



# Medical Devices

# Summary

## *Dubai Industrial Strategy*

The **Pharma and Medical Equipment** sector is one of the six target sectors set by Dubai Industrial Strategy 2030. The share of the sector in the manufacturing value added stood at 1.8% in 2014 according to the strategy document

Among DIS strategic objectives The **Pharma and Medical Equipment sector** has a potential to comply with two important objectives namely:

- Home for Global Business: Become the preferred Manufacturing platform for global businesses.

- Innovation Based: By enhancing the depth of knowledge and innovation

DIS programs include a number of initiatives scheduled for implementation to achieve the potential of the sector by enhancing the Ecosystem for attracting new companies in the manufacture of **Pharma and Medical Equipment**

## *Dubai a Regional Hub for Pharmaceutical and Medical Devices Trade*

UAE hosts around **18 m** multinational companies in the Medical Devices business who use Dubai as regional distribution hub (see the appendix for details) in addition to around 10 major multinational in pharmaceuticals distribution, and few local manufacturers

## *Fair performance of Exports from Dubai*

The current exports from Dubai from Medical devices stood at 0.3 Billion AED in 2016 according to Dubai Customs data, the top destinations were USA (26%) and KSA(23%), and top exports **were laboratory machines and equipment, instruments and appliances for medical/surgical/dental/- use and medical furniture**

## *Market Size and Potential for future manufacturing*

UAE is the fourth largest medical device market in the Middle East and Africa region, size estimated at 3.7 Billion AED for 2016.

Re-exports of Medical Devices from Dubai was around 1.7 Billion AED in 2016 according to Dubai Customs data (according to ITC the figure was around 0.8 Billion AED in 2015) these re-exports together with imports of 4.1 Billion AED form a good potential for future local manufacturing by the multinational companies directly or under license. Product-wise, **Consumables and instruments for medical or surgical use and medical furniture** represent a good target for investment in domestic manufacturing in UAE. While for potential market, the **Asian market is one of the most promising**

**markets for these target products.** For **Medical Consumables** and other **Medical Devices**, Asia market size ranks in the second position globally after EU28, and among Asian countries, China **Malaysia, and India** are excellent potential markets with high rewards and lower risk

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## Domestic Market

**UAE market for medical devices is estimated at 3.7 Billion AED in 2016 according to BMI, the market is driven by population growth, a changing epidemiology, a growing medical tourism industry, healthcare infrastructure developments, an expanding health insurance, digital transformation, new technologies and the research drive under the Dubai Science Park.**

- **UAE is Fourth largest medical device market in the Middle East and Africa region and among the highest medical device expenditure per capita in the region**

**BMI estimate the market will register a 2015-2020 CAGR of 8.2%, which will take the value to AED5.3bn (USD1.4bn) by 2020..**

Table 1 UAE Medical Devices Market Size 2017

	Market size Mn. US\$	CAGR % 2015-2020
Consumables	181	8.5
Diagnostic Imaging	308	8.5
Dental	99	7.8
Ortho	91	9.5
Aids	102	8.8
Other Devices	369	7.4

BMI

Consumables and diagnostic imaging in addition to “other devices” represent the top market sizes

The break-up of “other devices” below shows that Hospital Furniture and “Other Instruments” have the major markets

Table 2 Other Medical Devices Market Size 2017

	Market size Mn. US\$
Ophthalmic	27
Hospital Furniture	48
Other Instruments	269
Medical/Surgical Sterilizers	8
Ultra-Violet ,Infra-Red Apparatus	8

## International Trade

The size of the domestic market and the value re-exports together present good opportunities for future local manufacturing particularly for Consumables , Hospital Furniture and Medical /Surgical Instruments

Table 3 UAE Re-exports of Medical Devices 2015

	Mn. US\$
Consumables	29
Diagnostic Imaging	39
Dental	7
Ortho	3
Aids	8
Other Medical Devices	115

ITC

Table 4 Break-up of Other Medical Devices Re-exports

	Mn. US\$
Medical/Surgical Instruments	96
Operating/Examination Tables, Dental, Surgical Furniture	12
Medical/Surgical Sterilizers	4
Ophthalmic Instruments	2

