of medications was developed which proved to be effective on all six genotypes of HCV.

The new hepatitis program benefits both the Riyadh and Jeddah sites. It has become such a model of success that the Ministry of Health has recognized the treatment plan as the best strategy to eradicate HCV. Furthermore, it has inspired the gastroenterology to launch two similar projects; namely, the inflammatory bowel disease (IBD) program and esophageal program.

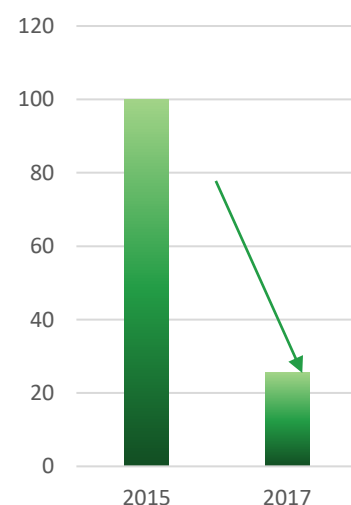
#### Compliance Rate




#### Effectiveness



#### HCV Annual Treatment Cost (SAR millions)







In 2017, more couples were blessed with a family because of improvements made at our Jeddah and Riyadh IVF Clinics.



# 2<sup>nd</sup> PLACE PROJECT WINNERS

## WATER WISE

### Conserving water use

#### Jeddah

There is a deep connection between the health of individuals and the environment. At King Faisal Specialist Hospital and Research Centre, the promise to do no harm goes beyond hospital walls and into the broader community.

Each year, water consumption at KFSH&RC increases along with the number of patients, visitors and employees. At the Jeddah facility, this has partially led to hospital water consumption exceeding the international benchmark by 35 percent: 40 percent of which is generally attributed to sanitary usage.

As part of an ongoing environmental stewardship strategy, Engineering Utility & Maintenance Dept. saw the opportunity for positive change. Early in 2017, the existing flush valves were adjusted to reduce the water flow per flush by 1 liter for all public and patient toilets at the Jeddah site. Within the first month, water usage in toilets decreased between 16% and 41%.

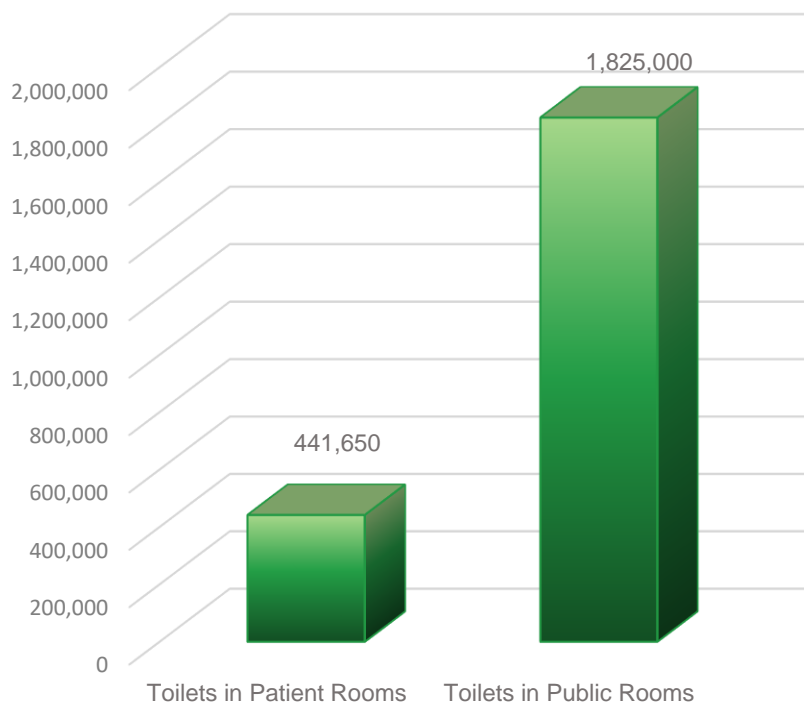
This simple change will reap rewards for years to come by reducing annual water usage by 2.26 million litres, as well as realizing an estimated 29,000 SAR in annual savings; and in addition to helping the strategic water reserves serve the hospital for a longer period in case of water shortage emergencies.



#### 2.26 million litres

Since the installation of low flow flush valves, 2.26 million litres of water are now saved each and every year at KFSH&RC.

