هـــيئـة الصـحـة بدبـي
DUBAI HEALTH AUTHORITY

HEALTH ACCOUNTS SYSTEM OF DUBAI

HASD 2022


10
سنوات
YEARS

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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 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.

Recognizing this, 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 pertinent initiative. We are pleased to publish the tenth edition of the Health Accounts Systems of Dubai (HASD) that provides a detailed analysis of the health expenditure for the Emirate of Dubai. The 2022 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 analyse 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 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 specialised and accessible care.

المقدمة

عوض صغيّر الكتبي
مدير عام
هيئة الصحة بدبي

تماشياً مع رؤيتنا المتمثلة في بناء مجتمع أكثر صحة وسعادة، فإننا في هيئة الصحة بدبي نسعى باستمرار لتحسين جودة نظام الرعاية الصحية في دبي.

ويتحقق ذلك من خلال وضع وتنفيذ الخطط والسياسات والتشريعات التي تعزز الكفاءة والتميّز وتدعم تحقيق المعايير العالمية في الرعاية الصحية الوقائية والعلاجية والتأهيلية.

شهدت منظومة الرعاية الصحية في دبي خلال السنوات الماضية تطوراً كبيراً في الحجم والتنوع من حيث تمويل وتقديم خدمات الرعاية الصحية. وتماشياً مع مهمتنا، قمنا بعملية الإشراف والمتابعة وتوفير الإمكانات المتاحة لتحسين النظام الصحي بشكل عام في الإمارة لخدمة المرضى من جهة، ومنظومة الرعاية الصحية من جهة أخرى، بداية من العاملين في مجال الرعاية الصحية وصولاً إلى مؤسسات الرعاية الصحية.

يعد تنفيذ السياسات والبرامج المبنية على الأدلة أمراً بالغ الأهمية لتطوير القطاع الصحي، كما يعد توفر البيانات والتحليلات الصحية عالية الجودة أمراً حيوياً لإعداد الخطط المبنية على الأدلة.

ومن هذا المنطلق، تحرص الهيئة بشكل دائم على بناء منصات البيانات الصحية لجمع المعلومات وإنشاء تقارير منتظمة، تساهم في توجيه صناع القرار. وتعد الحسابات الصحية في دبي مثالاً على إحدى هذه المبادرات ذات الصلة.

وفي هذا الصدد، يسعدنا نشر الإصدار العاشر من الحسابات الصحية في دبي (حصد)، والذي يقدم تحليلاً مفصلاً للإنفاق الصحي الخاص بإمارة دبي. ويعتبر تقرير "حصد" (إصدار 2022) انعكاساً للجهود التي تقوم بها دبي لتحسين جودة نظام الرعاية الصحية في الإمارة

في هيئة الصحة بدبي، نسعى جاهدين لضمان إعداد حسابات صحية بكل شفافية وتفصيل عاماً بعد عام من أجل:

- قياس وتحليل الإنفاق الصحي في كلا القطاعين الحكومي والخاص ذو العلاقة بالكفاءة، المساواة، والاستدامة.
- متابعة التأمين الصحي الإلزامي الحالي وتوفير الأدلة الداعمة لتحسين السياسات المستقبلية.
- تمكين كل من الجهة التنظيمية والمستثمرين على حد سواء، من خلال تزويدهم بالمعلومات اللازمة لفهم حجم واتجاهات الاستثمار استناداً إلى بيانات واقعية.

وإننا بهيئة الصحة بدبي إذ نقدر بشكل كبير مساهمة جميع الشركاء، لنؤكد التزامنا بتطوير نظام الرعاية الصحية بشكل ديناميكي في دبي. كما أننا نغتنم هذه الفرصة لدعوة شركائنا للاستفادة من المعلومات الواردة في هذا التقرير لدعم قراراتهم الخاصة بتحسين تقديم خدمات الرعاية الصحية في دبي، للمساهمة في بناء نظام رعاية صحية ديناميكي يقدم أعلى مستويات الجودة من الرعاية المتخصصة التي تركز على المريض وتسهل إمكانية الوصول اليها

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 Organisation'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 2022 report provides an insightful reflection of the healthcare financing indicators for Dubai and charts Dubai's steady progress in increasing health expenditure and enhancing 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 round of health accounts.

الرسالة

صالح الهاشمي
المدير التنفيذي لمؤسسة دبي للضمان الصحي
هيئة الصحة بدبي

"حصد" (نظام الحسابات الصحية في دبي) هو مبادرة دورية رئيسة لهيئة الصحة بدبي تهدف إلى تتبع الإنفاق الصحي العام وتدفق الموارد في القطاع الصحي، حيث يقدم التقرير التفصيلي تحليلاً معمقاً لبيانات الإنفاق الحكومي، والإنفاق المباشر (نفقات الأسرة على الصحة)، وإنفاق أصحاب العمل في القطاع الخاص على الصحة. يتم تنفيذ هذا التقرير وفقاً لأداة نظام الحسابات الصحية لمنظمة الصحة العالمية (SHA 2011).

تطور نظام تمويل الرعاية الصحية في دبي بشكل ملحوظ خلال العقد الماضي، حيث شمل هذا التطور عدداً من الجوانب الرئيسية مثل بدء التغطية الصحية الشاملة، بهدف الاستثمار في بناء نظام تأمين صحي قوي بالتعاون مع شركائنا من أجل استدامة تخصيص الموارد المتزايدة مع الوقت والحفاظ على الموارد المالية وسهولة الحصول على خدمة الرعاية الصحية وفي الوقت المناسب. يقدم هذا التقرير الأدلة الضرورية لرصد السياسات الحالية وصياغة خطط التمويل الصحي وتخصيص الموارد للاستثمار الاستراتيجي في مجال الصحة.

لا يقتصر دور "حصد" على تحسين الشفافية والكفاءة في إدارة النفقات الصحية فحسب، بل يحدد أيضاً الأولويات الصحية والبحثية اللازمة ويشجع على التطوير والدراسات في مختلف المجالات.

يقدم تقرير "حصد" 2022 انعكاساً عميقا لمؤشرات تمويل الرعاية الصحية لدبي، ويرسم التقدم الثابت الذي تحرزه دبي في زيادة الإنفاق على الرعاية الصحية، وتعزيز فهم النطاقات التي يتم الاستثمار فيها.

أود أن أعبر عن تقديري للفريق الفني لـ"حصد" الذي قام بعملية جمع وتحليل البيانات الفنية بشكل معمق ليقدم لنا هذه الدراسة الشاملة للحسابات الصحية.

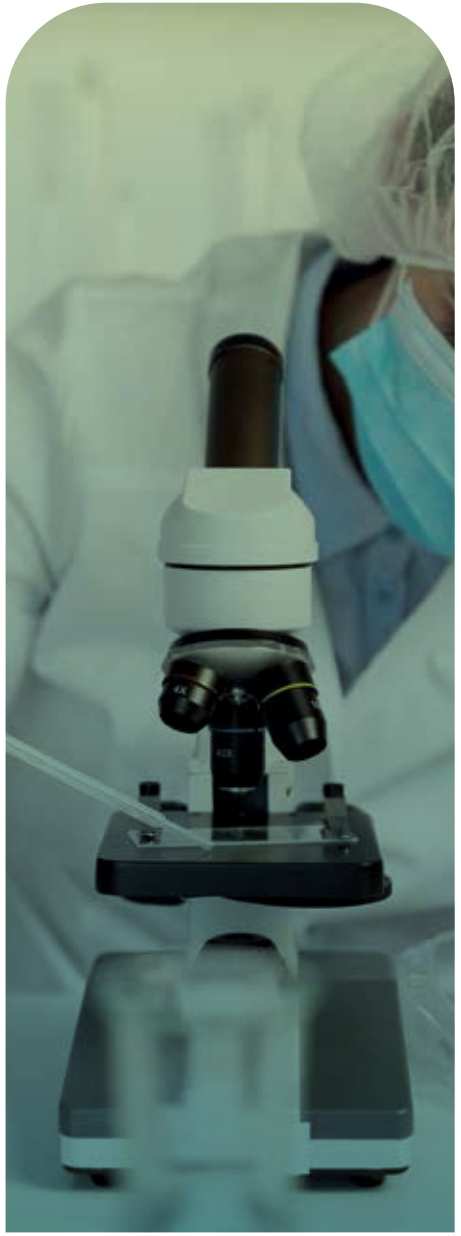
Executive Summary

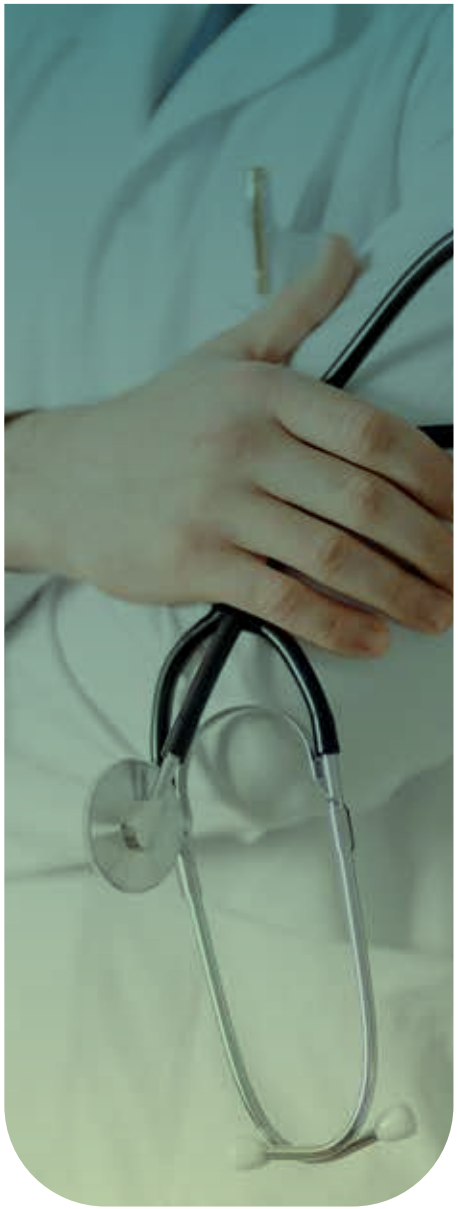
Health accounts is an internationally accepted tool for collecting, cataloguing and estimating financial flows through the health system regardless of the origin or destination of funds. It acts as a tool for monitoring, evaluating and policy formulation, by illustrating the vital information regarding who pays for health, who manages health resources and on which interventions health resources are spent.

Annually, Dubai Health Authority's Dubai Health Insurance Corporation(-DHIC) leads the production of Dubai's health accounts (HASD) and provides factual account of health expenditures by government and private sector by healthcare functions and by healthcare provider type.

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 reports at the state level and requires the definition of population boundaries to accompany each system of health accounts. The boundaries of Dubai's healthcare spending are defined as all healthcare related transactions made by or on behalf of citizens of Dubai or non-citizens with a Dubai work visa regardless of domicile. It also includes their spending that occurs outside the physical boundaries of Dubai. The accounting excludes any healthcare spending by short-term tourists and the healthcare spent inside the physical boundaries of Dubai on behalf of citizens of other Emirates or by non-citizen workers with visas from other emirates.

DHIC has been reporting on health expenditure in Dubai for a decade now as part of preparing the Health Accounts System of Dubai (HASD). This report presents estimates of the amount spent on health goods and services in Dubai for the year 2022 and illustrates the trend over the past ten years.



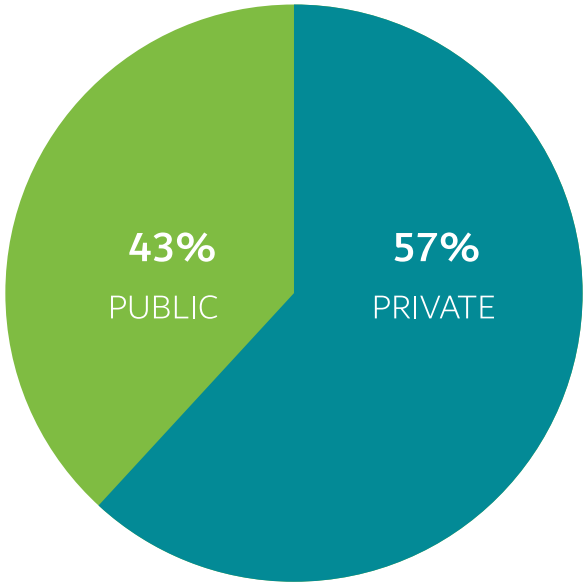


The report estimates are based on the data from e-ClaimLink (a database which includes the claims transaction for all Dubai based policies with details of the service provided and the financial transaction for each service episode), and collation of other data sources capturing health spending by government entities such as Department of Finance (DOF), Dubai Health Authority (DHA) and UAE's 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 2022 was 21.39 B AED (5.2% of GDP), an increase of 1% from the spending in 2021, which was 21.26 B AED.

Per capita health expenditure AED 4,525
(USD 1,233)

In 2022, Government financed healthcare expenditure accounted for 43% of total spending, 9,134 M AED and private healthcare expenditure accounted for 57% of total spending, 12,263 M AED.



