



Hand Hygiene Program Implementation Report August 2019

Introduction

The Hand Hygiene Program was comprehensively launched in 2017 as part of the Ministry of Health's mission to promote safe environment within hospitals. The program has been activated at all governmental hospitals operating under the Ministry of Health (MOH) and at some private hospitals. Since its launch, several processes and activities have been undertaken to enhance its implementation:

- All Hospitals have registered in the World Health Organization's web site.
- An interactive Excel sheet was developed by the General Directorate of Infection Prevention and Control (GDIPC) to collect hand hygiene opportunities and calculate compliance rates. The sheet, which is based on the World Health Organization (WHO) Observation form, was used by all hospitals for monthly between 2017 and 2019.
- In 2019, a web-based platform was developed to collect hand hygiene data from different sources into one user interface and presents stakeholders with useful information.
- Hand Hygiene Self-Assessment Framework (HHSAF) was conducted by the hospitals to obtain a situation analysis of hand hygiene promotion and practices within an individual health-care facility to facilitate development of an action plan. HHSAF was mandated on all hospitals (MOH, Military and Private) on a yearly basis. In 2019, the web-based platform was utilized for the automatic completion of HHSAF.
- Global hand hygiene day is celebrated every year on May 5 to promote the infection control strategies with focus on hand hygiene through series of awareness campaigns targeting healthcare practitioners, patient and visitors in hospitals and in the community.

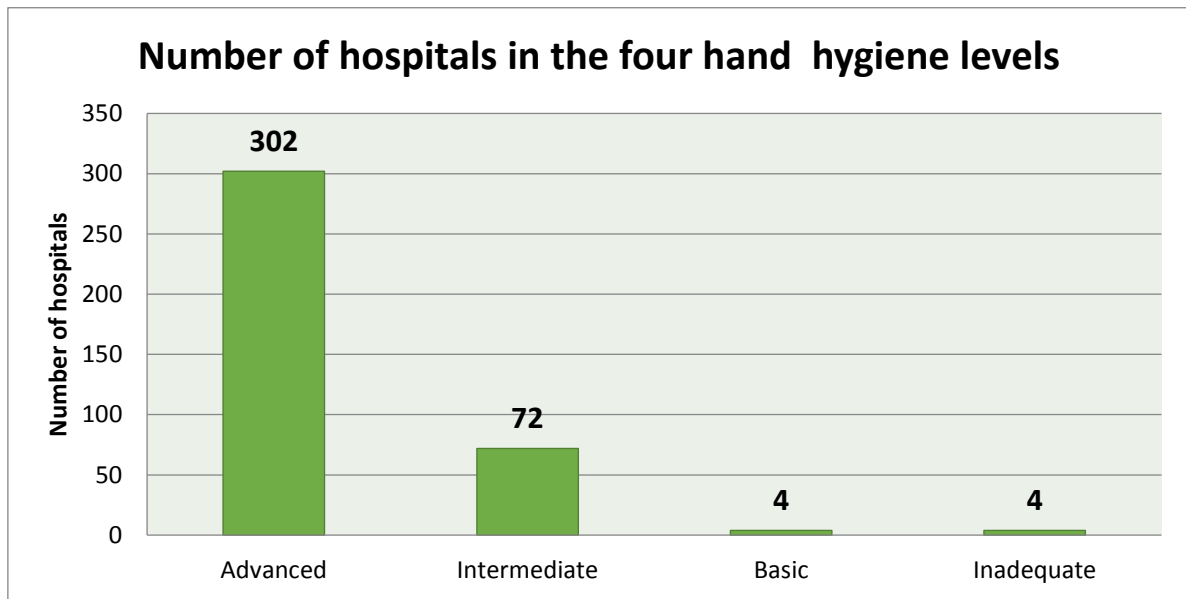
- In 2018, a long campaign that has lasted 7 weeks was conducted to train more than 120,000 healthcare workers working at both governmental and private healthcare facilities.
- Hand hygiene competency is a mandatory component in the Basic Infection Control Skills License (BICSL) which is required on a yearly basis for all MOH healthcare workers.
- All reports from all hospitals are reviewed to ensure that the quality of the reports meet certain thresholds of acceptability.

This report shows the main implementation processes and activities of the MOH Hand Hygiene Program and the outcomes accomplished so far.