ITC

## Regional Market

***The UAE will remain a predominant base for multinational medical device companies to set up regional subsidiaries or headquarters.***

***According to BMI The Asian medical device market will continue to outperform globally, recording mid single-digit growth in weighted local currency terms.***

**The Asian medical device market will grow at a 2016-2021 CAGR of 6.9% in weighted local currency terms**

**The Asia Pacific region is the second most attractive region for medical devices, with some of the world's fastest growing markets despite significant regulatory and operational risks**

**China and Malaysia represent some of the best market opportunities in the region through a mix of high rewards and manageable risks, while India offers the most potential as a fast-growing market with an improving regulatory environment.**

On a product basis, diagnostic imaging and other medical devices will remain the largest product areas, followed by consumables. These three product areas account for more than two-thirds of the total market. Orthopaedics & prosthetics and patient aids will continue to each account for around 13%, while dental products will remain the smallest product area.

Consumables will record the highest 2016-2021 CAGR at 6.7%. Other medical devices will register the second highest CAGR at 5.9%. The remaining product areas will record CAGRs between 5.1% and 5.5%.

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On a sub-regional basis, Developed Asia countries will represent a larger market than Emerging Asia countries,

Markets in Emerging Asia will continue to outperform within the region registering a US dollar 2016-2021 CAGR of 8.1%. Growth will be spearheaded by under-developed markets with very low per capita spend such as Bangladesh and Indonesia, followed by Malaysia and the Philippines which will all have 2016-2021 CAGRs of 10% or more. Other markets in Emerging Asia will see high single-digit growth, apart from Pakistan which will have mid single-digit growth.

### Multinational companies operating from UAE

Following the steps of the pharmaceutical industry, the United Arab Emirates (UAE) will remain the regional hub chosen by the medical device industry. Currently, around 18 leading multinationals use the UAE as their distribution base for other countries in the Middle East. Multinationals' offices serve as distribution, sales and service centers

Main manufactures of medical devices in UAE are DSP, MEDECO, and Dodhy's Medical Limited

### Export Performance

The export portfolio indicates the product manufactured in UAE , 8419 Machinery, plant or laboratory equipment, whether or not electrically ...and 9018 Instruments and appliances used in medical, surgical, dental or veterinary sciences were top exports(originating from UAE) in 2016(see table 6 )

USA and KSA were the top markets for export, together they account for taking about 50% of exports of medical devices from Dubai

Examining the Dubai export portfolio to USA We notice that laboratory equipment and medical / surgical and dental furniture were the top exports from Dubai to USA in 2016(see table 8 )

### Overall Trade of Medical Devices from Dubai 2016

The net imports (imports minus re-exports) by Dubai stood at around 2.5 Billion AED in 2016, compared to the estimate of domestic market size by BMI for the whole UAE at 1.0 Billion US\$(3.67 Bill AED) in the same year

On the other hand, it is to be noted re-exports from Dubai as per Dubai Customs stood at a significant value 1.7 Billion AED in 2016 indicating a good potential for conversion of re-export to export through local manufacturing by the multi-nationals.

Table 5

Year	2016
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MEDICAL DEVICES

Row Labels	Sum of Value (Dhs)
<b>EXPORT</b>	<b>304,295,641</b>
8419	243,989,374
9018	48,321,289
9402	8,511,778
3005	3,064,848
9019	159,406
4015	140,221
3006	97,520
3202	10,558
8713	646
<b>IMPORT</b>	<b>4,149,754,598</b>
9018	1,569,494,142
8419	1,261,805,240
9022	356,191,118
9021	316,752,008
3005	168,106,997
9402	159,558,722
9019	107,915,216
4015	92,428,807
3006	89,023,336
8713	22,656,198
3201	3,036,533
3202	2,786,282
<b>RE-EXPORT</b>	<b>1,682,203,562</b>
9018	842,310,442
9022	237,761,690
8419	229,224,493
9021	163,544,531
3005	73,439,022
3006	43,565,169
4015	30,855,829
9402	28,972,571
9019	28,787,106
3201	1,741,316
3202	1,530,433
8713	470,960
<b>Grand Total</b>	<b>6,136,253,801</b>

