



HEALTHCARE AND PHARMACEUTICALS

SECTOR REPORT FOR DUBAI

FOR DEVELOPMENT OF DUBAI AS A GLOBAL TRADE AND
INVESTMENT HUB

Business Advocacy – Center for Business Studies and Research
Dubai Chambers

AMBITION
IN FOCUS

غرف دبی
DUBAI CHAMBERS

**GLOBAL COMPETITIVENESS
OF HEALTHCARE AND
PHARMACEUTICALS
SECTOR IN DUBAI**

**HEALTHCARE AND
PHARMACEUTICALS
OPPORTUNITIES IN DUBAI**

**RECOMMENDATIONS FOR
THE HEALTHCARE AND
PHARMACEUTICALS
SECTOR IN DUBAI**

**APPENDIX: HEALTHCARE
AND PHARMACEUTICALS
TRADE ANALYSIS**

**APPENDIX: HEALTHCARE
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INVESTMENT ANALYSIS**

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**GLOBAL COMPETITIVENESS
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TRADE ANALYSIS

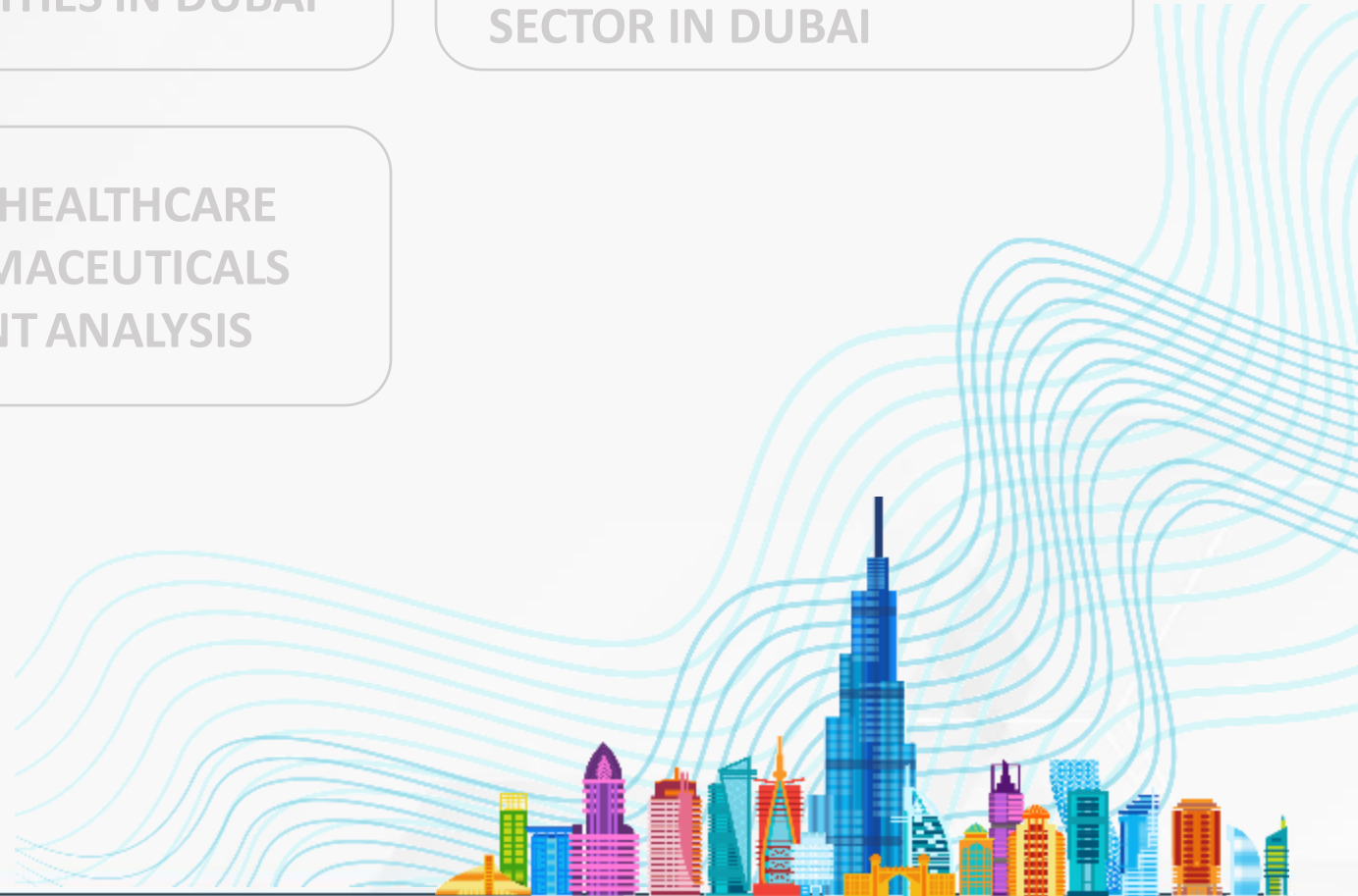
APPENDIX: HEALTHCARE
AND PHARMACEUTICALS
INVESTMENT ANALYSIS

Snapshot of UAE & Dubai Economy

Position of Healthcare and Pharmaceuticals Sector in the Economy

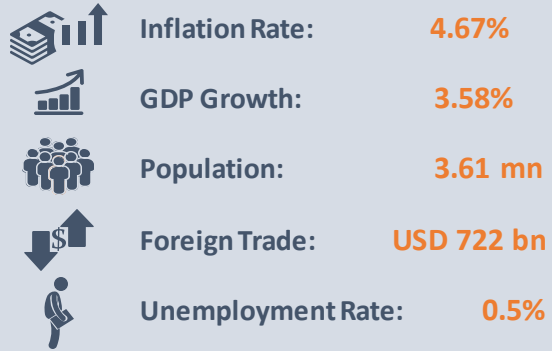
Break- Down of Healthcare and Pharmaceuticals Industry

Healthcare and Pharmaceuticals : Major Economic Aggregates



ECONOMIC OVERVIEW OF DUBAI

SNAPSHOT OF ECONOMY IN 2022¹



BUSINESS RANKING^{2,3}



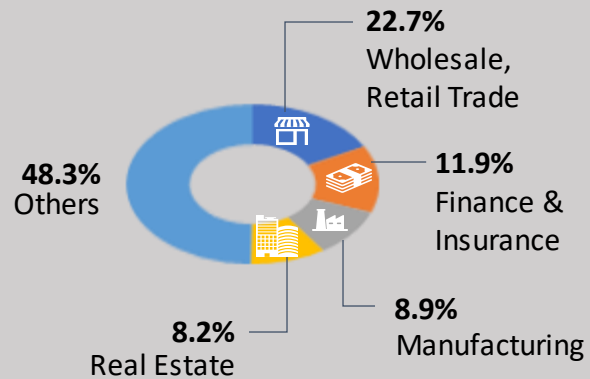
TAX⁴

The Dubai taxation system is one of the most advantageous in the world :

- **Corporate Tax: 9%** for profits of more than USD 102k
- **Rental Tax:** Levied on rental of real estate properties located in the Emirate
- **Tourist Tax: 10%** (other taxes could also apply for various other services)
- **Value Added Tax: 5%**



COMPOSITION OF GDP (2021)⁵



FREE ZONES^{8,9}

- 26 Free Zones
- Special Economic Area
- Licenses obtained do not require approval from external authorities
- **100% foreign ownership**
- **100% repatriation of capital earnings**
- **100% exclusion from personal and corporate tax**
- Varied number of visa packages
- Benefits like Flexi-Desk



100% OWNERSHIP^{10,11}

The list of over 1,000 business activities that allow **100% foreign ownership** can be obtained from the Dubai's Department of Economic Development (DED) website

Industries with 100% Ownership

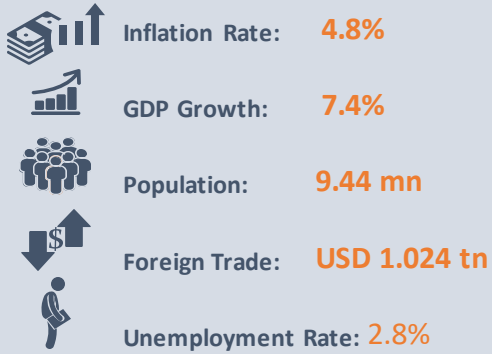


ECONOMIC OVERVIEW

SNAPSHOT OF UNITED ARAB EMIRATES

ECONOMIC OVERVIEW OF UNITED ARAB EMIRATES

SNAPSHOT OF ECONOMY IN 2022^{1 2 3}



BUSINESS RANKING^{2 4}



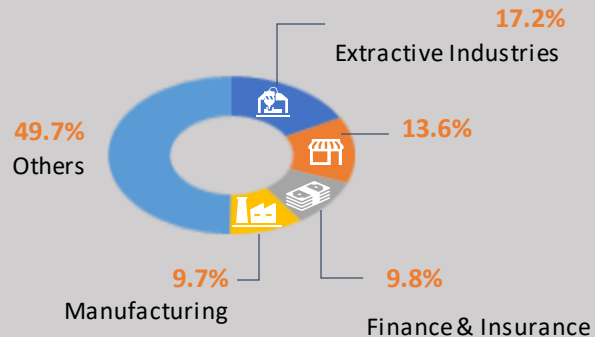
TAX⁴

Federal tax system that is applicable to all businesses and commercial activities operating within the 7 emirates, with no income taxes levied on individuals.

- **Corporate Tax: 9%** for profits of more than USD 102k
- **Rental Tax:** Levied on rental of real estate properties located in the Emirate
- **Tourist Tax: 10%** (other taxes could also apply for various other services)
- **Value Added Tax: 5%**



COMPOSITION OF GDP (2020)⁶



FREE ZONES^{7 8}

- 46 Free Zones
- Licenses obtained do not require approval from external authorities
- **100% foreign ownership**
- **100% repatriation of capital earnings**
- **100% exclusion from personal tax**
- Varied number of visa packages
- Relatively easier documentation.
- Long term leasing options.
- Simplified recruitment and workforce process.
- Benefits like Flexi-Desk



100% OWNERSHIP^{10 11}

The list of over 4,000 business activities that allow **100% foreign ownership** can be obtained from the Dubai Economy Development (DED)

Industries with 100% Ownership



Agriculture



Manufacturing



Accommodation & food services activities



Fishing



Mining & Quarrying



Contracting



Trading & services

HEALTHCARE AND PHARMACEUTICALS SECTOR IN DUBAI



CONTRIBUTION OF SECTOR

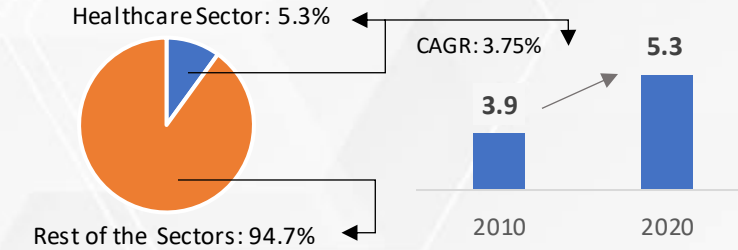
- UAE's healthcare sector contributes 0.9% of GDP in 2021, while the health expenditure is 5.7% of the GDP in 2020.
- Private sector investment in health services has played a pivotal role in the substantial expansion of Dubai's healthcare infrastructure in recent years, as the city has emerged as a thriving domestic market and a prominent regional destination for medical tourism.