Hand Hygiene Self-Assessment

All hospitals used “*WHO Hand Hygiene Self-Assessment Framework*” to understand the hospital’s level of hand hygiene and track the progress over time. The Framework is a tool with which to obtain a situation analysis of hand hygiene promotion and practices within an individual health-care facility, according to a set of indicators. It also acts as a diagnostic tool, identifying key issues requiring attention and improvement. Repeated use of the Framework will allow documentation of progress with time.

Hand hygiene levels (Advanced: 376-500, Intermediate: 251-376, Basic: 250-126, Inadequate: 0-125) of 382 hospitals are shown in the following graph:



Hand Hygiene Self-Assessment Framework 2019 Stratified by Region

Regions	Advanced	Intermediate	Basic	Inadequate
Asir	26	5	1	
Baha	6	3		
Bisha	3	4		
Eastern Region	35	4		
Hafer AlBatin	8	1		
Hail	15	2		1
Hassa	16	0		
Jazan	14	9		
Jeddah	38	8	1	
Jouf	8	2		
Madinah	14	5	1	
Makkah	16	2		
Najran	6	4		
Northern Borders	9	1		
Qaseem	20	2		
Qunfudah	4	1		
Qurayyat	4	0		
Riyadh	44	10		2
Tabouk	9	4	1	
Taif	7	5		1

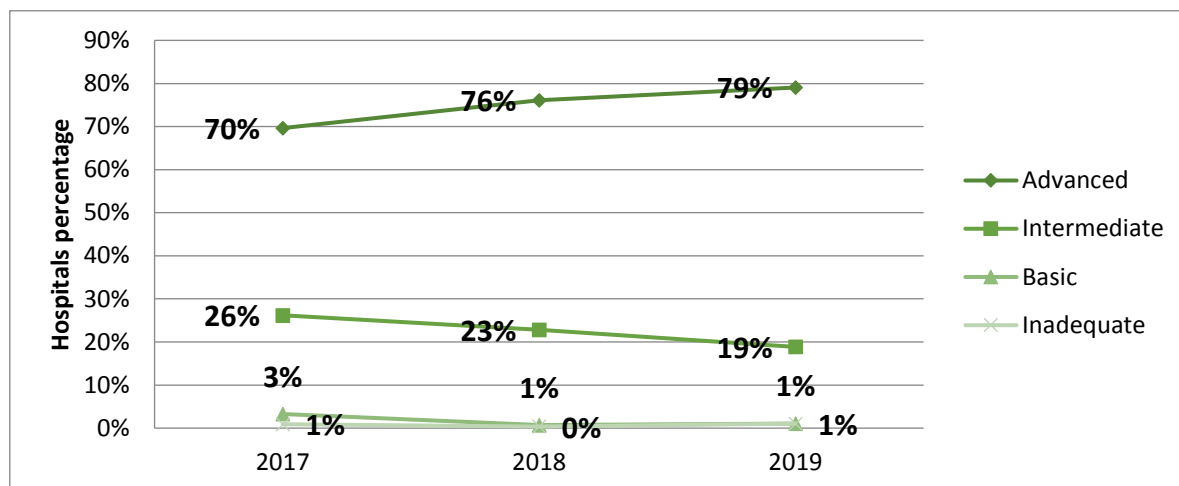
Hand Hygiene Self-Assessment Framework Average Score Stratified by Region

The following table shows the hand hygiene level average score of all hospitals in each region for the years of 2017, 2018 and 2019 based on WHO's scale: (Advanced: 376-500, Intermediate: 251-376, Basic: 250-126, Inadequate: 0-125)

Regions	Average score 2017	Average score 2018	Average score 2019
Asir	421	434	421
Baha	319	430	386
Bisha	337	380	383
Eastern Region	414	NA	445
Hafer AlBatin	401	397	432
Hail	418	412	393
Hassa	429	457	451
Jazan	370	381	386
Jeddah	419	401	421
Jouf	392	397	413
Madinah	428	425	411
Makkah	449	461	447
Najran	413	413	391
Northern Borders	363	405	409
Qaseem	428	NA	436
Qunfudah	259	362	410
Qurayyat	NA	367	464
Riyadh	419	420	409
Tabouk	328	368	397
Taif	373	420	361
Average	403	414	416

Hand Hygiene Self-Assessment Framework 2017/2018 and 2019

The below figure shows the different levels of hand hygiene at all hospitals and compare the years of 2017, 2018 and 2019:



Overall Progress in Hand Hygiene Level at All Hospitals

2017 to 2018	2018 to 2019
2.73%	0.48%

Hand Hygiene Compliance Rate

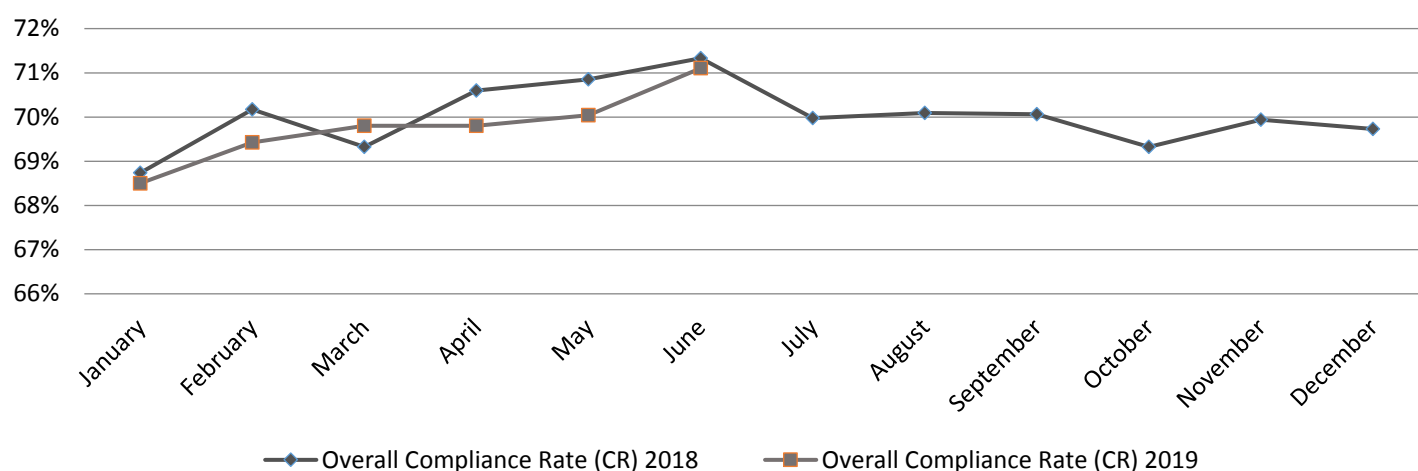
Measuring compliance with hand hygiene practice is crucial to demonstrating improvements both at a hospital and a national level and ensure a safe care eventually. Hand Hygiene Program monitors the staff's compliance with the five moments of hand hygiene, which are before touching a patient, before clean/aseptic procedure, after touching a patient, after body fluid exposure risk and after touching patient surroundings.

The following table shows the overall hand hygiene compliance rate in each region:

Overall Compliance Rate (CR)				
Region	Overall Compliance Rate 2018	#	Overall Compliance Rate 2019 (Jan-June)	#
Asir	72.08%	16	70.54%	19
Baha	72.36%	9	70.49%	9
Bisha	65.39%	6	68.45%	7
Eastern Reg.	70.95%	19	71.04%	19
Hafer AlBatin	74.78%	8	72.21%	9
Hail	69.34%	13	66.97%	16
Hassa	69.01%	8	73.21%	14
Jazan	60.93%	19	63.81%	25
Jeddah	66.66%	13	72.13%	28
Jouf	65.63%	8	69.09%	9
Madinah	69.53%	19	67.14%	22
Makkah	77.67%	9	78.33%	9
Najran	65.05%	9	68.14%	10
Northern Bor.	76.10%	9	72.66%	10
Qaseem	73.89%	24	69.40%	24
Qunfudah	59.26%	5	55.32%	5
Qurayyat	60.95%	4	62.44%	4
Riyadh	68.76%	41	67.29%	43
Tabouk	70.98%	12	72.59%	13
Taif	71.31%	16	71.21%	19
Total	69.52%	267	69.32%	314