### Litres of Water Saved Annually



## A Legacy of Research The Digitization of the Annals of Saudi Medicine

Riyadh

Innovation, research, and compassion are the hallmarks of leading hospitals around the world. As an academic medical centre, King Faisal Specialist Hospital and Research Centre has a great responsibility to bring research, teaching, and patient care together to achieve new heights of excellence and contribute to healthy futures for the people of Saudi Arabia and around the globe. It is in this spirit that KFSH&RC generously leads and shares research so that others beyond our hospital walls can share in our new knowledge and improve the lives of others.

The Annals of Saudi Medicine (ASM) is an international, peer-reviewed medical journal published bimonthly by KFSH&RC. This year ASM is in its 38th volume, having been initially launched in 1981. While all issues of ASM after 2008 are freely available online, the 28 volumes between 1981 and 2008 were only in print form, thus making it difficult to access this valuable research. Sharing these past volumes not only adds knowledge, research tools, and data for the next generation of medical and scientific professionals, but it also contributes to the credibility of the Journal and attracts more submissions for review.

With 28 volumes containing over 20,000 pages, scanning and populating the content into

international databases in a user-friendly format was an arduous and technical task. Academic and Training Affairs set out on a mission to not only digitize past volumes of ASM, but to do so in a way that images, text, and tables could be machine encoded and recognized by search engines and databases.

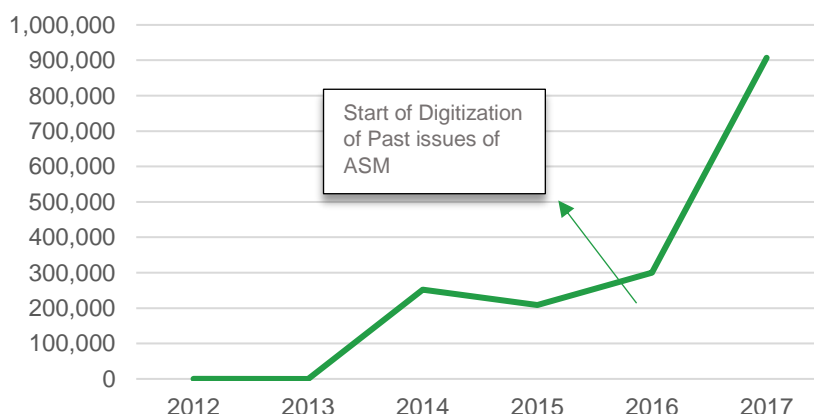
For nearly a year, the past issues were carefully scanned, converted into soft content, coded, assigned Digital Object Identifiers (DOIs), and uploaded/populated to the ASM website and international databases. Throughout this process, as more articles were added each month, the number of hits (number of times users clicked the ASM articles) under PubMed has steadily climbed from a low of 399 hits in June 2016 to a high of 3,492 hits in December 2017. The number of downloads and views to the

ASM website also grew from 155 in 2012 to 907,060 in 2017 and manuscript citations doubled.

Perhaps the greatest outcome of this project is the creation of more knowledge. Information is power. By sharing this data so freely, it could become a vital piece in completing the puzzle of the next great discovery.

*In research, you don't always know what will lead to the answer. If we are to continue to unlock cures, we must freely share knowledge for the solution could very well be in your hands.*

**Number of Downloads  
Pre and Post Digitization**



# 3<sup>rd</sup> PLACE PROJECT WINNERS

## IMPROVING ACCESS TO CARE

### Reducing waiting times for IVF Treatment

Riyadh

Waiting for a medical appointment can be an enormously stressful experience, especially when that appointment can help to realize the dream of a child. The invitro fertilization (IVF) clinic at King Faisal Specialist Hospital and Research Centre – Riyadh had a demand for appointments that meant a waiting list of more than two years. For the 1,200 couples waiting to become parents, it is a lifetime.

Staff at the IVF clinic were not only frustrated by the long wait time to help build families, but also the number of patients who were missing appointments. In 2016, 44% of appointments were missed due to no shows. This meant hundreds of patients were needlessly waiting because others had either opted not to attend their appointment, or simply forgotten their appointment was scheduled.

In late 2016, the project team set out on a plan to reduce the number of patients not showing up for appointments while concurrently decreasing the wait list time to improve overall access. Starting with a telephone blitz, over 800 patients were called to confirm their status



Wait Time  
Before  
2 years

Wait Time  
After  
0



Number of  
Patients  
Waiting Before  
1,200

Number of  
Patients  
Waiting After  
0

and update their information. The “super team” then scheduled 200 patients in the utilized slots of the IVF clinic in one day. Following this, 72 patients were slotted into additional appointments in the fertility clinic. This concerted focus to improve access eliminated the entire IVF wait list within six months. In addition, the no show rate dropped to under 13%.