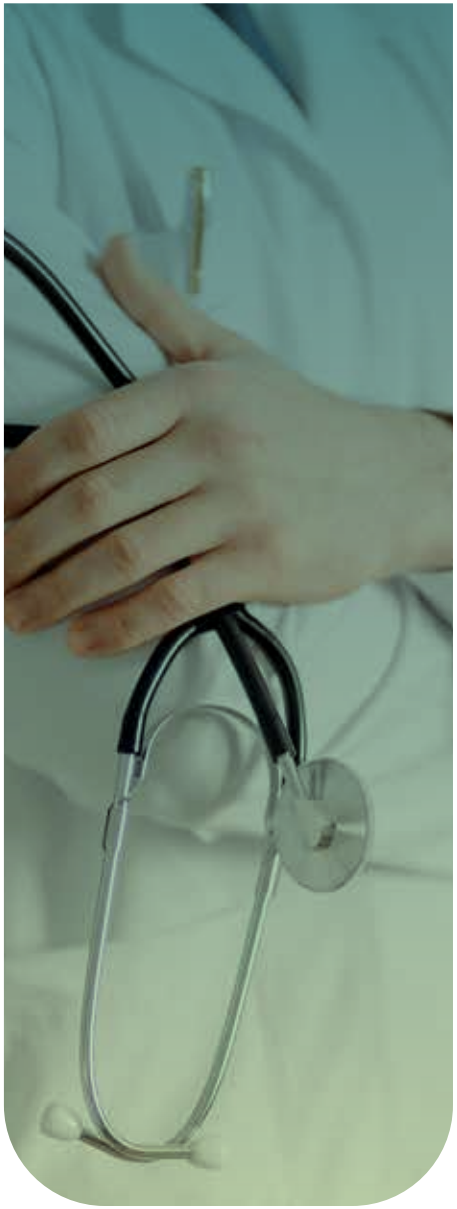
The share of all health spending received by various providers was 52%, 23% and 15% for hospitals, clinics, retail pharmacies and ancillary providers, respectively. The curative care accounted for 61% of the total health expenditure. The total spent on ancillary services and medical goods was estimated at 28%. The spend on preventive care services was estimated at 1%, similar to pre-pandemic years. The total spent on administrative and governance function was 9%. The private insurance spent 36% of their total health expenditure on ancillary services and medical goods.

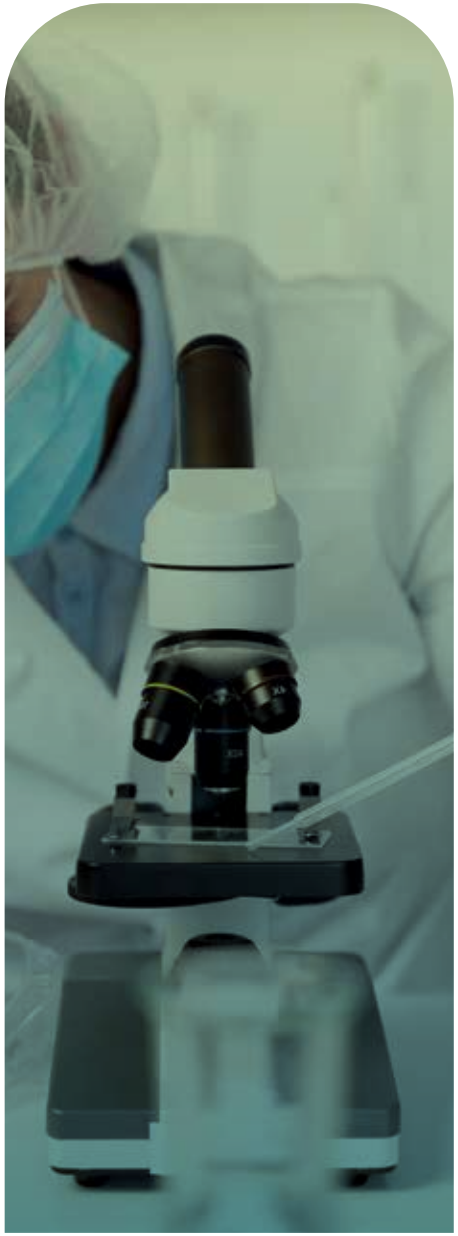
Curative Services **61%**

Medical Goods **15%**

Ancillary Services **13%**

Governance and administrative services **9%**





الملخص التنفيذي

الحسابات الصحية هي أداة متعارف عليها عالمياً كوسيلة لجمع وحساب وتقدير التدفق المالي من خلال النظام الصحي بغض النظر عن مصدر أو اتجاه التمويلات. يعمل "حصد" كأداة للرصد والتقييم وصياغة السياسات، من خلال توضيح المعلومات الحيوية المتعلقة بمن يدفع مقابل الصحة، ومن يدير الموارد الصحية، وماهي التدخلات التي يتم إنفاق الموارد الصحية عليها.

سنوياً، تدير مؤسسة دبي للضمان الصحي التابعة لهيئة الصحة بدبي إعداد تقارير الحسابات الصحية "حصد" وتوفر حسابات واقعية للإنفاق الصحي من قبل الحكومة والقطاع الخاص حسب وظائف الرعاية الصحية وحسب نوعية مقدم الخدمة.

تعتمد تقارير "حصد" منهجية مبنية على التصنيف الدولي لنظام الحسابات الصحية لعام 2011 (منظمة الصحية العالمية، 2011). توضح منظمة الصحة العالمية السبب المنطقي لإعداد تقارير على مستوى الإمارة وتتطلب تعريفاً للسكان بحيث يكون مرافقاً لكل نظام حسابات صحية. كما قمنا بتعريف 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 الإنفاق خارج حدودها باستثناء السياح المقيمين في إمارة دبي لفترة قصيرة، ويستثنى من ذلك أي إنفاق صحي تم نيابة عن مواطني الإمارات الأخرى أو للعمال غير المواطنين الحاملين لتأشيرات صادرة من الإمارات الأخرى.

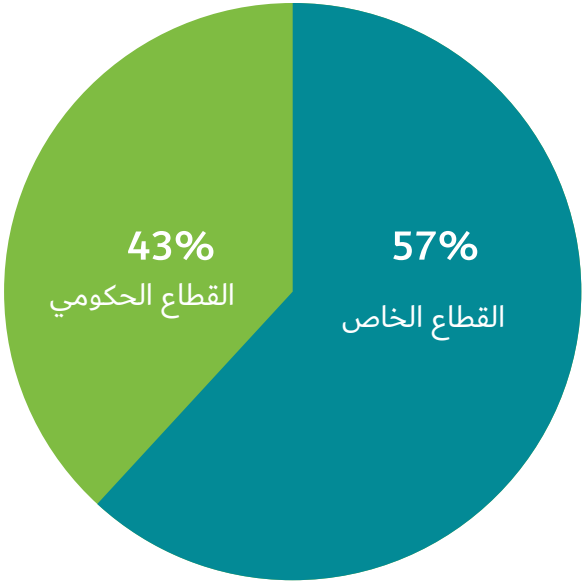
تقوم مؤسسة دبي للضمان الصحي بإصدار تقارير الإنفاق الصحي منذ ما يقرب من عقد من الزمن، تعد هذه التقارير جزءاً من عمليات إعداد نظام الحسابات الصحية في دبي "حصد". يعرض هذا التقرير تقديرات للمبالغ التي تم إنفاقها على السلع والخدمات الصحية في دبي لسنة 2022، حيث يوضح الاتجاه خلال العشر السنوات الماضية. تستند 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) بالإضافة إلى بيانات الإنفاق الصحي التي تقوم بها مؤسسات حكومية مثل: الدائرة المالية، وهيئة الصحة بدبي، ووزارة الصحة ووقاية المجتمع.

تستخدم المعلومات المأخوذة من المسح الصحي للأسر في دبي لتقدير الإنفاق الفردي على الصحة. إن الغرض من ذلك هو استخدام أفضل البيانات المتاحة لتقدير صورة شمولية للمعلومات التالية:

1. المبالغ التي تم إنفاقها على الصحة.
2. الجهة أو الشخص الممول للإنفاق الصحي.
3. مجالات المواد والخدمات الصحية.

في سنة 2022 بلغ إجمالي الإنفاق الصحي الحالي 21.39 مليار درهم (5.2% من إجمالي الناتج المحلي)، أي ارتفاع نسبته 1% من إنفاق سنة 2021، الذي كان 21.26 مليار درهم.

الإنفاق الصحي للفرد
4,525 درهم إماراتي
(1,233 دولار أمريكي)



شكلت حصة كل الإنفاق الصحي التي تلقاها مختلف مقدمي خدمة الرعاية الصحية المعدلات الآتية: 52%، 23% و15% للمستشفيات، والعيادات، وصيدليات البيع بالتجزئة، ومقدمي الخدمات المساندة على التوالي. وشكلت الرعاية العلاجية 61% من إجمالي الإنفاق الصحي. تم تقدير إجمالي الإنفاق الصحي على مقدمي الخدمات المساندة والمواد الطبية بنسبة 28%، كما بلغ الإنفاق على الرعاية الوقائية معدلاً قدره 1%، على غرار السنوات ما قبل جائحة كوفيد-19. خصصت الحكومة 9% من إجمالي إنفاقها الصحي على المهام الإدارية والحوكمة. وبلغت حصة إنفاق القطاع الخاص على الخدمات المساندة والسلع الطبية 36% من إجمالي إنفاق القطاع الخاص على الصحة.

الرعاية العلاجية (**61%**)
المواد الطبية (**15%**)
الخدمات المساندة (**13%**)
المهام الإدارية والحوكمة (**9%**)

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Since its original publication by Organisation for Economic Co-operation and Development (OECD) in 2000 and subsequent revision in 2011, A System of Health Accounts has become the global standard in health expenditure accounting and has become indispensable in countries' efforts to track the financial resources from sources through to uses in the health system. A System of Health Accounts 2011 allows for an in-depth analysis of health expenditure and financing and provides policy relevant international comparisons, from revenue-raising through to the purchasing of healthcare for the population. The development of the framework reflects the reality and evolving complexity of financing in healthcare systems around the world, particularly in the mix of public and private funding of health insurance and enables more policy-relevant comparative analysis.

The regular and sustained production of health expenditure and financing information is essential as societies undergo change in response to changing demographics and disease patterns and rapid technological advances, to name but only a few factors. Furthermore, in times of acute health emergencies, such as the Covid-19 pandemic, timely and accurate information on changes in financing and delivery has come to a fore as population healthcare needs adapt rapidly. In the longer term, in striving towards common healthcare system goals of equity, efficiency and financial protection, the availability of reliable and timely health financing information is paramount both for international benchmarking and national objectives.
In releasing its latest HASD report, the Dubai Health Authority (DHA) has achieved an important milestone; ten years since the launch of its first health accounts report in 2012. During this time, Dubai's healthcare system has significantly evolved in terms of financing and provision, and the need to track policy changes and monitor performance of the Dubai health care system has become all the more important. The establishment of universal health coverage, plus reforms in the purchasing of inpatient and day-case services, and the creation of special funds to finance services for those on low incomes all require the requisite information to gauge the impact of these important policies.

This latest report together with the previous seven rounds of HASD provide a clear illustration of the interaction of government, private and household spending on health over the years, and show the distribution across the range of healthcare functions and providers. Together with non-financial information, the HASD offer policy-makers and analysts the tools to examine the performance of the health system of the Emirate of Dubai. For example, regarding the key policy objective of financial protection of the population, the regular production of the HASD shows that Dubai ranks among the lowest compared to other member states in the Gulf Cooperation Council (GCC) and OECD countries in terms of household spending on health as a share of overall health expenditure.

More recently, the Covid-19 pandemic has brought a number of acute challenges to the Dubai health system – in common with countries around the globe - with an urgent need to mobilise additional funds to address the sudden surge in healthcare demand and finance the efficient roll-out of the vaccine to the whole population of Dubai. Information from the HASD reveals that during this period, government funding increased significantly to meet these population needs, with significant increases, for example, in prevention spending.

The Dubai Health Insurance Corporation (DHIC), together with key stakeholders, has succeeded in establishing robust tools, such as the Dubai Household Health Survey (DHHS) meeting international standards and definitions and detailed administrative data sources, such as the eClaimlink data, to provide a comprehensive and accurate picture of how much is spent on health by who, and on what types of goods and services. The sustainability and further refinement of the HASD can be considered as a cornerstone in efforts to deliver quality health data to help further enhance the development of a dynamic and modern health system for the people of the Emirate of Dubai.

KeyNote Authors

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For more than 30 years, the National Health Accounts have been widely used to track health financing and expenditure in more than 190 countries and provided a systematic approach to analyze trends over time and allow for consistent comparisons across countries and regions. In addition, NHA provides detailed categorization of expenditures into public and private sources of revenues, as well as the different functions of health financing, such as prevention, treatment, and administration.

In the MENA region, about 15 countries adopted the NHA until 2018. Among the Gulf Cooperation Council (GCC) countries, Saudi Arabia had the first NHA in 2008, followed by Qatar in 2011, but the Emirate of Dubai was the first to pioneer the preparation of NHA at the subnational level in 2012, not only among the GCC countries but in the MENA region, which reflects the clear vision of its leadership to get robust financial evidence to guide its policy decision. Only a few NHA studies have been conducted at a subnational level globally. An effort that I commend the Dubai Health Authority for starting and sustaining it.