Table 6 Dubai Exports of Medical Devices

Row Labels	Sum of Value (Dhs )
	<b>243,989,374</b>
<b>8419</b>	<b>374</b>
Machinery, plant or laboratory equipment, whether or not electrically heated (excluding furnaces, ovens and other equipment of heading 85.14), for the treatment of materials by a process involving a change of temperature such as heating, cooking, roasting, distilling, rectifying, sterilising, pasteurising, steaming, drying, evaporating, vaporising, condensing or cooling, other than machinery or plant of a kind used for domestic purposes; instantaneous or storage water heaters, non-electric.	243,989,374
	<b>48,321,289</b>
<b>9018</b>	<b>89</b>
Instruments and appliances used in medical, surgical, dental or veterinary sciences, including scintigraphic apparatus, other electro-medical apparatus and sight-testing instruments.	48,321,289
	<b>8,511,778</b>
<b>9402</b>	<b>8</b>
Medical, surgical, dental or veterinary furniture (for example, operating tables, examination tables, hospital beds with mechanical fittings, dentists' chairs); barbers' chairs and similar chairs, having rotating as well as both reclining and elevating movements; parts of the foregoing articles.	8,511,778
	<b>3,064,848</b>
<b>3005</b>	<b>8</b>
Wadding, gauze, bandages & similar articles, (for example, dressings, adhesive plasters, poultices), impregnated or coated with pharmaceutical substances or put up in forms or packings for retail sale for medical, surgical, dental or veterinary purposes.	3,064,848
	<b>586,280</b>
<b>3701</b>	<b>280</b>
Photographic plates & film in the flat, sensitised, unexposed, of any material other than paper, paperboard or textiles; instant print film in the flat, sensitised, unexposed, whether or not in packs.	586,280
	<b>159,406</b>
<b>9019</b>	<b>406</b>

Mechano-therapy appliances; massage apparatus; psychological aptitude-testing apparatus; ozone therapy, oxygen therapy, aerosol therapy, artificial respiration or other therapeutic respiration apparatus. 159, 406

**4015** 140, 221

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Articles of apparel & clothing accessories (including gloves, mittens & mitts), for all purposes, of vulcanised rubber other than hard rubber. 140, 221

**3006** 97,5 20

Pharmaceutical goods specified in Note 4 to this Chapter. 97,5 20

**3702** 5,54 0

Photographic film in rolls, sensitised, unexposed, of any material other than paper, paperboard or textiles; instant print film in rolls, sensitised, unexposed. 5,54 0

**8713** 646

Carriages for disabled persons, whether or not motorised or otherwise mechanically propelled. 646

Table 7 2016 Top Export Markets

USA	79,498,634	26%
SAUDI ARABIA	70,835,861	23%
IRAN	30,417,079	10%
MALAYSIA	15,732,755	5%
JEBEL ALI F.Z.	12,413,268	4%
IRAQ	9,340,076	3%
PAKISTAN	8,878,704	3%
TUNISIA	6,077,655	2%
QATAR	5,820,963	2%
EGYPT	4,928,132	2%
Other countries	60,933,775	20%
	<b>304,876,902</b>	100%

Table 8 Exports of Medical Devices from Dubai to USA 2016

<b>USA</b>	<b>79,4</b>
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	98
	,6
	34
	78
	,4
	39
	,0
<b>8419</b>	<b>20</b>
Machinery, plant or laboratory equipment, whether or not electrically heated (excluding furnaces, ovens and other equipment of heading 85.14), for the treatment of materials by a process involving a change of temperature such as heating, cooking, roasting, distilling, rectifying, sterilising, pasteurising, steaming, drying, evaporating, vaporising, condensing or cooling, other than machinery or plant of a kind used for domestic purposes; instantaneous or storage water heaters, non-electric.	78
	,4
	39
	,0
	20
	1,
	05
	9,
	61
<b>9402</b>	<b>4</b>
	1,
Medical, surgical, dental or veterinary furniture (for example, operating tables, examination tables, hospital beds with mechanical fittings, dentists' chairs); barbers' chairs and similar chairs, having rotating as well as both reclining and elevating movements; parts of the foregoing articles.	05
	9,
	61
	4
	79
	,4
	98
	,6
<b>Grand Total</b>	<b>34</b>