Since the IVF clinic reached their target in July 2017, the team is continuing to monitor access and wait times and has set a goal that no one should have to wait longer than six months for their first appointment.



*Clearing our wait list from being over 2 years long, to zero was amazing. The anxiety experienced by couples waiting is so difficult and by removing this stress we can truly provide the care we strive for.*

## ENSURING THE BEST USE OF RESOURCES

### Reducing the no-show rate in the Sleep Lab

#### Jeddah

Each day there are hundreds of appointments scheduled across King Faisal Specialist Hospital and Research Centre. When an appointment is missed, it is a lost opportunity to provide care and live up to our promise of timely access.

The Respiratory Care Sleep Lab recently experienced a spike in appointment no-show rates. Reaching a peak of 60% of patients not showing for their scheduled appointments, the team was concerned not only about using resources wisely and caring for as many patients as possible, but also the health of patients who are not showing for the appointments.

It is estimated that 50 to 70 million Americans chronically suffer from a disorder of sleep and wakefulness, hindering daily functioning and adversely affecting health. The long-term effects of sleep loss and sleep disorders have been associated with a wide range of many health consequences including an increased risk of hypertension, diabetes, obesity, depression, heart attack, and stroke.

Sleep medicine services are relatively new in the Kingdom of Saudi Arabia. Based on the last research PSG rate was 18 studies/year/100,000 people, which showed high deficiency

on conduction of the sleep studies while at same time the demands for sleep studies increasing drastically. Upwards of 24% of the population is affected by sleep related disorders; pushing short sleep lab beds to the limit leading to long waiting lists. For this reason, even one missed appointment is concerning.

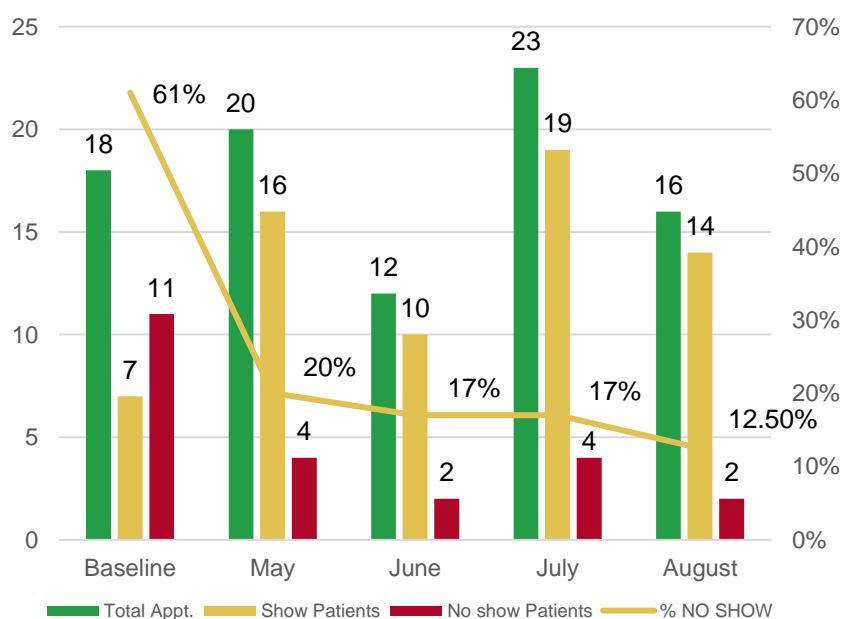
In May 2017, the Respiratory Care Sleep Lab team developed a simple plan to increase communication with patients to remind them of an upcoming appointment. When patient was not able to come to an appointment date that set for them, the team offered the spot to someone else on the waiting lists.

Within a very short time, we were able to reduce the no-show rate from 60% to 12.5%; almost doubling the number of patients being seen each month. This project demonstrated how commitment to improve quality can improve patient care and saves time and money for hospital.