CONTRIBUTION OF HEALTHCARE AND PHARMACEUTICALS SECTOR TO DUBAI ECONOMY^{1 2 3 4}

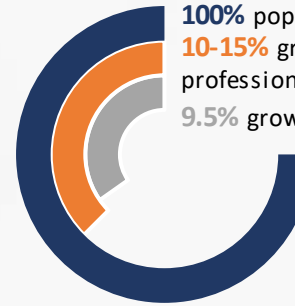
Value Addition to GDP 2021 (% of GDP)



Health Expenditure 2020 (% of GDP)



BREAKDOWN OF HEALTHCARE AND PHARMACEUTICALS ACTIVITIES IN DUBAI^{5 6}



100% population covered under health benefits
10-15% growth projection for medical professionals (for 2023 and beyond)
9.5% growth in medical tourists (2015-2020)



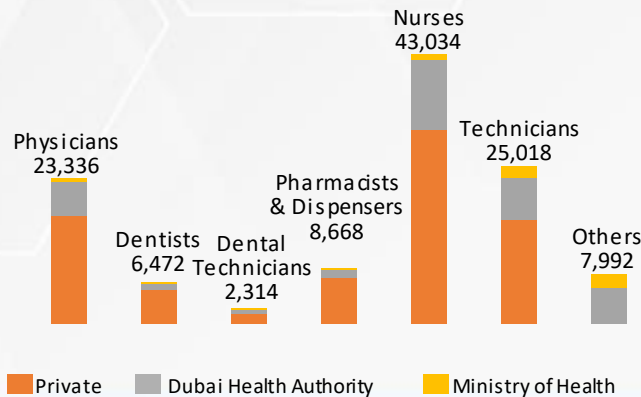
Dubai ranked #1 city globally for the number of FDI projects in the healthcare sector in 2021



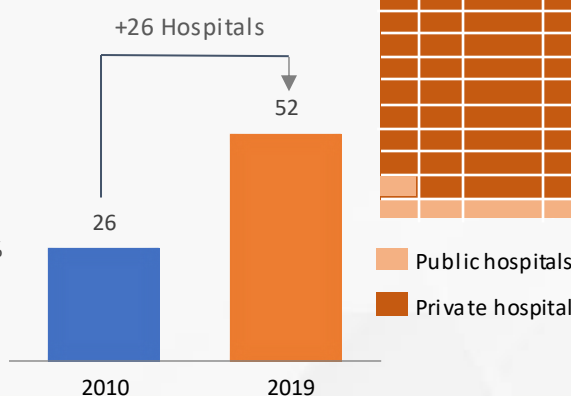
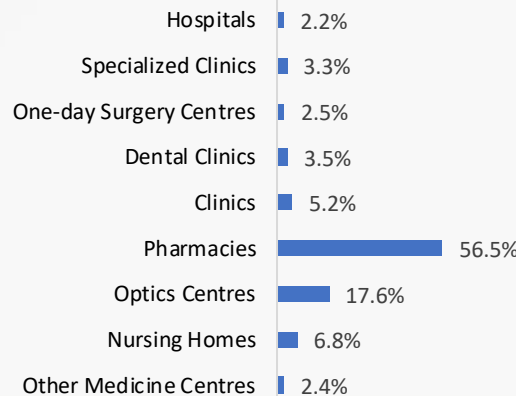
674,000 medical tourists in 2022 spending AED992m, an increase of AED262m from 2021.

CONTRIBUTION OF HEALTHCARE AND PHARMACEUTICALS SECTOR TO DUBAI ECONOMY^{7 8 9}

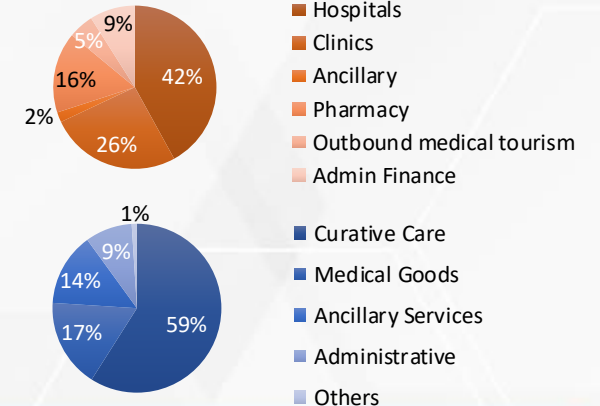
Employees in healthcare and pharmaceuticals 2021 (58,417 total employees)



Breakdown of establishments in healthcare & pharmaceuticals 2023 (4609 total number of health facilities)



Breakdown of Dubai Health sector and operations basis expenditure 2019



HEALTHCARE SECTOR IN DUBAI

COMPOSITION OF SECTOR

- Conventional high-growth sub-sectors of Dubai's Healthcare sector include Pharmaceuticals, Medical devices, and Healthcare delivery.
- Emerging high-growth sub-sectors of Dubai's Healthcare sector include Clinical Research, Biotechnology, Telemedicine, Personalized medicine and medical tourism.



HIGH GROWTH SUB-SECTORS- CONVENTIONAL^{1 2 3}



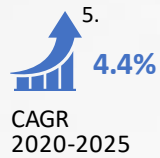
Pharmaceuticals

In 2021, **38%** of the new companies that registered in Dubai Science Park were pharmaceutical manufacturers



Medical Devices

UAE committed **USD 70m** to two companies in medical equipment manufacturing for global export



Hospitals & Clinics

An additional **742 beds** by 2020 and **1,043 beds** by 2025 had been planned for Dubai as per Clinical services capacity plan 2018-2030

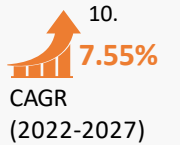


HIGH GROWTH SUB-SECTORS-EMERGING^{7 8 9 14 16}



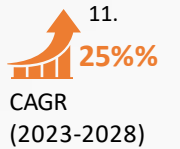
Clinical Research and trials

With government's added emphasis on Research and development, Dubai is set to host **4th international clinical trials conference** in November 2023



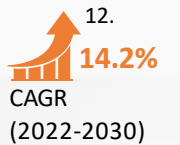
Telehealth

More than **300,000 telemedicine consultations** in 2022, with an increase of **24%** in telehealth services over 2021 to 2022



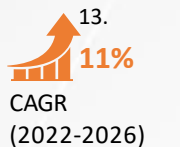
Biotechnology

Biotechnology accounts for **5%** of companies in Life sciences in UAE, with DuBiotech Free Economic Zone formed in Dubai with emphasis on Biotech



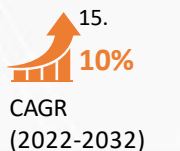
Precision medicine

Dubai is to host **Middle East's first Precision Medicine Exhibition & Summit**



Medical Tourism

Dubai is ranked **#6 globally and #1 in GCC**, among attractive medical travel destinations, in the Medical Tourism Index 2020-2021



HEALTHCARE AND PHARMACEUTICALS SECTOR IN DUBAI

POLICY FOCUS AND DEMAND DRIVERS

- Key Demand Drivers for Local Investment for Value Added Exports and for Import Substitution include free trade zones, logistics, location, demography, regulations and steady investment.
- The government policy focuses upon creating Dubai a global hub. The key areas involve Mental health, rehabilitation, urgent care, long-term care, MedTech, and homecare.



DUBAI AS A RE-EXPORT HUB FOR HEALTHCARE AND PHARMA:^{1 2}



UAE domestic and re-export markets by greatest USD size:

Consumables, Diagnostic Imaging, Dental, Ortho, Aids, Other Devices (Ophthalmic, Hospital Furniture, Other Instruments, Medical/Surgical Sterilizers, Ultra-Violet/Infra-Red Apparatus



Excellent Location:

Dubai's excellent connectivity:

- Under **8 hours** flying time for **2/3** of the world's population.
- **140 airlines** directly connecting Dubai to **260 destinations**.



Air and Sea infrastructure:

Zayed Port, and Khalifa Port and Industrial Zone

DRIVERS OF CONSUMPTION OF HEALTHCARE AND PHARMA IN DUBAI:^{3 4}

Healthcare facilities:

Number of licensed facilities by DHA increased by **6.8% (2012-2019)**



Population Growth:

U.A.E.'s population >65 yrs to grow from **1% at present to 3% by 2030**, stimulating growth for general care and geriatric care.



Disease suffrage: Non-Communicable Diseases (NCD) account for

- * 76% of all deaths
- * 35% are overweight
- * 16% suffer from diabetes
- * 15% mental or substance use disorder.
- * Cardiovascular diseases >3 times developed countries.



Medical Tourism:

Over **350,118 health tourists** from the region, Asia and Africa and generated over **AED 726 Mn** in total healthcare revenue



Free Zones:

Two dedicated free zones, **DHCC Dubai Healthcare City Free Zone (DHCC)** and **DSP (Dubai Science Park)**



Foreign Ownership: 100% foreign ownership

of onshore companies and a new 10-year visa or Golden visa is available to investors and professionals in the medical, scientific, research and technical fields.



POLICY AND VISION PLAN⁵

UAE Healthcare 2071 Plan

- Aims for a healthcare system that delivers **good quality healthcare to international Standards**, with a focus on **lifestyle diseases**
- Improve access to healthcare through **e-health, smart health**
- Become a top destination for **medical tourism**.

Dubai Health Strategy 2016-2021

- **Vision:** Towards a healthier and happier community
- **Mission:** Transforming Dubai into a leading healthcare destination by fostering innovative and integrated care models and by enhancing community engagement

Focus areas for the next 2-3 years

2-3 years

3-5 years

Mental Health	Home based care	Prevention and pharmacy beyond the pill
Rehabilitation & physical therapy	Diagnostic and remote monitoring	Precision Medicine and genetics
Long-term and extended care	Urgent care clinics	Population health management
Tertiary care: diabetes, cardiology and oncology	Ambulatory care	Tertiary care: diabetes, cardiology and oncology
Chronic disease management	Innovation in primary care	Nursing home and Palliative care

VALUE CHAIN OF HEALTHCARE SECTOR

IDENTIFYING KEY COMPONENTS

- The Healthcare sector value chain covers from producers and suppliers, to distributors, providers, fiscal intermediaries and payers of service.