In its tenth edition, the Health Accounts System of Dubai 2022 report reveals very interesting findings about the Emirate health financing system and its Universal Health Coverage (UHC) mission.

Countries that strive to achieve Universal Health Care usually find it easier to expand coverage to new population groups or increase the level of services provided to its population. Improving financial protection however, is usually the hardest policy option to pursue as almost one third of national health expenditures, globally, is covered by out-of-pocket expenditures, but in the case of the Emirate of Dubai, household spending decreased from 18 percent in 2015 to 10 percent in 2022, thus further reducing the burden of out-of-pocket spending and improving financial protection for its population. This is among the lowest compared to selected OECD and GCC countries.

The report is a rich source of financial information for researchers and policy makers and the next challenge is to expand it further by linking the financial data to service delivery utilization to assess the efficiency of health spending. It is equally critical to demonstrate how NHA results shape policy decisions and allocation of resources through additional policy briefs and analytical products. As a pioneer in the UAE, a second area is to transfer the knowledge and know-how to other Emirates.

I look forward to the wider dissemination of this report and the subsequent rounds of NHA reports to further strengthen the heath system and improve health outcomes of the population of the Emirate of Dubai.

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Population Level Preventive Public Health Spending in NHAs
National Health Accounts (NHAs) have shown their value in tracking growth trends in spending in the health sector. They can help analysts decompose the types of services, age groups, and conditions driving trends and they can indicate the response of cost growth to various policies.

The pandemic years dramatically highlighted spending in population level public health spending area that most NHAs typically struggle to measure. Health systems in 2020, 2021, and 2022 spent unprecedented amounts on population level public health preventive efforts while also offering direct medical care for sick people.

During the pandemic, lockdowns led to decreases in utilization for most services while preventive public health spending to control the virus was escalated. The public health workforce undertook extensive efforts in surveillance, COVID-19 testing, quarantine, isolation, contact tracing, communication, and the distribution of personal protective equipment. Then in 2021 the vaccination efforts also deployed thousands of health workers. All of these pandemic control efforts fit into NHA frameworks as code HC 6 and various sub-codes under HC 6.

Now that attention on public health spending has come to the forefront, we must ensure we sustain our focus on preventive healthcare (Viva HC 6). From now on, the benefits of annually reviewing the budgets of all of the agencies that conduct population-level public health activities should be regularly assessed as part of national health accounting. Population health agencies inside government and in NGOs that carry out HC 6 have suffered a syndrome of neglect and fragmentation prior to the pandemic and unless their budgets remain visible there is a high risk that they will once again be ignored.

From now on, there should be no going back. Efforts to include HC 6 spending in all national health accounts will enable wise leaders to ensure that these efforts retain adequate funding and avoid the common cycle of neglect and skill-degradation.

INTRODUCTION

Introduction

In line with the vision of His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, to make Dubai's economy a global benchmark in sustainability and resilience, Dubai noted an exceptional GDP growth in 2022 despite the global economic slowdown and uncertain financial environment worldwide.

In 2022, Dubai's GDP was 414.4 Billion AED, of which AED 21,397M (5.2%) was spent on health.

Healthcare in Dubai is provided by a combination of government and private providers. Dubai Health Authority oversees the health sector in the Emirate of Dubai and regulates the providers, health insurance companies and TPA's. In addition, the Ministry of Health and Prevention (MOHAP), which is the federal ministry overseeing the UAE's healthcare sector also runs and regulates few clinics and hospitals in Dubai.

Dubai's Healthcare financing system has also 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 specialised 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. In addition, the adoption of innovative mode of health service provision, primarily led by the outbreak of the pandemic with its enormous strain on health- service providers, also resulted in further evolution of the healthcare system.

In such an environment, healthcare regulators and policymakers need reliable information sources to monitor the changes and implementation of the

initiatives. HASD acts as a tool which facilitates the same and helps the regulator to enhance the quality of care provided to the population and ensures the provision of accessible, specialised 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 utilisation of resources by healthcare providers, policy-makers can make justified strategic decisions.

It is important to note that the HASD is not only a tool for policymakers in the decision-making process but also is an important tool for policymakers as well as for research specialists and the public to evaluate the outcomes 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.

With the release of HASD 2022, DHA has completed ten years of producing health accounts. All these rounds of health accounts were based on System of Health Accounts 2011 (SHA 2011) framework.

This report presents the health account estimates for the year 2022. It determines the contribution of stakeholders in financing and delivery of healthcare. It illustrates the ten year trend of distribution of healthcare expenditure by financing sources, agents, providers and functions and it highlights the significant impact of mandatory health insurance.

Methodology

Data Collection Strategy

Dubai's healthcare 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 providers 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 whereas a small portion of health services are 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)

DHA's HASD's technical team contacted DOF to obtain the health expenditure data of Dubai police and Dubai Ambulance. The data received included a detailed breakdown of expenditure and funds based on the Dubai Government Chart of Accounts, which includes the cost centres 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 amount paid towards health insurance claims for government employees distinguishing clearly between the funds paid towards insurance premiums and healthcare claims. The data was adjusted based on claims data for government schemes in e-ClaimLink data. DOF data didn't indicate which providers and health services were used.

Dubai Health Authority (DHA)

DHA's finance department provided the data on total healthcare spending by DHA, which was used to analyse and map DHA activities to HASD
DHA Expenditure Dataset: Detailed government expenditure data was collected from DHA by cost centre by each item definition and by sector. The cost centre data was classified in healthcare functions (inpatient, day-case and outpatient) based on the healthcare utilization data published by DHA health information and statistics department.

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 centres located in Dubai. MOHAP healthcare utilization in Dubai was used to analyse 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 2022 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 was 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 labour 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 minimize any chance of the skewness of the data. The 2018 estimates were then used to extrapolate to 2022 by adjusting for inflation i.e. CPI and population growth assuming that the proportion of each type of household remained constant. Additional adjustment was made to account for change in behaviour of utilizing healthcare post-pandemic.

Appendix A details the methodology of 2018 DHHS

Population boundaries for HASD

The population in Dubai is classified into the following groups:

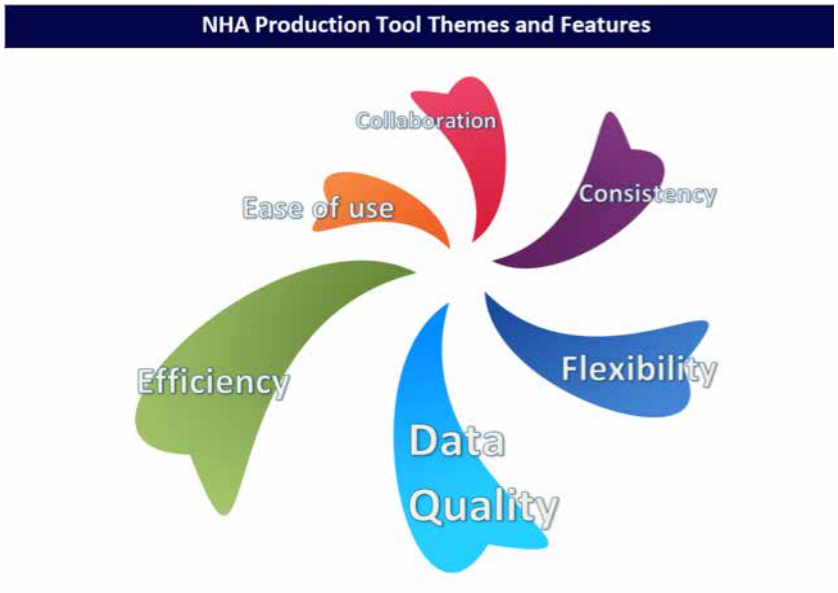
1. Nationals in the Emirate of Dubai
2. Non-Nationals with employment visas from Dubai and residence inside Dubai
3. Non-Nationals with employment visas from Dubai and residence outside Dubai
4. Tourists who visit Dubai

However, the healthcare 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 the 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 the 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 reduces the time to generate health accounts matrices.



Limitations

HASD estimates typically rely on the information collected by public and private organisations for other purpose and access to accurate 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. 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 organised.

Results of HASD 2022

Table 1. Health Accounts Summary Indicators for 2022

	Indicators	2022
1.	Health expenditure (HE) % Gross Domestic Product (GDP)	5.2%
2.	General Government Expenditure on Health (GGHE) as % of GDP	2.2%
3.	General Government Expenditure on Health (GGHE) as % of HE	43%
4.	Private Expenditure on Health (PvHE) as % of HE	57%
5.	Out-Of-Pocket expenditure as % of HE	10%
6.	Out-Of-Pocket expenditure as % of PvHE	18%
7.	Private Insurance as % of PvHE	82%
8.	Expenditure on In-patient care as % of HE	24%
9.	Government Expenditure on In-patient care as % of GGHE	24%
10.	Prevention and Public Health services as % of HE	1.4%
11.	Medical goods as % of HE (not including IP)	15%

	Indicators	2022
12.	Current expenditure on health / capita at exchange rate (NCU per US$)	1,233
13.	Current expenditure on health / capita at Purchasing Power Parity (NCU per US$)	2,774
14.	General government expenditure on health / cap x-rate	526
15.	General government expenditure on health / cap Purchasing Power Parity (NCU per US$)	1,184
16.	OOP/ capita at exchange rate (NCU per US$)	126
17.	Exchange Rate (NCU per US$)	3.67
18.	PPP 2022(NCU per US$)	2.25
19.	Gross domestic product - Million AED (Constant Prices)	414,489
20.	Financial Population*	4,728,750
21.	Current Health Expenditure – Million AED	21,397

*The estimate of financial population is derived based on the data from Dubai Statistics Centre and the member data from insurance companies. (Dubai Insurance covered Population/HASD Population)

Sources and flow of funds

In 2022, the biggest source of funds and financing schemes were employers, who accounted for 47% of funds followed by the government and households who accounted for 43% and 10% respectively. In terms of flow of funds, hospitals received more than half of the pooled funds (52%) with the majority of funds received by hospitals being used for curative care (61%) which includes inpatient, outpatient and daycare. Healthcare expenditure outside Dubai ("Import") is estimated at 1%.

Figure 1. Flow of Funds

Financing schemes that managed the healthcare expenditure

The current health expenditure increased by 1% from 2021 to 2022. The private employers were the major source of funds estimated at 10,080 M AED (47%) in 2022. The government financing schemes accounted for 9,134 M AED (43%) in 2022. Households out of pocket was estimated at 2,182 M AED (10%) in 2022.
Out of the 9,134 M AED funds managed by the government entities, the major spending was made by the government of the Emirates of Dubai, estimated at 8,819 (97%) while the federal government contributed 316 M AED (3%)
Between, 2018 to 2022 (Figure 2), the government contribution in total health spending increased by 8%. The funding from compulsory health insurance showed a reduction of 6%. 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 2022 (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	**9,134**	**10,080**		**19,215**	**90%**
HF.1.1 Government schemes	**9,134**			**9,134**	**43%**
HF.1.1.1 Central government schemes	**316**			**316**	**1%**
HF.1.1.2 State/regional/local government schemes	**8,819**			**8,819**	**41%**
HF.1.2 Compulsory contributory health insurance schemes		**10,080**		**10,080**	**47%**
HF.1.2.2 Compulsory private insurance schemes		**10,080**		**10,080**	**47%**
HF.3 Household out-of-pocket payment			**2,182**	**2,182**	**10%**
All HF	**9,134**	**10,080**	**2,182**	**21,397**	
Share of HF	**43%**	**47%**	**10%**		

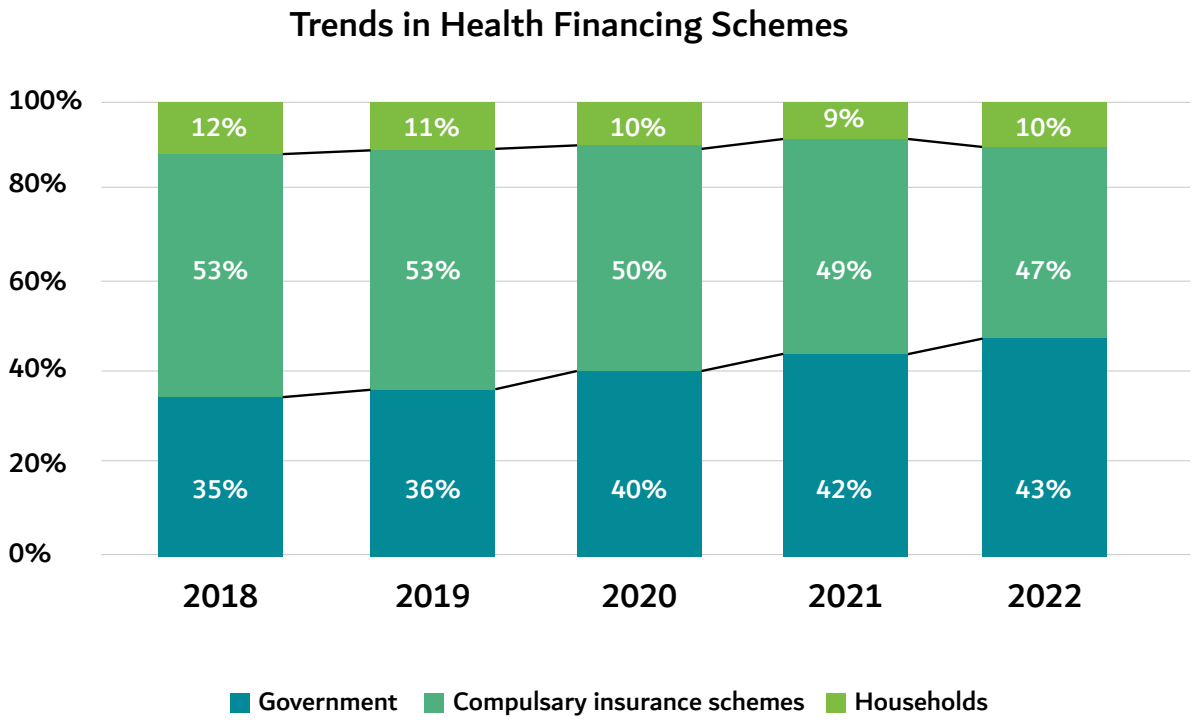
Table 3. Funds of Health Care Financing over Time, Dubai (2018-2022)