*It's amazing how small communication change can save time, money and help to improve quality of patient care.*

No Show Rate in Sleep lab



# 4<sup>th</sup> PLACE PROJECT WINNERS

## THE GIFT OF A CHILD

### Improving IVF success rates

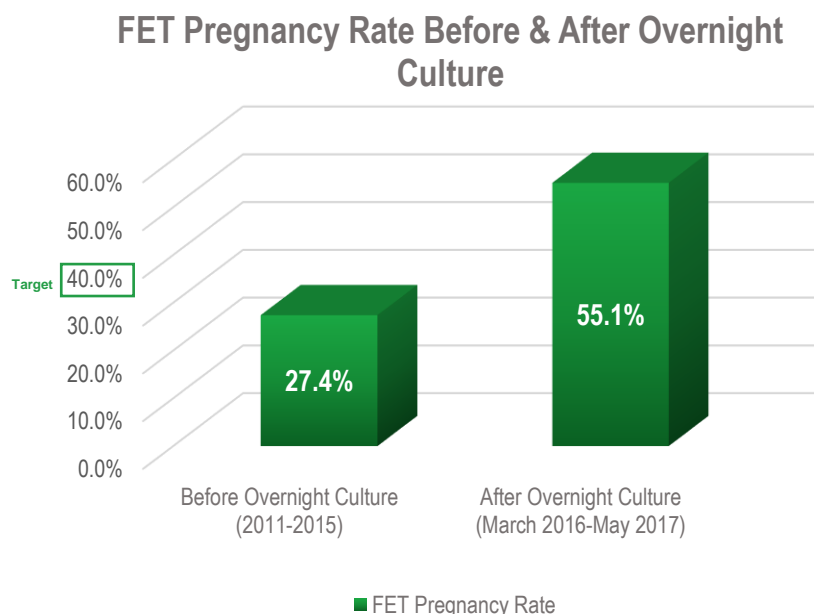
Jeddah

Becoming parents is a dream that sometimes requires medical intervention to realize. In vitro fertilization, more commonly known as IVF, is a treatment that helps couples conceive a child. Available for over 30 years, IVF success rates have steadily increased with new technology, research and innovation.

The Assisted Reproductive Technology (ART) Lab and IVF Unit in Jeddah helps over 300 couples a year conceive a child after an average of three rounds of IVF. Each attempt is a highly personal and stressful endeavour for couples as they anxiously wait for a positive result.

Frozen embryo transfer is one technique used for patients who failed to achieve pregnancy after a fresh embryo transfer. From 2011 – 2015, the IVF Unit had a frozen embryo transfer success rate of 27.4%, an outcome considered low when measured against other global benchmarks. With reports of over 40% success in other countries, the team in Jeddah set out to innovate their current practice so that more couples could at long-last have the gift of a child.

After studying international best practices, it was felt that a simple change in practice could dramatically increase IVF success rates – literally over



*Dr. Naeem, will all happiness, Peace, Mercy and Blessings of God I would like to thank you and all the members of the ART Clinic, especially Dr. Haneen and Ala, for helping us to achieve our dream for seven years. Our joy is great, and our feeling is unbelievable. Life has revived us again.*

*May God reward you with good.  
-New Parents*

night. Previously, frozen embryos were thawed, examined and transferred on the same day. Based on research, the ART Lab theorized that allowing thawed embryos to sit overnight before examining for viability would better indicate which embryos had greater likelihood of implanting after transfer and developing into a pregnancy.

The results were game changing. By implementing this change in protocol, the ART Lab and IVF Unit quickly passed international benchmarks and achieved a 55.1% success rate in only three months.

Since March 2017, successful frozen embryo transfer rates have doubled meaning even more families welcomed the new year with a child.



## TELEMEDICINE FOR BETTER CARE

### Streamlining patient referrals through virtual clinics

#### Riyadh

King Faisal Specialist Hospital and Research Centre is a tertiary care facility that cares for some of the most critical patients from across Saudi Arabia and the Middle East. A highly regarded institution recognized for excellence, a referral to KFSH&RC can signal an important step in someone's healthcare journey.

In order to ensure the best care, healthcare providers must have the most complete picture of an individual's current health including medical history, test results and the insights of referring physicians. Without proper screening and documentation, a smooth transition into our care is quickly hampered with roadblocks that can result in either delays and unnecessary repeating of tests. Both of which cause undue stress on the patient and their families and creates an extra burden on the healthcare system.

Health Outreach Services Department, in partnership with Pediatric Urology, launched a pilot program in 2017 to help prevent unnecessary delays and improve efficiency by using telemedicine virtual clinics. In a virtual clinic held with the patient and family, the referring physician and a physician at KFSH&RC, a proper consultation can occur to accurately assess patients and more effectively determine the next steps.

Prior to this pilot, it could take over 6 ½ months from referral time to surgery/treatment as documentation was frequently incomplete and would need to be sent back to the referring physician. This created a risk to patient health and wasted valuable resources trying to track down the proper paperwork. In addition, patients and their families had to travel to Riyadh, at a considerable cost and disruption to their family, to attend an assessment at an outpatient clinic prior to their first appointment.