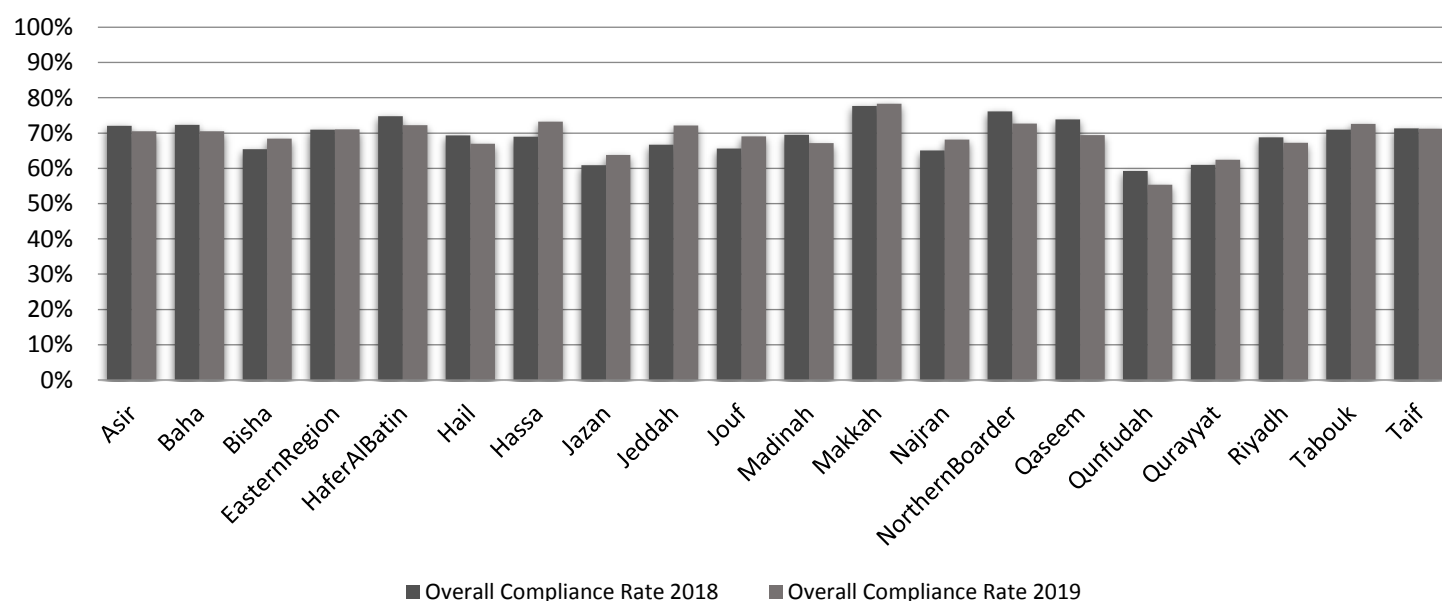
Hand Hygiene Compliance Rate in 2018 and 2019