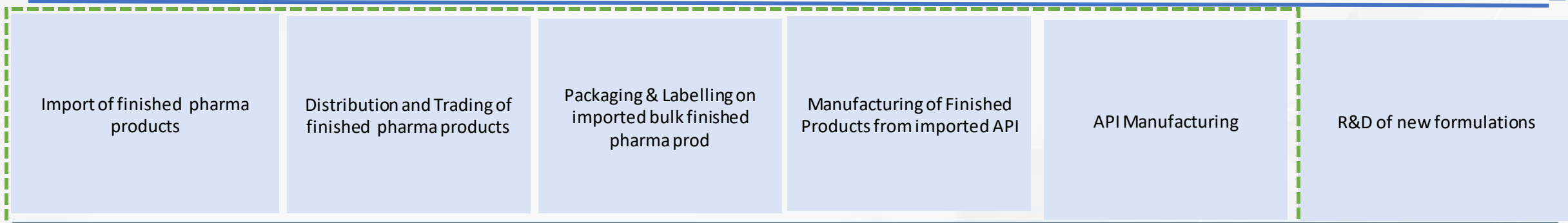
VALUE CHAIN FOR HEALTHCARE SECTOR ¹



Potential Opportunity Areas



VALUE CHAIN FOR PHARMACEUTICAL SECTOR ²



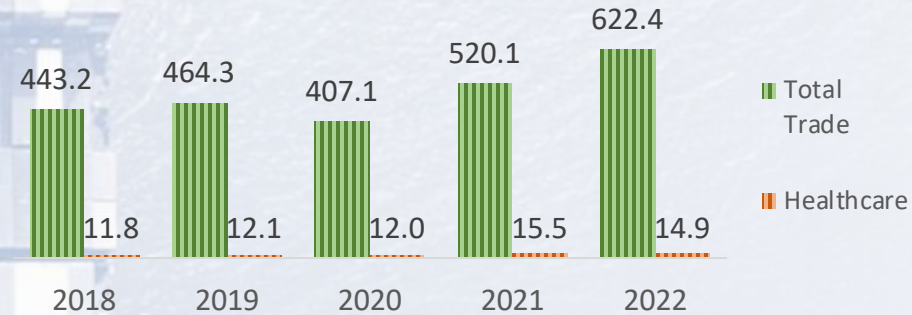
MULTI-LATERAL TRADE HIGHLIGHTS OF HEALTHCARE SECTOR IN UAE

TOTAL MULTI-LATERAL TRADE AND COMPONENTS

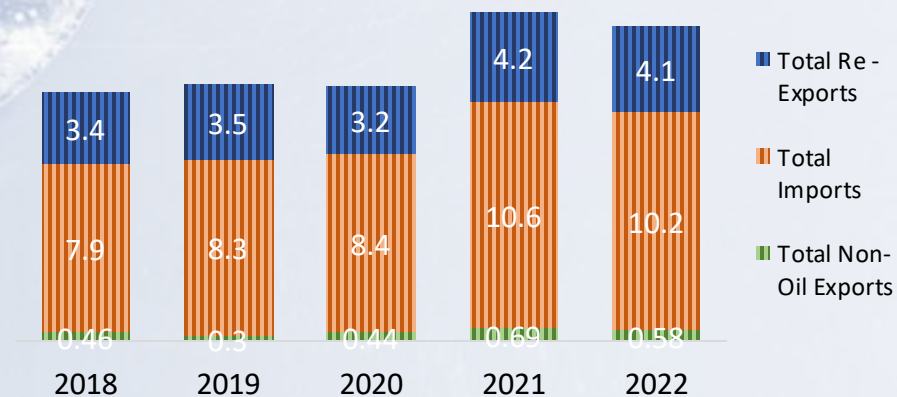
Key takeaway

- In 2022, Healthcare trade accounted for 2.39% of total UAE trade.
- In 2022, total multilateral trade value for Healthcare stood at USD 14.9 billion. 68% were imports, 5% were exports and 27% were re-exports.
- Top products from the Healthcare sector were pharmaceuticals and medical equipment.

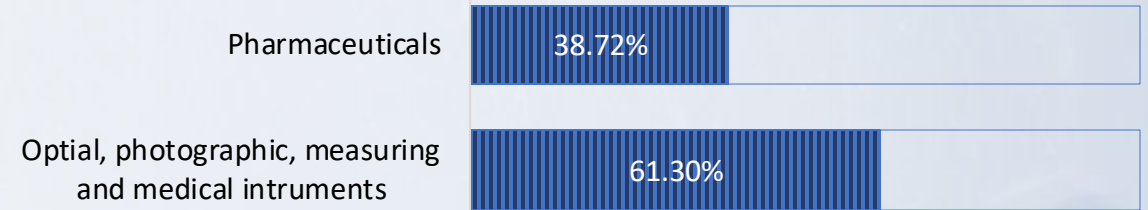
Total Trade Value Vs. Healthcare Trade Value (USD Billion)



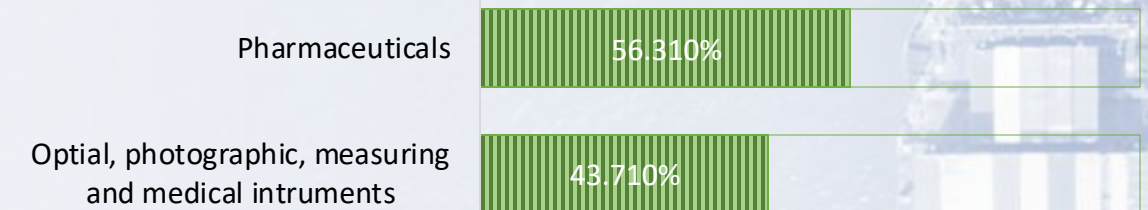
Total Multi-Lateral Trade Value in UAE Healthcare (USD Billion)



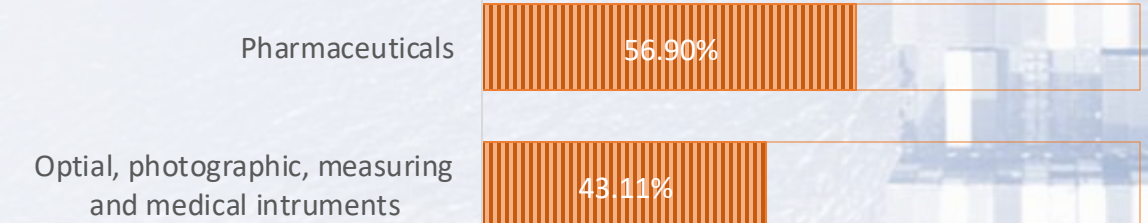
Re-Export Items from UAE Healthcare (2022, % of total Healthcare re-exports)



Export Items from UAE Healthcare (2022, % of total Healthcare exports)



Import Items in UAE Healthcare (2022, % of total Healthcare imports)



MULTI-LATERAL INVESTMENT HIGHLIGHTS OF HEALTHCARE & PHARMACEUTICALS SECTOR IN DUBAI

Key takeaway

- Between 2018 and June 2023, Total inward FDI Projects into Healthcare and into Pharma has been of total value of US\$ 906.22 Mn
- Of total volume, Pharmaceutical Preparations account for more than 52% followed by General Medical & Surgical Hospitals for 40% of all incoming FDI in this sector

FDI INWARD INVESTMENTS IN DUBAI HEALTHCARE & PHARMACEUTICALS



906.22 Mn



25
USD 431 mn

Inward FDI Projects in
Healthcare in
Dubai past 5 years



22
USD 475 mn

Inward FDI Projects in
Pharmaceutical in
Dubai in past 5 years

Top Sectors & Top Countries of Inward Healthcare & Pharmaceutical FDI (Jan 2018-June 2023)³

Inward Healthcare & Pharma FDI Sectors	Top 5 Countries (USD Mn)	Companies	Number of Projects	FDI Volumes USD Mn)
Pharmaceutical preparations	USA, UK, South Korea, India, Italy, France, Germany, Denmark	AstraZeneca, Medytox, Chapper Healthcare, Omnicals Pharma, Clinixel Life Sciences, Cor.Con. International, Menarini Group, Gabri Labs	21	474.40
Other (Pharmaceuticals)	India	Power Gummies	1	0.67
General Medical & Surgical Hospitals	South Korea, KSA, UK, Israel, France, Germany, USA	Asan Medical Center, Mayo Clinic, Curie Institute (Insitut Curie), Dr Sulaiman Al-Habib Medical Group (HMG), Hadassah Medical Center, King's College Hospital, Quironsalud	7	362.85
Outpatient care centres & medical & diagnostic laboratories	USA, UK, Israel, Spain	Fountain Life, Alphagenix, Aviv Scientific (Xtend Scienific), Igenomix, Centro de Oftalmologia Barraquer	5	30.5
Offices of physicians, dentists, & other healthcare practitioners	UK, USA, Lebanon, RSA, Spain, Finland	Hexarad, Genesis Lifesciences International, Feetness, Mediclinic Middle East, Mediclinic Middle East, Holistic Rehab Clinic, Grupo Asisa, Neosmart Health	8	27.00
Other (Healthcare)	Turkey, UK	Hair of Istanbul, Regent Street Clinic	2	10.20
Medicinal & botanical	RSA	Wuhan General Group (M2Bio Sciences)	1	6.50
Home Healthcare & all Other Ambulatory Health Care Services	Netherlands	EMS Ambulance	1	2.20
Psychiatric & speciality hospitals	Malaysia	The Wave Clinic	1	1.3

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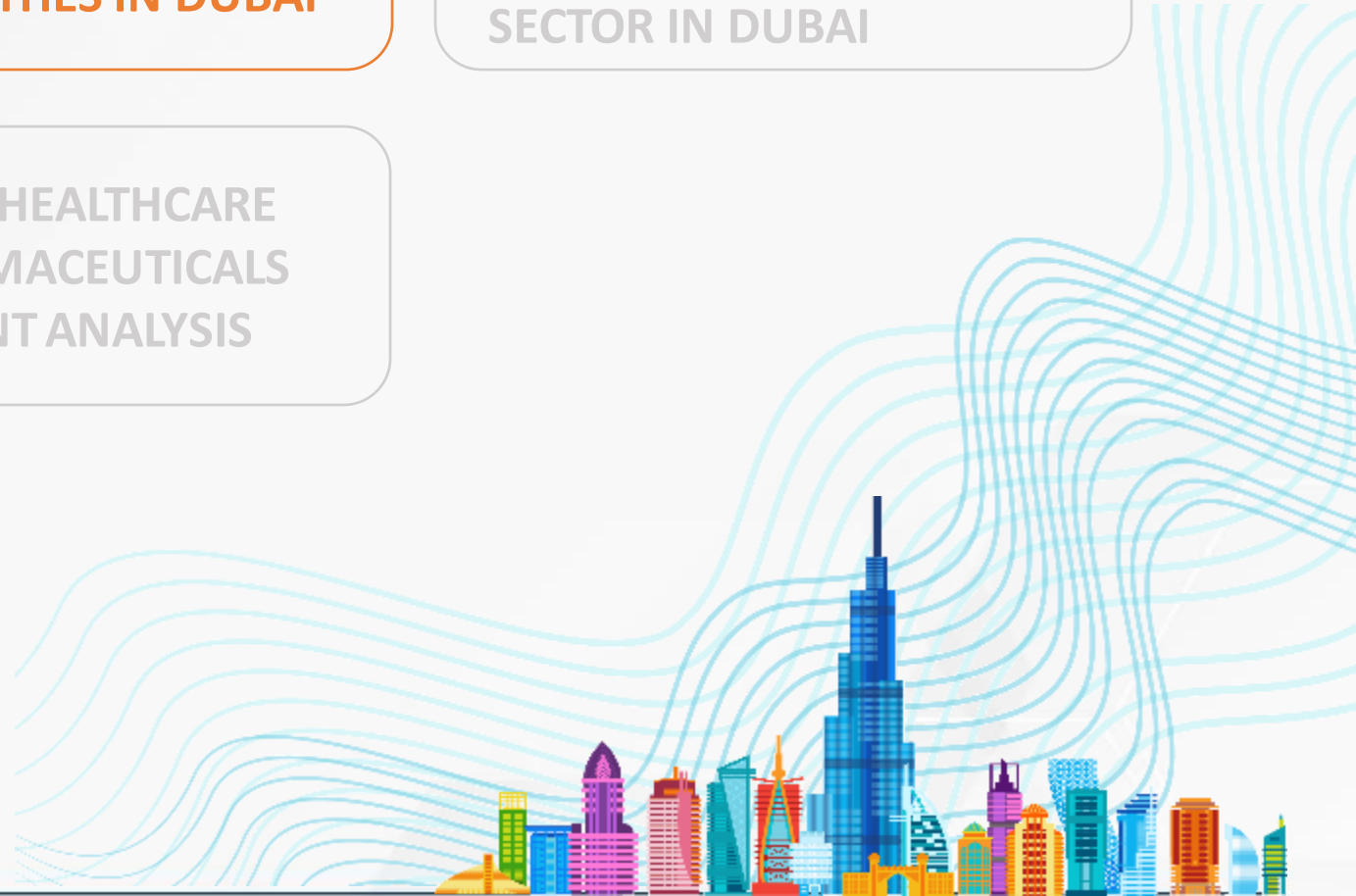
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Top 8 Sectors of Focus for Healthcare and
Pharmaceuticals in UAE/Dubai