The simple addition of a virtual clinic helped to ensure that all documentation was complete, and reduced the waiting time to surgery/treatment to just under 4 months. Plus, it eliminated an

outpatient clinic creating a saving of 1.18 million SAR, including 548,100 SAR in travel costs for patients and families.

The patient experience starts the moment a patient is referred to KFSH&RC. By better utilizing technology we were not only able to deliver an experience to support exceptional care, but we were also able to use limited healthcare resources more effectively.

**2.7 months**  
Wait times for surgery/treatment to Urology with the help of virtual clinics.



# 5<sup>th</sup> PLACE PROJECT WINNERS

## FREE TECHNOLOGY LEADS TO BETTER SCREENING

### Fast-tracking pre-bone marrow transplant clearance process

Riyadh (Tied for 5<sup>th</sup> Place)

For patients with certain non-malignant blood disorders, learning that a bone marrow transplant (BMT) could be the only curative option available marks beginning of a journey that takes them through a battery of pre-clearance tests. A clearance process that might take up to 10 months for patients with suitable donor to find out if they qualify for the transplantation procedure could feel like a lifetime, while placing them at potential risk for developing further complications.

Stem cell transplantation is often offered as a curative therapy in patients with inherited and/or acquired non-malignant blood disorders. Several of these cases are referred to the pediatric hematology section for personalized treatment plans to best support each patient's transplantation course and outcome based on their condition.

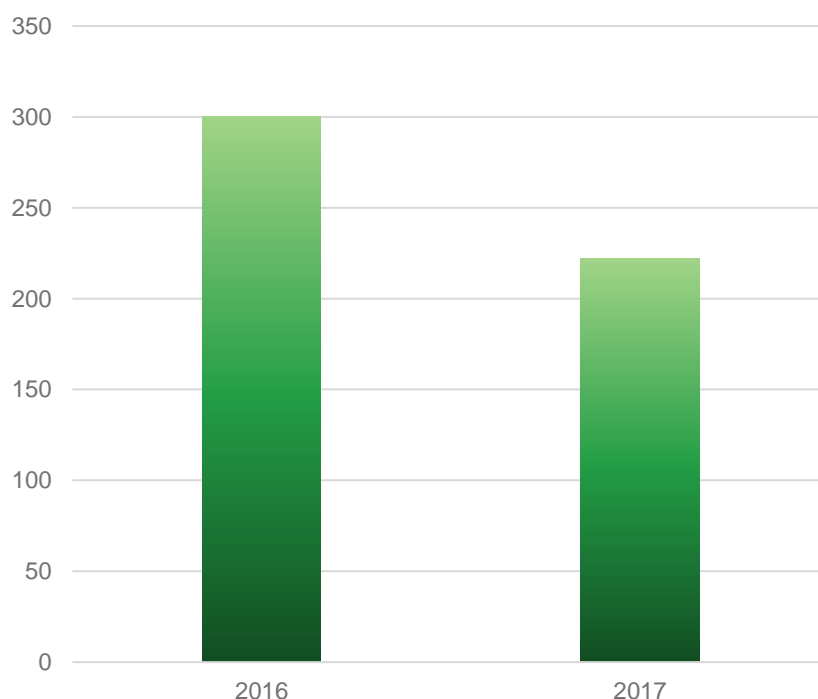
Up until 2016, screening and clearance for a possible BMT was performed through a time-consuming paper-based manual process, and not as effective as it could be. Fueled with a desire to improve the processes the section of hematology set out to establish a fact-based, well-organized screening process. Cornerstone of this initiative was adopting a web-based tracking system designed and developed to track patients accepted with an indication for a transplant.

Built on the free-access REDCap (Research Electronic Data Capture) application designed by Vanderbilt University, the team successfully devised a user-friendly tracking system enabled with electronic disease-specific work-up plans identifying early-scheduling areas and calling-out scheduling bottlenecks with real-time follow-up through virtual tracking. Additionally, "no-donor" patients were catalogued for effective alternate donor search. The system not only helped in the reorganization of processes, but also enabled a standardized pre-bone marrow transplant clearance work-up plan and

patients in need of an urgent transplant were identified and fast-tracked.

By adopting this module, wait times declined by 26%, or 78 days: a critical time for those waiting to regain their health. With successful implementation of this project and results presented at the 2018-Annual American Society of Blood and Marrow Transplantation Conference, other sections took notice of the unique system design and plans are well underway to adopt and implement similar technology for several other disease-specific Pre-BMT clearance modules.