Comparison between hand hygiene compliance rate between 2018 and 2019



Hand Hygiene Compliance Rate in 2018 and 2019

Comparison between hand hygiene overall compliance rate between 2018 and 2019

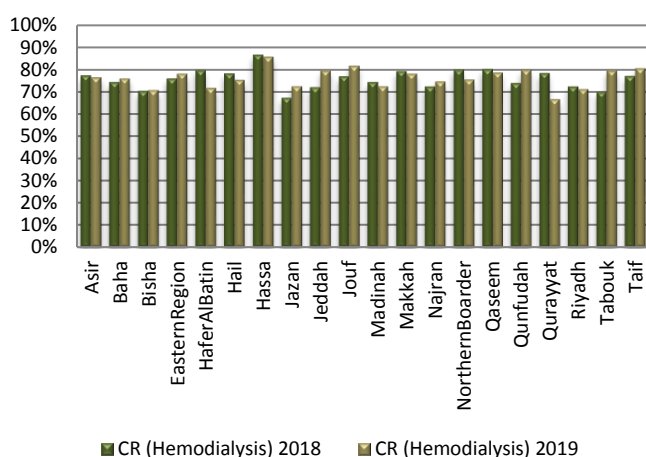


Compliance Rate (CR) in Hospitals per Units

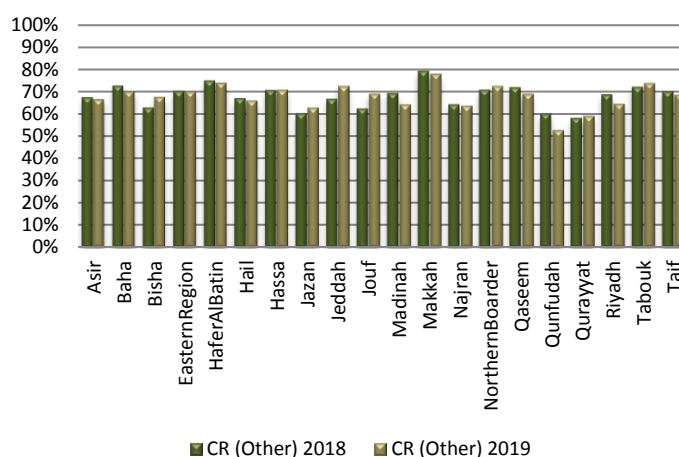
Region	CR (ER) 2018	CR (ER) 2019	CR (ICU) 2018	CR (ICU) 2019	CR (Hemodialysis) 2018	CR(Hemodialysis) 2019	CR (Other) 2018	CR (Other) 2019
Asir	70.07%	67.90%	76.56%	74.72%	77.27%	76.30%	67.38%	66.51%
Baha	71.11%	67.11%	80.79%	76.94%	74.19%	75.72%	72.55%	69.99%
Bisha	63.06%	67.31%	73.67%	68.18%	70.09%	70.59%	62.66%	67.40%
Eastern Region	67.10%	67.33%	76.35%	76.11%	75.71%	77.93%	70.13%	69.97%
Hafer AlBatin	71.44%	68.62%	79.89%	75.37%	79.47%	71.64%	74.82%	73.80%
Hail	65.22%	62.25%	70.77%	69.72%	78.04%	75.25%	66.89%	65.81%
Hassa	61.00%	68.76%	68.33%	73.83%	86.47%	85.52%	70.57%	70.63%
Jazan	57.39%	60.87%	66.11%	69.07%	67.03%	72.31%	60.15%	62.64%
Jeddah	61.63%	68.83%	74.95%	75.00%	71.81%	79.32%	66.66%	72.33%
Jouf	61.42%	63.72%	65.60%	70.28%	76.72%	81.51%	62.25%	68.91%
Madinah	62.76%	60.97%	69.22%	72.29%	74.19%	72.32%	69.15%	64.17%
Makkah	74.88%	75.38%	78.18%	81.63%	79.03%	77.87%	79.22%	77.91%
Najran	61.01%	66.32%	66.70%	72.28%	72.14%	74.48%	64.22%	63.52%
Northern Boarder	75.41%	71.98%	77.14%	72.57%	79.66%	75.36%	70.70%	72.36%
Qaseem	71.18%	64.83%	76.59%	71.86%	79.95%	78.44%	71.80%	68.88%
Qunfudah	50.53%	47.91%	61.28%	60.40%	73.79%	79.65%	59.95%	52.57%
Qurayyat	61.42%	64.82%	65.91%	62.17%	78.26%	66.50%	58.14%	59.01%
Riyadh	66.26%	64.52%	69.80%	70.44%	72.12%	71.06%	68.61%	64.38%
Tabouk	70.65%	69.93%	74.07%	73.28%	69.73%	79.34%	71.97%	73.62%
Taif	69.26%	69.19%	72.24%	72.92%	76.96%	80.42%	69.89%	68.54%
Total	66.15%	65.93%	72.60%	72.73%	74.86%	75.77%	68.42%	67.70%

Compliance Rate (CR) in Hospitals per Unit

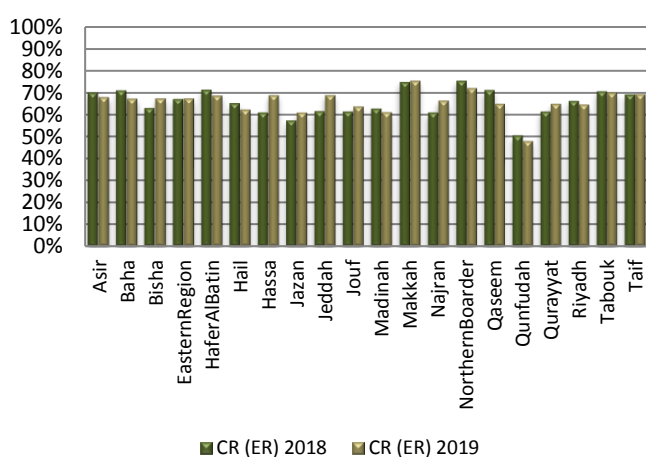
Comparison between hand hygiene compliance rate in Hemodialysis unit between 2018 and 2019



