حكومة دبي
GOVERNMENT OF DUBAI

هيئة الصحة بدبي
DUBAI HEALTH AUTHORITY

Health Accounts

System of Dubai

2021

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Foreword

Awadh Seghayer Al Ketbi

Director-General
Dubai Health Authority

In line with our vision of creating a healthier and happier community, we, at the Dubai Health Authority, continuously strive to improve the quality of the healthcare system in Dubai.
This is achieved by developing and implementing plans, policies and legislations that promote efficiency, excellence and support the achievement of global standards in preventive, curative and rehabilitative healthcare.

Dubai's healthcare system has significantly evolved in scale and complexity in terms of healthcare financing and healthcare service provision over the years. In line with our mandate, DHA has monitored, protected and provided an impetus to help further improve the overall healthcare system in the Emirate to benefit both patients as well as the full healthcare ecosystem from healthcare professionals to health institutions.

Evidence-based implementation of policies and programs are crucial for the development of the health sector and availability of quality health data and analytics is vital for evidence- based planning.
Acknowledging this fact, DHA has always been keen on building health data platforms to capture information and generate regular reports, which can guide decision-makers. Health Accounts of Dubai is an example of one such initiative.

We are pleased to publish the seventh report of the Health Accounts Systems of Dubai (HASD) that provides a detailed analysis of the health expenditure for the Emirate of Dubai. The 2021 HASD report is the reflection of Dubai's efforts to enhance the quality of Dubai's healthcare system.

At DHA, we strive to ensure that we develop transparent and in-depth health accounts year-on-year to:

- Measure and analyze the healthcare expenditure in both public and private health sectors with regards to efficiency, equity and sustainability.
- Monitor the current mandatory health insurance scheme and provide evidence to enhance future policies.
- Empower both the regulator and investors alike, with information needed to understand investment size and trends based on factual data.

DHA greatly appreciates the participation of all stakeholders . We are committed to developing our dynamic healthcare system in Dubai.

I take this opportunity to invite stakeholders to utilize the information contained in this report to support their decisions on how to enhance the delivery of healthcare in Dubai with an aim to build a dynamic healthcare system that provides the highest quality of patient-centered specialized and accessible care.

Message

Saleh Al Hashimi

CEO, Dubai Health Insurance Corporation
Dubai Health Authority

HASD (Health Accounts System of Dubai) is a major periodic initiative of the Dubai Health Authority to track overall health spending and flow of resources in the health sector. The detailed exercise provides an in-depth analysis of the healthcare expenditure data of the government, out-of-pocket (household expenditure on health) and private employers' expenditure on health. This exercise is carried out in accordance with the World Health Organization's System of Health Accounts (SHA 2011) tool.

Dubai's healthcare financing system has evolved significantly over the past decade and this includes key milestone developments such as the establishment of universal health coverage. The aim is to continue building a robust health insurance system with the cooperation and input of our stakeholders in order to sustain the incremental resource allocation and provide financial protection as well as easy and timely access to care. This report provides necessary evidence which is critical for the monitoring of the current policies and formulation of health financing and resource mobilization for strategic health investment. HASD not only enhances the transparency and efficiency in health expenditure management but also sets the necessary health and research priorities and motivates development and studies in various health fields.

The HASD 2021 report provides an insightful reflection of the healthcare financing indicators for Dubai and charts Dubai's steady progress in increasing health expenditure and expanding understanding of where investments are made.

I would like to extend my appreciation to the HASD technical team who have undertaken an in-depth and technical data collection and analysis process to provide us with this comprehensive seventh round of health accounts.

Acknowledgement

Substantial efforts were undertaken to provide this comprehensive analysis of health expenditure and flow of funds throughout Dubai's healthcare sector. Significant data on expenditure was collected, analyzed and validated to produce the HASD Report, 2021. DHA's Dubai Health Insurance Corporation (DHIC) worked in close collaboration with key stakeholders, in order to publish a credible and transparent report.

This exercise could not have been successfully completed without the support of key stakeholders. We would like to express our sincere gratitude and appreciation to various organizations for providing vital and sensitive financial information necessary to produce this report. In particular, the following organizations' collaborative efforts are recognized:

- Department of Finance (DOF), Dubai
- Ministry of Health and Prevention (MOHAP), United Arab Emirates
- Finance Affairs Department, Dubai Health Authority
- Dubai private healthcare providers and insurance companies

The DHA technical team responsible for the execution of HASD and this report includes the following members:

- **Dr. Meenu Mahak Soni,** Health Economist, led the technical production of this report.
- **Mr. Philip Swanny,** extracted and interpreted the data from the e-claim system.
- **Dr. Eldaw A. Suliman,** Advisor for Strategy and Governance Department, provided valuable technical review of the report.
- **Senior team members from Dubai Health Insurance Corporation,** participated in a comprehensive review of the report.

List of Abbreviations and Definitions

AED	United Arab Emirate Dirham
CHE	Current Health Expenditure
DHA	Dubai Health Authority
DHCC	Dubai Health Care City
DHCCA	Dubai Health Care City Authority
DHIC	Dubai Health Insurance Corporation
DHHS	Dubai Health Household Survey
DM	Dubai Municipality
DoF	Dubai Department of Finance
DSC	Dubai Statistics Center
FS	Funds of Financing Scheme
GDP	Gross Domestic Product
GGHE	General Government Expenditure on Health
HASD	Health Accounts System of Dubai
HC	Health care Functions
HF	Health Financing Schemes
HP	Health care Providers
ISAHD	Insurance System of Advancing Health in Dubai
MOH	Ministry of Health
MOHAP	Ministry of Health and Prevention
OECD	Organization for Economic Co-operation and Development
OOP	Out-of-Pocket
n.e.c	Not Elsewhere Classified
NCU	National Currency Unit
PPP	Purchasing Power Parity

List of Abbreviations and Definitions

PvHE	Private Expenditure on Health
RoW	Rest of the World
SHA	System of Health Accounts
THE	Total Health Expenditures
UAE	United Arab Emirates
USAID	United States Agency for International Development
US$	United States Dollars
WHO	World Health Organization

Definitions

Ancillary services: A variety of services such as laboratory tests, diagnostic imaging and patient transport, usually performed by paramedical or medical technical personnel with or without the direct supervision of a medical doctor.

Investment: Investment in health care facilities and equipment that creates assets that are typically used over a long period of time.

Curative care: Medical and paramedical services delivered during an episode of curative care. An episode of curative care occurs when the principal medical intent is to: relieve the symptoms of injury or illness; to reduce severity of an illness or injury; or to protect against injury or exacerbation of an injury which could threaten life or normal function.

Current health expenditure (CHE): Comprises all services such as curative care (including services provided to residents by non-residents providers), rehabilitative care, prevention, public health, and ancillary health care. Also includes expenditures for administration of these services and drugs, medical goods, and salaries and fees of health personnel. This excludes investment expenditures, and exports (services provided to non-residents).

Day care: Planned medical and paramedical services delivered to patients who have been formally admitted for diagnosis, treatment or other types of health care but with the intention to discharge the patient on the same day.

Definitions

Exports (of health care goods and services): Health care goods and services acquired by non-residents (visitors) from resident providers.

Financing agents (FA): Institutional units that manage health finance schemes. For example, collecting Funds and premiums, purchase services, and pay for these services.

Financing schemes (HF): Components of a country's health financial system that channel funds to pay for, or purchase, the activities within the health accounts boundary.

Health care functions (HC): The goods and services provided and activities performed within the health accounts boundary.

Health care system administration and financing: Establishments that are primarily engaged in the regulation of the activities of agencies that provide health care and in the overall administration of the health care sector, including the administration of health financing.

Imports of healthcare goods and services (Imports): Health care goods and services acquired by residents from nonresident providers. In other words, healthcare services provided outside the geographical boundaries of the health care system.

Inpatient care (IP): Formal admission into a health care facility for treatment and/or care that is expected to constitute an overnight stay.

Not Elsewhere Classified (n.e.c): A category used to reflect those activities or transactions that fall within the boundaries of the health accounts but which cannot be definitively allocated to a specific category due to insufficient documentation.

Out-Of-Pocket (OOP) spending: The direct outlays of households, including gratuities and payments in-kind, made to health practitioners and suppliers of pharmaceuticals, therapeutic appliances, and other goods and services whose primary intent is to contribute to the restoration or enhancement of the health status of individuals or population groups. Includes household payments to public services, non-profit institutions or non-governmental organizations.

Definitions

Outpatient care (OP): Any care offered to a non-admitted patient regardless of where it. It may be delivered in a hospital, an ambulatory care center, or a physician's private office.

Preventive services: Services provided as having the primary purpose of risk avoidance, of acquiring diseases or suffering injuries, which can frequently involve a direct and active interaction of the consumer with the health care system.

Providers (HP): Encompass organizations and actors that deliver health care goods and services as their primary activity, as well as those for which health care provision is only one among a number of activities.

Inflow Funds of financing schemes (FS): The funds of the health financing schemes received or collected through specific contribution mechanisms.

System of Health Accounts (SHA): A system developed by the OECD, Eurostat, and WHO to provide international comparability standards for member and non-member countries. The manual was produced first in 2010 with the latest iteration published in 2011.

Total health expenditure (THE): Total health expenditure is no longer part of the health accounts as per SHA 2011. It is defined as the sum of current health expenditure (CHE) and the expenditure on capital goods. In this report, the term is used only to draw comparison with other countries.

Prepayment schemes: Schemes that receive payments from the insurer or other institutional units on behalf of the insured, to secure entitlement to benefits of health insurance schemes.

Executive Summary

Health Accounts System of Dubai (HASD) aims to support a long-term, whole of system understanding of health spending in the Emirate of Dubai. This system is unique and varies from other health system reporting in scope. Unlike other systems which tend to focus on specific funding programs or time periods, HASD follow a more comprehensive approach.

The methodology used in HASD is based on the international classification of System of Health Accounts (SHA) 2011 [World Health Organization, 2011]. The WHO explains the rationale of producing the reports at the state level and requires the definition of population boundaries to accompany each system of health accounts. Similar to previous HASD reports, we define the boundaries of Dubai's healthcare spending as all healthcare related transactions made by or on behalf of citizens of Dubai or non-citizens with work visa from Dubai regardless of their domicile. We include their spending even if it occurred outside the physical boundaries of Dubai. The accounting excludes healthcare spending by short term tourists. Also, excluded is the healthcare spending inside the physical boundaries of Dubai on behalf of citizens of other emirates or by non-citizen workers with visa from other emirates.