Pre Bone Marrow Transplant Clearance Times  
(Days)



## PROTECTING OUR MOST FRAGILE PATIENTS

### Reducing and preventing infections in the NICU

Jeddah

Each year approximately 171 neonatal admissions (including in-borns and out-borns) at King Faisal Specialist Hospital and Research Centre - Jeddah count on the Neonatal Intensive Care Unit (NICU) to help get them through their challenging start to life and home with their families. As part of their care, central lines are frequently used to provide life-sustaining medication and nutrition. As some of the most vulnerable patients with delicate immune systems, this places neonates at even greater risk for infections and makes infection prevention strategies of paramount importance.

Infection rates are closely monitored across the entire hospital including the NICU. While international standards help set standards for performance, staff have their sights set on an infection rate of zero. That is why when four central line associated blood stream infections occurred in the NICU in early 2016, an interprofessional team quickly came together to map a plan to get the unit back to zero.

Infection prevention and control is everyone's responsibility. In order to develop a solution, every central line associated blood stream infection case was meticulously reviewed to understand what contributed to the infection and how practices could be changed to prevent it in the future. Working closely with the Infection Control



Marta Bubenikova , Staff Nurse NICU and Dr. Mohamed AbdelWahab, Assistant Consultant neonatologist, KFSH&RC - Jeddah

Department, the NICU staff employed strategies rooted in education, clinical best practices and training. Over the course of eight months, all staff were involved in a hand hygiene and infection control campaigns and took part in clinical training to apply the strictest rules to minimize the risk of infection.

As a result of this work, central line associated blood stream infections not only went below the international standard, but the unit achieved its zero target. Most importantly, through this concerted effort, a sustained infection control vigilance has been embedded into clinical care. Staff are universally committed to practices that prevent infections and are watchful for early signs and symptoms so that immediate action can be taken.



*A culture of best practice and exemplary outcomes became our standard of care...and it is a never-ending journey. When practice is transformed at the bedside and through teamwork within the multi-disciplinary team, excellent patient outcomes are possible.*



**On target** to zero-harm with zero central line associated blood stream infections in 2017.

## COLLABORATING FOR THE BEST CARE

### Discharge before noon planning

Riyadh (Tied for 5th Place)

A pillar of an effective healthcare system, everyone deserves to receive the right care, in the right place, at the right time. In a hospital, delivering on this promise is a complex and delicate balance of managing the care path of one patient with the entire flow of hundreds of patients across the organization each and every day.

Patient flow is a multifaceted task that requires an interdisciplinary team to deliver success. The Pediatric Hematology Department recognized an opportunity to improve how they managed the flow of patients and in 2016 decided to implement weekly interdisciplinary Discharge Planning Meetings to achieve a best practice standard known as Discharge Before Noon.

Discharge Before Noon is a benchmark for planning the management of patient flow and preventing bottlenecks and overcrowding for new patients being admitted. It also ensures timely decisions about a patient's care and provides families with the answer to perhaps the most sought-after question, "when can I go home?". Through the weekly Discharge Planning Meetings, the Pediatric Hematology Department focused on the power of interprofessional collaboration and brought together hematologists,

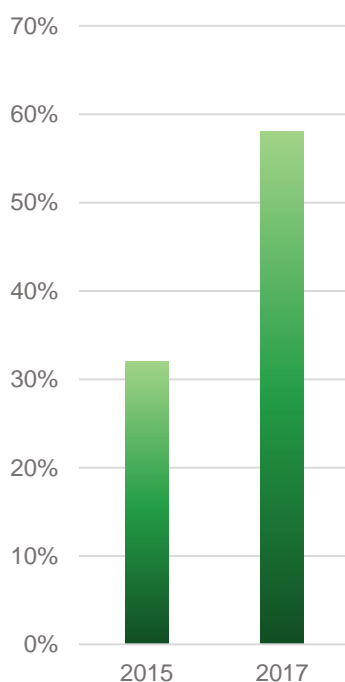
oncologists, pharmacists, social workers, case managers, clinical nurse coordinators, nutritionists, charge nurses and clinical research coordinators, to assess patients, their continuing care needs and follow up appointments with outpatient clinics.

Before this approach was used, Pediatric Hematology had a Discharge Before Noon rate of 38%. Thanks to effective communication and engaging teams that provide sub-specialized care in the

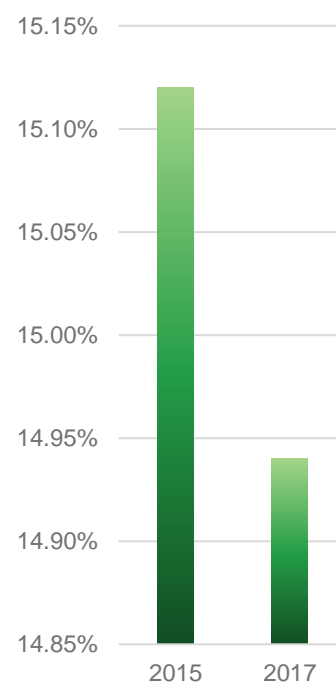
discharge planning process, this rate increased to 58%. It also helped to create efficiencies in care by reducing the average length of stay.