Inflow Funds of health care financing schemes (Million AED)	2018	2019	2020	2021	2022
FS.1 Transfers from government domestic revenue (allocated to health purposes)	6,495	6,864	7,721	8,877	9,134
FS.4.2 Compulsory prepayment from employers	9,703	10,198	9,819	10,367	10,080
FS.5 Voluntary prepayment	0	0	0		0
FS.6.1 Other funds from households	2,195	2,212	1,952	2,025	2182
Total	**18,393**	**19,273**	**19,492**	**21,269**	**21,397**

Table 4. Financing Schemes over Time, Dubai (2018-2022)

Financing schemes, Million AED	2018	2019	2020	2021	2022
HF.1.1 Government schemes	6,495	6,864	7,721	8,877	9,134
HF.1.2 Compulsory contributory health care financing schemes	9,703	10,198	9,819	10,367	10,080
HF.2 Voluntary health care payment schemes	0	0	0	.	0
HF.3 Household out-of-pocket payment	2,195	2,212	1,952	2025	2182
Total	**18,393**	**19,273**	**19,492**	**21,269**	**21,397**

Figure 2. Trends in Health Financing Schemes, Dubai (2018-2022)



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

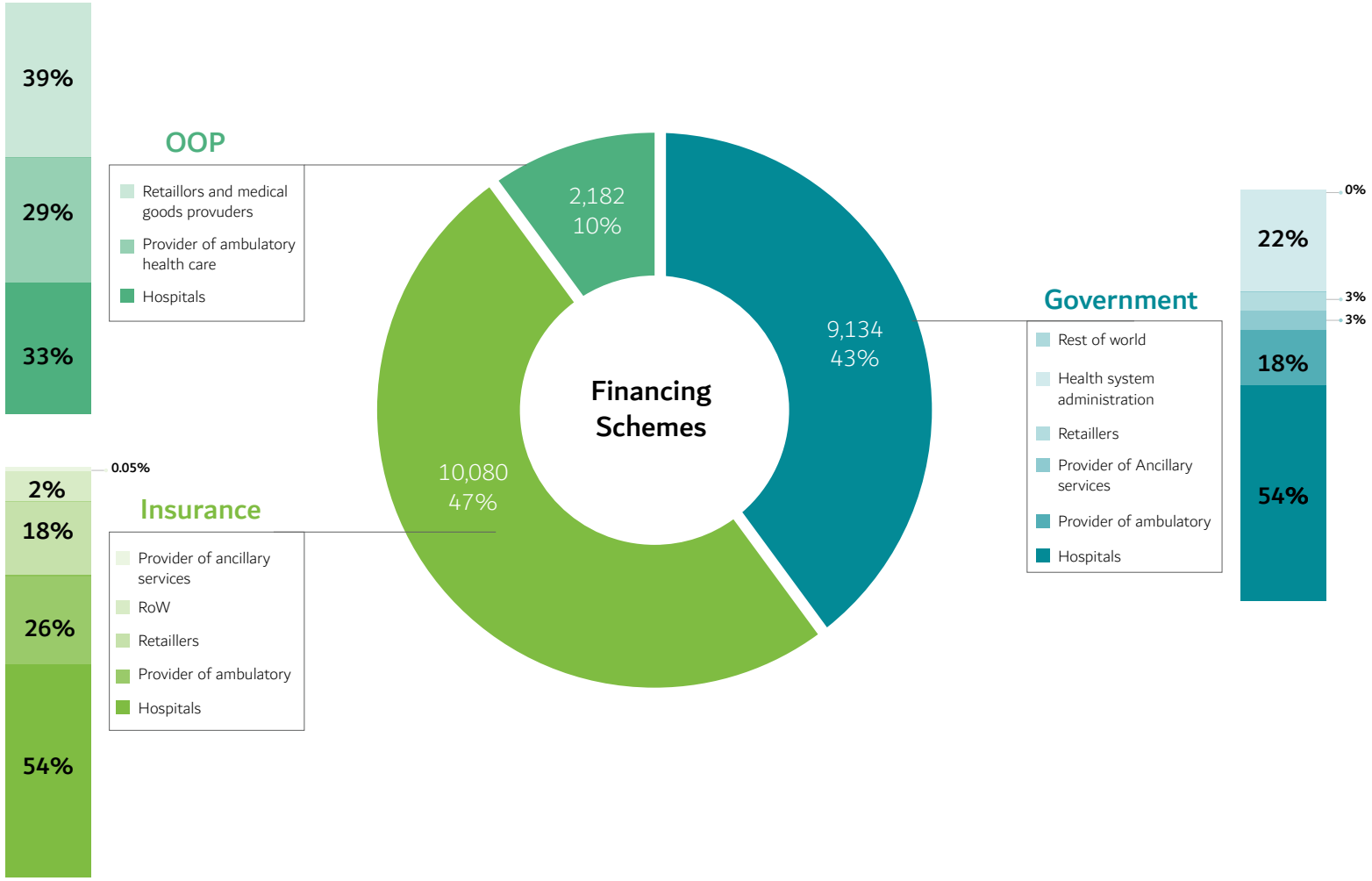
The major amount of current healthcare expenditure for 2022 went to hospitals amounting to 11,058 M AED (52%), followed by the primary health centers 4,943 (23%) Ancillary providers such as medical and diagnostic labs, imaging centers received 293 M AED (1%) while pharmacies received 2,951 M AED (14%). Healthcare governance and providers of healthcare system administration and financing received 1,972 (9%) of the funds.
Households allocated 847 M AED (39%) towards discretionary health care spending. And 179 M AED (1%) 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 (54%) and healthcare system administration (22%) similar to 2021. The private insurance schemes provide a major share of fund to hospitals (54%) and clinics (26%), respectively. The pharmacies received 1,844 M AED (18%) 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 2022 (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	10,348	4,926	230	4,696	5,421	710	11,058	52%
HP.3	Providers of ambulatory health care	4,319	1,679	72	1,606	2,640	625	4,943	23%
HP.4	Providers of ancillary services	293	287		287	5		293	1%
HP.5	Retailers and Other providers of medical goods	2,104	260		260	1,844	847	2,951	14%
HP.7	Providers of health care system administration and financing	1,972	1,972	13	1,960			1,972	9%
HP.9	Rest of the world	179	10		10	169		179	1%
All HP		19,215	9,134	316	8,819	10,080	2,182	21,397	
Share of HP		90%	43%	1%	41%	47%	10%		

Figure 3. CHE by Financing Schemes and Providers, Dubai 2022



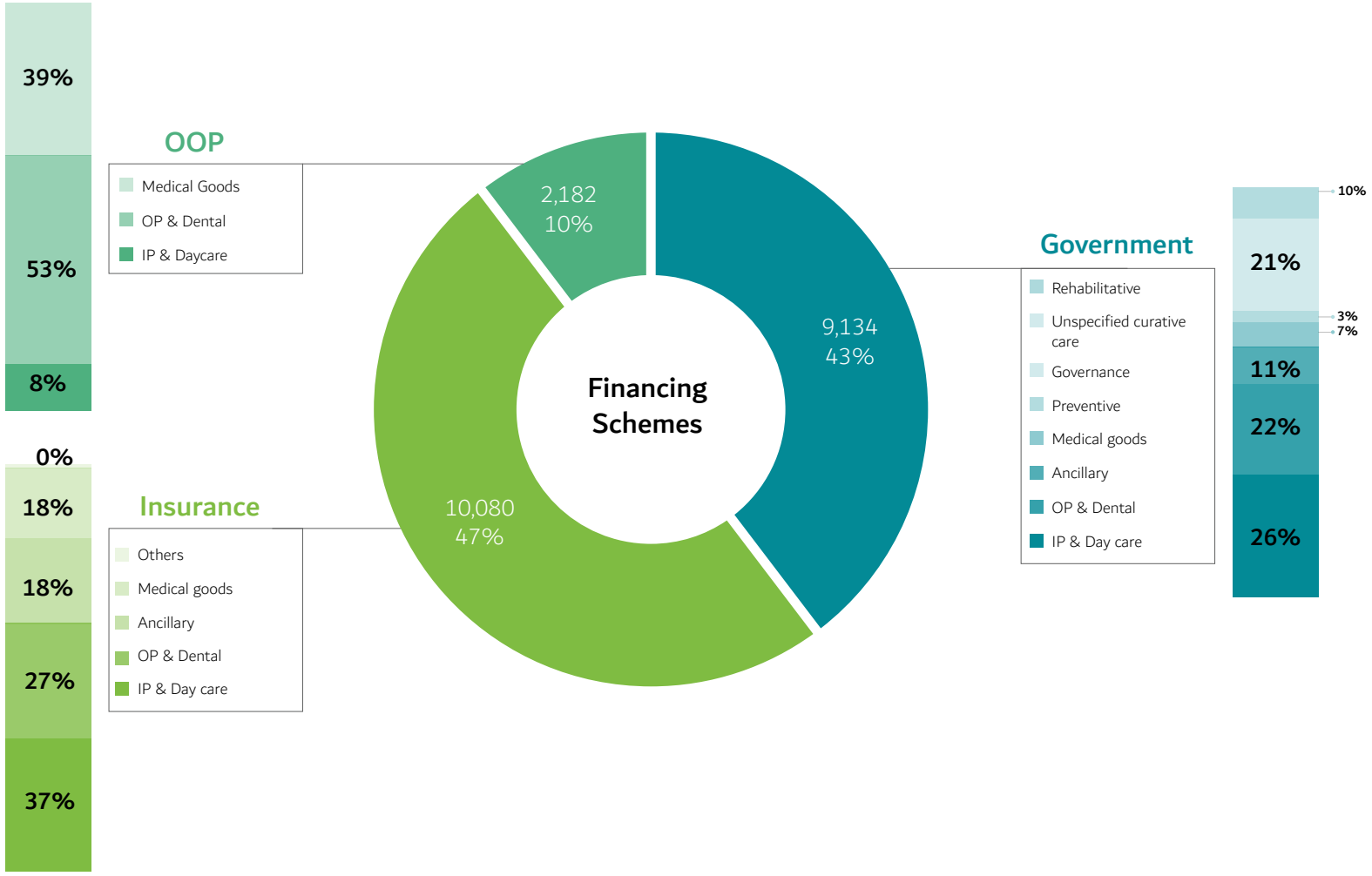
Health services expenditure through the various financing schemes

In 2022, curative care received the biggest share of funds at 13,055 M AED (61%). A breakdown of curative care indicates that inpatient care spending was 5,149 M AED (24%) and outpatient care spending was 5,908 M AED (28%) out of the total healthcare spending (21,397 M AED). Ancillary services spending was 2,781 M AED (13%), medical goods spending was 3,302 M AED (15%) and preventive care spent was 304 M AED (1%). Healthcare governance and administration represented 1,895 M AED (9%).