There appears to be good opportunities for manufacturing of medical Consumables, Medical and Surgical Instruments, and Hospital Furniture, since these products have a large domestic demand as well as a good export market in Asia

## Global market composition

Table 9 The Global market for the target products shows Asia is leading

	Medical Consumables Billion US\$ 2016	Other Medical Devices Billion US\$ 2016
Asia	9.7	14
Middle East	1.7	2.3
Africa	0.7	1.4
EU28	23	22
America	12	17
World	48	59

ITC

## Analysis of the opportunities in the Asian Market

Looking into the Asian market of “ Other medical devices”, we notice that instruments and appliances for medical and veterinary surgery stood at the top and within “ Consumables”, Needles, catheters, cannula and Sterile surgical catgut were the leaders in consumption.(see the tables below)

**Table 10 List of products imported by Asia**

Product group: Other Medical Devices

When a group has members that did not report, the group value is shown in red

The data aggregated are mirror and direct data: the values are shown in purple.

Unit : US Dollar thousand

Code	Product label	Imported value in 2012	Imported value in 2013	Imported value in 2014	Imported value in 2015	Imported value in 2016
TOTAL	All products	6,948,107,432	7,158,004,215	7,141,676,600	6,220,345,239	5,849,382,356
	Other Medical Devices	12,350,064	13,265,964	14,117,441	13,895,188	14,169,328

MEDICAL DEVICES

901890	Instruments and appliances used in medical, surgical or veterinary sciences, n.e.s.	9,885,244	10,707,600	11,353,527	11,238,435	11,510,524
901850	Ophthalmic instruments and appliances, n.e.s.	1,168,949	1,223,724	1,344,195	1,313,859	1,360,682
940290	Operating tables, examination tables, and other medical, dental, surgical or veterinary furniture . . .	657,554	679,156	751,727	714,630	635,515
841920	Medical, surgical or laboratory sterilizers	362,884	375,879	362,405	333,821	351,566
871310	Carriages for disabled persons, not mechanically propelled	144,844	149,399	164,795	167,659	172,794
901820	Ultraviolet or infra-red ray apparatus used in medical, surgical, dental or veterinary sciences	81,848	71,064	78,115	64,912	76,156
871390	Carriages for disabled persons, motorised or otherwise mechanically propelled (excluding specially . . .	48,741	59,142	62,677	61,872	62,091

**Table 11 List of products imported by Asia**

Product group: Consumables medical

When a group has members that did not report, the group value is shown in red

The data aggregated are mirror and direct data: the values are shown in purple.

Unit : US Dollar thousand

Code	Product label	Imported value in 2012	Imported value in 2013	Imported value in 2014	Imported value in 2015	Imported value in 2016
TOTAL	All products	6,948,107,432	7,158,004,215	7,141,676,600	6,220,345,239	5,849,382,356

MEDICAL DEVICES

	Consumables medical	8,749,548	8,976,605	9,801,340	9,366,341	9,967,089
901839	Needles, catheters, cannulae and the like, used in medical, surgical, dental or veterinary ...	5,113,095	5,145,222	5,429,503	5,153,350	5,571,491
300610	Sterile surgical catgut, similar sterile suture materials, incl. sterile absorbable surgical ...	625,381	831,874	1,049,637	979,668	952,164
901831	Syringes, with or without needles, used in medical, surgical, dental or veterinary sciences	686,523	783,899	874,872	910,689	940,569
901832	Tubular metal needles and needles for sutures, used in medical, surgical, dental or veterinary ...	639,722	512,409	538,835	534,565	636,425
300590	Wadding, gauze, bandages and the like, e.g. dressings, adhesive plasters, poultices, impregnated ...	643,994	646,913	744,991	621,508	634,705
300510	Adhesive dressings and other articles having an adhesive layer, impregnated or covered with ...	419,811	483,872	537,781	520,197	581,791
401511	Surgical gloves, of vulcanised rubber (excluding fingerstalls)	310,341	302,829	297,316	315,659	306,902
300620	Reagents for determining blood groups or blood factors	170,965	130,752	169,136	178,021	163,255
300691	Appliances identifiable for ostomy use	108,667	114,890	130,743	130,436	144,028
300650	First-aid boxes and kits	31,049	23,945	28,526	22,248	35,759

## Appendix

### Multinational companies in Medical Devices

#### **B. Braun**

**Overview:** B. Braun operates a regional subsidiary, B. Braun Medical Gulf FZ-LLC, located at Dubai Science Park (DSP). The company increased the number of employees in 2015.