Exceptional care relies on an efficiently run healthcare system that draws on the expertise of many. Discharge Planning Meetings demonstrates how success can be achieved when you bring all these elements together with a common goal of providing the best care.

#### Discharge Before Noon Rate



#### Average Length of Stay (Days)





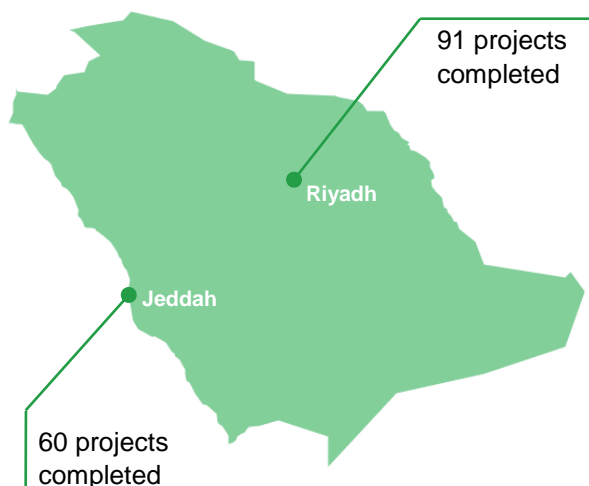


Inter-professional collaboration was cornerstone to success and ensured measurable and sustained improvements.



# ALL COMMIT TO IMPROVE 2017 AT-A-GLANCE

## Number of Performance Improvement Projects Completed in 2017



**1,312**

Staff across KFSH&RC supported performance improvement projects

**245**

KFSH&RC Departments led performance improvement projects

## Supporting our Domains of Care

<b>Safe</b> <b>34</b>	<b>Timely</b> <b>24</b>
<b>Effective</b> <b>22</b>	<b>Efficient</b> <b>47</b>
<b>Equitable</b> <b>1</b>	<b>Patient-Centred</b> <b>23</b>

## Benefits of Improvement Projects



### Productivity

24 projects contributed to improved productivity



### Patient Satisfaction

31 projects increased patient satisfaction



### Work Processes

75 projects helped to improve how we work



### Reduced Costs

29 projects helped to contain or reduce costs



### Cycle Time

24 projects helped to improve cycle time

# CONGRATULATIONS

Each year a few performance improvement initiatives particularly shine in their success and lasting impact. Congratulations to the following for being recognized for their outstanding achievements.

## Jeddah Site

### 1<sup>st</sup> Place

#### Improving the Process of Neurology Outpatient Discharge

Neurosciences/Adult Neurology

### 2<sup>nd</sup> Place

#### Reduction of Water Consumption in Hospital Toilets

Engineering Utility & Maintenance

### 3<sup>rd</sup> Place

#### Reduce No Show Rate in Sleep Lab

Respiratory Care Services/Sleep Lab

### 4<sup>th</sup> Place

#### Improving the Success Rate of Frozen Embryo Transfer Cycles in IVF Patients Who Failed to Achieve Pregnancy with Fresh Embryos Transfer

Department of Pathology & Laboratory Medicine  
ART Lab

### 5<sup>th</sup> Place

#### Reduction and Prevention of Central Line Associated Blood Stream Infections in the Neonatal Intensive Care Unit

Neonatal Intensive Care Unit

## Riyadh Site

### 1<sup>st</sup> Place

#### Interdisciplinary Milestone at KSA: Pathway from Heart Failure to Ventricular Assisted Device

(tied for 1<sup>st</sup>)

Cardiovascular Nursing & ECMO/Assisted Device Service

#### Hepatitis C Program Improvement Project

(tied for 1<sup>st</sup>)

Gastroenterology and Medicine

### 2<sup>nd</sup> Place

#### Digitization of the Annals of Saudi Medicine Past Issues (1981-2008)

Academic and Training Affairs:  
Publications Office

### 3<sup>rd</sup> Place

#### Minimizing IVF Waiting List

Registration, Appointment & Admissions

### 4<sup>th</sup> Place

#### Enhancing Acceptance Process by Utilization of Virtual Clinic

Health Outreach Services Department and Urology Department

### 5<sup>th</sup> Place

#### Discharge Before Noon Planning

(tied for 5<sup>th</sup>)