Sector Opportunity Deep Dives



INWARD INVESTMENT OPPORTUNITY IDENTIFICATION- DUBAI

Opportunities derived from:

- ✓ Potential for value add to exports or Potential for import substitution
- ✓ Extent of existing Inward FDI Investments
- ✓ Policy Focus
- ✓ Emerging trends
- ✓ Technology and Market Gap Analysis

PHARMACEUTICALS - DISTRIBUTION AND TRADING

HEALTHCARE MEDICAL INSTITUTIONS – EDUCATION

CLINICAL RESEARCH (CRO) AND TRIALS

SHARED LABORATORIES FOR GENOME SEQUENCING

HEALTHCARE SERVICES (CLINICS, DEVICES & OPD CARE) – CHRONIC DISEASE MANAGEMENT, MENTAL HEALTH AND OTHERS

SINGLE SPECIALITY CLINICS, HOPITALS-AT-HOME, ELDERLY/GERIATRIC CARE

SMART HOSPITALS AND HEALTHCARE COMMAND CENTERS: INCL VIRTUAL AI, ANALYTICS, ROBOTICS, BLOCKCHAIN

PRE-CLINICAL DIAGNOSTIC EQUIPMENT

HEALTHCARE BUSINESS INFRASTRUCTURE – ADMINISTRATIVE, OFFICES AND OTHER ANCILLARY PROVIDERS (SCIENTIFIC OFFICES FOR THE REGION)

INWARD INVESTMENT OPPORTUNITY IDENTIFICATION: INTO DUBAI HEALTHCARE AND PHARMACEUTICALS COMPANIES

1. SMART HOSPITALS AND HEALTHCARE COMMAND CENTERS



USING RPM, TELEMEDICINE, BLOCKCHAIN, AI, ANALYTICS, ROBOTICS



- The UAE is leading MEASA Smart hospitals market with Dubai is the leading destination in UAE
- Technological upgrades to existing hospitals of the highest standards to make them reference hospitals



UAE Smart Hospital
Market (USD billions)

1.9
2022

2.1
2023



CAGR
13%

Source: Arab
Health 2020

Government
policy



- **High Government spending:** on building smart hospitals - most recent medical technology.
- **Hosting expos and fairs to attract tech in healthcare:** e.g. Arab Health 2020 event, for innovation in tech-powered healthcare.
- **Regulatory changes:** Federal Law Number 2 of 2019 to centralize and protect healthcare data
- **Emphasis on AI:** The **Dubai Health Authority (DHA)** uses an AI-based healthcare model to promote early disease detection, prevent disease, and reduce treatment-related complications.
- **Dubai Smart Healthcare Model:** to implement more intelligent technology in the city's hospitals.



Remote monitoring, automated healthcare system, telemedicine
Countries with shortage of physicians, but high levels of internet & mobile phone penetration, have a high potential of telemedicine implementation.

Global Leaders

- US
- Canada
- Switzerland



Analytics

70% of healthcare workers' tasks could be reinvented by technology augmentation (like AI) or automation.

Global Leaders

- US
- China
- UK
- Germany



Robotics

Complicated surgeries, clinical training, medicine dispensing, personal care account for majority of the demand

- US
- China
- Germany



Blockchain
Immediate application and integration in healthcare could save more than USD 100 billion per year in costs related to IT, operations, support functions, personnel, and health data breaches by 2025.

- US
- France
- UK
- Switzerland



AI
70% of healthcare workers' tasks could be reinvented by technology augmentation (like AI) or automation.

- US
- China
- UK
- Japan



Key Drivers:

- Smart Dubai Initiative
- Protected healthcare data
- 27 free zones for sectors including health-tech



Key Challenges:

- Regulatory hurdles
- Lack of skilled workforce in technology
- Integration with the traditional system

Recent FDI
2018-2023



- **USD 362.85 Mn-** of FDI flowed into Dubai into General Medical and Surgical Hospitals from USA, UK, France, and Israel notably Asan Medical Center from South Korea and HMG from KSA
- **Technological upgrades** to the highest standards would include the incorporation of remote patient monitoring, e-visits, telemedicine in consultation, and usage of robotics in surgeries and procedures, electronic health records, blockchain & AI in diagnostics, health analytics in floor management, etc.

Market Gap
Size



- The UAE is leading the Middle East and Africa's smart hospitals market reaching a record-high of **USD 2.1 billion by 2023.**

INWARD INVESTMENT OPPORTUNITY IDENTIFICATION: INTO DUBAI HEALTHCARE AND PHARMACEUTICALS COMPANIES

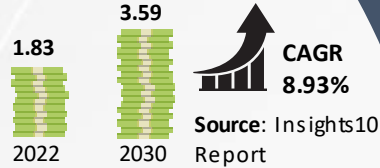
2. SINGLE SPECIALITY CLINICS, HOSPITALS-AT-HOME, ELDERLY/GERIATRIC CARE



- Medical care saw a **shift from hospitals to homecare** in the post-pandemic era, a 65% increase from pre-COVID
- Elderly care** is the main service in demand at in-home care
- Single specialty clinics** are growing for specialized care without the need for a visit to the hospital



UAE Home Healthcare market growth (USD billions)



Government policy



- Dubai has **dedicated specialty centers** under DHA, like **Dubai Genetics Center, Dubai Diabetes Center**, etc.
- Homecare** has been a vision for DHA in Dubai, with Dubai government investing in this area

Gap Analysis: Overall



- Gap analyses show areas of care that are **critically undersupplied** in Dubai and can be well served by specialty and at-home care
- International players from the USA like **Kindered Healthcare, Teladoc, Genesis, and Amedisys** set standards for homecare
- UAE has a market size for home healthcare at **USD 1.83 Bn** in 2022

Gap Analysis: Acute same day priority



Gap Analysis: Outpatient consultation room



Global Leaders

Single Specialty Clinics

- Specialty Clinics for Diabetes, Pediatric Care, Gastroenterology, Rheumatology; Cardiology, Oncology, Orthopedics, Maternity and Urology and dental, eyecare, IVF, and kidney dialysis have major demand

- US
- Germany
- India

Hospitals at Home

- In the post-pandemic era, 65% increase from hospital to home care
- For rehabilitation, palliative care, post-surgery/accident care, physical therapy, chronic disease care, maternal care, etc

- US
- Canada
- Switzerland

Elderly/Geriatric Care

- In 2021, UAE Nationals (60+ y.o.) accounted for 7% of Dubai's Emirati population but for 21.7% of Insurance expenses.

- US
- Canada
- Switzerland
- Germany



Key Drivers:

- Medical Tourism for specific specialties
- Ageing population
- Technology focused vision



Key Challenges:

- Requirement of skilled workforce
- Regulatory compliance
- Supportive infrastructure requirement

Sub-sector	Gaps – 20250	Gaps – 2030
Dialysis	39	370
Paediatric medicine	15	159
Gastroenterology	22	155
Orthopaedics & Rheumatology	21	144

Sub-sector	Gaps – 20250	Gaps – 2030
Respiratory Medicine	100	209
Allied Health	120	262
Neurology	75	157
Primary Care	198	726

INWARD INVESTMENT OPPORTUNITY IDENTIFICATION: INTO DUBAI HEALTHCARE AND PHARMACEUTICALS COMPANIES

3. HEALTHCARE SERVICES

CHRONIC DISEASE MANAGEMENT, AMBULATORY & URGENT CARE AND MENTAL HEALTH



- **Cardiovascular diseases and Cancer:** main causes of mortality accounting for over 42% of deaths.
- **Diabetes:** prevalence ratio 2-4 times higher than in developed countries.
- **Depressive disorders** incidence was 2.3% with 3/4th of patients undiagnosed



UAE depression therapeutics market growth (USD Mns)



Government policy



- **Mental health, rehabilitation, urgent care, long-term care** are among the top investment priority by 2025

Gap Analysis



Sub-sector Gaps (Undersupply)	2025	2030
Outpatient Visit Rooms	447	2106
Acute Inpatient Beds	311	1590
Procedural Care Units	113	406
Operating Theatres	-	15
Emergency Rooms	35	107
Critical Care Beds	116	233
Long Term Care	112	192
Re-Habilitation	311	483
Mental Health facility	231	NA

- **Higher domestic and FDI flowing** into these sectors

- The UAE depression therapeutics market was **USD 51 Mn in 2022**
- The chronic disease management market is expected to grow at a CAGR of **13.7%** in the forecast period of 2021-2028

Global Leaders

- US
- UK
- China
- Germany
- South Korea

Clinics, OPD & Devices for Chronic Diseases
Management of chronic diseases as seen by the OPD, Admissions, procedural care units, Ots, ER, Critical care

Ambulatory & Urgent Care

Global ambulatory expertise can be leveraged for e.g. EMS Ambulance Netherlands from Netherlands in FDI in 2022

- US
- UK
- Australia
- Netherlands

Mental Health

Global mental health expertise can be leveraged e.g. Wave Clinic from Malaysia in 2021

- Switzerland
- UK
- Norway
- Netherlands



Key Drivers:

- Rising cases of chronic disease
- Rising medical tourism – immediate medical care for visitors
- Government support for medical care



Key Challenges:

- Cultural sensitivity to enter segments like mental health
- Shortage of skilled professionals

Emerging Trends



UAE Market Size



INWARD INVESTMENT OPPORTUNITY IDENTIFICATION: INTO DUBAI HEALTHCARE AND PHARMACEUTICALS COMPANIES

4. PLASTIC BASED PRE-CLINICAL DIAGNOSTIC DEVICES

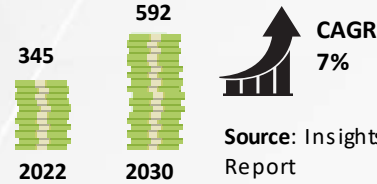
MEDICAL GRADE PLASTICS, COMPOUNDING, PLASTIC TUBES (SYRINGES& OXYGEN) AND CONTRACT MANUFACTURING



- Increasing demand and imports for diagnostic equipment and a pre-existing strength in domestic plastics industry creates opportunity for simple plastic based pre-clinical diagnostics devices



UAE Clinical Diagnostics market growth (USD Mn)



Source: Insights10 Report

Government policy



- High Government focus
- #MakeInEmirates To Value add in the existing industries like plastic

Extent of current FDI



- FDI flows into Top players like GE Healthcare, Siemens Healthcare and Philips Healthcare which provide top medical and diagnostic devices in Dubai.
- Opportunity in Contract manufacturing for Simple Pre-Diagnostic equipment

Export and Re-Export potential



- Around USD 1.5 Mn of export and USD109.9 Mn of re-exports of medical devices in total (UAE)
- These can be value added to by the augmented contract manufacturing

Import Substitution potential



- USD 244.8 mn: Import for medical devices in UAE, which could be partly substituted by domestic production

Market Gaps



- MENA region exports medical use plastics to China and India
- Potential exists to manufacture and export semi finished goods instead of raw plastics.