DHIC has been reporting on health expenditure in Dubai for almost a decade now as part of preparing Health Accounts System of Dubai (HASD). This report presents estimates of the amount spent on health goods and services in Dubai for 2021. The report estimates are based on the data from e-Claim Link (a database which includes the claims transaction for all the Dubai based policies with details of the service provides and the financial transaction for each service episode), and collation of other data sources capturing health spending by government entities such as Department of Finance (DOF), Dubai Health Authority (DHA) and Ministry of Health and Prevention (MOHAP). The information from Dubai Health Household Survey is used to estimate the out of pocket spending on health. The purpose is to use the best available data to provide the most comprehensive picture of 1) how much was spent on health, 2) funded by who and on 3) what areas of health goods and services. Total current health expenditure in 2021 was 21.26 B AED (5.5% of GDP), an increase of 9% from the spending in 2020, which was 19.49 B AED.

In 2021, Government financed healthcare expenditure accounted for 42% of total spending, 8,877 M AED and Private healthcare expenditure accounted for 58% of total spending, 12,392 M AED.

In 2021, similar to 2020 estimates, the share of all health spending received by various providers was 49%, 24% ,13% and 2% for hospitals, clinics, retail pharmacies and ancillary providers, respectively. The curative care accounted for 59% of the total health expenditure. The total spent on ancillary services and medical goods was estimated at 28%. The spent on preventive care services was estimated at 3%, an increase of 2 percentage points from 2020. The government allocated 23% of their health expenditure to governance and administrative functions. The private insurance spent 38% of their total health expenditure on ancillary services and medical goods.

Highlights

How much does Dubai spend on healthcare?
Current Health Expenditure (CHE)

AED 21,269 M

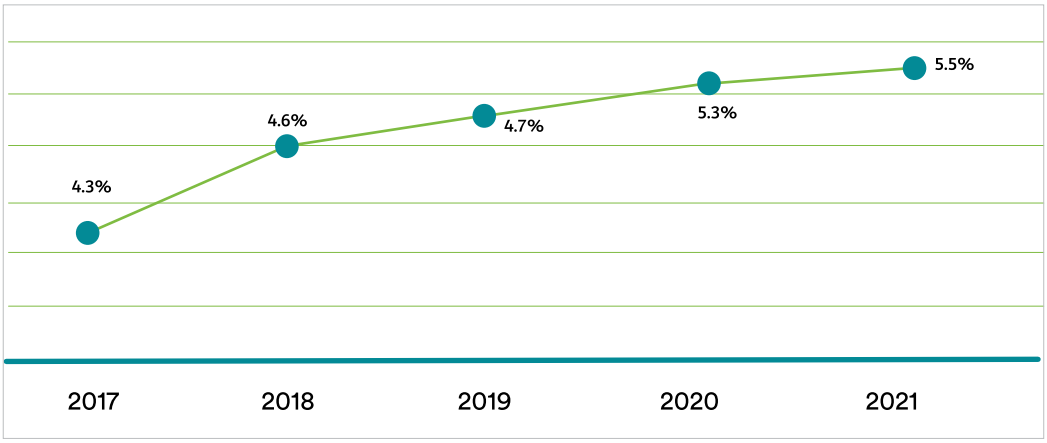
5.5% of GDP

Per capita health expenditure

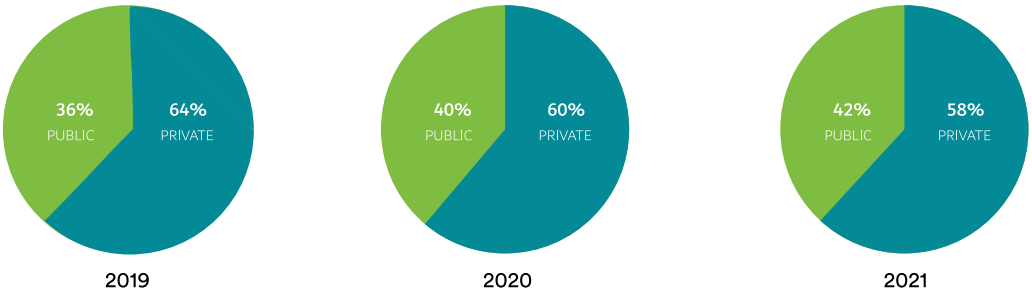
AED 4,683 (USD 1,276)

How has current expenditure changed?

CHE as % of GDP



Who paid for it?



What was it spent on?

Curative Services **59%**

Medical Goods **14%**

Preventive Care **3%**

Ancillary Services **14%**

Governance **10%**

Introduction

Dubai's Healthcare financing system has evolved significantly over the past decade with some of the milestone developments being the establishment of universal health coverage, replacing the fee-for-service model with the DRG reimbursement for inpatient and day-case services, creating special funds to finance specialized high-cost oncology services for the low-income population group, introduction of unified drug formulary applied to Dubai's Essential Benefit plan (EBP) for insured members.

We are in the process of implementing many other quality initiatives to ensure we continue to build a dynamic health system that is patient-centered.

Despite the unprecedented pandemic during the last two years, the healthcare system in Dubai stood resilient and overcame several challenges with its efficient utilization of existing resources and rapid mobilization of additional funds to meet the sudden surge in healthcare demand. Supplementary capacity was created over a short period of time. There was a successful early Covid-19 vaccination roll out. The resources were invested to enhance the logistic capabilities and Dubai became a hub for global vaccine distribution.

DHA's Covid-19 Health Response

Following the Covid-19 pandemic, in late February 2020, the Dubai Health Authority entered a partnership with private health providers to overcome the outbreak. DHA made agreements with private health facilities which included DHA providing financial coverage to uninsured patients treated at private facilities for Covid-19.

DHA provided additional manpower and other crucial resources e.g. beds, ventilators to the private sector to increase the response to the Covid-19 pandemic outbreak.

Additionally, DHA implemented a range of policies and programs including establishment of specialized testing facilities, standardizing the prices of health services for Covid-19 management and home delivery of drugs to patients.

In late December 2020, the Covid-19 vaccination campaign was launched and centers were established across different geographical areas to provide easy access to receive the Covid-19 vaccine. By the end of first quarter of 2021, more than half of Dubai's population was vaccinated against coronavirus.

Dubai's healthcare ecosystem underwent several changes in regards to healthcare financing, service provision and utilization over the past two years.

HASD acts as a tool to monitor the changes and implementation of the initiatives by the regulator and policy-maker who are entrusted with the responsibility to enhance the quality of care provided to the population and ensure the provision of accessible, specialized and patient-centered care using the latest medical technologies.

By combining, the information in the health accounts with non-financial data, such as the level of utilization of resources by healthcare providers, the policy makers can make justified strategic decision.

It is important to note that the HASD is not only a tool for the policymakers in the decision-making process but is also an important tool for policymakers as well as for research specialists and the public to evaluate the out-comes of the strategic decisions made by policy makers.

History of HASD in Dubai

The production of HASD in Dubai was initiated in 2012, to estimate the healthcare spending in the Emirate of Dubai. Over the years the methodology was refined where by detailed definitions of what constitutes health expenditure and types of disaggregation were drawn up based on inputs from several documents, meetings and consultative discussions. The expertise from international consultancies were also used in setting guidelines to ensure that HASD estimation methods are acceptable and reliable under NHA methodology used by OECD and WHO.

Six rounds of HASD reports have been produced to date. All these rounds of health accounts were based on System of Health Accounts 2011 (SHA 2011) framework.

This report presents the findings of the seventh health account estimation, using the data for the year 2021. It determines the contribution of stakeholders in financing the healthcare and highlights the changes that occurred due to the Covid-19 pandemic. It illustrates the distribution of healthcare expenditure by financing sources, agents, providers and functions.

Methodology

Data Collection Strategy

The Dubai health care sector is an amalgam of public and private sector providers and financing agents. The predominant source of public sector financing, emanates from DOF, who funds the health services rendered by DHA, Dubai ambulance and Dubai police. DHA serves as both financers and provider of health care services in Dubai. In addition, the federal authority funds the services provided by MOHAP facilities in Dubai. The predominant form of private sector financing of healthcare services emanates from private health insurance. A small portion of health services financed by households as out of pocket spending. Therefore, the data required for the report is obtained from various primary and secondary sources.

The section below provides details on different datasets and data sources

Data Sources

Government

Dubai Department of Finance (DoF)

HASD's technical team contacted DOF to obtain the health expenditure data of Dubai police and Dubai Corporation for Ambulance Services (DCAS). The data received included a detailed breakdown of expenditure and funds based on the Dubai Government Chart of Accounts which includes the cost centers and the line item details. The breakdown was useful to accurately map the expenditures at the item level, and to ensure consistency with the reports from recipients of the funds. DOF also provided data on amounts paid towards health insurance claims for government employees distinguishing clearly between the funds paid towards insurance premiums and healthcare claims. These data were adjusted based on claims data for government schemes in e-Claim link Data. DOF data didn't indicate which providers and health services were used.

Dubai Health Authority (DHA)

DHA finance department provided the data on total healthcare spending by DHA, which was used to analyze and map DHA activities to HASD.

DHA Expenditure Dataset: Detailed government expenditure data was collected from DHA by cost center by each item definition and by sector. The cost center data was classified in healthcare functions (inpatient, daycase, outpatient and preventive care) based on the healthcare utilization data published by DHA health information and statistics department.

DHA Revenue Dataset: The revenue data that contains the money collected by each cost center, was used to triangulate validate the estimates of out-of-pocket (OOP) Expenditures.

