IQVIA Quarterly Pharmaceutical Market Outlook

Quarterly Report: August 2023
Data Month Ending: June 2023

European Thought Leadership

IQVIA Quarterly Pharmaceutical Market Outlook

+ Global Adult Vaccination Trends
+ Deep Dive into COVID-19 Vaccination
+ Channel Preference Survey 2023 Results
+ New Active Substance, plus Innovative Launch Analysis
+ Medicine Demand and Supply
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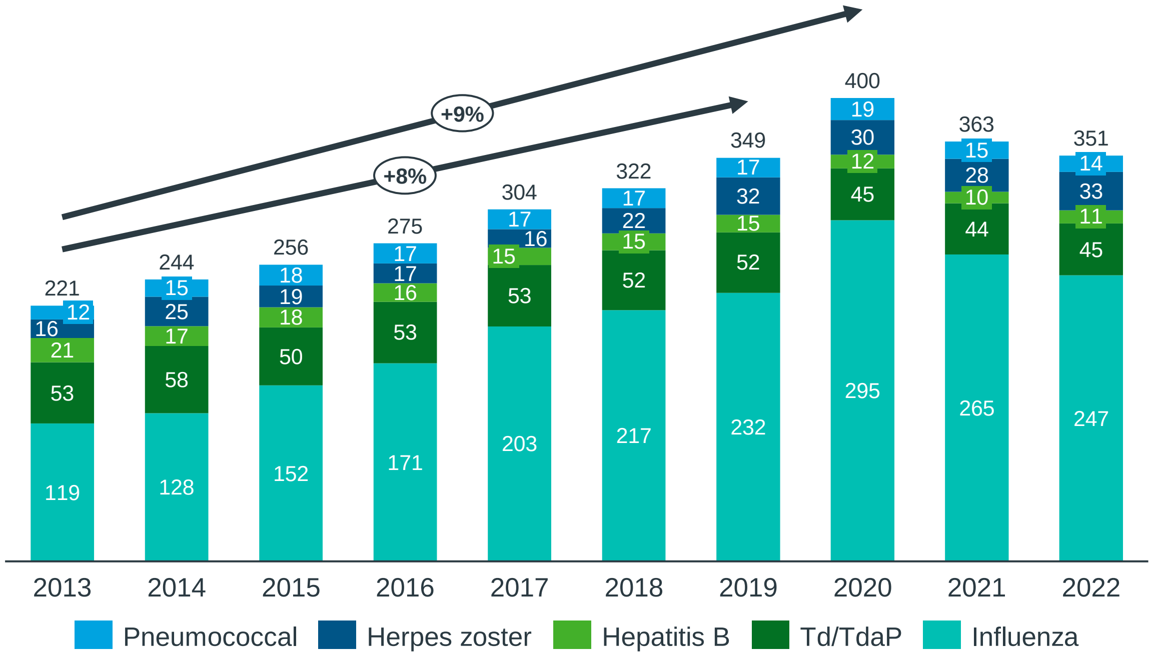
Global Adult Vaccination Trends

Global adult vaccinations show steady progression for 2013-2020, then declined between 2020-2022 due to COVID-19 pandemic

Impact of COVID-19 on global adult vaccination doses

- ***Vaccine-preventable diseases (VPDs)*** may present serious burden on the public healthcare system in terms of treatment cost and may also increase the risk of other co-morbidities such as cardiovascular, cerebrovascular, neurological, renal complications etc.
- In the EU, VPD causes ***estimated ~94,000 deaths annually*** with a significant number of hospitalizations[1]

Global adult vaccination doses (M), 2013-2022[1]



In ***2013-2020***, the number of adult vaccination doses **grew at a CAGR of ~9% *(221 M in 2013 to 400 M in 2020)***, whereas in ***2020-2022***, the number of doses ***reduced 12% (400 M in 2020 to 351 M in 2022)***

In ***2021-2022,*** globally received vaccination doses ***for other VPDs*** are ***16.2 doses/100 adults***, in contrast to global ***COVID-19 vaccination of 132 doses/100 adults (2022)*** excluding booster doses