**Product Portfolio:** B. Braun operates four main divisions: Hospital Care, Aesculap for surgical products, Out-Patient Market and B. Braun Avitum. B. Braun's product range includes IV solutions, syringe pumps, and accessories for IV therapy, intensive care and anaesthesia, as well as surgical instruments, sutures, hip and knee endoprostheses, equipment and accessories for dialysis, and woundcare products.

#### **Becton Dickinson**

**Overview:** Becton Dickinson (BD) operates a subsidiary located in Dubai.

**Acquisition:** BD completed the acquisition of CareFusion in March 2015.

**Product Portfolio:** BD has two main divisions: BD Medical and BD Life Sciences. BD Medical operates four main businesses: Diabetes Care, Medication and Procedural Solutions, Medication Management Solutions and Pharmaceutical Systems. BD Medical focuses on products such as syringes, needles, intravenous catheters, surgical and laparoscopic instruments and infusion pumps.

#### **Boston Scientific**

**Overview:** Boston Scientific operates through its regional subsidiary, Boston Scientific Middle East FZ-LLC, located at DSP.

**Acquisitions:** The acquisition of the AMS portfolio for a transaction value of USD1.6bn in March 2015 is Boston Scientific's largest deal in the decade since the encumbered acquisition of Guidant in 2006.

**Product Portfolio:** Boston Scientific specialises in three product categories: Cardiovascular (Interventional Cardiology and Peripheral Interventions), Rhythm Management (Cardiac Rhythm

Management and Electrophysiology) and Medsurg (Endoscopy, Urology & Pelvic Health and Neuromodulation).

#### Canon

**Acquisition:** In December 2016, Canon completed the acquisition of Toshiba Medical Systems Corporation (TMSC), which will become its subsidiary. TMSC is represented by the distributor Gulf Drug, located in Dubai.

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**Financial Review:** TMSC claims to have a small market share in the UAE, compared to Egypt and Turkey, where its operations are stronger, particularly in Turkey where it has a subsidiary.

**Product Portfolio:** Canon's medical business covers Ophthalmic Diagnostic Systems, Radiography Systems and Healthcare IT. TMSC specialises in diagnostic X-ray systems, medical X-ray CT systems, MRI systems, diagnostic ultrasound systems, radiation therapy systems, diagnostic nuclear medicine systems, medical sample testing equipment, and information systems for medical equipment.

#### Dräger

**Overview:** Dräger Medical and Dräger Safety have local subsidiaries located in Dubai.

**Product Portfolio:** Dräger operates the medical and safety divisions. In the medical division, Dräger specialises in products used for perioperative, intensive care and neonatal, and emergency care, including products for ventilation, anaesthetics and warming therapy as well as related accessories and consumables.

#### Fresenius Medical Care

**Overview:** Fresenius Medical Care (FMC) has a regional service subsidiary, Fresenius Medical Care (FMC) Gulf FZ-LLC, located at DSP.

**Product Portfolio:** FMC is one of the four business segments operated by Fresenius. It focuses on products for haemodialysis, peritoneal dialysis, further home therapies, acute dialysis, other blood cleansing procedures; and dialysis drugs. In March 2011, FMC and Abu Dhabi Health Services (SEHA) signed a 10-year agreement for the management of SEHA's dialysis facilities.

#### Fujifilm

**Overview:** Fujifilm operates a regional subsidiary, Fujifilm Middle East FZE, located in Dubai. In addition, it has three local distributors, two of which sell medical and endoscopic systems, Grand Trading Agencies and Gulf & World Traders, both located in Dubai.