Ministry of Health and Prevention, U.A.E (MOHAP)

MOHAP provided the HASD team with detailed expenditure data broken down by facility type and cost centers located in Dubai. MOHAP healthcare utilization in Dubai was used to analyze and map this expenditure by healthcare functions. MOHAP collection of revenue from service users was not reported and has been omitted from this report.

eClaimlink Data

Dubai Health Authority (DHA) oversees all operations relating to the eClaimLink system, and ensures adherence to rules and regulations for full compliance and that all health insurance transactions are reported through the system. The administrative data for private health insurance in 2021 was extracted from eClaimLink. The datasets from eClaimLink included the claims transaction data for all Dubai based policies with details of the services provided, and the financial transaction for each service episode. The data was classified by payer type, provider type and service type so that it could be mapped to SHA 2011.

Major employers

Data from major employers in Dubai such as Emirates Airlines that provided health insurance coverage for their employees and families were collected and classified by provider type, and service type, and mapped to SHA 2011.

Dubai Household Health Survey (DHHS)

The household health expenditures were derived using Dubai Household Health Survey (DHHS) 2018 conducted by DHA with logistical support from Dubai Statistics Center (DSC). The DHHS is the largest comprehensive household survey of healthcare and health issues carried out in The Emirates of Dubai. This was a representative survey of Dubai stratified across households categorized into 4 groups as Nationals, Non-nationals in households, Non-nationals in collective housing, and Non-nationals in labor camps. The probability that each of the 4 categories of household would have any discretionary, or any outpatient, or any inpatient OOP expenditure was calculated, then multiplied by weighted estimate of the average total OOP expenditure for households who incurred that type of event. Outliers above the 99th percentile were excluded to reduce the skewness of the data. The 2018 estimates were then used to extrapolate to 2021 by adjusting for inflation i.e using the comsumer price index (CPI) and population growth assuming that the proportion of each type of household remained constant. Additional adjustment was made to account for change in utilization due to covid- 19 outbreak in 2021.

Appendix A details the methodology of 2018 DHHS

Population boundaries for HASD

The population in Dubai is classified into the following groups:

1. Nationals in the Emirate of Dubai
2. Non-Nationals with employment visas from Dubai and residence inside Dubai
3. Non-Nationals with employment visas from Dubai and residence outside Dubai
4. Tourists who visit Dubai

Dubai Statistics Center considers first two groups as part of Dubai's population. However, the health care financing reform is aimed to offer mandatory health coverage to all members of the first three groups, regardless of geographical location. Thus, for the purpose of HASD report, the first three groups were considered. Healthcare expenditures for HASD are not limited to the activity that take place within Dubai. They include healthcare expenditure by citizens temporarily abroad and exclude health spending by tourists in Dubai.

Data Analysis

The datasets from each source or entity were processed differently depending on the availability, format and completeness of data. The initial data preparation, analysis and coding was done in Microsoft excel spreadsheets. Any data gaps were subjected to imputation methods used by HASD technical team to fill the gaps. Some unique data verification processes were also implemented. This involves validation of total estimates for each data source prior to merging for the production of final database.

The final data files were uploaded into the HAPT tool. It is a software application developed by USAID and WHO that supports countries undertaking health accounts exercise. It facilitates the production of health accounts by mapping health expenditure according to SHA 2011 methodology classification and any defined country-specific classification. The software has in built functionalities to check for double counting and errors in classification codes hence enhancing the data quality. It also allows keeping track of multiple data files and managing the large datasets with ease thus reducing the time to generate health accounts matrices.

Limitations

HASD estimates typically rely on the information collected by public and private organizations for other purpose, access to disaggregated data as per health accounts classification becomes a challenge. The insurance payment data obtained from some government entities did not indicate the financial allocations by category of healthcare providers and services used. The private sector data did not reflect the portion of the collected premium for private insurance that was not used to pay claims. Thus, the operating cost of the private insurance companies that was attributed to medical loss ratio or "loading" are omitted. HASD focus on CHE and not the THE which makes the health sector contribution to the GDP under reported. Finally, HASD is limited to tracking of what entities pay for healthcare and not the production cost. In this case, it cannot be used as a tool for validation of existing policies on cost of provision, but rather as a tool of identifying issues related to the way the health system is organized.

Results of HASD 2021

Table 1. Health Accounts Summary Indicators for 2021

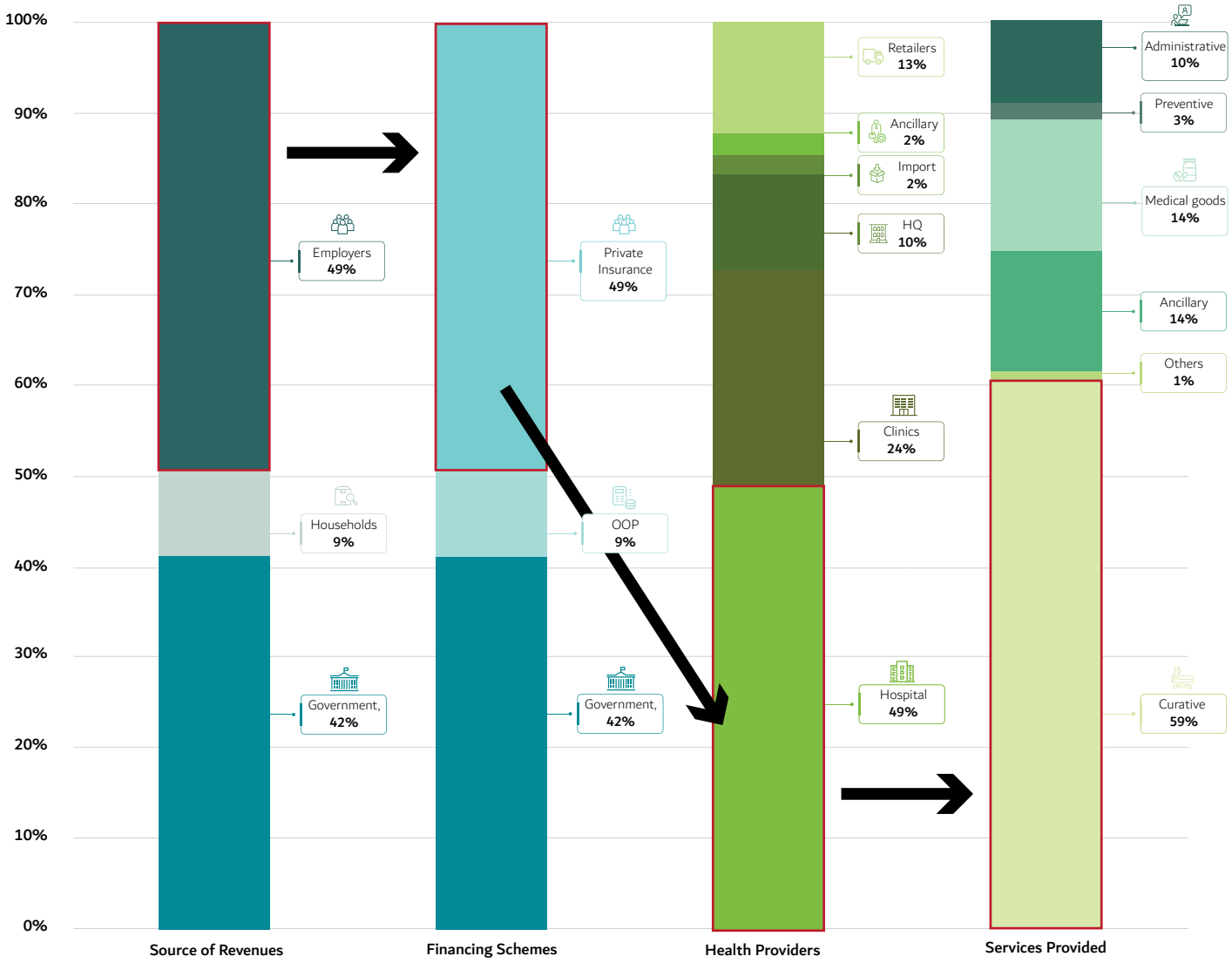
	Indicators	2021
1.	Current Health expenditure (CHE) % Gross Domestic Product (GDP)	5.5%
2.	General Government Expenditure on Health (GGHE) as % of GDP	2.3%
3.	General Government Expenditure on Health (GGHE) as % of CHE	42%
4.	Private Expenditure on Health (PvHE) as % of CHE	58%
5.	Out-Of-Pocket expenditure as % of CHE	9%
6.	Out-Of-Pocket expenditure as % of PvHE	16%
7.	Private Insurance as % of PvHE	84%
8.	Expenditure on Inpatient care as % of CHE	23%
9.	Government Expenditure on Inpatient care as % of GGHE	26%
10.	Prevention and Public Health services as % of CHE	3%
11.	Medical goods as % of CHE (not including IP)	14%
12.	Current expenditure on health / capita at exchange rate (NCU per US$)	1,276
13.	Current expenditure on health / capita at Purchasing Power Parity (NCU per US$)	2,552
14.	General government expenditure on health / cap x-rate	533
15.	General government expenditure on health / cap Purchasing Power Parity (NCU per US$)	1,065
16.	OOPS / capita at exchange rate (NCU per US$)	121
17.	Exchange Rate (NCU per US$)	3.67
18.	PPP 2020(NCU per US$)	2.0
19.	Gross domestic product - Million AED(Constant Prices)	386,027
20.	Financial Population*	4,541,675
21.	Current Health Expenditure – Million AED	21,269

*The estimate of financial population is based on the member data provided by insurance companies. (Dubai Insurance covered Population/HASD Population)

Sources and flow of funds

In 2021, the biggest source of funds and financing schemes were employers, who accounted for 49% of funds followed by the government and households who accounted for 42% and 9% respectively. In terms of flow of funds, Hospitals received almost half of the pooled funds (49%) with the majority of funds received by hospitals being used for curative care (59%) which includes inpatient, outpatient and daycare. Healthcare expenditure outside Dubai ("Import") is estimated at 2%. Expenditure on preventive care increased to 3%, which can partially be explained by spent on Covid-19 vaccine.

Figure 1: Flow of funds



Financing schemes that managed the healthcare expenditure

The current health expenditure increased by 9% from 2020 to 2021. The private employers were the major source of funds estimated at 10,367 M AED (49%) in 2021. The government financing schemes accounted for 8,877 M AED (42%) in 2021. Households out of pocket was estimated at 2,025 M AED (9%) in 2021.