Table 6. Health Care Functions (HC) by Health Financing Schemes (HF) for 2022 (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	11,720	5,289	123	5,166	6,431	1,335	13,055	61%
HC.1.1 Inpatient curative care	4,971	2,191	57	2,134	2,781	178	5,149	24%
HC.1.2 Day curative care	1,122	210		210	912		1,122	5%
HC.1.3 Outpatient curative care	4,751	2,012	67	1,946	2,739	1,157	5,908	28%
HC.1.4 Home-based curative care	7	7		7			7	0.03%
HC.1.nec Unspecified curative care (n.e.c.)	870	870		870			870	4%
HC.2 Rehabilitative care	34	34		34			34	0.2%
HC.4 Ancillary services (non-specified by function)	2,781	990	11	978	1,791		2,781	13%
HC.4.1 Laboratory services	1,552	528	9	520	1,024		1,552	7%
HC.4.2 Imaging services	1,078	329	3	327	748		1,078	5%
HC.4.3 Patient transportation	26	7		7	19		26	0%
HC.4.nec Unspecified ancillary services (n.e.c.)	125	125		125			125	1%
HC.5 Medical goods (non-specified by function)	2,454	610	168	442	1,844	847	3,302	15%
HC.6 Preventive care	304	304		304	0		304	1%
HC.7 Governance, and health system and financing administration	1,895	1,895	13	1,883			1,895	9%
HC.9 Other health care services not elsewhere classified (n.e.c.)	26	12		12	14		26	0.1%
All HC	19,215	9,134	316	8,819	10,080	2,182	21,397	
Share of HC	90%	43%	1%	41%	47%	10%		

Figure 4. Financing Flows from Financing Schemes and Healthcare Functions, Dubai 2022



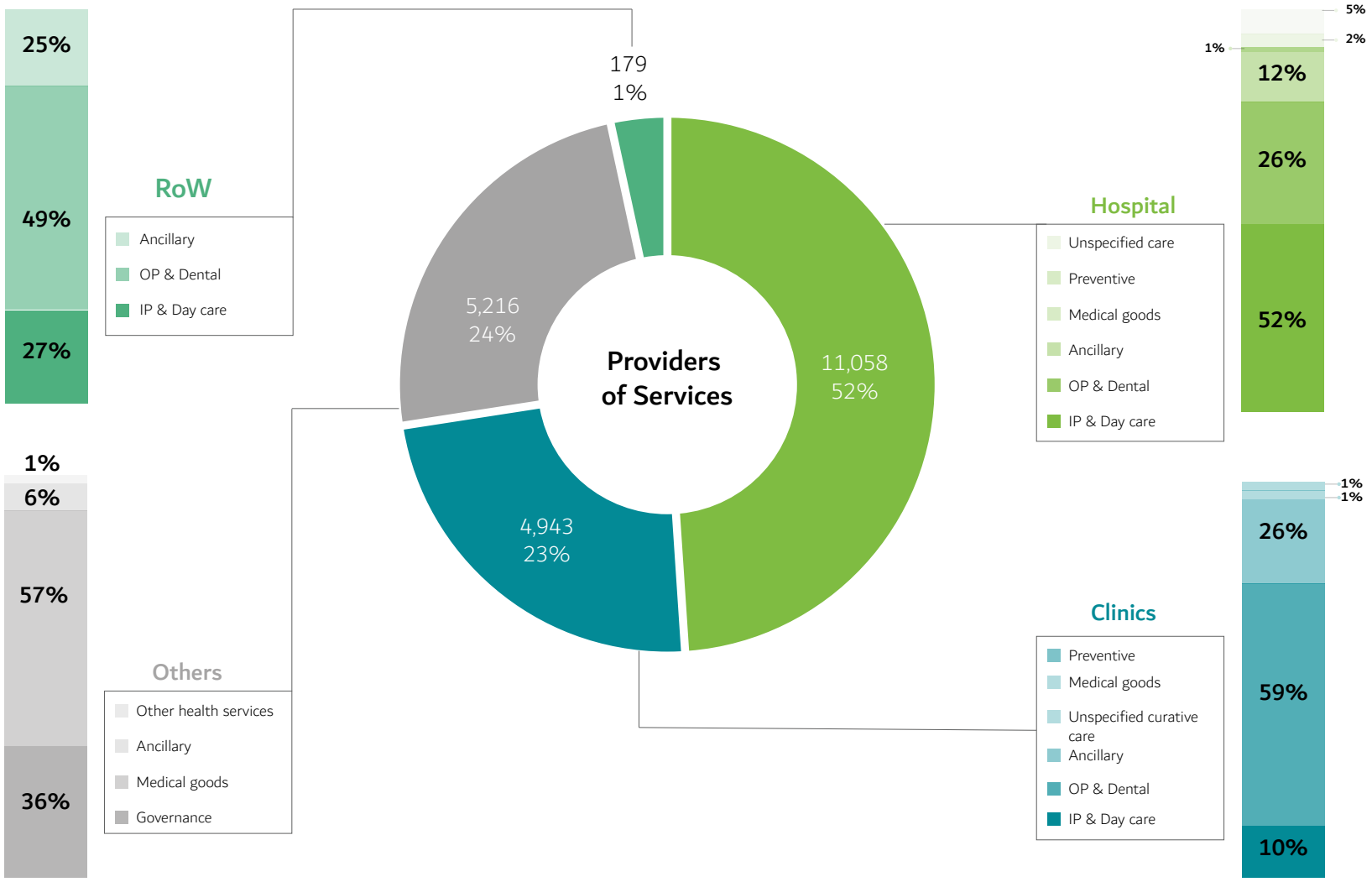
Types of health services that received the health-care expenditure amount through the various health providers

As shown in Table 7, in 2022, hospitals received a total of 11,058 M AED of which 9,318 M AED was spent on curative care, 1,325 M on ancillary services ,240 M on preventive care, and 142 M on medical goods. Primary Healthcare centers received a total of 4,943 M of which 3,525 M was spent on curative care, 1,280 M on ancillary services, 64 M on preventive care and 48M on medical goods. Retailers and providers of medical goods received 2,951 M AED. The Rest of the World provided a wide array of services totaling 179 M AED with majority spent towards curative care (135 M).

Table 7. Health Care Functions (HC) by Health Care Providers (HP) in 2022

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	9,318	3,525			77	135	13,055	61%
HC.1.1 Inpatient curative care	4,758	345			5	41	5,149	24%
HC.1.2 Day curative care	960	155				7	1,122	5%
HC.1.3 Outpatient curative care	2,894	2,926				87	5,908	28%
HC.1.4 Home-based curative care		7					7	0.03%
HC.1.nec Unspecified curative care (n.e.c.)	706	92			72		870	4%
HC.2 Rehabilitative care	29	5					34	0.2%
HC.4 Ancillary services (non-specified by function)	1,325	1,280	132			44	2,781	13%
HC.4.1 Laboratory services	649	866	7			30	1,552	7%
HC.4.2 Imaging services	675	388				15	1,078	5%
HC.4.3 Patient transportation	0	26					26	0.1%
HC.4.nec Unspecified ancillary services (n.e.c.)			125				125	1%
HC.5 Medical goods (non-specified by function)	142	48	160	2,951			3,302	15%
HC.6 Preventive care	240	64					304	1%
HC.7 Governance, and health system and financing administration					1,895		1,895	9%
HC.9 Other health care services not elsewhere classi fied (n.e.c.)	5	21	0				26	0.1%
All HC	11,058	4,943	293	2,951	1,972	179	21,397	
Share of HC	52%	23%	1%	14%	9%	1%		

Figure 5. CHE by Healthcare Providers and Healthcare Functions, Dubai 2022



Major Diagnostic Category

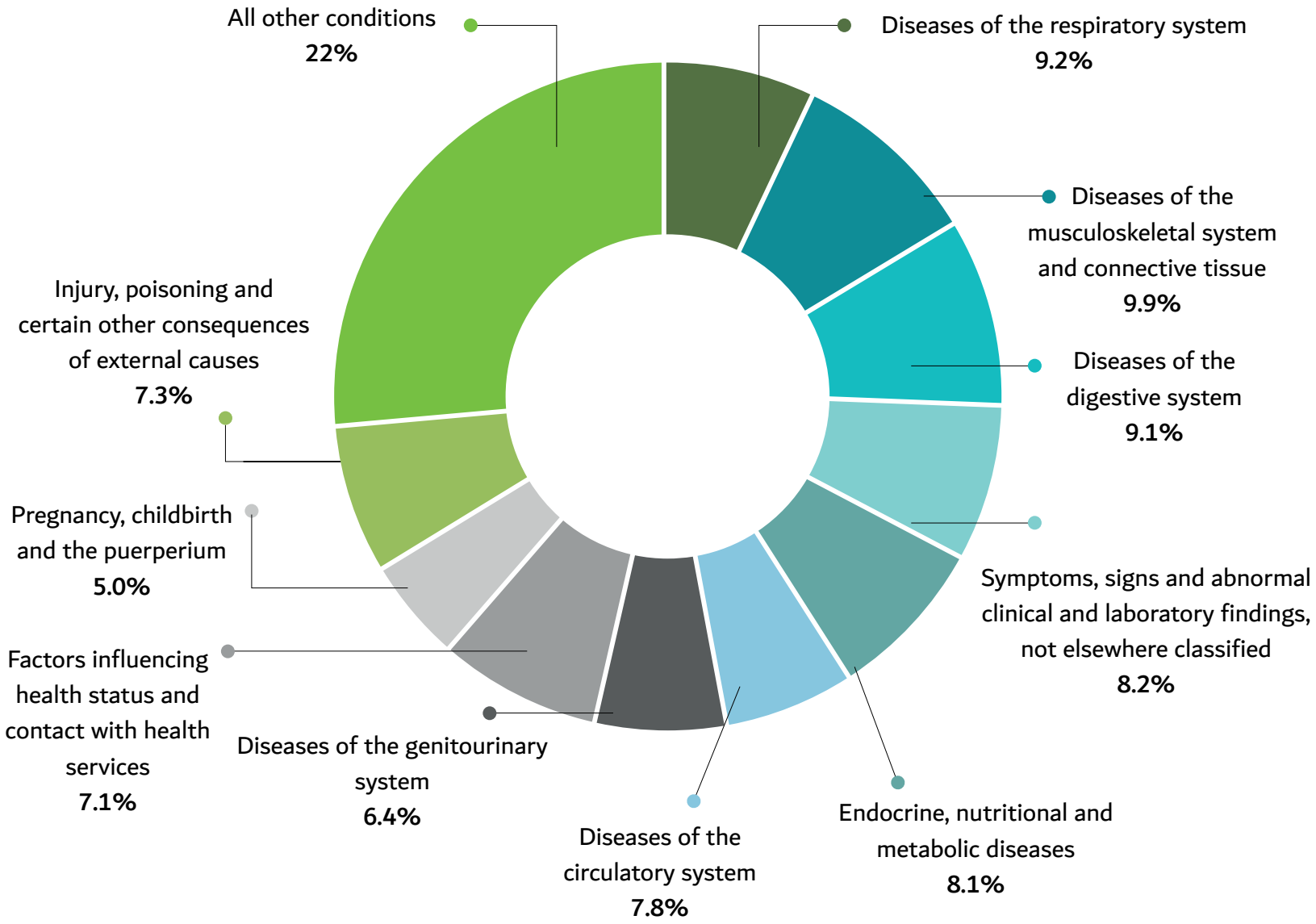
Table 8 illustrates healthcare expenditure by Major Diagnostic Category (MDC's) in Dubai. In 2022, the total net amount spent by MDC's was 14.9 billion AED. The highest expenditure was on two main disease category namely musculoskeletal system (9.9%) and respiratory system (9.2%). The top ten MDC's in Dubai represent 78% of the total net expenditure by MDC's. There was a significant reduction (6%) in expenditure on codes for special purposes with an estimated spent of just 1.2% of total net spent on MDC's.

Table 8.

MDC	Share
Diseases of the musculoskeletal system and connective tissue	9.9%
Diseases of the respiratory system	9.2%
Diseases of the digestive system	9.1%
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	8.2%
Endocrine, nutritional and metabolic diseases	8.1%
Diseases of the circulatory system	7.8%
Injury, poisoning and certain other consequences of external causes	7.3%
Factors influencing health status and contact with health services	7.1%
Diseases of the genitourinary system	6.4%
Pregnancy, childbirth and the puerperium	5.0%

MDC	Share
Neoplasms	3.8%
Diseases of the skin and subcutaneous tissue	3.2%
Certain infectious and parasitic diseases	3.0%
Diseases of the eye and adnexa	2.7%
Diseases of the nervous system	2.4%
Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism	1.4%
Codes for special purposes	1.2%
Diseases of the ear and mastoid process	0.9%
Mental and behavioural disorders	0.8%
Congenital malformations, deformations and chromosomal abnormalities	0.4%
Certain conditions originating in the perinatal period	0.2%
External causes of morbidity and mortality	0.01%

Figure 6. MDC's percentages from total paid amount



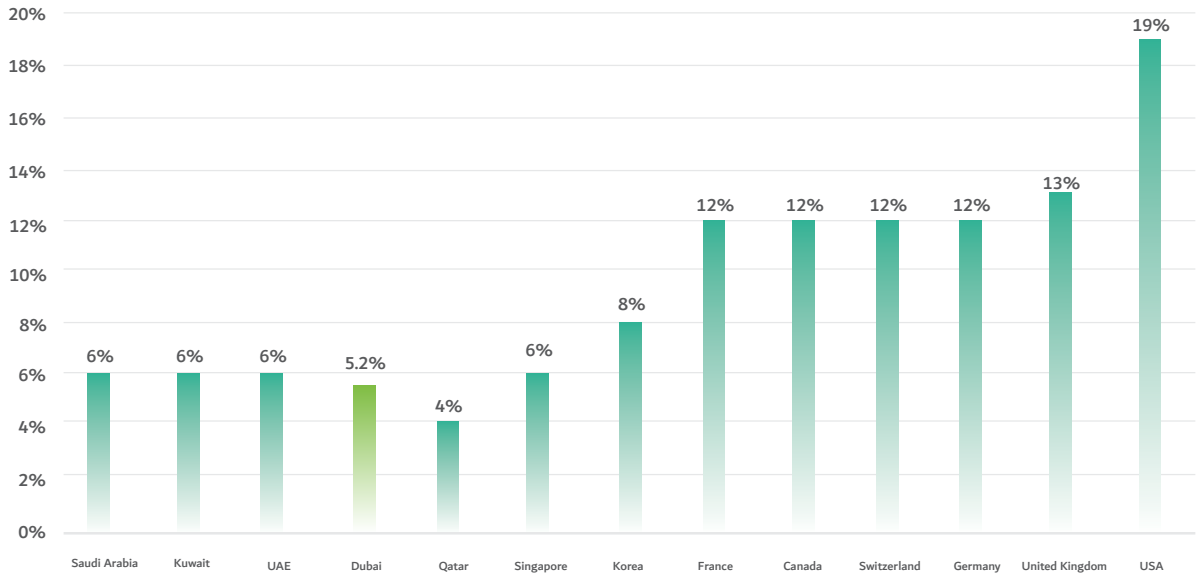
COMPARATIVE ANALYSIS

Comparative Analysis

This section compares Dubai's results with other regional and selected countries from The Organisation 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 (2021) 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 policies in Dubai. Furthermore, the UAE health account indicators are also reflected in below graphs , which are based on the year 2020, the most recent data available for UAE on WHO health expenditure database.