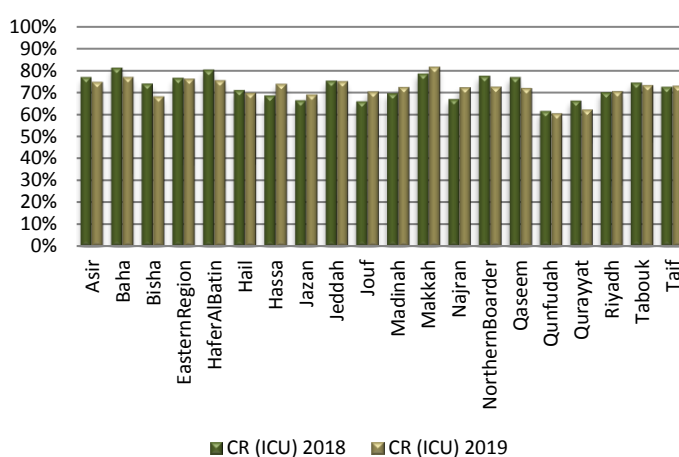
Comparison between hand hygiene compliance rate in other units between 2018 and 2019



Comparison between hand hygiene compliance rate in ER between 2018 and 2019



Comparison between hand hygiene compliance rate in ICU between 2018 and 2019

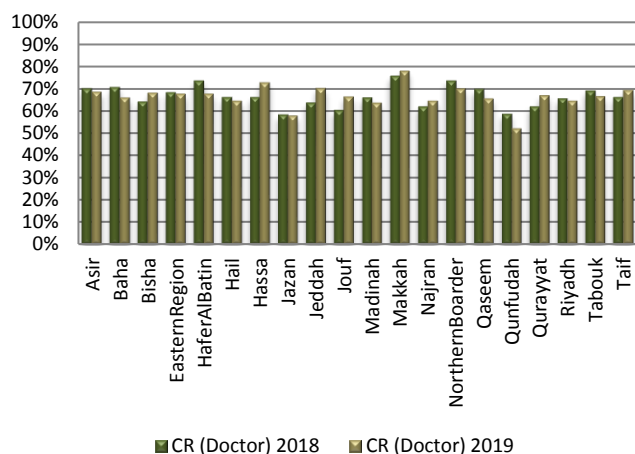


Compliance Rate (CR) per Professional Categories

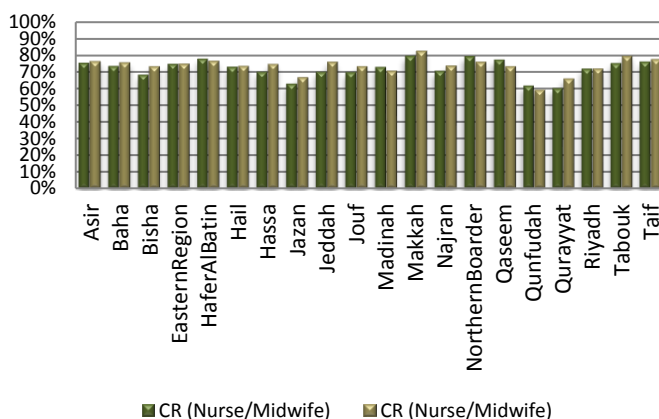
Region	CR (Doctor) 2018	CR (Doctor) 2019	CR (Nurse/Mid wife) 2018	CR (Nurse/Mid wife) 2019	CR (Other Health Care Workers) 2018	CR (Other Health Care Workers) 2019
Asir	69.82%	68.44%	75.19%	75.97%	69.00%	61.63%
Baha	70.38%	65.84%	73.36%	75.23%	74.60%	60.53%
Bisha	63.86%	68.06%	68.06%	73.01%	56.59%	59.41%
Eastern Region	68.11%	67.65%	74.67%	74.57%	62.59%	60.18%
Hafer AlBatin	73.32%	67.56%	77.80%	76.23%	69.42%	68.21%
Hail	65.84%	64.48%	72.87%	73.16%	64.82%	57.57%
Hassa	65.84%	72.63%	69.89%	74.25%	66.88%	67.72%
Jazan	58.08%	57.79%	62.75%	66.44%	56.29%	57.35%
Jeddah	63.44%	70.04%	69.93%	75.57%	61.81%	65.06%
Jouf	60.13%	66.39%	69.63%	73.01%	61.05%	56.74%
Madinah	65.72%	63.64%	72.77%	70.26%	61.63%	56.11%
Makkah	75.49%	77.82%	79.51%	82.23%	74.92%	69.71%
Najran	61.67%	64.38%	70.45%	73.28%	58.89%	58.92%
Northern Boarders	73.25%	69.89%	79.23%	75.70%	71.06%	65.05%
Qaseem	69.48%	65.43%	77.13%	72.93%	68.10%	61.65%
Qunfudah	58.38%	51.99%	61.67%	58.99%	53.04%	49.04%
Qurayyat	61.66%	66.89%	59.99%	65.72%	64.91%	46.76%
Riyadh	65.33%	64.49%	71.81%	71.61%	64.38%	59.66%
Tabouk	68.72%	66.52%	75.02%	79.14%	64.53%	67.35%
Taif	65.88%	69.20%	76.02%	77.15%	60.99%	52.82%
Total	66.33%	66.30%	72.60%	73.38%	64.48%	60.76%