Out of the 8,877 M AED funds managed by the government entities, the major spending was made by the government of the Emirates of Dubai, estimated at 8,354 (94%) while the federal government contributed 523 M AED (6%)

Between, 2017 to 2019 (Figure 2). There was an increase in funds from private employers whereas the government contribution decreased from 38% to 36%. However, in 2020 and 2021, there was a noticeable change in government spending trend, with 6% increase in government funding during 2021 compared to 2019(pre-pandemic era). The household out of pocket spending didn't show much variation during these five years.

Table 2. Financing Schemes (HF) by Financing Sources (FS) in 2021 (HF X FS)

Revenues of health care financing schemes **U.A.Emirates dirham (AED), Million** Financing schemes	FS.1 Transfers from government domestic revenue (allocated to health purposes)	FS.4 Compulsory prepayment (Other, and unspecified, than FS.3)	FS.6 Other funds from households n.e.c	All FS	Share of FS
HF.1 Government schemes and compulsory contributory health care financing schemes	**8,877**	**10,367**		**19,244**	**91%**
HF.1.1 Government schemes	**8,877**			**8,877**	**42%**
HF.1.1.1 Central government schemes	**523**			**523**	**3%**
HF.1.1.2 State/regional/local government schemes	**8,354**			**8,354**	**39%**
HF.1.2 Compulsory contributory health insurance schemes		**10,367**		**10,367**	**49%**
HF.1.2.2 Compulsory private insurance schemes		**10,367**		**10,367**	**49%**
HF.3 Household out-of-pocket payment			**2,025**	**2,025**	**9%**
All HF	**8,877**	**10,367**	**2,025**	**21,269**	**100%**
Share of HF	**42%**	**49%**	**9%**	**100%**	

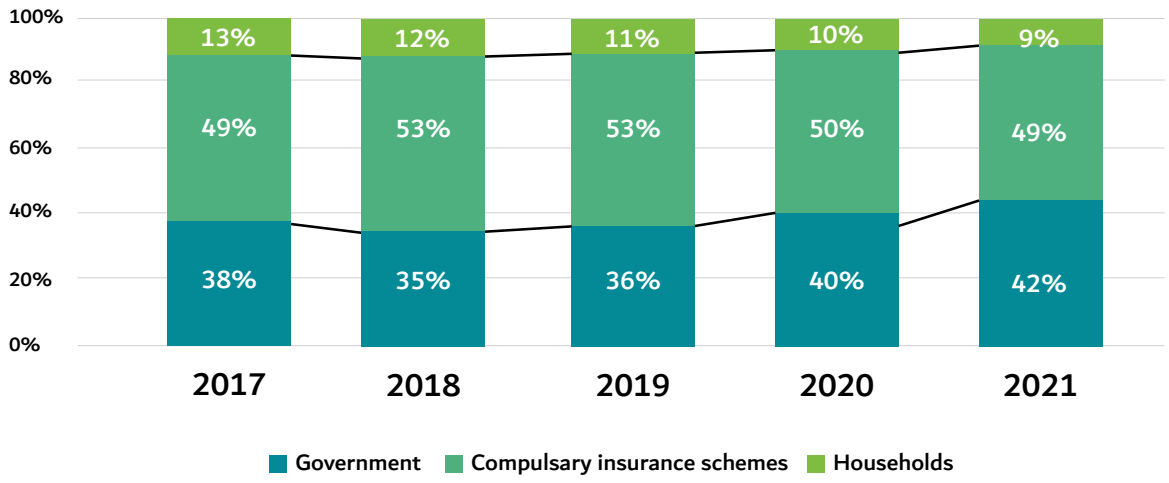
Table 3. Funds of Health Care Financing over Time, Dubai (2017-2021)

Inflow Funds of health care financing schemes (Million AED)	2017	2018	2019	2020	2021
FS.1 Transfers from government domestic revenue (allocated to health purposes)	6,338	6,495	6,864	7,721	8,877
FS.4.2 Compulsory prepayment from employers	8,282	9,703	10,198	9,819	10,367
FS.5 Voluntary prepayment	0	0	0	0	0
FS.6.1 Other funds from households	2,152	2,195	2,212	1,952	2,025
Total	**16,773**	**18,393**	**19,273**	**19,492**	**21,269**

Table 4. Financing Schemes over Time, Dubai (2017-2021)

Financing schemes, Million AED	2017	2018	2019	2020	2021
HF.1.1 Government schemes	6,338	6,495	6,864	7,721	8,877
HF.1.2 Compulsory contributory health care financing schemes	8,282	9,703	10,198	9,819	10,367
HF.2 Voluntary health care payment schemes	0	0	0	0	0
HF.3 Household out-of-pocket payment	2,152	2,195	2,212	1,952	2025
Total	**16,773**	**18,393**	**19,273**	**19,492**	**21,269**

Figure 2. Trends in Health Financing Schemes, Dubai (2017-2020)



Types of health providers that received the healthcare expenditure amount through the various financing schemes

The major amount of current healthcare expenditure for 2021 went to hospitals amounting to 10,384 M AED (49%), followed by the primary health centers 5,108 (24%) Ancillary providers such as medical and diagnostic labs, imaging centers received 321 M AED(2%) while pharmacies received 2,862 M AED (14%). Healthcare governance and providers of healthcare system administration and financing received 2,069 (10%) of the funds.

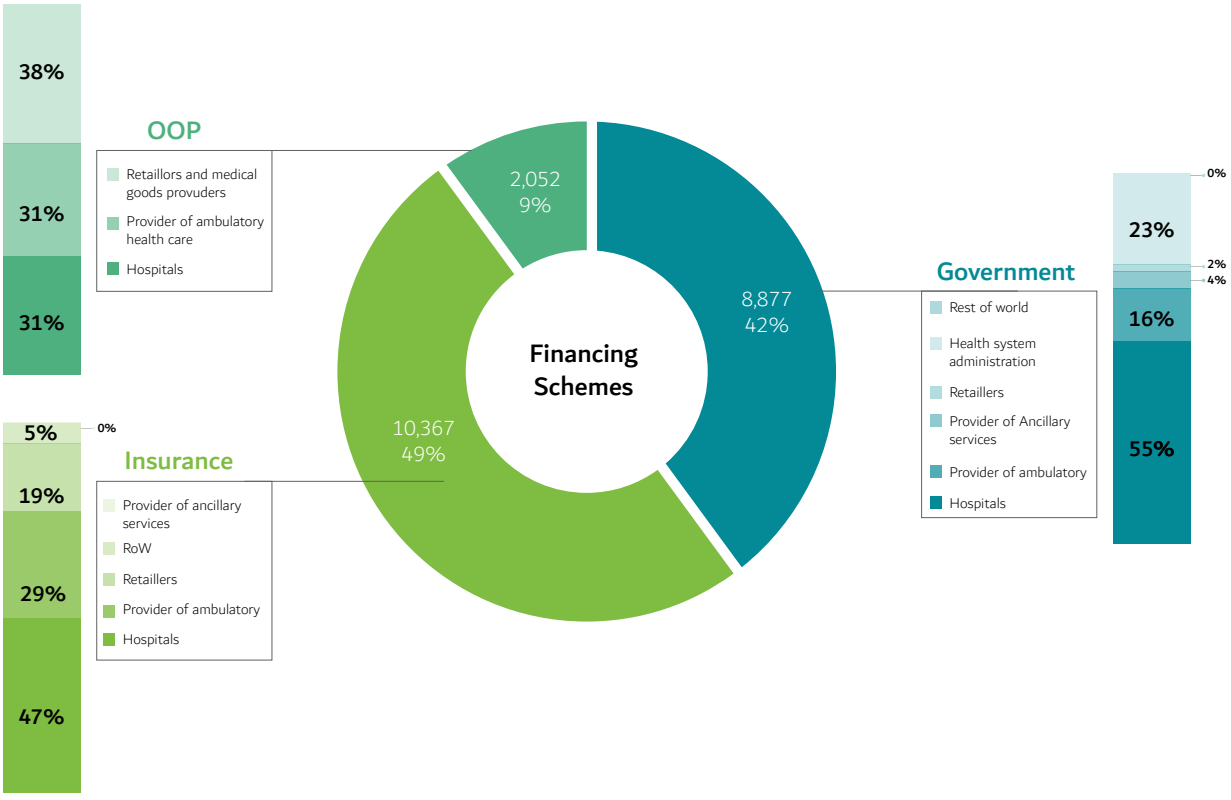
Households allocated 776 M AED (38%) towards discretionary health care spending. And 525 M AED (2%) was given to providers outside Dubai.

The HF1.1 column of Table 5 shows that large share of government scheme's spending goes to Hospitals (55%) and healthcare system administration (23%) similar to 2020 but 2 percentage points less compared to 2019. The private insurance schemes provide a major share of fund to hospitals (47%) and clinics (29%), respectively. The pharmacies received 1,919 M AED (19%) from private insurance schemes. As noted earlier, data about private health insurance spending on administration and claims management was not available.