Hence, while comparing the Dubai's health indicators with overall UAE, it is important to account for this difference in years of reported data.
The available data from the other GCC countries providing the closest regional comparison to Dubai's healthcare system are also presented below.

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



CHE as % of GDP

Dubai ranks second among GCC countries in terms of CHE as % of GDP and ranks among the lowest compared to OECD countries

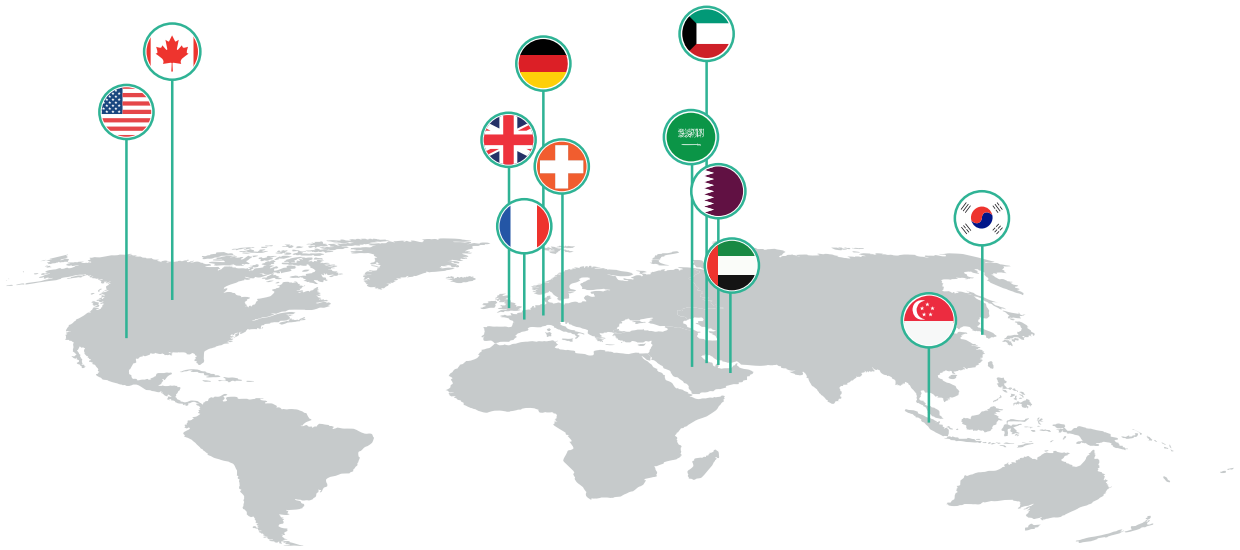
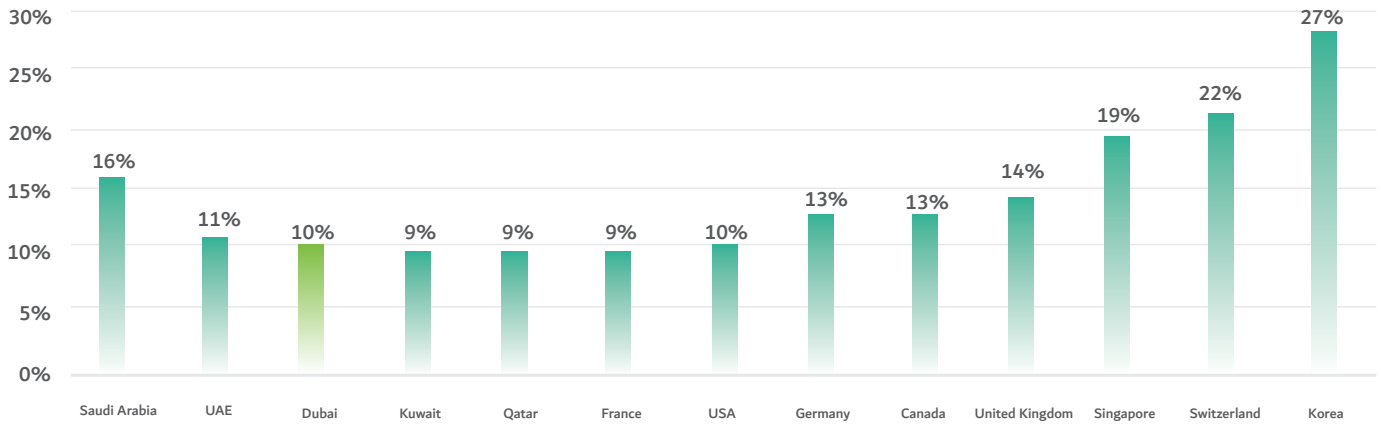


Figure 8. Share of Out-of-Pocket Expenditure of Current Health Expenditure (CHE)



OOP as % of CHE

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

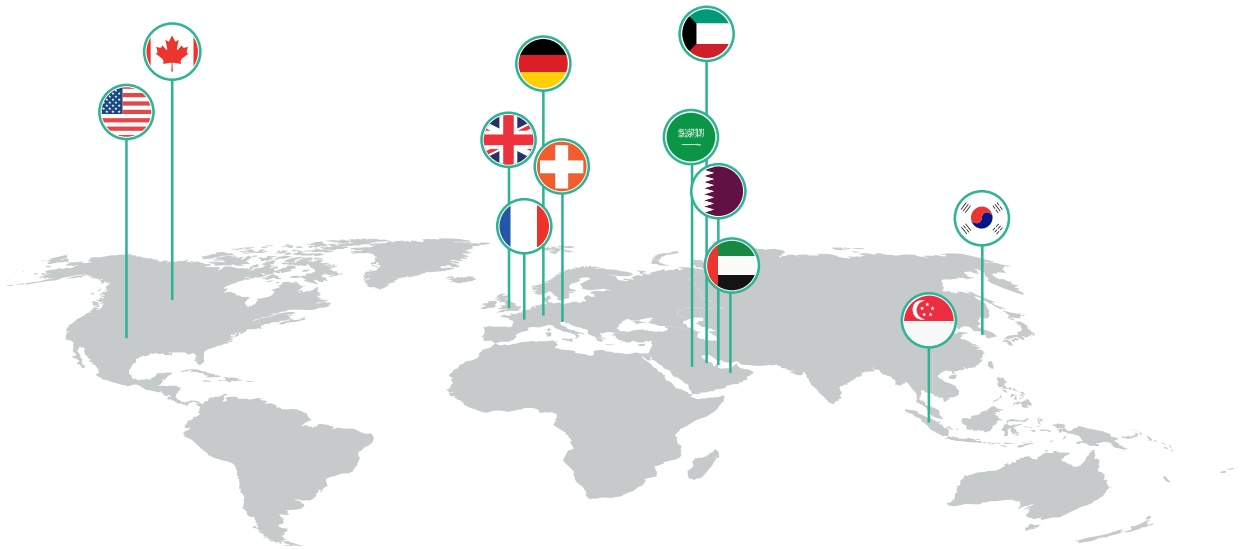
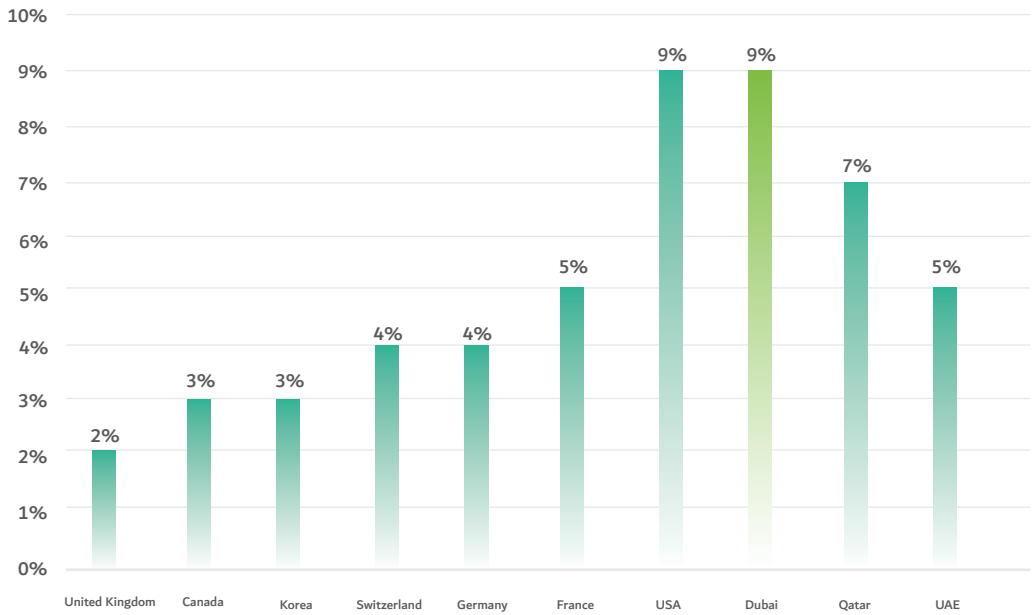


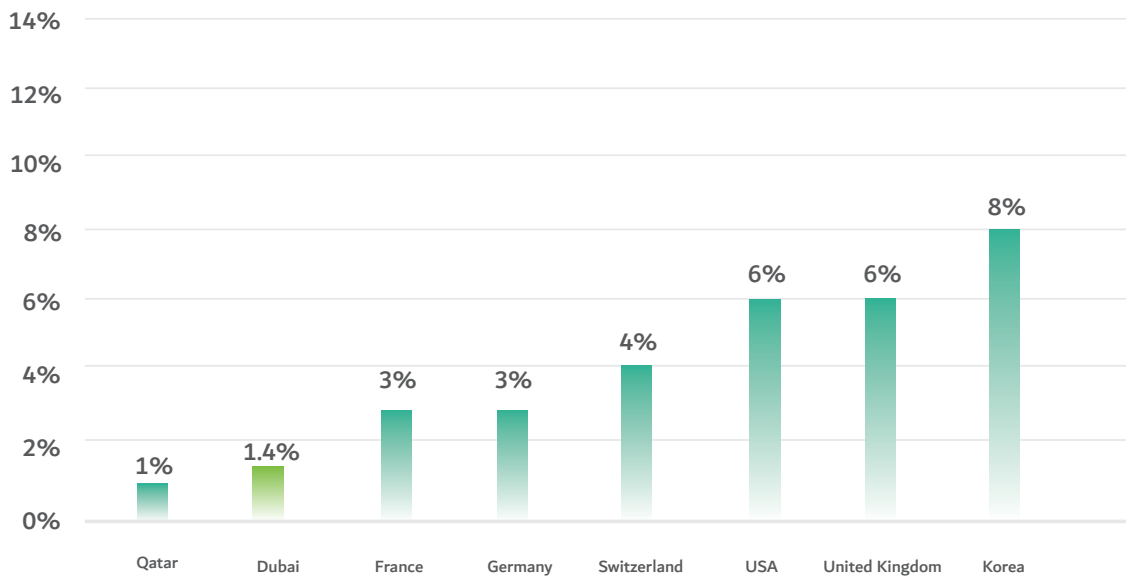
Figure 9. Share of Administration and Financing Expenditure of Current Health Expenditure

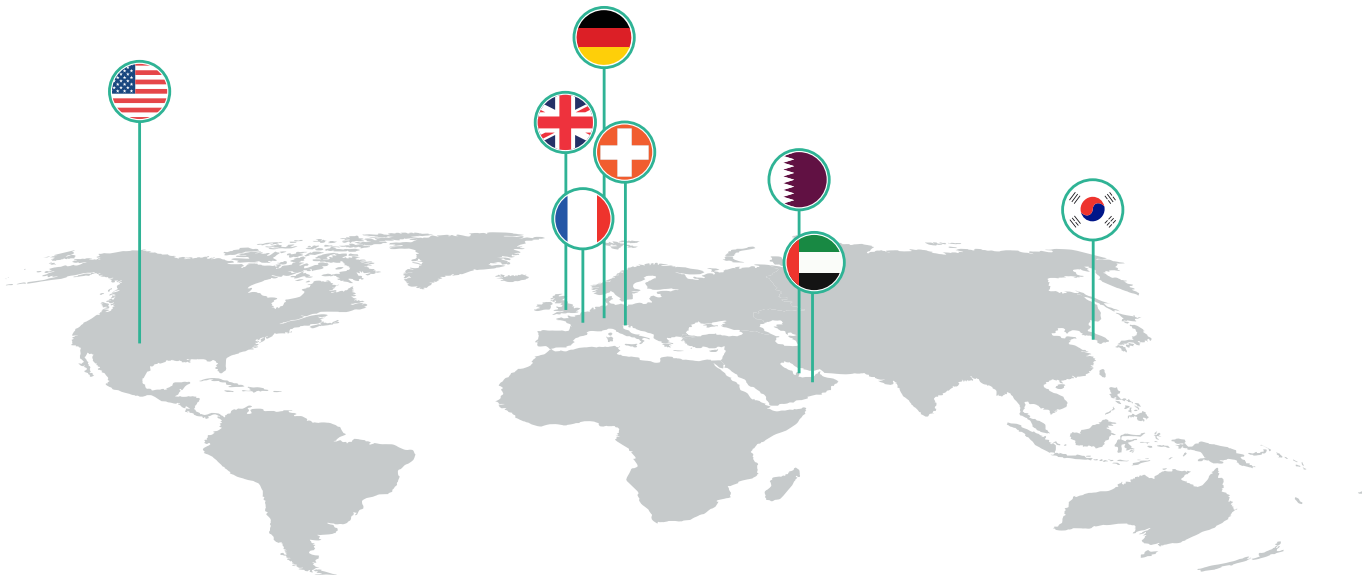


Administrative Expenditures as % of CHE

Dubai ranks among the highest compared to selected GCC and OECD in terms of administrative expenditure as % of CHE countries.