**Product Portfolio:** Fujifilm operates three main divisions: Imaging Solutions, Information Solutions and Document Solutions. Healthcare forms part of Information Solutions, and comprises Medical Systems, Pharmaceuticals, Regenerative Medicine and Life Sciences. Medical Systems includes digital X-ray diagnostic imaging systems, medical-use picture archiving and communications systems, endoscope systems, ultrasound diagnostic equipment, X-ray films, dry imagers and in vitro diagnostic systems.

#### GE Healthcare

**Overview:** General Electric (GE) has a regional subsidiary, GE Middle East, North Africa & Turkey (MENAT), located in the UAE. It runs GE Healthcare, the healthcare business division, which employs more than 1,000 people in the region.

**Product Portfolio:** GE Healthcare is one of the business units operated by GE. GE Healthcare's main products include diagnostic imaging systems (MRI, CT, nuclear & molecular imaging, and digital mammography), surgical imaging products, ultrasound, and pharmaceutical research & production tools. GE Healthcare's digital solutions include Centricity, Dose Management, Workforce Optimization, Asset Optimization and Health Cloud.

We note that GE Healthcare has signed a Memorandum of Understanding with the Dubai Health Authority (DHA) to optimise operations at several DHA hospitals and primary care clinics to deliver its patient experience transformation strategy, revealed at Arab Health 2017. GE Healthcare also has a partnership known as Unison to provide radiology services in 11 hospitals operated by the UAE Ministry of Health, confirmed at Arab Health in January 2016.

**Distribution:** GE Healthcare established a warehouse at Jebel Ali Free Trade Zone in 2013. It serves 84 countries across Africa, Russia & CIS, Turkey and the Middle East. The company's main distributor in the UAE is Abu Dhabi International Medical Services.

#### Getinge

**Overview:** Getinge has regional subsidiaries located at DSP.

**Spin-off:** Getinge plans the spin-off of the Patient & Post-Acute Care business no later than Q118.

**Product Portfolio:** Getinge's organisational structure comprising three independent business areas (Medical Systems, Infection Control and Extended Care) was replaced with a more functional structure in January 2016. The new structure is composed of the Acute Care Therapies, Surgical Workflows and Patient & Post-Acute Care segments, although this will change with the impending spin-off of the Patient & Post-Acute Care business. The Acute Care Therapies offering includes solutions for cardiac, pulmonary and vascular therapies and a broad selection of products and therapies for intensive care. Surgical Workflows develops products and solutions for infection control, equipment for surgical workplaces and advanced IT systems for hospitals. Patient & Post-Acute Care's offering encompasses products and solutions for safe patient handling, prevention of venous thromboembolisms, medical beds, hygiene systems and early mobility among others.

**R&D:** Getinge established its Dubai-based regional training centre in April 2012.

#### Hitachi

**Overview:** In May 2016, the Hitachi Group announced a management plan to become an innovation partner for the IoT era. Since May 2012, the Hitachi Group operates a regional subsidiary, Hitachi Medical Systems Middle East, located in Cairo, Egypt. In addition, the Hitachi Group operates a number of companies in the UAE.

**Product Portfolio:** In April 2014, the Hitachi Group established Hitachi Medical as a wholly owned subsidiary and renamed it Hitachi Healthcare. Hitachi Healthcare focuses on bone densitometry, diagnostic ultrasound, CT, general radiography, mobile X-ray, MRI, optical topography and R/F systems.

#### Johnson & Johnson

**Overview:** Johnson & Johnson (J&J) has a regional subsidiary, J&J Middle East FZ-LLC, located at the Dubai Healthcare City.

**Acquisition:** In February 2017, J&J completed the acquisition of Abbott Medical Optics (AMO) for a transaction value of USD4.3bn. This acquisition will complement J&J's vision care business.

**Product Portfolio:** J&J is organised into three business segments: Consumer, Pharmaceutical and Medical Devices. The Medical Devices segment includes a broad range of products used in the cardiovascular, diabetes care, diagnostics, orthopaedics (hips, knees, trauma and spine & other), surgery (advance, general and specialty) and vision care markets. The company's largest markets are surgery and orthopaedics.