Table 5. Health Providers (HP) by Financing Schemes (HF) in 2021 (HP X HF)

Financing schemes U.A.Emirates dirham (AED), Million Health care providers		HF.1 Government schemes and compulsory contributory health care financing schemes	HF.1.1 Government schemes	HF.1.1.1 Central government schemes	HF.1.1.2 State/regional/local government schemes	HF.1.2 Compulsory contributory health insurance schemes	HF.3 Household out-of-pocket payment	All HF	Share of HF
HP.1	Hospitals	9,764	4,885	390	4,496	4,879	620	10,384	49%
HP.3	Providers of ambulatory health care	4,480	1,424	81	1,343	3,055	629	5,108	24%
HP.4	Providers of ancillary services	321	314		314	8		321	2%
HP.5	Retailers and Othe providers of medical goods	2,086	167		167	1,919	776	2,862	13%
HP.7	Providers of health care system administration and financing	2,069	2,069	52	2,017			2,069	10%
HP.9	Rest of the world	525	18		18	507		525	2%
HP.nec	Unspecified health care providers (n.e.c.)	0	0		0			0	0%
All HP		19,244	8,877	523	8,354	10,367	2,025	21,269	100%
Share of HP		90%	42%	3%	39%	49%	9%	100%	

Figure 3. CHE by Financing Schemes and Providers, Dubai 2021



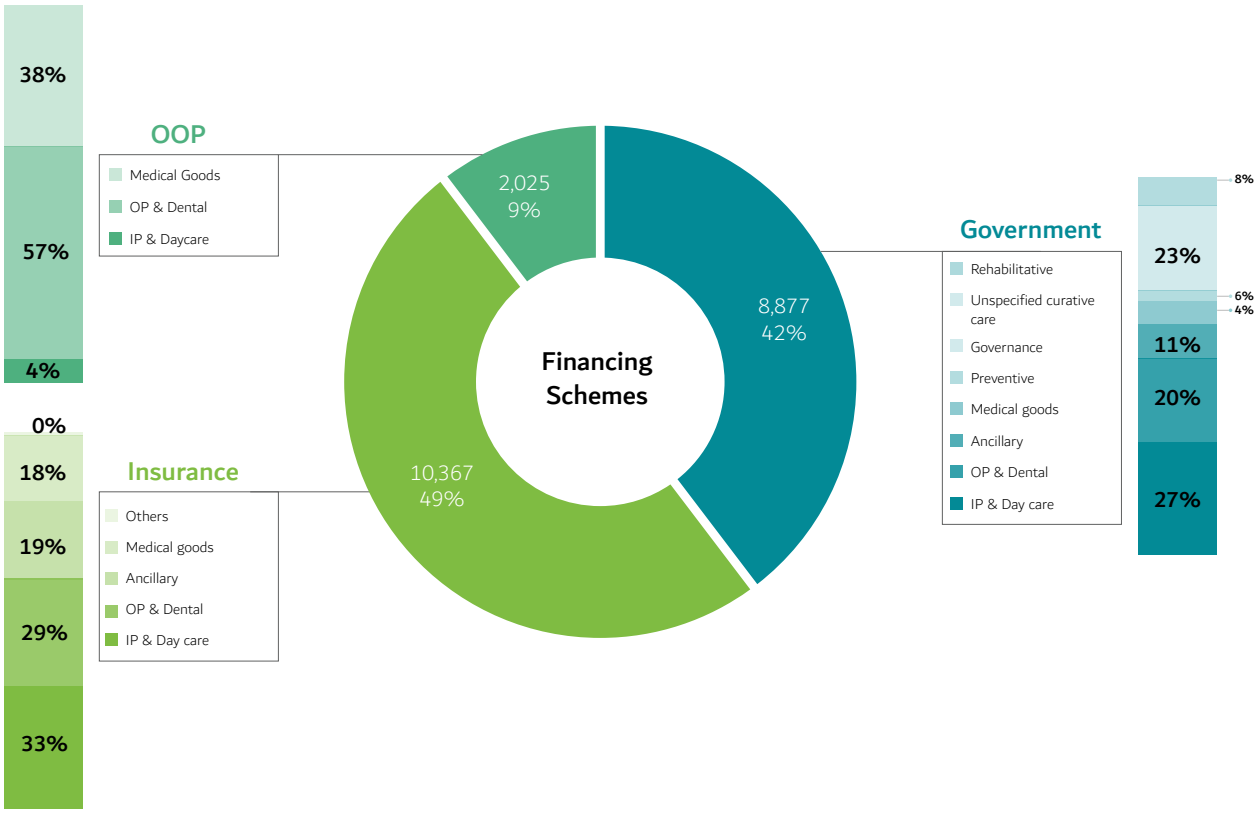
Health services expenditure through the various financing schemes

In 2021, curative care received the biggest share of funds at 12,569 M AED (59%). A breakdown of curative care indicates that inpatient care spending was 4,953 M AED (23%) and outpatient care spending was 5,968 M AED (28%) out of the total healthcare spending(21,269 M AED). Ancillary services spending was 2,956 M AED (14%), medical goods spending was 3,066 M AED (14%) and preventive care spent was 559 M AED (3%). Healthcare governance and administration represented 2,063 M AED (10%).

Table 6. Health Care Functions (HC) by Health Financing Schemes (HF) for 2021 (HC X HF)

Financing schemes **U.A.Emirates dirham (AED), Million** Health care functions	HF.1 Government schemes and compulsory contributory health care financing schemes	HF.1.1 Government schemes	HF.1.1.1 Central government schemes	HF.1.1.2 State/regional/local government schemes	HF.1.2 Compulsory contributory health insurance schemes	HF.3 Household out-of-pocket payment	All HF	Share of HF
HC.1 Curative care	11,320	4,885	273	4,612	6,436	1,249	12,569	59%
HC.1.1 Inpatient curative care	4,868	2,297	114	2,183	2,571	85	4,953	23%
HC.1.2 Day curative care	966	101		101	865		966	5%
HC.1.3 Outpatient curative care	4,804	1,804	158	1,646	3,000	1,164	5,968	28%
HC.1.4 Home-based curative care	6	6		6			6	0%
HC.1.nec Unspecified curative care (n.e.c.)	676	676		676			676	3%
HC.2 Rehabilitative care	43	43		43			43	0%
HC.4 Ancillary services (non-specified by function)	2,956	952	27	925	2,004		2,956	14%
HC.4.1 Laboratory services	1,588	417	20	397	1,171		1,588	7%
HC.4.2 Imaging services	1,041	233	8	225	808		1,041	5%
HC.4.3 Patient transportation	315	290		290	24		315	1%
HC.4.nec Unspecified ancillary services (n.e.c.)	12	12		12			12	0%
HC.5 Medical goods (non-specified by function)	2,290	372	171	201	1,918	776	3,066	14%
HC.6 Preventive care	559	559		559	0		559	3%
HC.7 Governance, and health system and financing administration	2,063	2,063	52	2,011			2,063	10%
HC.9 Other health care services not elsewhere classified (n.e.c.)	13	3		3	10		13	0%
All HC	19,244	8,877	523	8,354	10,367	2,025	21,269	100%
Share of HC	91%	42%	3%	39%	49%	9%	100%	

Figure 4. Financing Flows from Financing Schemes and Healthcare Functions, Dubai 2021



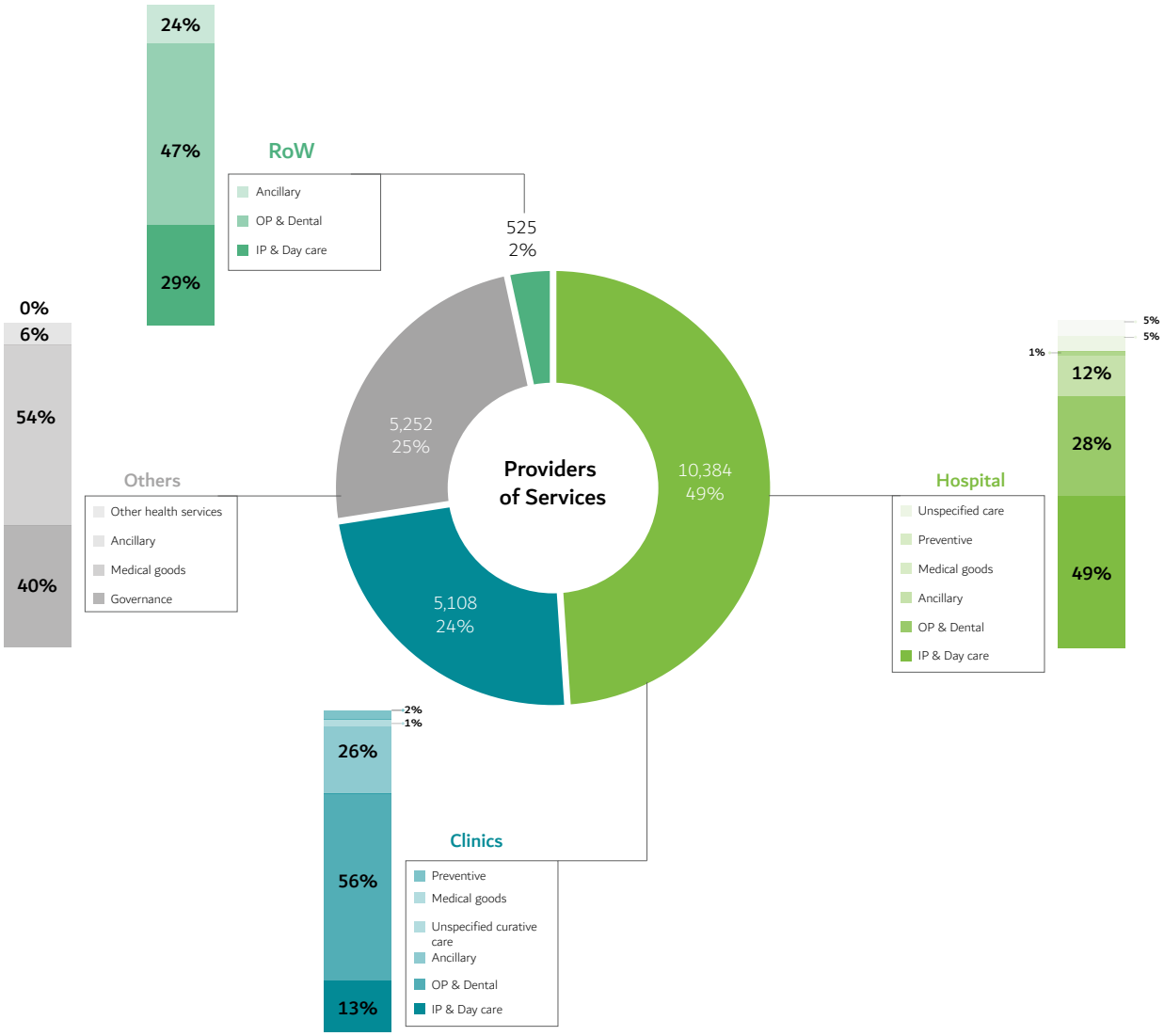
Types of health services that received the healthcare expenditure amount through the various health providers

As shown in Table 7, in 2021, hospitals received a total of 10,384 M AED of which 8,509 M AED was spent on curative care, 1,215 M on ancillary services ,473 M on preventive care, and 147 M on medical goods. Primary Healthcare centers received a total of 5,108 M of which 3,655 M was spent on curative care, 1,308 M on ancillary services, 86 M on preventive care and 44M on medical goods. Retailers and providers of medical goods received 2,862 M AED. The Rest of the World provided a wide array of services totaling 525 M AED with majority spent towards curative care (399 M).