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

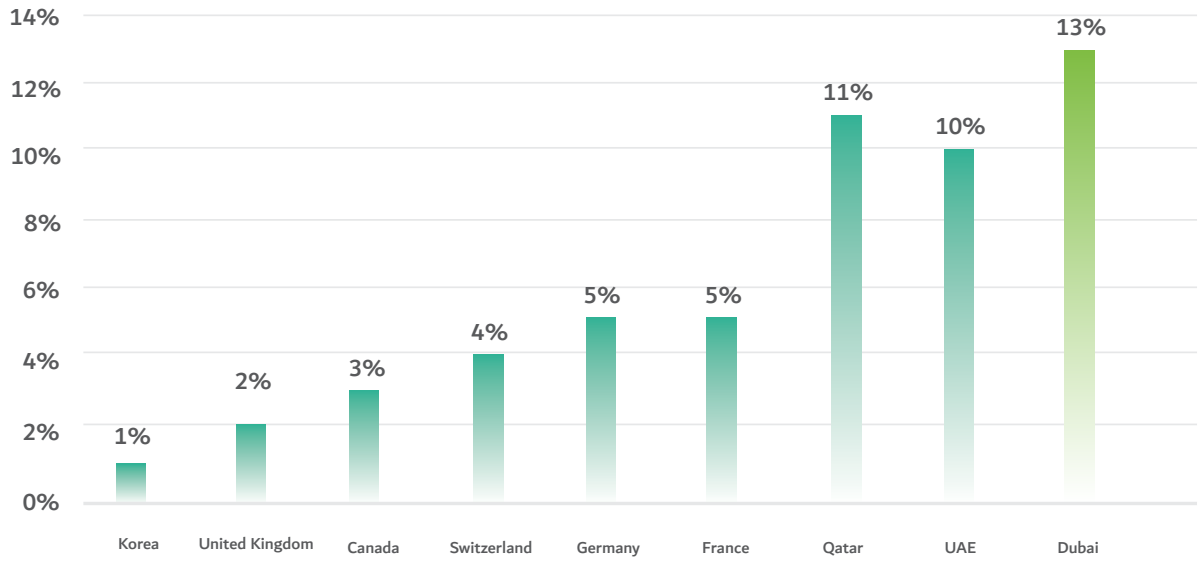




Preventive Care Expenditure as % of CHE

In terms of preventive care spent as % of CHE, Dubai's expenditure remains low compared to few selected OECD countries.

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



Ancillary Expenditures as % of CHE

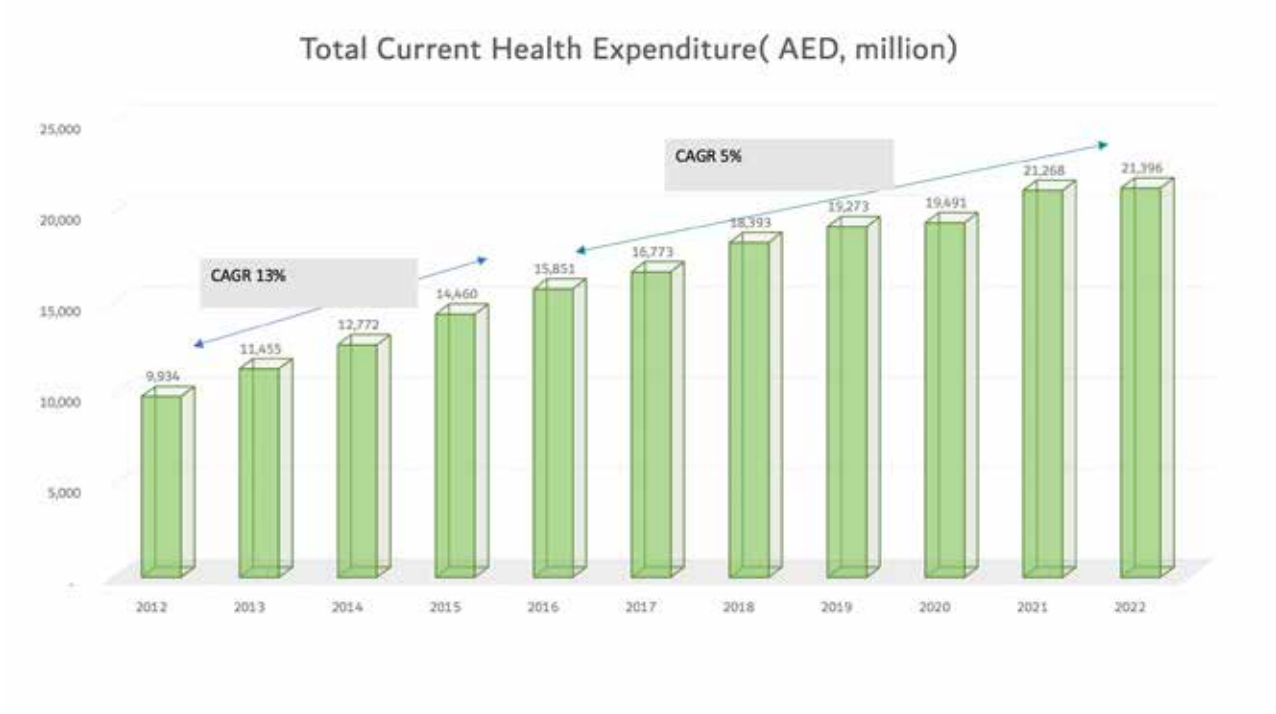
Dubai reports to have highest ancillary services expenditure as % of CHE compared to selected GCC and OECD countries.

Trend Analysis and Impact of Mandatory Health Insurance

The section illustrates the trends of healthcare expenditure in Dubai over the past ten years (2012-2022) and the impact of the change in health financing mechanism with the launch of ISAHD (Mandatory health insurance) scheme in 2014-2015

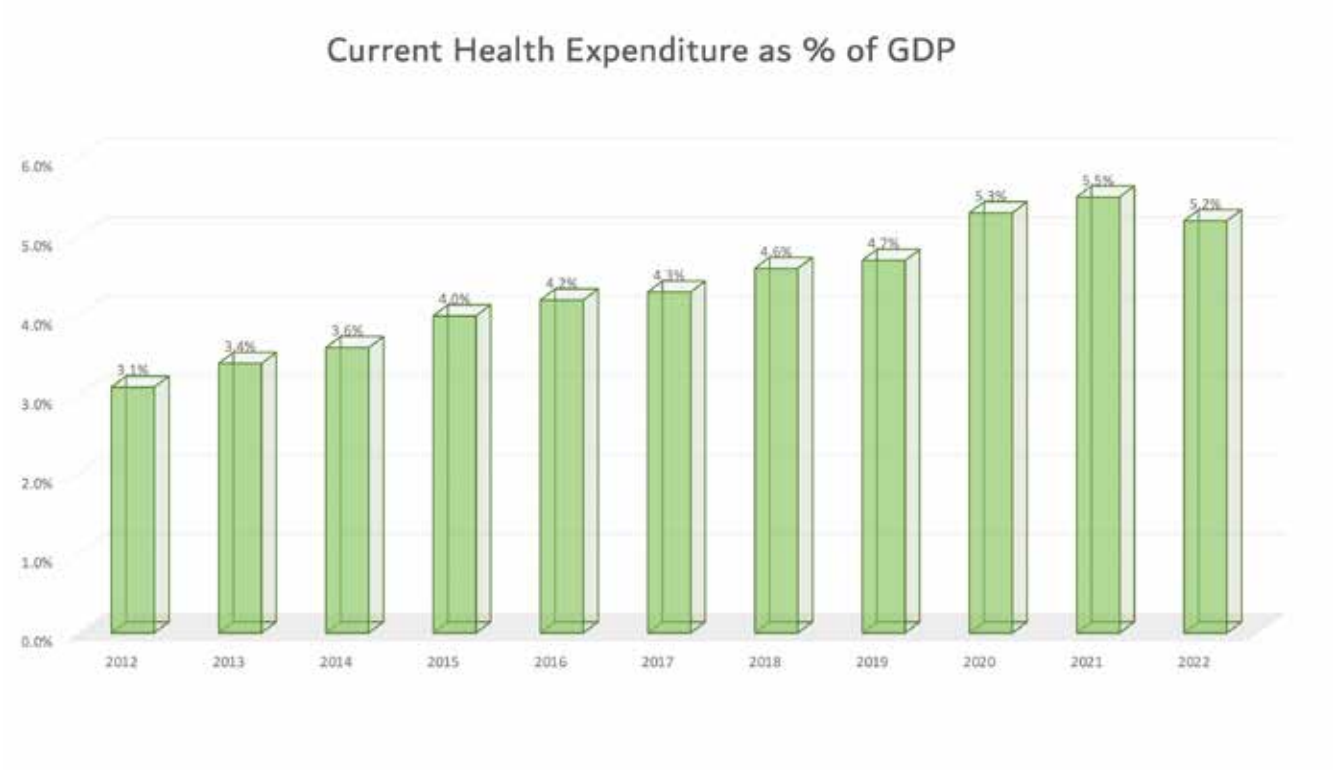
As a result of Dubai's growing population, the increasing prevalence of chronic conditions and the rising costs of delivery of care, Dubai's total current health expenditure has doubled over the past decade with compound annual growth rate (CAGR) of 8%.
Figure 12 shows, during the early years (2012 to 2015), prior to the implementation of ISAHD (Insurance System for Advancing Healthcare in Dubai) the health care spending was increasing at the rate of 13%, however the rate of growth declined significantly (5%) between 2016 to 2022 highlighting the positive impact of the mandatory health insurance (MHI) scheme.

Figure 12. Total Current Health Expenditure (between 2012- 2022)



The trend of CHE as % of GDP shows that the health sector contribution to GDP has been gradually increasing over the past ten years from 3.1% in 2012 to 5.2% in 2022 respectively. However, the year 2020 and 2021, being the years of pandemic stand as an exception and reported sudden increase in CHE as % of GDP with 5.3% and 5.5% respectively.

Figure 13. Current Health expenditure as % of GDP (between 2012- 2022)



The per capita health expenditure has increased at the 3.8% CAGR from 2012 to 2022, primarily led by increase in utilization due to aging population, increase in burden of chronic diseases, surge in the cost of healthcare provision, and adoption of health care innovation and technology. In 2022, the average per capita spent on health was estimated as 4,525 AED compared to 3,118 AED in 2012.