#### Medtronic

**Overview:** In January 2014, Medtronic moved its regional Middle East and North Africa headquarters from Beirut, Lebanon, to Dubai, the UAE. Medtronic META FZ-LLC is located at DSP.

**Acquisitions:** In August 2016, Medtronic acquired HeartWare International, a developer of miniaturised left ventricular assist devices (LVADs) for the treatment of heart failure, for USD1.1bn. In February 2016, Medtronic acquired Italian haemodialysis treatment company Bellco. Overall, Medtronic has strengthened its global position following the USD50bn acquisition of Covidien, completed in January 2015.

**Product Portfolio:** Medtronic operates four business groups: Cardiac and Vascular Group (CVG), Diabetes Group, Restorative Therapies Group (RTG) and Minimally Invasive Therapies Group (MITG) which represents 90% of Covidien's revenues. Covidien's Peripheral Vascular business has been integrated into CVG, while Covidien's Neurovascular business has been integrated into RTG.

**R&D:** Medtronic plans to open an academy, the Medtronic Academy, to train doctors in new technology.

#### **Nihon Kohden**

**Overview:** Nihon Kohden established a regional subsidiary, Nihon Kohden Middle East FZE, in Dubai in September 2012.

**Product Portfolio:** Nihon Kohden's four business segments are Patient Monitors, Physiological Medical Equipment (electroencephalographs, electrocardiographs, evoked potential testing devices and clinical polygraph systems), Treatment Equipment (defibrillators, AEDs and imported devices such as pacemakers, vagal nerve stimulators and ventilators) and Other Medical Equipment. Of note, Nihon Kohden also imports and distributes other companies' medical devices in various fields, such as cardiology, anaesthesiology, respiratory care, emergency care, point-of-care testing and rehabilitation.

#### **Philips HealthTech**

**Overview:** Philips operates a regional subsidiary, Philips Healthcare Middle East, headquartered in Dubai. It covers 15 markets through various Philips representative offices, located in Lebanon, Pakistan and Saudi Arabia, and local authorised distributors.

**Product Portfolio:** Philips HealthTech is one of the two business units operated by Philips. Philips HealthTech focuses on three main businesses: Diagnosis & Treatment (diagnostic imaging, ultrasound, image-guided therapy, driven by the integration of Volcano including interventional X-ray and smart catheters); Connected Care & Health Informatics (patient monitoring, hospital ventilators, defibrillators, home and remote cardiac monitoring, healthcare IT and high-end radiology & cardiology informatics); and Personal Health (sleep & respiratory care, oral healthcare, mother & childcare, air purifiers and male grooming). The company has leading market positions in a number of areas, including cardiovascular X-ray, image-guided interventions, patient monitoring, and home healthcare.

At Arab Health 2017, Philips revealed that the company has conducted a survey on the population's health and is developing connected cardiovascular solutions in collaboration with emergency response agencies, as part of a public-private partnership with the Dubai government.

#### **Siemens Healthineers**

**Overview:** Siemens established a regional office in 1999, Siemens LLC, which serves as the main representative and distribution office in the UAE and also Bahrain, Oman, Qatar and Yemen. The company moved to its regional offices at Masdar City in Abu Dhabi in January 2014, but runs two additional offices. Siemens had 2,518 employees in the country in FY2015 (October 1 2014 - September 30 2015).

**Financial Review:** Siemens reported revenues of EUR940mn in the country in FY2015.

**Product Portfolio:** Siemens Healthineers (formerly called Healthcare until May 2016) is the business managed by Siemens separately; it forms part of Siemens' Industrial Business. Siemens Healthineers has been reorganised into six business areas: Diagnostic Imaging, Laboratory

Diagnostics, Advanced Therapies, Ultrasound, Point of Care Diagnostics and Services. In FY15, Siemens sold its hearing aid and hospital information businesses.

**Smith & Nephew**

**Overview:** Smith & Nephew has a local subsidiary, Smith & Nephew FZE, located at the Dubai Healthcare City.

**Product Portfolio:** Smith & Nephew operates nine global product franchises: Knee Implants, Hip Implants, Sports Medicine Joint Repair, Arthroscopic Enabling Technologies, Trauma & Extremities, Other Surgical Businesses, Advanced Wound Care, Advanced Wound Devices and Advanced Wound Bioactives.