Table 7. Health Care Functions by Health Care Providers in 2021

Health care providers **U.A.Emirates dirham (AED), Million** Health care functions	HP.1 Hospitals	HP.3 Providers of ambulatory health care	HP.4 Providers of ancillary services	HP.5 Retailers and Other providers of medical goods	HP.7 Providers of health care system administration and financing	HP.9 Rest of the world	All HP	Share of HP
HC.1 Curative care	8,509	3,655			6	399	12,569	59%
HC.1.1 Inpatient curative care	4,330	495				128	4,953	23%
HC.1.2 Day curative care	783	160				22	966	5%
HC.1.3 Outpatient curative care	2,881	2,838				249	5,968	28%
HC.1.4 Home-based curative care		6					6	0%
HC.1.nec Unspecified curative care (n.e.c.)	515	156			6		676	3%
HC.2 Rehabilitative care	40	3					43	0%
HC.4 Ancillary services (non-specified by function)	1,215	1,308	307	1		126	2,956	14%
HC.4.1 Laboratory services	609	887	9	1		83	1,588	7%
HC.4.2 Imaging services	606	392		0		43	1,041	5%
HC.4.3 Patient transportation	0	29	286				315	1%
HC.4.nec Unspecified ancillary services (n.e.c.)			12				12	0%
HC.5 Medical goods (non-specified by function)	147	44	14	2,861			3,066	14%
HC.6 Preventive care	473	86					559	3%
HC.7 Governance, and health system and financing administration					2,063		2,063	10%
HC.9 Other health care services not elsewhere classi fied (n.e.c.)	0	12	0		1		13	0%
All HC	10,384	5,108	321	2,862	2,069	525	21,269	
Share of HC	49%	24%	2%	13%	10%	2%	100%	

Figure 5. CHE by Healthcare Providers and Healthcare Functions, Dubai 2021



Major Diagnostic Category

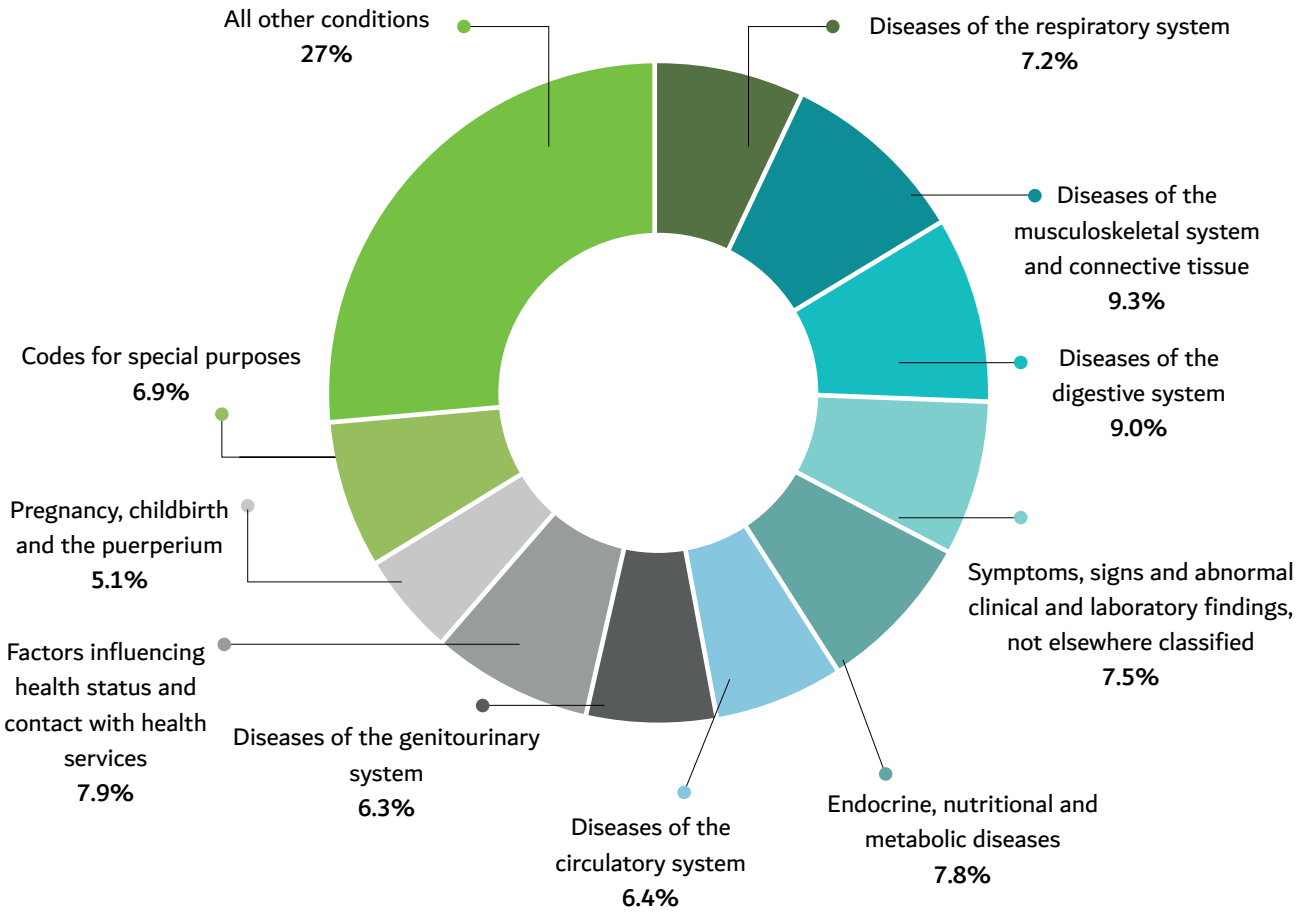
Table 8 illustrates healthcare expenditure by Major Diagnostic Category (MDC's) in Dubai. In 2021, the total net amount spent by MDC's was 15.8 billion AED. The highest expenditure was on two main disease category namely musculoskeletal system (9.3%) and digestive system (9.0%). The top ten MDC's in Dubai represent 73% of the total expenditure. The codes for special purposes accounts for 6.9% of the total spent reflecting the covid pandemic financial burden.

Table 8

MDC	Share
Diseases of the musculoskeletal system and connective tissue	9.3%
Diseases of the digestive system	9.0%
Factors influencing health status and contact with health services	7.9%
Endocrine, nutritional and metabolic diseases	7.8%
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	7.5%
Diseases of the respiratory system	7.2%
Codes for special purposes	6.9%
Diseases of the circulatory system	6.4%
Diseases of the genitourinary system	6.3%
Pregnancy, childbirth and the puerperium	5.1%
Injury, poisoning and certain other consequences of external causes	4.0%
Neoplasms	3.5%
Diseases of the skin and subcutaneous tissue	2.9%
Certain infectious and parasitic diseases	2.7%
Diseases of the eye and adnexa	2.4%
Diseases of the nervous system	1.9%
Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism	1.4%
Diseases of the ear and mastoid process	0.8%
Mental and behavioural disorders	0.6%
Congenital malformations, deformations and chromosomal abnormalities	0.3%
Certain conditions originating in the perinatal period	0.3%
External causes of morbidity and mortality	0.0%

Figure 6.

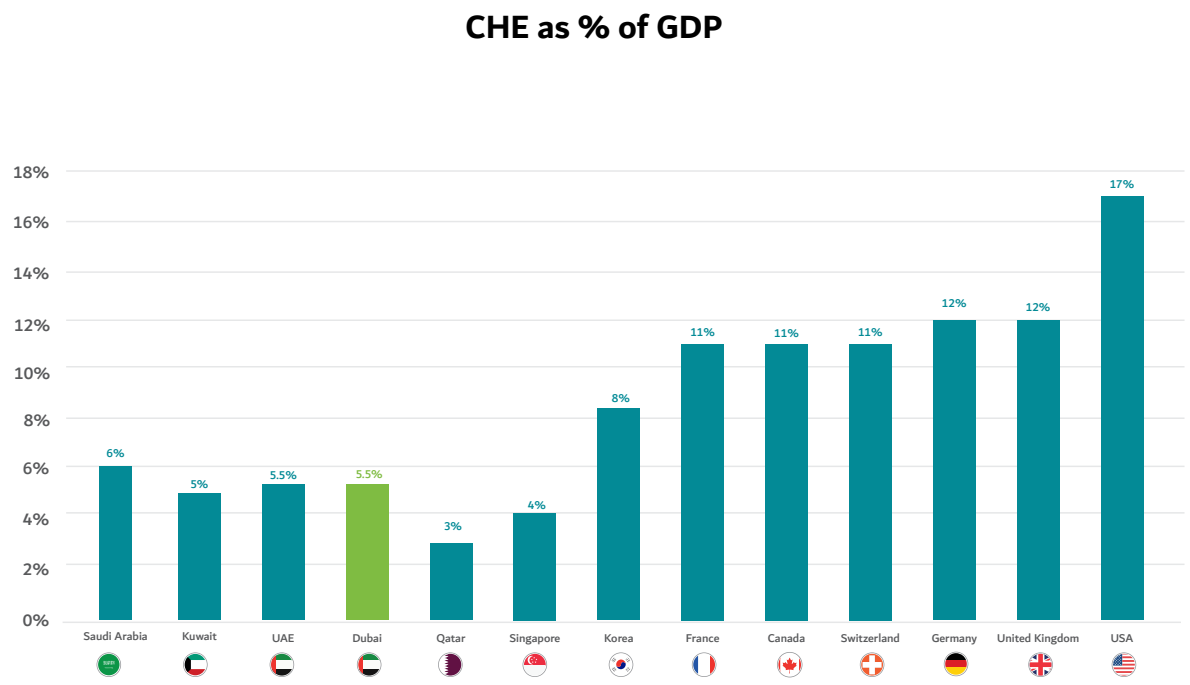
MDC's percentages from total paid amount