Compliance Rate (CR) per Professional Categories

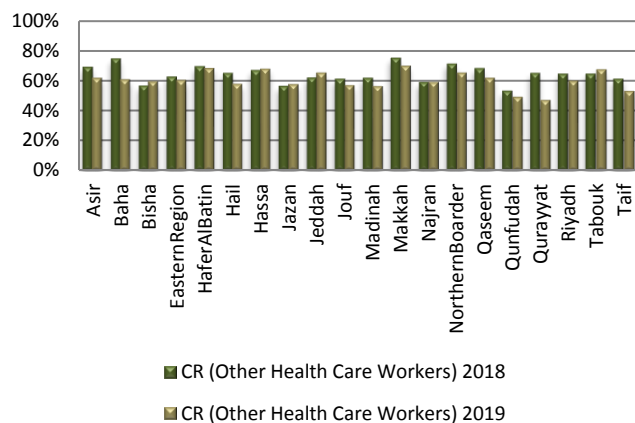
Comparison between hand hygiene compliance rate among Doctors between 2018 and 2019



Comparison between hand hygiene compliance rate among Nurse/Midwife between 2018 and 2019



Comparison between hand hygiene compliance rate among Other Health Care Workers between 2018 and 2019



Hand Hygiene Activities

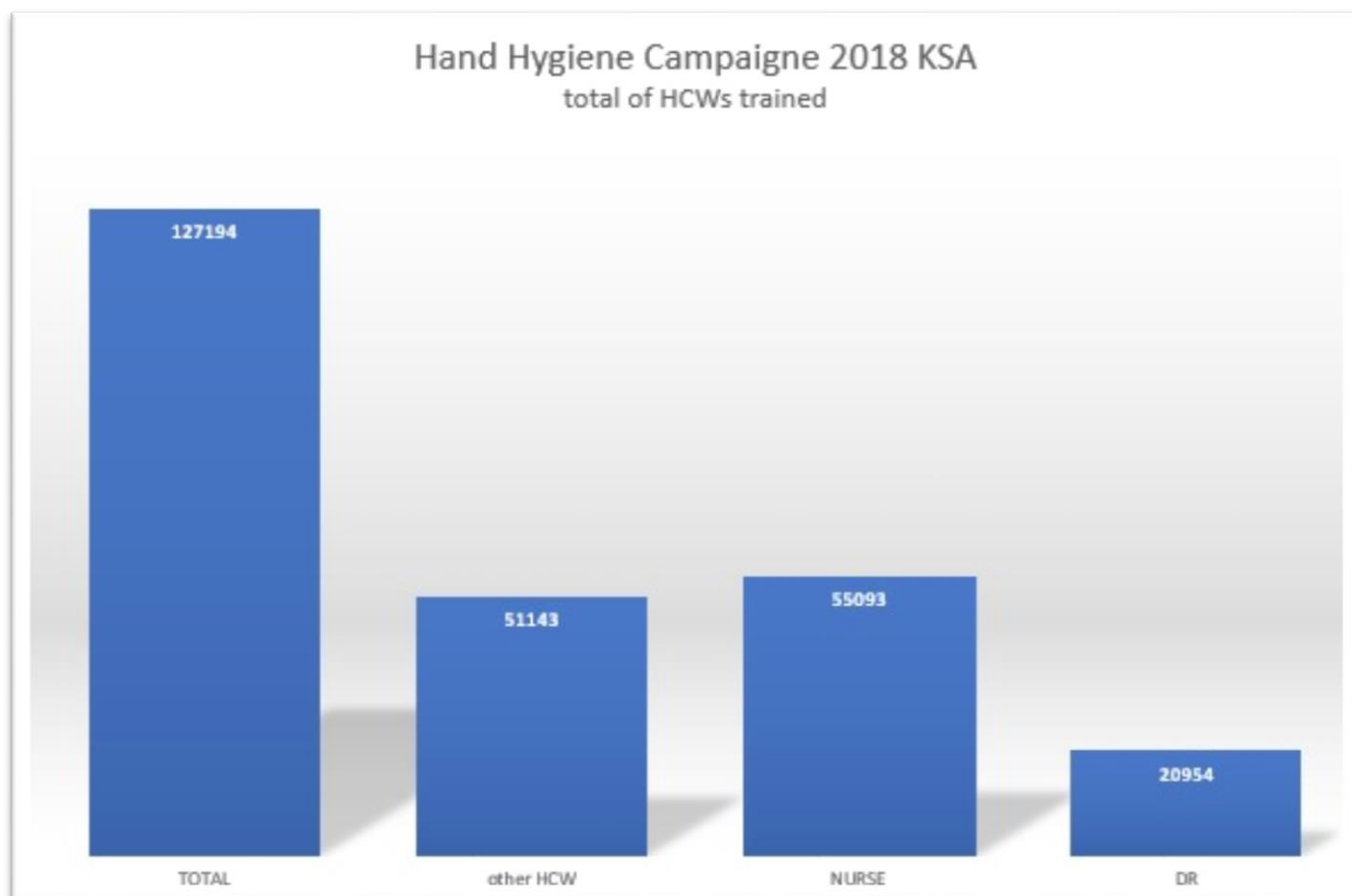
- Activation of hand hygiene awareness campaigns global during hand washing day at all MOHs' hospitals in 2018 and 2019.
- Activation of hand hygiene campaigns in the following educational institutions in 2018:
 - Princess Nourah Bint Abdul Rhman University, Riyadh
 - King Saud University, Riyadh
 - King Khaled University, Abha
- Measuring the impact of hand hygiene campaigns conducted in 2018 in collaboration with the Impact Measurement Unit at MOH.
- Measuring the effect of different approaches to increase hand hygiene compliance rate in 14 governmental hospitals in Riyadh in collaboration with the Behavioral Economics Unit at MOH.
- Working with Nursing Directorate at MOH to increase hand hygiene compliance among nurses.
- Working with the Armed Forces Medical Services at the Ministry of Defense to implement the Hand Hygiene Program at all military hospitals.
- Conducting several training courses and workshops related to hand hygiene at governmental and non-governmental health facilities.
- Preparing and directing short films or cartoons film in enhancing hand hygiene.
- Contribution to community and school hand hygiene activities.
- Use of social media to increase awareness on hand hygiene.