Manufacture of Medical Grade Plastics:

High value medical grade plastics like Abs, Polycarbonate, Acetal, PET, PP, PPO, PBA, PA6, PMMA for export market and domestic use

Polymer Compounding for Engineered Plastics

For specific requirements of housings and enclosures for oxygen concentrators and compressors for medical applications; labware and diagnostic equipment; radiation and non-radiation based medical devices; medical packaging etc

Contract Manufacturing: Simple Pre-Diagnostic Equipment

Proportion of engineered plastics is higher (35%) in Hospitals- Consumables, equipment, wound care, drug delivery devices, infusion devices, surgical consumables, general surgery, endoscopy, laboratory equipment, and hence contract manufacturing for such products.

Global Leaders

- US
- China
- UK
- Germany
- Canada
- France
- Ireland
- Israel



Key Drivers:

- Existence of strong plastic industry that that can value to its products
- Well established exports of plastic poly ethylene and poly propylene



Key Challenges:

- Highly regulated licensing and approval

INWARD INVESTMENT OPPORTUNITY IDENTIFICATION: INTO DUBAI HEALTHCARE AND PHARMACEUTICALS COMPANIES

5. SHARED LABORATORIES FOR GENOME SEQUENCING

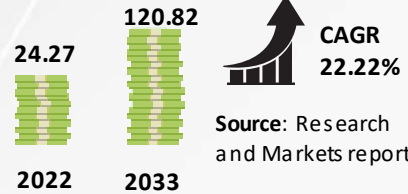
NATIONAL PRIORITY WITH TECH ADVANCEMENTS SPURS SHARING OF RESOURCES



- A shift towards **next-generation sequencing (NGS)** technologies, which held almost half of the Genetic Testing Market in 2021, is expected to witness the highest growth in the next decade
- NGS being integrated into **clinical laboratory analysis**, testing, and disease diagnoses.
- With high government priority due to **genetic disorders**, shared laboratories for sharing of resources is a high growth opportunity in Dubai



UAE Genetic testing market (USD Mn)



Government policy



- Government Focus: VERY HIGH**
- UAE launched **National Genome Strategy 2023** and devotes considerable resources to the field of genetic sequencing
- Dubai Genetics Center (DGC) provides Medical Genetic Services** as a focus area for the next 3-5 years for better disease diagnosis and treatment.
- Established a board for the **Emirati Genome Program** and launched a **Center for Genomic Discovery**
- in March 2018, the Dubai authority announced testing the DNAs of **all 3 Mn citizens**.

GAPS

- Genetic disorders** are a significant health concern in the UAE.
- Genetic disorders** are the **fourth-highest** cause of deaths in the UAE and the nation is ranked sixth among 193 countries in terms of prevalence of birth defects, mainly due to genetic causes

Emerging Trends

- Dante Labs Genomics, First Genomix and Igenomix** are a few shared laboratories for genome sequencing in Dubai.
- Dubai 10X Initiative outlines Human Genome Map** for residents with ~ 400,000 citizens' blood samples and DNA cheek swabs submitted by 2023 with the aim to collect one Mn samples.

UAE Market Size



- The UAE genetic testing market size was valued at **USD 29.27 Mn in 2022**



- The NGS market on a global scale achieved a valuation of **USD 6.76 billion in 2022**, with huge expected valuation gains in the next decade.
- Most significant players are **USA, UK, China, Germany and South Korea**
- Shared laboratories with **technical collaboration holds high opportunity**

Global Leaders

- US
- UK
- China
- Germany
- South Korea



Key Drivers:

- Increased genome mapping programs
- Expanded applications of NGS
- increasing healthcare expenditure
- technological advancements in sequencing technology



Key Challenges:

- Data Privacy and security
- High technical capabilities
- High expenses

INWARD INVESTMENT OPPORTUNITY IDENTIFICATION: INTO DUBAI HEALTHCARE AND PHARMACEUTICALS COMPANIES

6. HEALTHCARE SCIENTIFIC OFFICES

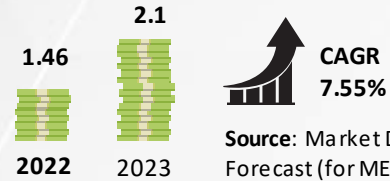
CLINICAL RESEARCH (CRO), MEDICAL DEVICE TESTING, CERTIFICATION LABORATORIES & ADMINISTRATIVE OFFICES



- Recent trend of increasing FDI in administrative offices and ancillary providers, like **scientific offices in Dubai**
- Increasing demand for **specialized healthcare services** driving demand for **ancillary providers**.
- Clinical Research and Trials** have been laid a special emphasis due to major R&D flux and government priority.



UAE Clinical Trials Market (USD billions)



Government policy



Free Trade Zones for Healthcare: DHCC AND DSP

- The Dubai Healthcare City Free Zone (DHCC) for the healthcare sector entitles the Overseas Company to apply for a **Scientific Office license** without being required to use its local distributor and space for lease for medical & research laboratories.
- Dubai Science Park (DSP)** set-up to foster scientific research
- New legislation** allows 100% foreign ownership of UAE-based companies and facilitates 10-year visas for investors and professionals in the medical, scientific, research and technical fields.
- Hosting 13th **International Conference on Clinical Research & Clinical Trials 2023**
- Fast track approval for clinical trials** from the UAE regulators



Clinical Research Organizations

Newer contract research organizations (CROs) to grow by **6.9% between 2022-30**. The UAE's **AED 300 Mn 1ST** independent multi-disciplinary medical research center in Dubai



Medical Device Testing

Major investments in this sector are coming from Switzerland, Germany, and UK



Certification Laboratories

Major investments in this sector are coming from the USA, India, Spain, and Israel



Administrative & Other Ancillary

Major investments in this sector are coming from the USA, UK, India, and Japan



US



UK



China



Japan



Germany



France



Key Drivers:

- Favorable Regulatory Environment
- Alignment with Government Vision
- Free Trade Zones



Key Challenges:

- High cost of setting up and running the office

Clinical Trials in UAE



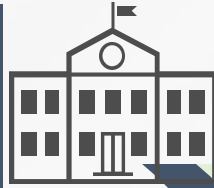
Top Sub-category in UAE	Countries with top investment in trials	Trials in 2022(Global)
Diabetes Mellitus	Iran Egypt, Saudi Arabia,	1415
Malignant Neoplasms	Iran Egypt, Saudi Arabia, Lebanon	7028
Cardiovascular diseases	Iran, Egypt, Pakistan	4077

Extent of current FDI



- Current FDI:** 11 of the 25 private equity firms identified as the top investors in health care have stakes in clinical research companies
- Innovation Hubs** of healthcare companies like **GE Healthcare, Sobi, and Bio-Rad. Zimmer Biomet Holdings**
- Recent FDI(May 2022):
 - Boston Scientific**, the global medical technology leader, inaugurated its new offices in Dubai Science Park (DSP)
 - AstraZeneca** to build offices at Dubai Science Park

INWARD INVESTMENT OPPORTUNITY IDENTIFICATION: INTO DUBAI HEALTHCARE AND PHARMACEUTICALS COMPANIES



7. MEDICAL EDUCATION

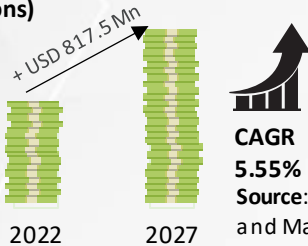
PHYSICAL AND ONLINE MEDICAL EDUCATION



- The licensed medical workforce in Dubai is comprised of **7,616 FTE** across both the public and private sectors, which has been in **undersupply since 2020**.
- By 2030, the Dubai health system will need to **double** its medical workforce.
- Medical institutions are a growing priority in Dubai due to the expected major **shortage of practitioners**.



UAE Education market growth (USD billions)



Government policy: moderate



- In 2015, Dubai unveiled a 10-year plan, building **three new medical colleges and five nursing schools**.
- The **Dubai Health Authority (DHA)** has launched online medical education platforms, to offer healthcare professionals access to digital medical learning resources and support.

Gap Analysis



Leading Institutions	Workforce Dubai Gap by 2030
Nursing workforce	13923
General Medicine & Surgery	4184
Pediatrics	2144



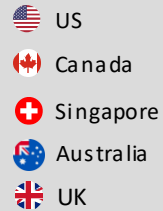
Medical Colleges and Nursing Schools

Gaping workforce gap of close to 14k nurses and 4184 GP and 2144 pediatricians by 2030 to be closed by medical institutions



Healthcare Professionals

Service imports and expat nursing and healthcare professionals can be replaced by domestic training and upskilling of staff



Key Drivers:

- Medical tourism drives the need for professionals
- Strategic location between Africa, Europe, and Asia ideal for global students
- Education is a national priority as per the Ministry of Education (UAE)



Key Challenges:

- Cultural and language diversity
- Cost of Education

SERVICE IMPORTS



- GCC countries are heavily dependent on an expatriate health care workforce of **40,000 health care professionals** from 110 nationalities

EMERGING TRENDS



- Doctors and nurses'** additional training as well as further upskilling of healthcare staff can be done in domestic medical institutions
- Affiliations** can result in satellite campuses of global medical colleges to create a medical education hub for the region

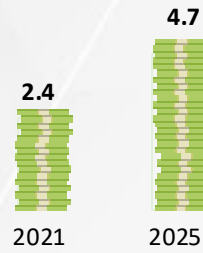
INWARD INVESTMENT OPPORTUNITY IDENTIFICATION: INTO DUBAI HEALTHCARE AND PHARMACEUTICALS COMPANIES

8. PHARMACEUTICAL: API MANUFACTURING & DRUGS DISTRIBUTION & TRADING



- Dubai's pharmaceutical industry to grow from **USD 2.6bn to USD 6.8bn by 2025**, creating a demand for distribution facilities.
- Port of Jebel Ali** responsible for **50%** (1.2 Mn mt of cargo) of the **trade volume** of Dubai's healthcare distribution and pharmaceuticals industry in 2020 - With **390+** companies from **60+** countries and a **4,000+** workforce

UAE pharmaceutical market growth (USD billions)



CAGR 27*%

Source: National News; Global Data



WHOLESALE AND RETAIL DISTRIBUTORS

- Wholesale pharmacy market - dominated by a **small number of large companies**, such as City Pharma & Co.
- Retail pharmacy market - **more fragmented, with a large number** of independent pharmacies and small pharmacy chains.