Comparative Analysis

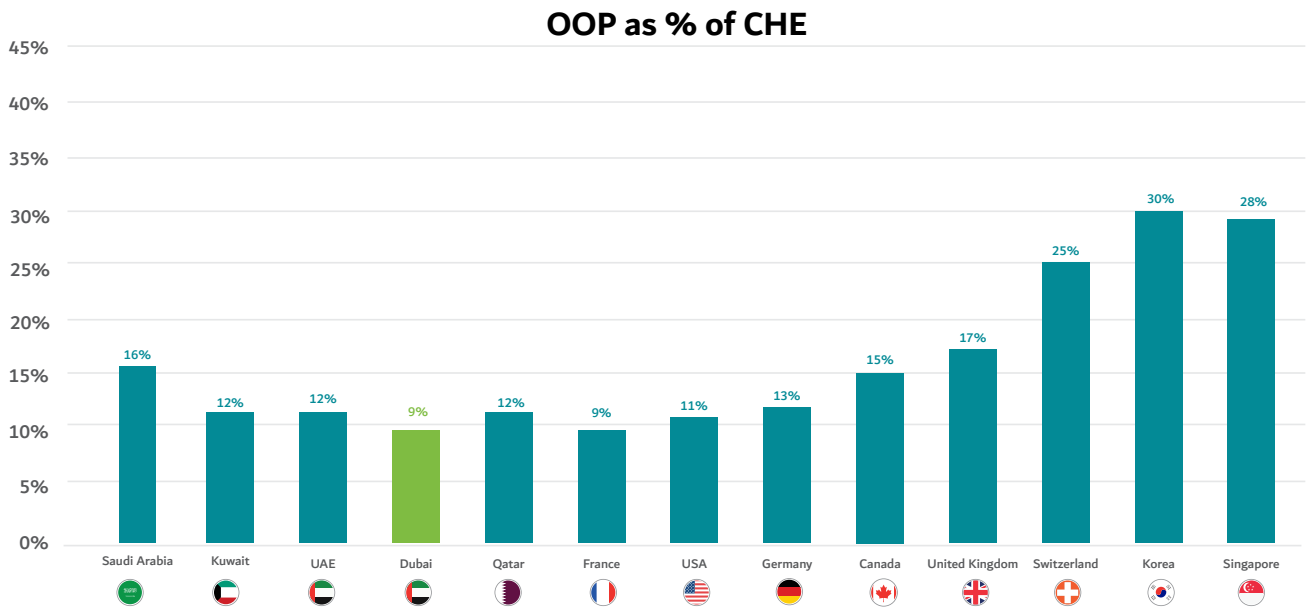
This section compares Dubai's results with other regional and selected countries from The Organization of Economic Cooperation and Development (OECD). Data for comparative analysis was obtained from WHO Global Health Expenditure Database and OECD Health Expenditure and Financing Statistics for the recent year available. The OECD countries such as France, Switzerland, Canada, United Kingdom and USA were chosen to create a basket of countries that are similar to the current or future health financing system in Dubai. In addition, UAE health accounts for year 2020 was used to compare Dubai's health indicators with UAE overall.
The data from the other GCC countries provided the closest regional comparison to Dubai's healthcare system.

Figure 7. Current Health Expenditure (CHE) as Percentage of GDP



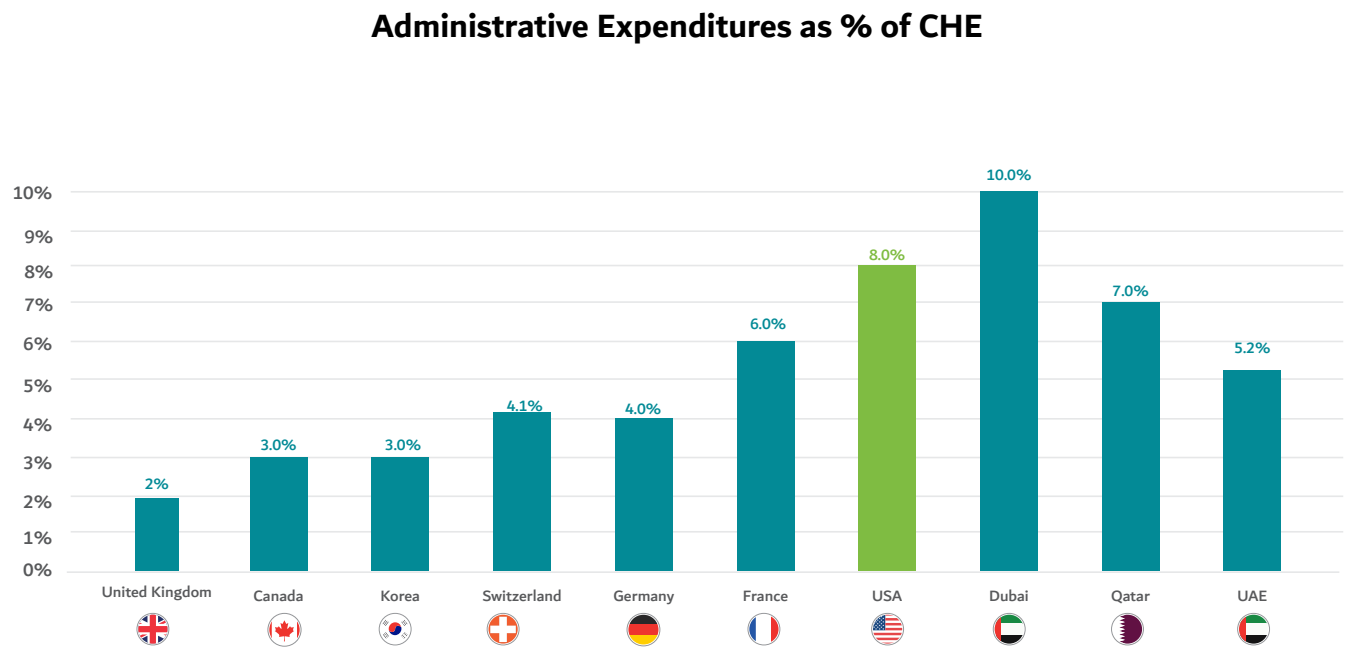
Dubai (UAE) rank second among GCC countries in terms of CHE as % of GDP and rank among the lowest compared to OECD countries.

Figure 8. Share of Out of Pocket Expenditure of Current Health Expenditure (CHE)



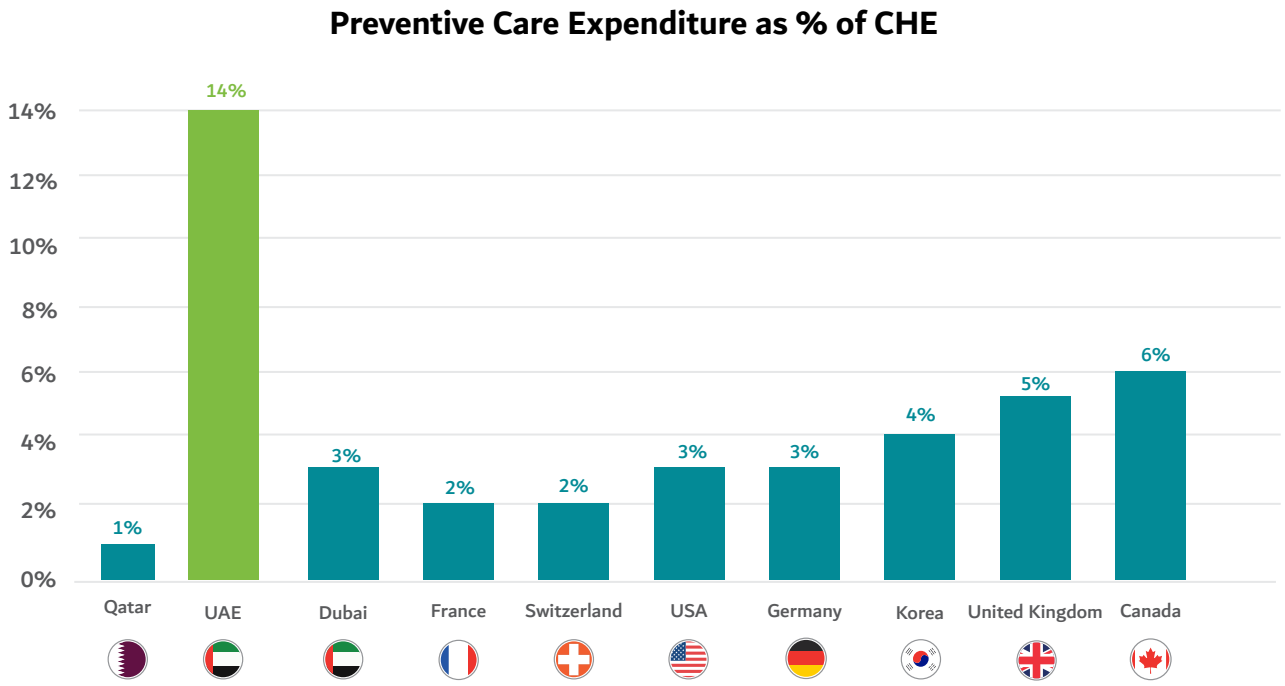
Dubai ranks among the lowest compared to selected GCC and OECD countries in terms of OOP as % of CHE.