Figure 14. Per Capita Health expenditure in Dubai (between 2012- 2022)

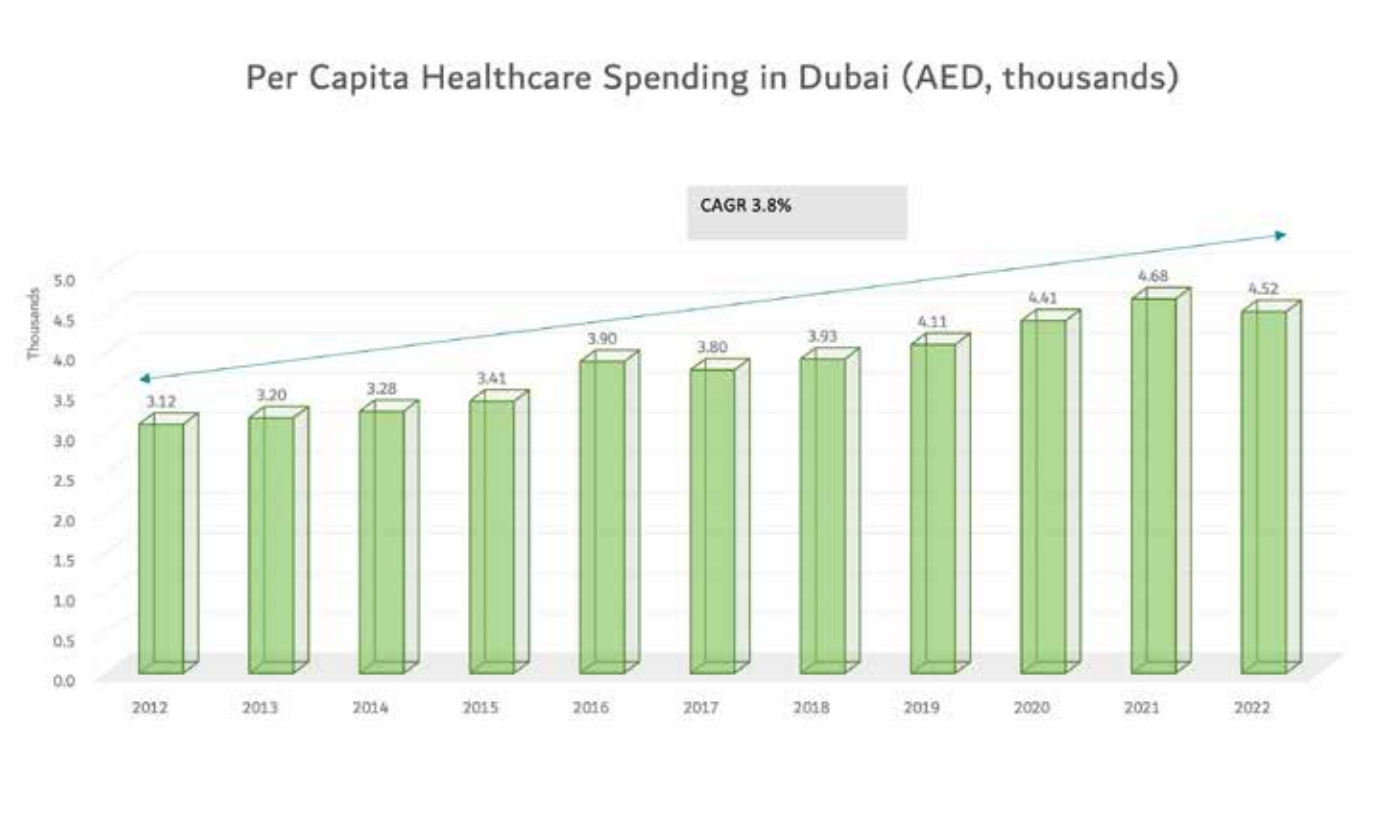


Figure 15 provides the breakdown of current health expenditure by health financing schemes over a ten-year period. The trend highlights the major shift from voluntary insurance scheme to compulsory health insurance in 2015 with the launch of ISAHD (mandatory health insurance) scheme.

In pre-ISAHD era, the out of pocket(household) spending was above 20%, the voluntary health insurance contributed to little above 40% of the total health expenditure and the government health financing was in the range of 33% to 38%.

With the implementation of the Mandatory Health Insurance scheme for the Emirate of Dubai, the out-of-pocket spending declined significantly and has remained between 9% to 12% for past six years.

In the initial years of post-ISHAD era (2016-2019), the government contribution in the total health expenditure reported a gradual decline, matching equivalently by an increase in the share of funds from employers through the mandatory health insurance scheme.

However, in 2020 there was reversal in the trend, with government spending increasing to 40% and it continued to grow with 43% in 2022. This change in trend was primarily led by government playing a major role in pandemic management.

Figure 15. Trends in Health Financing Schemes (between 2012- 2022)

Figure 16 illustrates the trends of healthcare expenditure by healthcare providers. During the pre-ISAHD era, the share of expenditure towards hospitals were in the range of 47% to 49%. With the implementation of the mandatory health insurance, the spending at hospitals declined by approximately 5% between 2016 to 2019, with a corresponding increase in healthcare spent at primary clinics and health centers thus enhancing the role of primary healthcare as frontline healthcare and reducing unnecessary hospital visits. This helps further enhance the provision of accessible and specialised healthcare and further improves the overall care received by the community.

This shift again reflects the successful implementation of mandatory health insurance, highlighting the increase in accessibility and affordability of healthcare.

However, the year 2020- 2021 remains an exception due to outbreak of the pandemic, resulting in a sudden rise in healthcare demand, thus increasing the burden on healthcare service providers, especially hospitals. The upward trend continued in 2022 as well with estimated 52% of the total health expenditure towards hospitals.

Over the past decade there has been a significant decline in the share of health expenditure outside of Dubai. This illustrates that the providers in Dubai have become more financially affordable and accessible due to MHI. Furthermore, there has been a significant increase in the funds spent on retailers and providers of medical goods (7% in 2012 to 14% in 2022).

In addition, there has been a noticeable increase in spending on healthcare administration and financing following the implementation of MHI.

Figure 16. Trends in Healthcare Providers (between 2012- 2022)

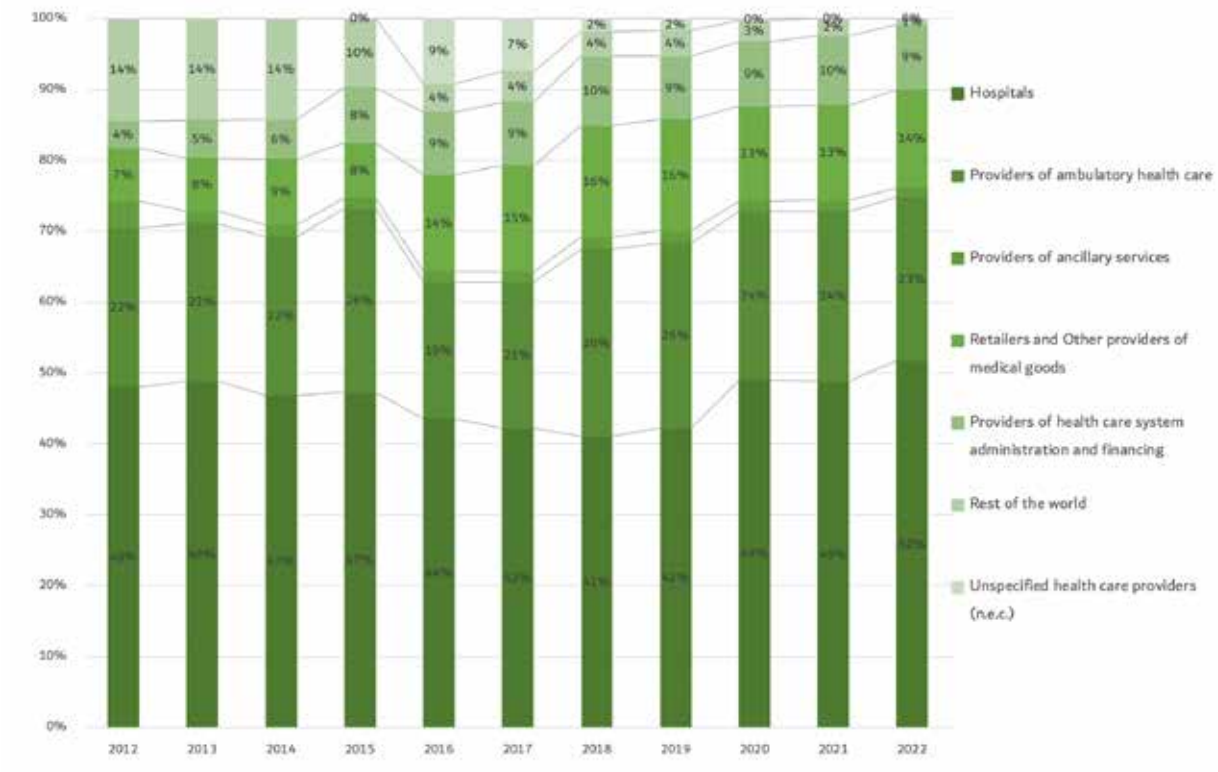
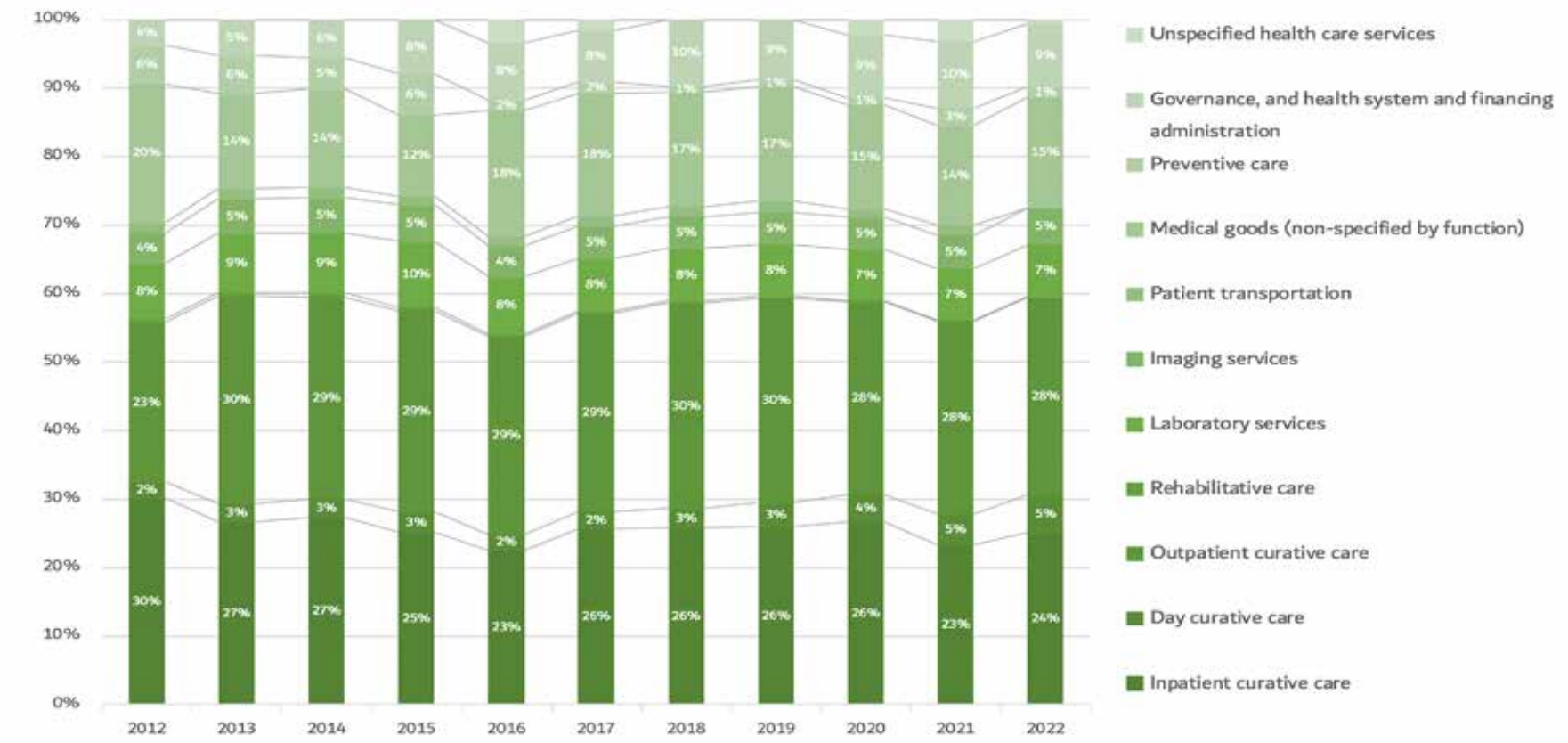


Figure 17 illustrates that the aggregate of 3 categories of curative care (outpatient, day case and inpatient) has accounted for the bulk of healthcare services provided over the last 10 years. The trends of healthcare functions show that the aggregate of these 3 categories of curative care has stayed in the range of 55% to 61% of the total cost. The share of inpatient, outpatient and day case is relatively stable. The appearance of a decrease in preventive care could be attributed to lack of data. It is also important to note that there has been growth in the government's expenditure on governance and financing administration.

Figure 17. Trends in Healthcare Functions (between 2012- 2022)



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, analysed and validated to produce the HASD Report, 2022. 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 organisations for providing vital and sensitive financial information necessary to produce this report. In particular, the following organisation's collaborative efforts are recognized:

- Department of Finance (DOF), Dubai
- Dubai Police, Dubai Ambulance
- Dubai Statistics Centre
- Dubai Health
- Finance Department, Dubai Health Authority
- Dubai private healthcare providers and insurance companies
- Ministry of Health and Prevention (MOHAP), United Arab Emirates
- Emirates Airline

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
- Ms. Kamakshi Gupta, Editorial Review, Corporate Communications and Marketing Department
- 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
DHCA	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	Organisation for Economic Co-operation and Development
OOP	Out-of-Pocket
n.e.c	Not Elsewhere Classified
NCU	National Currency Unit
PPP	Purchasing Power Parity
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.

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.

Definitions

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.

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.

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 2018 DHHS survey was based on a multi- stage stratified cluster sample. The sampling was designed so that after weighting it would be representative of four subpopulations: UAE citizens, Non- citizens living in households, Non-citizens living in collective housing and Non- citizens living in labour 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 Organisation'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 labour 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 utilisation. 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 Sheikh Hamdan bin Mohammed 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 organisational structure of Dubai Health Authority (DHA). The Corporation helps regulate the insurance market, creates a conducive environment for growth and helps 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' (TPA's) in mind.

The corporation also licenses and regulates 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.

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