ONLINE PHARMACIES AND E-COMMERCE

Rise e-commerce has led to the emergence of online pharmacies that sell pharmaceutical products over the internet.



ACTIVE PHARMACEUTICAL INGREDIENT MANUFACTURING

Build on API Plan: The investment size of **USD 11.43 Mn**; Plant Capacity of **1000 tons/year**; Expected IRR of **7%**; Expected NPV of **USD 1.6 Mn**



Key Drivers:

- Policy support for FDI opportunities in pharmaceuticals
- Increasing reputation of Dubai's medical tourism
- Advance healthcare practices in the region



Key Challenges:

- International manufacturers have fewer products registered in the region than in some other regions (Europe, NA)
- Prices are still high for some procedures and drugs due to the infancy of sector boom

Government policy: Moderate



- Vision:** Pharmaceutical industry - identified for focused development by the Dubai Government under the **Dubai Industrial Strategy 2030**.
- Highly Regulated:** The UAE retail pharmacy market is very well regulated by the **Ministry of Health and Prevention (MOHAP)**, as well as **Dubai Health Authority (DHA)**
- Free Trade zones:** provide incentives to distribution of pharma products

Gap Analysis



- Dubai had decided to reduce its pharmaceutical imports by **18 per cent (from USUSD 4 billion)** by the end of 2022.
- Increased emphasis in **local manufacturing**, can drive companies to invest in local market of distribution.
- With **rising age** and prevalence of **diseases**, increased demand for prescription drugs expected.

EMERGING TRENDS



- The pharmaceutical distribution industry in the UAE is looking forward to new technologies, such as **blockchain and artificial intelligence**.

UAE MARKET SIZE



- USD 2.4 Bn** in 2021 pharmaceutical market

GLOBAL COMPETITIVENESS
OF HEALTHCARE &
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APPENDIX: HEALTHCARE &
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INVESTMENT ANALYSIS



INVESTMENT OPPORTUNITY IDENTIFICATION IN UAE GREEN TECH

Key takeaway: Smart Hospitals and Command Centers, Single Specialty Hospitals, Hospitals-at-home, Elderly Care, Healthcare services, Plastic Based Pre-Clinical Devices provide a Promising opportunity.

INWARD INVESTMENT OPPORTUNITY¹

RECOMMENDATION

SMART HOSPITALS AND COMMAND CENTERS



- For international manufacturers or service providers of **rpm, telemedicine, blockchain, ai, analytics, robotics in healthcare.**

FDI Value
2018-2023 (USD)



Target markets

- USA
- UK
- Switzerland
- China
- Germany

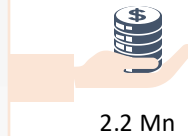
How to Facilitate

- Target high growth countries to attract FDI into Dubai for providing **rpm, telemedicine, blockchain, ai, analytics, robotics in healthcare.**
- Approach highlighted companies in particular like Globalmed, Medgate, Blockpharma, Augmedix, Siemens Healthineers, Megarobo etc. *(details in appendix)*

SINGLE SPECIALTY CLINICS, HOPITALS-AT-HOME, GERIATRIC CARE



- For international healthcare providers of **single specialty clinics** for Diabetes, Pediatric Care, Gastroenterology etc., along with special emphasis on **hospitals at home** and **geriatric care** for chronic diseases.



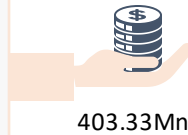
- USA
- Canada
- Germany
- Switzerland

- Target high growth countries to attract FDI into Dubai for **Single specialty clinics, hospitals at home and elderly care.**
- Approach highlighted companies in particular like Spiteex, Medically Home, CBI Health Group, BrightStar Care, AWO etc. *(details in appendix)*

CHRONIC HEALTHCARE SERVICES



- For international healthcare Providers of **chronic disease management, ambulatory & urgent care and mental health**



- USA
- UK
- South Korea
- Germany
- China

- Target high growth countries to attract FDI into Dubai for **chronic disease management, ambulatory & urgent care and mental health.**
- Approach highlighted companies in particular NHS, Samsung Medical centre, Asklepios Kliniken, Cleveland etc. *(details in appendix)*

PLASTIC BASED PRE-CLINICAL DEVICES



- For international manufacturers of **medical devices**, special emphasis on **diagnostic devices** using **medical grade plastics, compounding, plastic tubes (syringes & oxygen) and contract manufacturing**



- USA
- Germany
- Canada
- Israel
- UK
- France
- China

- Target high growth countries to attract FDI into Dubai for development of **plastic based pre-clinical devices especially, medical imaging equipment.**
- Approach highlighted companies in particular like Thermo Fisher Scientific, Abaxis, Medinol, GE Healthcare, Mindray etc *(details in appendix)*

INVESTMENT OPPORTUNITY IDENTIFICATION IN UAE GREEN TECH

Key takeaway: Shared Laboratory for Genome Sequencing, HealthCare Scientific Offices, Medical Institutions, and Pharmaceuticals manufacturing, distribution and Trading provide a Promising opportunity.

INWARD INVESTMENT OPPORTUNITY¹

RECOMMENDATION

SHARED LABORATORIES FOR GENOME SEQUENCING



- For international providers of **genome sequencing** via shared laboratory, national priority with tech advancements.

FDI Value
2018-2023 (USD)



Target markets

- USA
- Germany
- China
- UK
- South Korea

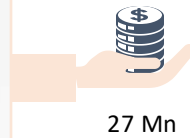
How to Facilitate

- Target high growth countries to attract FDI into Dubai for manufacture of **genome sequencing**.
- Approach highlighted companies in particular like Illumina, MacroGen, Pacific Biosciences, Oxford Nanopore technologies etc. *(details in appendix)*

HEALTHCARE SCIENTIFIC OFFICES



- For international providers of **clinical research (cro), medical device testing, certification laboratories & administrative offices**.



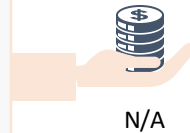
- Germany
- USA
- UK
- China
- France
- Japan

- Target high growth countries to attract FDI into Dubai for development of **clinical research (cro), medical device testing, certification laboratories & administrative offices**.
- Approach highlighted companies in particular like Merc. And Co., GlaxoSmithKline, Astrazeneca etc. *(details in appendix)*

MEDICAL EDUCATION



- For international **medical colleges setting up branches in Dubai**.



- USA
- UK
- Singapore
- Canada
- Australia

- Target high growth countries to attract FDI into Dubai for development of **medical colleges**.
- Approach highlighted companies in particular like John Hopkins Medicine, Imperial College Kings College, etc.

PHARMACEUTICAL MANUFACTURING, DISTRIBUTION, AND TRADING



- For international companies that participate in **distribution and trading of medical equipment**.



- USA
- China
- UK
- Japan
- India

- Target high growth countries to attract FDI into Dubai for **manufacture of API and distribution and trading of medical equipment**.
- Approach highlighted companies in particular like McKesson, AmerisourceBergen, Cardinal Health etc. *(details in appendix)*

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MULTI-LATERAL TRADE HIGHLIGHTS

TOP 5 TRADED COUNTRIES AND KEY HEALTHCARE AND PHARMACEUTICALS PRODUCTS (TRENDS 2018-2022)

Key takeaway

- Dubai's HEALTHCARE EXPORTS: TOP SECTORS Are Pharmaceutical Products And Medical Equipment
- Dubai's HEALTHCARE IMPORTS: TOP SECTORS Are Pharmaceutical Products And Medical Equipment

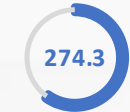
UAE's top five Healthcare and Pharmaceuticals Export Sectors and Key Sub-Sectors (average of 2018-2022)



Currency: USD mn



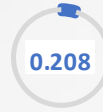
PHARMACEUTICALS PRODUCTS
0.39%
USD 303.939 mn/year



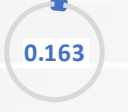
Medicaments ¹



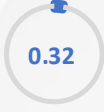
Blood; antisera and other blood fractions; vaccines, toxins, cultures of micro ²



Pharmaceutical goods specified in Note 4 ³



Medicaments ⁴



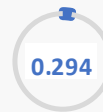
Wadding, gauze, bandages and similar articles ⁵



Instruments and appliances used in medical, surgical, dental or veterinary sciences ⁶



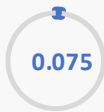
Measuring or checking instruments, appliances and machines ⁷



Mechano-Therapy Apparatus ⁸



Apparatus based on the use of X-rays or of alpha, beta or gamma radiations ⁹



Orthopedic appliances; fracture appliances; artificial parts of the body; hearing aids and other appliances ¹⁰

Currency: USD mn



UAE's top five Healthcare and Pharmaceuticals Import Sectors and Key Sub-Sectors (average 2018-2022)



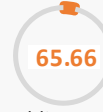
Medicaments ¹



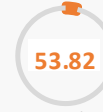
Blood; antisera and other blood fractions; vaccines, toxins, cultures of micro



Medicaments ²



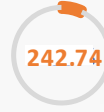
Wadding, gauze, bandages and similar articles



Pharmaceutical goods specified in Note 4



Instruments and appliances used in medical, surgical, dental or veterinary sciences



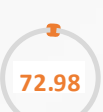
Measuring or checking instruments, appliances and machines



Apparatus based on the use of X-rays or of alpha, beta or gamma radiations



Orthopedic appliances; fracture appliances; artificial parts of the body; hearing aids and other appliances



Mechano-Therapy Apparatus



PHARMACEUTICALS PRODUCTS
1.84%
USD 5004.54 mn/year



OPTICAL, PHOTOGRAPHIC, MEASURING, AND MEDICAL INSTRUMENTS
1.48%
USD 4050.6 mn/year

MULTI-LATERAL TRADE HIGHLIGHTS

TOP 5 TRADED COUNTRIES AND KEY HEALTHCARE PRODUCTS (TRENDS 2022)

- Key takeaway**
- Dubai's HEALTHCARE EXPORTS: TOP SECTORS Are Pharmaceutical Products And Medical Equipment
 - Dubai's HEALTHCARE IMPORTS: TOP SECTORS Are Pharmaceutical Products And Medical Equipment

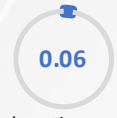
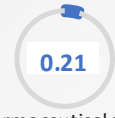
Dubai's top five Healthcare Export Sectors and Key Sub-Sectors (2022)



Currency: USD mn



PHARMACEUTICALS PRODUCTS
0.31%
USD 325.13 mn/year



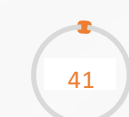
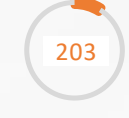
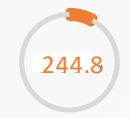
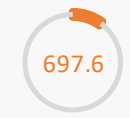
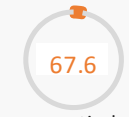
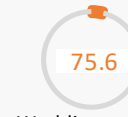
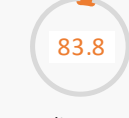
OPTICAL, PHOTOGRAPHIC, MEASURING AND MEDICAL INSTRUMENTS
0.24%
USD 252.4 mn/year