**Stryker**

**Overview:** Stryker runs a regional office, Stryker Export, located in Dubai. The representative office covers a large number of countries in the Middle East and Africa region.

**Product Portfolio:** Stryker operates three main divisions: Orthopaedics, MedSurg and Neurotechnology & Spine. Orthopaedics includes products such as hips, knees, robotics, trauma & extremities including foot & ankle, and orthobiologics & biosurgery. MedSurg includes instruments (bone-cutting & surgical accessories and computer-assisted surgery), endoscopy (minimally invasive surgical solutions and integration & connectivity), sports medicine, medical (beds, stretchers and emergency medical services equipment) and sustainability solutions (reprocessing and remanufacturing). Neurotechnology & Spine includes spinal implants and interventional spine products, neurovascular, neuro powered instruments and craniomaxillofacial products.

**Zimmer Biomet**

**Overview:** Zimmer has a local subsidiary, Zimmer Gulf FZ-LLC, located at DSP.

**Product Portfolio:** Zimmer Biomet focuses on six business areas: Knees; Hips; Surgical, Sports Medicine, Foot and Ankle, Extremities and Trauma (SET); Dental; Spine & Craniomaxillofacial (CMF); and Other.

Multinationals in Pharmaceuticals

MULTINATIONAL MARKET ACTIVITY	
Company	Operations
Novartis	Novartis has a representative office in Dubai, which markets and sells consumer health products including OTC pharmaceuticals, health and functional foods and medical nutrition supplements. Leading products include <i>Voltaren</i> (diclofenac), <i>Lamisil</i> (terbinafine), <i>Otrivin</i> (xylometazoline), <i>Orofar</i> (benzoxonium), <i>Nicotinell</i> (nicotine replacement therapy) and <i>Maalox</i> (aluminium hydroxide and magnesium hydroxide).
Pfizer	The US drug major is present in local manufacturing through a licensing agreement with local firm Neopharma and is looking into expanding its local research and development activity. Pfizer, however, does not operate local offices in the country.
Roche	Roche partnered with the Health Authority of Abu Dhabi in setting up the 'Cancer Wave' initiative to raise cancer awareness in the UAE. The company employs around 35 people in Dubai, and 11 in the Abu Dhabi office.
Sanofi	Sanofi-Aventis mostly operates through distributors and agents, such as the City Pharmacy in the UAE. In 2015, Sanofi gave support to the UAE's breast cancer prevention and screening program 'Pink Caravan' - a country-wide scheme raising awareness.

MULTINATIONAL MARKET ACTIVITY

Company	Operations
Merck & Co	Earlier in 2015, Merck and Co launched a diabetes education programme in the UAE. The five-year programme will improve diabetes awareness, early diagnosis and prevention on a national scale.
Johnson & Johnson	In November 2015, Johnson & Johnson announced that it is looking to expand its portfolio and operations in the UAE. The company started its operations from Dubai Healthcare City in October 2015, and the centre employs 70 people. In terms of sales growth, the UAE features among the top ten nations in Europe, the Middle East and Africa for the company.
GlaxoSmithKline	In October 2014, GlaxoSmithKline revealed it was looking into allegations of corruption in the UAE after it was claimed that the company made direct payments to healthcare professionals, pharmacies, clinics and hospitals for securing business.
AstraZeneca	AstraZeneca Gulf regional head office is located in Dubai (UAE). Its UAE drug portfolio covers a range of therapeutic areas including cardiovascular, diabetes, gastrointestinal, infection, neuroscience, oncology and respiratory.
Takeda	Has no direct presence in the country; products tend to be imported.
AbbVie	In February 2015, Abbvie opened its regional office in Dubai. In June 2015, AbbVie announced that the Ministry of Health had approved its interferon-free treatment of <i>Viekirax</i> (ombitasvir/paritaprevir/ritonavir) + <i>Exviera</i> (dasabuvir) for hepatitis C infection