Figure 9. Share of Administration and Financing Expenditure of Current Health Expenditure



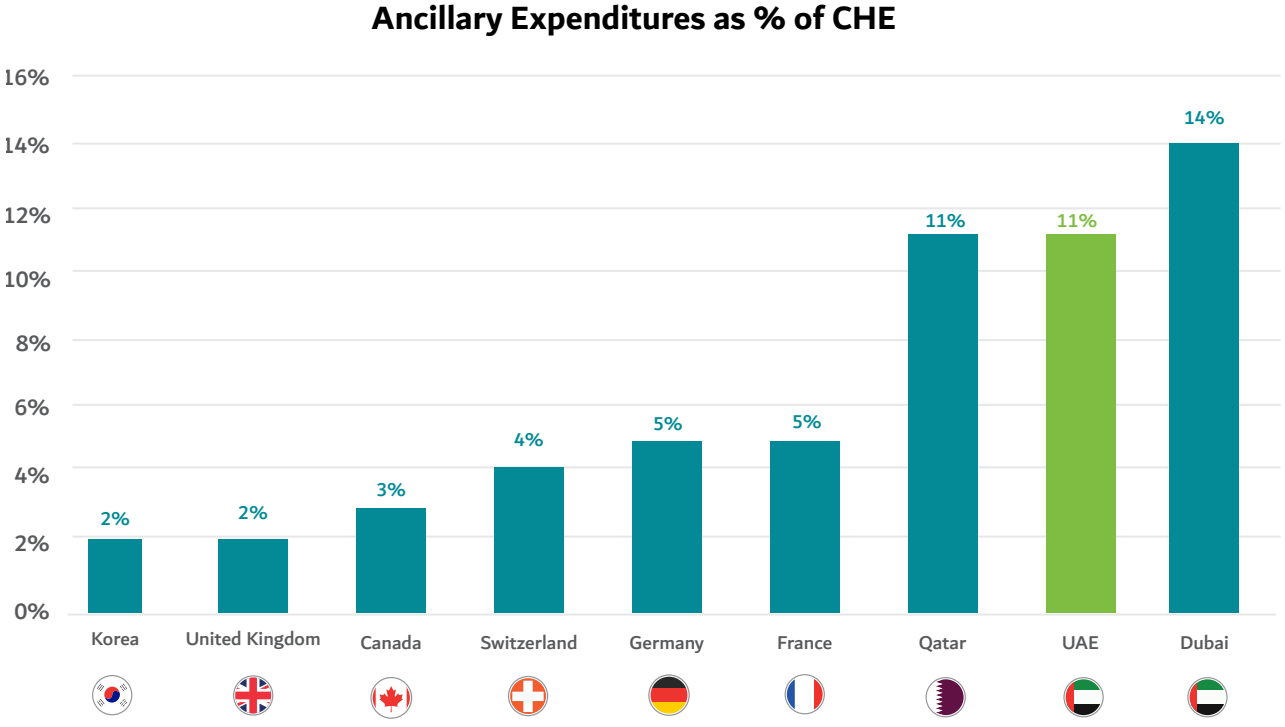
Dubai reports to have highest administrative expenditure as % of CHE compared to selected GCC and OECD countries.

Figure 10. Share of Preventive Care Expenditure of Current Health Expenditure (CHE)



In terms of preventive care spent as % of CHE, Dubai's expenditure increased to 3% similar to few selected OECD countries. However, the spent at UAE level was estimated to be 14%.

Figure 11. Share of Ancillary Services Expenditure of Current Health Expenditure (CHE)



Dubai reports to have highest ancillary services expenditure as % of CHE compared to selected GCC and OECD countries.

Appendix A

Dubai Household Health Survey (DHHS) is the largest comprehensive household survey of healthcare and health issues carried out in The Emirates of Dubai

The survey provides a statistically accurate and representative outlook of key health and healthcare variables across the entire population of Dubai.

The survey of 2018 was based on a multi- stage stratified cluster sample. The sampling was designed so that after weighting it would be representative of four subpopulation: UAE citizens, Non- citizens living in households, Non-citizens living in collective housing and Non- citizens living in labor camps. Surveyors personally visited these randomly selected households to obtain detailed information on issues ranging from household health expenditure, and access to health services to questions on exercise levels, dietary habits, lifestyle diseases, mental health, and a detailed module on the use of public and private health services in Dubai. The 2018 survey had a response rate of 96%. The design and methodology of the survey were adopted from those used in the World Bank's Living Standards Measurement Surveys (LSMS), the World Health Organization's World Health Surveys (WHS) and the US Center for Disease Control's National Health Interview and Examination Surveys (NHIES).

Importance weights were assigned by DSC because UAE citizens were oversampled. After weighting, the sample was representative of population of 3.2 million Dubai residents as of 2018. The sample size for 2018 was a total of 9,630 persons in 2200 housing units of whom 5,665 were UAE citizens, 2342 were Non- citizens in households, 1,335 were Non-citizens in collective housing, and 288 were Non-citizens in labor camps. The survey was sanctioned by the institutional review board of the Dubai Health Authority.

Each of the surveyors received extensive training in the collection of self-reported expenditure data and interviewed the person in the household most knowledgeable about recent medical utilization. After collecting a household roster and basic demographics for each household member, the surveyor asked whether each household member had had any outpatient utilization in the last 30 days, made any discretionary purchases of medical supplies or over the counter medicines

(mentioning blood pressure cuffs, blood sugar monitors, orthopedic supplies, medicines etc.) in the last 30 days and whether each household member had an overnight inpatient stay in the last 12 months. For households where more than one member had experienced these events, an individual member was selected at random and details of their medical events were collected to investigate the total of out of pocket spending for various categories of discretionary spending, outpatient spending and inpatient spending, after adjusting for the appropriate weights.

A Report by

DUBAI HEALTH INSURANCE CORPORATION

Dubai Health Insurance Corporation was formed in 2018 under the guidance of Shaikh Hamdan Bin Mohammad Bin Rashid Al Maktoum, Crown Prince of Dubai and Chairman of the Dubai Executive Council who issued Executive Council Resolution No. (18) of 2018 approving the new organizational structure of Dubai Health Authority (DHA). The Corporation helps regulate the insurance market, create a conducive environment for growth and help maximise benefits to customers as well as protect their interest. At the same time, it also keeps the interest of the insurance companies and Third Party Administrators in mind.

The corporation also license and regulate health insurance companies, claims management companies, insurance brokers and service providers.

It is responsible for managing Dubai Government's health insurance programme and issuing reports and recommendations related to health insurance and health economics.

For Any Queries

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Email: mschandersoni@dha.gov.ae

الملخص التنفيذي

الحاجة لـ "حصد"

نظام حسابات دبي الصحية (حصد) يهدف الى دعم فهم طويل المدى ومتكامل لمنظومة الانفاق الصحي في إمارة دبي. هذا النظام فريد من نوعه ويختلف عن التقارير الصحية الاخرى التي يتم إعدادها ضمن نفس النطاق. وعلى عكس الأنظمة الأخرى التي تميل الى التركيز على برامج تمويل محددة او الفترات الزمنية يتبع نظام حصد منهجا أكثر شمولا.

يعتمد حصد منهجية مبنية على التصنيف الدولي لنظام الحسابات الصحية لعام 2011(منظمة الصحة الدولية، 2011). توضح منظمة الصحة الدولية السبب المنطقي لإنتاج تقارير على مستوى الإمارة وتتطلب تعريفا لحدود السكان بحيث يكون مرافقا لكل نظام حسابات صحية. وكما في التقارير السابقة لحصد، قمنا بتعريف حدود إنفاق القطاع الصحي لإمارة دبي بجميع المعاملات المتعلقة بالرعاية الصحية التي تتم من قبل أو نيابة عن مواطني إمارة دبي أو غير المواطنين الذين يحملون تأشيرة عمل من دبي بغض النظر عن موطنهم. يشمل التقرير إنفاق سكان دبي حتى لو كان الانفاق خارج حدودها باستثناء السياح المقيمين في إمارة دبي لفترة قصيرة، ويستثنى كذلك أي إنفاق صحي تم نيابة عن مواطنين الإمارات الأخرى أو للعمال غير المواطنين الحاملين لتأشيرات صادرة من إمارات أخرى.

جمع وتحليل البيانات

تقوم مؤسسة دبي للضمان الصحي بإصدار تقارير الإنفاق الصحي منذ ما يقرب من عقد من الزمن، تعد هذه التقارير جزءا من عمليات إعداد نظام حسابات دبي (حصد). يعرض التقرير تقديرات للمبالغ التي تم انفاقها على السلع والخدمات الصحية في دبي لسنة 2021. تستند الأرقام التقديرية في تقرير حصد على البيانات المتوفرة في موقع eclaims (قاعدة بيانات تتضمن المطالبات المالية لجميع سياسات التأمين الصحي لشركات التأمين الموجودة في دبي، مع تفاصيل الخدمة المقدمة والمعاملات المالية لكل مرة حصل فيها المريض على خدمة الرعاية الصحية. بيانات الانفاق الصحي التي تقوم بها مؤسسات حكومية مثل الدائرة المالية وهيئة صحة دبي ووزارة الصحة ووقاية المجتمع. تستخدم المعلومات المأخوذة من مسح الأسرة في دبي لتقدير إنفاق الأفراد من الجيب على الصحة. إن الغرض من ذلك هو استخدام أفضل البيانات المتاحة لتقدير صورة شمولية للمعلومات التالية:

1. المبالغ التي تم انفاقها على الصحة.
2. الجهة او الشخص الممول للإنفاق الصحي.
3. مجالات السلع والخدمات الصحية التي تم تمويلها كخدمات للسكان.

النتائج الرئيسية لـ "حصد"

في سنة 2021 بلغ إجمالي الإنفاق الصحي 21.26 بليون درهم (5.5% من الناتج المحلي الاجمالي)، أي ارتفاع نسبته 9% من إنفاق سنة 2020، الذي كان 19.49 بليون درهم.

في سنة 2021، شكل معدل الإنفاق الصحي عن طريق التمويل الحكومي 42% من اجمالي الانفاق الكلي بمقدار8,877 مليون درهم إماراتي، بينما شكل معدل الانفاق الصحي الخاص 58% من إجمالي الإنفاق الصحي بمقدار 12,392مليون درهم إماراتي.

وعلى غرار تقديرات الانفاق الصحي لسنة 2020، شكلت حصة كل الإنفاق الصحي التي تلقاها مختلف مقدمي خدمات الرعاية الصحية في سنة 2021 المعدلات الآتية: 49%، 24%،13% و 2% للمستشفيات، العيادات، صيدليات البيع بالتجزئة، ومقدمي الخدمات المساعدة على التوالي. وشكلت الرعاية العلاجية 59% من اجمالي الانفاق الصحي. تم تقدير إجمالي الإنفاق على الخدمات المساعدة والسلع الطبية بنسبة 28%، كما بلغ الانفاق على خدمات الرعاية الوقائية معدلا قدره 3% والذي يعد ارتفاعا بنسبة 2% مقارنة بالأرقام التي تم تقديمها في تقرير 2020. خصصت الحكومة 23% من انفاقها الصحي على المهام الادارية والحوكمة. وبلغت حصة إنفاق القطاع الخاص على الخدمات المساعدة والسلع الطبية 38% من إجمالي إنفاق القطاع الخاص على الصحة.