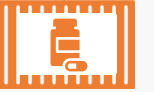
Currency: USD mn



Dubai's top five Healthcare Import Sectors and Key Sub-Sectors (2022)



PHARMACEUTICALS PRODUCTS
1.68%
USD 5793 mn/year



OPTICAL, PHOTOGRAPHIC, MEASURING, AND MEDICAL INSTRUMENTS
1.27%
USD 1349.7 mn/year



GLOBAL COMPETITIVENESS
OF HEALTHCARE AND
PHARMACEUTICALS
SECTOR IN DUBAI

HEALTHCARE AND
PHARMACEUTICALS
OPPORTUNITIES IN DUBAI

RECOMMENDATIONS FOR
THE HEALTHCARE AND
PHARMACEUTICALS
SECTOR IN DUBAI

APPENDIX: HEALTHCARE
AND PHARMACEUTICALS
TRADE ANALYSIS

APPENDIX: HEALTHCARE
AND PHARMACEUTICALS
INVESTMENT ANALYSIS



TARGET COMPANIES FOR ATTRACTING HEALTHCARE & PHARMACEUTICALS

FDI

SMART HOSPITALS AND HEALTHCARE COMMAND CENTERS		SINGLE SPECIALITY, HOSPITALS AT HOME & ELDERLY CARE	
Remote monitoring, automated healthcare system, telemedicine		Hospitals at home	
USA	GlobalMed, 2nd MD, Allscripts Healthcare Solutions, Medtronic, Teladoc Health, Doctor on Demand	Switzerland	Spitex, Hirslanden At Home, Senevita
Canada	Ontario Telemedicine Network , Tia health, Virtual Clinic+, aetonix, Teladoc Health	USA	Medically Home, DispatchHealth, Contessa, Landmark Health, Heal, Hometeam, Vivify Health
Switzerland	Medgate, Medi24	Canada	Care at Home Services, Medisys Health Group, Bayshore Healthcare Spectrum Health Care, CBI Health Group
Block Chain		Elderly Care	
USA	Akiri, Bustique, Avaneer Health, Coral health, Nebula Genomics	USA	Home Instead Senior Care, BrightStar Care, Senior Helpers, Right at Home, Visiting Angels
France	Blockpharma, Blockpill	Canada	Bayshore Healthcare, Comfort Keepers, Nurse Next Door, Retire-At-Home Services, VHA Home Healthcare
UK	Medicalchain, Farmatrust	Switzerland	Pro Senectute, Spitex, Curaviva, Tertianum, ORS Service AG
Switzerland	Gaurdtime, Authena AG	Germany	Johanniter-Unfall-Hilfe, Arbeiterwohlfahrt (AWO), Diakonie Deutschland, Malteser Hilfsdienst, DRK (German Red Cross)
Artificial Intelligence		HEALTHCARE SERVICES	
USA	Augmedix, CloudMedX Health	Clinics, OPD & Devices for Chronic Diseases	
China	Insilico, Yitu, ICarnX	USA	Cleveland Clinic, Mayo Clinic, Medtronic
UK	Deepmind, Babylon Health	UK	NHS, Bupa, Smith & Nephew
Japan	Genoplan Japan, LPixel	Germany	Asklepios Kliniken, Fresenius Helios, Siemens Healthineers
Analytics		South Korea	Samsung Medical Center, Seoul National University Hospital
USA	Arcadia, IBM Watson Health, health Catalyst	China	Peking University People's Hospital, Mindray, iCarbonX
Germany	Siemens Healthineers, Caresyntax	Ambulatory and Urgent Care	
China	Insilico, Yitu, ICarnX	Netherlands	Saltro, ZorgDomein
UK	BJSS, Healum Ltd, Databound Ltd.	USA	Concentra, GoHealth Urgent Care, MedExpress
Robotics		UK	Care UK, Vocare
USA	intuitive surgical, Hansen Medical, Medrobotics	Australia	Primary Health Care, Sonic HealthPlus
China	Megarobo, Edge Medical Robotics	Mental Health	
Germany	Vathos Robotics, Franka Emika, Aeon Robotics	Norway	St. Olavs Hospital, Norwegian Centre for Mental Health and Substance Abuse
		Switzerland	Psychiatric University Clinics (UPK Basel), Klinik Waldhaus
		netherlands	Arkin, GGz Centraal
		Denmark	Aarhus University Hospital Psychiatry, Psykiatrisk Center København
		Finland	Terveystalo, Valtio+

TARGET COMPANIES FOR ATTRACTING HEALTHCARE & PHARMACEUTICALS FDI

HEALTHCARE SCIENTIFIC OFFICES	
USA	Pfizer, Johnson & Johnson, Merck & Co., Gilead Sciences
UK	AstraZeneca, GlaxoSmithKline, University College London (UCL)
China	Sinopharm Group, Sinovac Biotech, Fosun Pharma
Japan	Takeda Pharmaceutical, Astellas Pharma, Daiichi Sankyo
Germany	Bayer, Boehringer Ingelheim, Charité – Universitätsmedizin Berlin
France	Sanofi, Institut Pasteur, Pierre Fabre

MEDICAL EDUCATION	
Medical colleges	
USA	Johns Hopkins University School of Medicine, Stanford University School of Medicine, University of California, San Francisco (UCSF) School of Medicine, Perelman School of Medicine at the University of Pennsylvania
Singapore	Yong Loo Lin School of Medicine (NUS), Duke-NUS Medical School, Lee Kong Chian School of Medicine (NTU)
Canada	University of Toronto Faculty of Medicine, McGill University Faculty of Medicine, University of British Columbia Faculty of Medicine, University of Montreal Faculty of Medicine, University of Alberta Faculty of Medicine and Dentistry
Australia	University of Melbourne Medical School, University of Sydney School of Medicine, Monash University Faculty of Medicine, Nursing and Health Sciences, University of Queensland School of Medicine, University of New South Wales (UNSW) Faculty of Medicine and Health
UK	University of Oxford Medical School, University of Cambridge School of Clinical Medicine, Imperial College School of Medicine, King's College London School of Medical Education, University College London (UCL) Medical School

SHARED LABORATORY FOR GENOME SEQUENCING	
USA	Illumina, Pacific Biosciences, 10x Genomics, Complete Genomics
UK	Oxford Nanopore Technologies, Genomics England
Germany	Qiagen, Eurofins Genomics
South Korea	Macrogen, Theragen Etex
China	BGI Group, Novogene, Annoroad Genomics

PLASTIC BASED PRE-CLINICAL DIAGNOSTIC DEVICES	
USA	Thermo Fisher Scientific, Bio-Rad Laboratories, PerkinElmer
Germany	Siemens Healthineers, Carl Zeiss Meditec, QIAGEN
Canada	Abaxis, BioTek Instruments, Microbix Biosystems
Israel	Medinol, Sight Diagnostics, Nanox
UK	GE Healthcare, Abingdon Health, Horiba Medical
France	bioMérieux, Cepheid (Danaher), DiaSorin
China	Mindray, Shanghai Fosun Pharmaceutical (Fosun Pharma), AnPac Bio
Ireland	Bio-Rad Laboratories (formerly Biorad), Cirdan Imaging

PHARMACEUTICAL DISTRIBUTION	
Country	Companies
USA	AmerisourceBergen, McKesson, Cardinal Health
UK	Alliance Healthcare, Phoenix Group
China	Sinopharm Group, Jointown Pharmaceutical Group
Japan	Suzuken, Alfresa Holdings
India	Apollo Pharmacy, MedPlus, PharmEasy, 1mg, Netmeds

FDI INFLOW IN PHARMACEUTICAL SECTOR IN DUBAI

Inward Manufacturing FDI Sectors (USD mn)	Investment Date	Investing Company	Country	Capital Investment (USD Mn)	Details
Medicinal & botanical (6.50)	Aug 2022	Wuhan General Group (M2Bio Sciences)	South Africa	6.5	Undergoing business as M2bio Sciences, it is a nutraceutical biotechnology company; that specializes in CBD-based products.
	Feb 2023	AstraZeneca	United Kingdom	6.5	Expected to open in quarter three of 2023, the offices will expand the company's local footprint in the UAE. This represents a commitment to the UAE sustainability goals and is in line with the 'We the UAE' vision.
	Jan 2023	Medytox	South Korea	45.3	It will produce MT10109L botulinum toxin. The facility in Dubai will serve the global market.
	Jan 2023	Chapper Healthcare	United Kingdom	6.5	It is a wholesaler and distributor of pharmaceuticals. Chapper Healthcare MENA FZ-LLC will serve the Middle East and north Africa, and is based at the company's existing local office.
	Dec 2022	Omnicals Pharma	India	6.5	It is investing in the Pharmaceuticals sector in a Sales, Marketing & Support project. This project is into an economic free zone: Dubai Airport Free Zone. The office will serve the market in Middle East and north Africa.
	Sep 2022	Clinixel Life Sciences	India	6.5	It is investing in the Pharmaceuticals sector in a Sales, Marketing & Support project. It is a full-service clinical research organization (CRO)
	Jul 2022	Cor.Con. International	Italy	6.5	It is investing in a Sales, Marketing & Support project. It is a small private pharmaceutical company and will focus on promoting the export of products in the GCC region. The project is supported by Italian Industry and Commerce Office in the UAE.
	May 2022	Menarini Group	Italy	40.7	It is investing in a Headquarters project. This project is into an economic-free zone: Dubai Science Park. The new entity, Menarini Middle East and Africa, forms part of the company's goal to expand its presence to the MEA region.
Pharmaceutical preparations (404.15)	Apr 2022	Gabri Labs	United States	4.9	It is investing USD 4.90m in the Pharmaceuticals sector in a Manufacturing project. This project is into an economic-free zone: Dubai Science Park. It will invest Dh18m in a new manufacturing facility. The 930 sq m plant will produce for the ENT, Otomar, and Curadem brands. It will have an initial volume of 12 Mn units per year, with further expansions planned by 2023. The facility will serve patients across the MENA region.
	Sep 2021	MSN Laboratories	India	24.65	It is investing in the Pharmaceuticals sector in a Sales, Marketing & Support project. This project is into an economic free: zone Dubai Science Park. The new entity, MSN Laboratories FZ-LLC, located at Dubai Science Park, will serve the Middle East.