Pediatric Hematology / Oncology Department

#### Fast-Track Pre-Bone Marrow Transplant Clearance of Patients with Non-Malignant Blood Disorders

(tied for 5<sup>th</sup>)

Hematology Section, Pediatric Hematology / Oncology Department



1<sup>st</sup> Place Award Winners – Jeddah Site



1<sup>st</sup> Place Award Winners – Riyadh Site

# WITH GRATITUDE

Success is only possible because of the 151 departments from across King Faisal Specialist Hospital and Research Centre and their passion for innovation and commitment to improve. Thank you.

## Riyadh Site



2<sup>nd</sup> Place Award Winners – Riyadh Site



3<sup>rd</sup> Place Award Winners – Riyadh Site



4<sup>th</sup> Place Award Winners – Riyadh Site



5<sup>th</sup> Place Award Winners – Riyadh Site

Academic & Training Affairs Department	Medical Genetics
Ambulatory Care Nursing	Nursing Operation
Anesthesiology Department	Nursing Quality & Magnet
Cardiovascular Nursing	Nutrition Services
Case Management	Obstetrics & Gynecology Department
Clinical Engineering Department	Office of CEO
Contract Management	Office Services
Critical Care Nursing	Oncology / Liver Nursing
Design & Development Department	Orthotics / Prosthetic Services
Education & Allied Health Services	Pathology & Laboratory Medicine
Environmental Services	Patient Services
Facility Project Management	Pediatric Nursing
Food Services	Performance & Management Development
Gastro-enterology Medicine Department	Personnel Services
General Accounting	Pharmaceutical Care Division
Health Outreach Services	Physical Therapy
Hematology Pediatric Oncology Department	Protocol Services Nursing
Hospital & Residential Maintenance	Quality Management Division
Human Resources Services	Radiology Department
Infection Control & Hospital Epidemiology	Registration Admission & Appointment Services
Infection Control and Nursing Quality	Respiratory Care Services
Informatics Systems Operation	Safety Department
Medical & Clinical Affairs	Servers and Storage Department
Medical / Surgical Nursing	Social Services
	Systems Engineering
	Total Quality Management



Everyone in healthcare really has two jobs when they come to work every day: to do their work and to improve it.

- Paul B Batalden and Frank Davidoff

What is "quality improvement" and how can it transform healthcare?  
BMJ Quality and Patient Safety

## Jeddah Site

24 Hrs. Admission Unit  
Academic and Training Affairs  
Administrative services  
Anesthesia Axillary  
ART Clinic  
Cardiac Noninvasive Lab  
Cath Lab  
Clinical Engineering  
CSICU  
CVT  
Dental Clinic  
Department of Pediatrics  
Department of Medicine  
DPU  
Emergency  
Endoscopy  
Engineering, Utilities &  
Maintenance  
Family Medicine  
Financial Services  
Food Services  
Home Healthcare  
Housing  
L&D  
Laboratory and Pathology  
Medical Records  
Medicin-5 North  
MSICU

Neuro-1 South  
Neurophysiology  
NICU  
Nursing Affairs / Quality &  
Research  
OB GYN  
Oncology Department  
OR  
Pharmacy  
Physiotherapy  
Protocol  
Quality Management  
Radiology Department  
Recruitment  
Research Center  
Respiratory Services  
Safety & Security  
Surgery Department  
Surgery-3 North / South

## A special thank you

To all the individuals and departments who helped make the Performance Improvement Executive Report 2017, *All Commit to Improvement* possible, thank you. We would particularly like to acknowledge the work of the Quality Management Division Riyadh and Quality Management Department Jeddah, as well as Total Quality Management. Your year-round commitment and support is deeply appreciated and critical in supporting KFSH&RC along our pathway to excellence.



2<sup>nd</sup> Place Award Winners – Jeddah Site



3<sup>rd</sup> Place Award Winners – Jeddah Site



4<sup>th</sup> Place Award Winners – Jeddah Site



5<sup>th</sup> Place Award Winners – Jeddah Site





مستشفى الملك فيصل التخصصي ومركز الأبحاث  
King Faisal Specialist Hospital & Research Centre  
Gen. Org. مؤسسة عامة

King Faisal Speciality Hospital and Research Centre  
Jeddah - Riyadh  
Quality Management Division  
[www.kfshrc.edu.sa](http://www.kfshrc.edu.sa)