Hand Hygiene Campaign Training Coverage in 2018

HAND HYGIENE Campaign 2018 specific HCWs trained by region

Region	DR	NURSE	other HCW	TOTAL
Al-hsa	1268	2896	2409	6573
Asir	754	1824	2129	4712
Baha	423	1028	1630	3081
Bisha	226	712	538	1476
Eastern Province	2582	6161	11228	19971
Hafar Al Batin	366	1527	960	2852
Haill	393	1120	315	1828
Jeddah	1192	3711	4259	9162
Jizan	1025	2918	3935	7878
Jouf	563	1991	1012	3566
Madinah	1396	3737	2410	7543
Makkah	1653	4178	3573	9404
Najran	861	1745	1661	4267
Northern Borders	662	1322	840	2824
Qassim	1496	3039	2129	6664
Qunfudah	251	519	436	1206
Qurayyat	123	674	187	984
Riyadh	4079	11720	9054	24853
Tabuk	733	2135	1351	4219
Taif	908	2136	1090	4134
TOTAL	20954	55093	51146	127197

Hand Hygiene Campaign Training Coverage in 2018



Hand Hygiene Training Activities in the First Half of 2019

Region	Number of Health Care Facility Participated	Number of Completed Activities	Number of Trainees
Asir	6	3	154
Baha	9	9	278
Bisha	8	21	1210
Eastern Region	21	34	3265
Hafer AlBatin	10	40	6405
Hail	17	51	1934
Hassa	15	15	6462
Jazan	9	9	278
Jeddah	37	37	14476
Jouf	11	11	1975
Madinah	18	48	2909
Makkah	7	46	5442
Najran	9	27	2379
Northern Borders	11	32	8381
Qaseem	24	50	2795
Qunfudah	5	20	599
Qurayyat	6	6	874
Riyadh	-	-	-
Tabouk	13	13	2451
Taif	19	19	2427
Total	248	491	59252



General Directorate of Infection Prevention and Control
Deputyship of Public Health, Ministry of Health
Saudi Arabia