FDI INFLOW IN PHARMACEUTICAL SECTOR IN DUBAI

Inward Manufacturing FDI Sectors (USD mn)	Investment Date	Investing Company	Country	Capital Investment (USD Mn)	Details
	Jul 2021	Ipsen Pharmaceutical	France	40.7	It is investing in the Pharmaceuticals sector in a Headquarters project. This project is into an economic-free zone: Dubai Healthcare City. The company is based in the Al Jalila Foundation building, part of Dubai Healthcare City.
	Jun 2021	Organon & Co	United States	6.5	It is investing in the Pharmaceuticals sector in a Sales, Marketing & Support project. It is a pharmaceutical company focused on women's health.
	Oct 2020	Bayer Middle East	Germany	5.15	It is investing USD 5.15m in a Headquarters project, creating 47 jobs. This project is into an economic-free zone : Dubai Science Park. It has invested USD 5.1.5m to expand its regional headquarters in Dubai, United Arab Emirates. It has moved to a larger location at the Dubai Science Park and created 47 jobs.
	Jul 2020	Emmaus Life Sciences	United States	6.5	It is investing in the Pharmaceuticals sector in a Sales, Marketing & Support project. The new office will be used to establish a presence in the Middle East and North Africa region (MENA) and to facilitate the registration and commercialization of the drug Endari. The company has also expressed this to be the first step in a wider expansion plan in the MENA region.
	Jun 2020	Xellia Pharmaceuticals	Denmark	6.5	It is investing in the Pharmaceuticals sector in a Sales, Marketing & Support project. It is a speciality pharmaceutical company and a subsidiary of Denmark-based Novo Nordisk. Located in Silicon Oasis, it will serve the Middle East and Africa.
	Feb 2020	Kyowa Kirin International (ProStrakan Group)	Japan	40.7	It is investing in the Pharmaceuticals sector in a Headquarters project. This project is into an economic free zone Dubai Healthcare City. Located at Dubai Healthcare City, the new office will serve as the company's headquarters for the Gulf Cooperation Council countries in the Middle East.

FDI INFLOW IN PHARMACEUTICAL SECTOR IN DUBAI

Inward Manufacturing FDI Sectors (USD mn)	Investment Date	Investing Company	Country	Capital Investment (USD Mn)	Details
	Feb 2020	Sanofi	France	40.7	It is investing in the Pharmaceuticals sector in a Headquarters project. This project is into an economic free zone Jumeirah Lakes Towers Free Zone. It develops therapeutic solutions.
	Apr 2019	Geltec Pharmacare	India	29.95	It is a producer of dietary supplements and medicines in soft gelatin capsules. It is a subsidiary of India-based Geltec and has opened a manufacturing plant at the National Industries Park. The USD 30m plant will produce 1.5 billion units per annum and is expected to reinforce the UAE's healthcare sector and to support Geltec's operations in the United States and European markets.
	Feb 2019	Sanofi	France	21.1	It is investing in the Pharmaceuticals sector in a Logistics, Distribution & Transportation project. This project is into an economic free zone Dubai Logistics City. France-based Sanofi-Aventis, a drug manufacturer, has moved to a new logistics hub in Dubai, United Arab Emirates. The move has increased Sanofi's capacity in the country.
	Dec 2018	Atnahs	United Kingdom	6.5	It is investing in the Pharmaceuticals sector in a Sales, Marketing & Support project. It focuses on the acquisition of mature-branded medicines from large cap and speciality pharmaceutical companies. It will house a sales staff to support company expansion in the Middle East and north Africa.
	Jul 2018	Wockhardt Bio	India	45.3	It is investing in the Pharmaceuticals sector in a Manufacturing project. It is a developer, manufacturer, and marketer of pharmaceutical and bio-pharmaceutical formulations. The new plant will be making drugs to treat anti-microbial resistance (AMR). The facility, which has applied for US FDA compliance, will produce sterile dry powder antibiotic injections. The facility is spread over 10,000 sq m of space and is self-sufficient for handling, warehousing, manufacturing operations, product testing and product stability.
	Apr 2018	Merck & Co	United States	6.5	It is investing in the Pharmaceuticals sector in a Sales, Marketing & Support project. This project is into an economic free zone Dubai International Financial Centre. It is a research-driven pharmaceutical company, and has opened a new scientific office in Dubai.
	Other (Pharmaceuticals) (0.67)	Aug 2021	Power Gummies	India	0.67

FDI INFLOW IN HEALTHCARE SECTOR IN DUBAI

Inward Manufacturing FDI Sectors (USD mn)	Investment Date	Investing Company	Country	Capital Investment (USD Mn)	Details
General Medical & Surgical Hospitals (362.85)	Jul 2023	Asan Medical Center	South Korea	85.50	<p>It is investing in the Healthcare sector in a Construction project. This project is in an economic-free zone: Dubai Healthcare City.</p> <p>It is a healthcare institution that has unveiled plans to build a gastroenterology hospital in Dubai. The 21,150 sq m hospital will serve both patients in the UAE and globally. It will be the first hospital for Asan Medical Centre outside South Korea, and the first hospital specializing in the digestive system in the Arabian Gulf region. Construction is due to begin in quarter four, 2023. The hospital will have a capacity of 65 beds.</p>
	Mar 2023	Mayo Clinic	United States	1.30	<p>It is investing in the Healthcare sector in a Customer Contact Centre project. This project is into an economic free zone Dubai Science Park and is a provider of diagnostic, treatment, and surgical services. Their office will assist patients in inpatient transfers and outpatient visits.</p>
	Sep 2022	Curie Institute (Insitut Curie)	France	2.20	<p>It is investing in the Healthcare sector in a Sales, Marketing & Support project.</p> <p>A private health institution of collective interest, it has collaborated with Paris Saint-Joseph and Marie-Lannelongue Hospitals, Rothschild Foundation Hospital and C3 Medical to open a new regional office in Dubai, United Arab Emirates. It will address the needs of the populations of the Middle East countries by developing strong ties with local partners.</p>
	Jan 2022	Dr Sulaiman Al-Habib Medical Group (HMG)	Saudi Arabia	85.50	<p>It is investing in the Healthcare sector in a Construction project.</p> <p>It plans to expand its hospital in Dubai with the addition of a Mother and Child Centre. The expansion covers 6505 sq m and is equipped to provide comprehensive health care services in the specialities of obstetrics and gynaecology, paediatrics, and dermatology. In addition, the project also includes operating rooms, advanced diagnostic units such as radiology, imaging and medical laboratories.</p>
	Oct 2020	Hadassah Medical Center	Israel	5.10	<p>It is investing in a Business Services project.</p> <p>Its a medical organization that is in talks to open a branch in Dubai. The organisation is also considering relocating some of its doctors to the new branch. This project follows the signing of the Israel -UAE peace agreement in August 2020. Since then, the two countries have established bilateral agreements on a range of issues including tourism, telecommunications, and healthcare.</p>

FDI INFLOW IN HEALTHCARE SECTOR IN DUBAI

Inward Manufacturing FDI Sectors (USD mn)	Investment Date	Investing Company	Country	Capital Investment (USD Mn)	Details
General Medical & Surgical Hospitals	Sep 2018	King's College Hospital	United Kingdom	85.50	It is investing in a Construction project. An acute care facility, it has opened a new medical centre in Dubai. It offers international standards of care to local customers.
	Sep 2018	King's College Hospital	United Kingdom	85.50	It is investing in a Construction project. It is an acute care facility that plans to open a new hospital in Dubai. The 100-bed facility will be located in the Dubai Hills area and forms part of a wider expansion plan for the UAE.
	Jun 2018	Quironsalud	Germany	12.25	It is investing USD 12.25m in a Business Services project. It has invested Dh45m in a new ophthalmology centre in Dubai. It spans 2325 sq m and will provide cataract surgery, retina and vitreous surgery, oculoplastic surgery, refractive surgery, glaucoma, paediatric ophthalmology, strabismus, clinical optometry and ocular traumatology treatments to its patients.
Home Healthcare & all Other Ambulatory Health Care Services (2.20)	Apr 2022	EMS Ambulance	Netherlands	2.20	It is investing in a Sales, Marketing & Support project. This project is into an economic free zone Business Bay. Netherl a provider of ambulance and medical repatriation services, has opened a new office in Dubai Business Bay, United Arab Emirates.
Offices of physicians, dentists, & other healthcare practitioners (27.00)	May 2023	Hexarad	United Kingdom	1.3	Hexarad is a tech-enabled teleradiology that supports the remote reporting of medical scans such as CTs, MRIs and X-rays.
	Mar 2023	Genesis Lifesciences International	United States	1.3	It is investing in the Healthcare sector in a Business Services project. It is a personalised wellness and lifestyle management company.
	Dec 2022	Feetness	Lebanon	5.1	It is investing in a Business Services project. It is a podiatry firm offering diagnoses and treatments for all types of foot disorders.
	Oct 2022	Mediclinic Middle East	South Africa	2.7	It is investing in a Business Services project. This project is into an economic free zone: Dubai Production City Free Zone. It has reopened Mediclinic Me'aisem in Dubai Production City. The clinic will serve local residents and businesses
	Sep 2022	Mediclinic Middle East	South Africa	5.1	It is investing in a Business Services project. It is a private hospital group that has opened a new standalone aesthetics and wellness clinic in The Dubai Mall. Enhance by Mediclinic offers a full range of services and technologies in the fields of aesthetic medicine, plastic surgery, energy-based technology, aesthetic gynaecology, aesthetic dentistry and lifestyle-related treatments.

FDI INFLOW IN HEALTHCARE SECTOR IN DUBAI

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Offices of physicians, dentists, & other healthcare practitioners	Mar 2021	Holistic Rehab Clinic	United Kingdom	1.3	It is investing in a Business Services project. It is a health and well-being provider that specialises in osteopathy, physiotherapy and massage treatments, and has opened a new rehabilitation clinic in Dubai.
	Oct 2019	Grupo Asisa	Spain	5.1	It is investing in a Business Services project. It has formed a joint venture with locally-based Faisal Holding to open a new clinic in Dubai. The joint venture plans to open more locations in the country.
	Jan 2019	Neosmart Health	Finland	5.1	It is investing in a Business Services project. This project is into an economic free zone: Dubai Multi Commodities Centre. It is a preventative healthcare technology start-up.
Other (Healthcare) (10.20)	Mar 2023	Hair of Istanbul	Turkey	5.1	It is investing in a Business Services project. This project is into an economic free zone: Business Bay. It provides cosmetic hair transplantation services. It will offer follicular unit extraction consultation services to the market in Dubai.
	Dec 2020	Regent Street Clinic	United Kingdom	5.1	It is investing in a Business Services project. It will offer patients popular treatments including facial aesthetic services such as botox and dermal fillers, as well as private general practice services, IV vitamin nutrition therapy and health screening.
	Jan 2023	Fountain Life	United States	5.1	It is investing in a Business Services project. It is a preventative and healthy longevity company.
	Apr 2022	Alphagenix	United Kingdom	5.1	It is investing in a Business Services project. This project is into an economic free zone: Dubai Silicon Oasis. It is a specialist in medically supervised testosterone replacement therapy.
Outpatient care centres & medical & diagnostic laboratories (30.5)	Sep 2020	Aviv Scientific (Xtend Scienific)	Israel	5.1	It is investing in a Business Services project. It operates medical centres where it uses technology and hyperbaric oxygen therapy to help ageing adults improve physical and cognitive behaviour. The clinic, which will be a flagship treatment and research centre, will be located in the Jumeirah Lake Towers and is set to open during the first quarter of 2021.
	Oct 2019	Igenomix	Spain	10.1	It is investing in a Research & Development project. It is a provider of reproductive genetic diagnosis services.
	Sep 2019	Centro de Oftalmologia Barraquer	Spain	5.1	It is investing in a Business Services project. This project is into an economic free zone: Dubai Healthcare City. It is an ophthalmology clinic.
Psychiatric & speciality hospitals (1.3)	Oct 2021	The Wave Clinic	Malaysia	1.3	It is investing in a Business Services project. It offers a series of residential programs for teenagers and young adults suffering from a variety of health problems.

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