Among other vaccines, the number of ***Influenza vaccine doses*** increased continuously in between 2013-2020, but ***reduced significantly in between 2020-2022***[1]

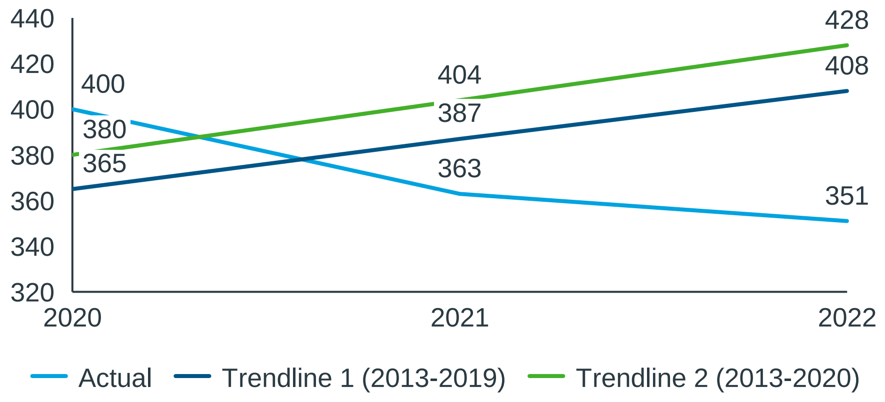
- The ***disruption in immunization services and economic loss due to COVID-19*** possibly resulted in sudden decline in adult vaccination doses
- Adverse effects presented in the form of missed adult vaccination doses require more focus and in-depth analysis

Note: Adult vaccinations include Influenza, Td/TdaP, Hepatitis B, Herpes zoster, Pneumococcal vaccines; Source: [1]IQVIA Institute Report 2023
Abbreviation: Td- diphtheria and tetanus; TdaP- diphtheria, tetanus and pertussis; VPD- Vaccine-preventable diseases

Globally ~100 M adult vaccination doses are missed, although the adult vaccination spend has moderately increased in Europe

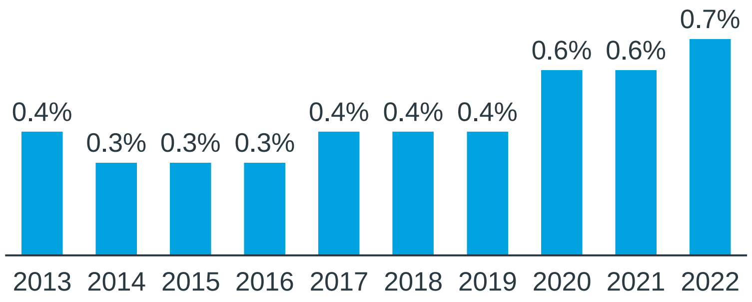
Missed doses and spend of adult vaccination

Estimated adult vaccine missed doses in 2021 and 2022

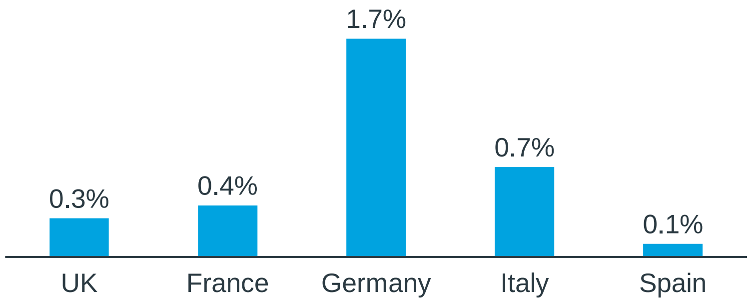


The ***estimated number of missed adult vaccine doses are ~100 M between 2021-2022*** for Influenza, Td/TdaP, Hepatitis B, Herpes zoster and Pneumococcal (as per the derivation from the mid-point of two historical trend lines for the periods, 2013-2019 and 2013-2020 respectively)

Adult vaccination spend in Europe as a share of total pharmaceutical expenditure (2013-2022)



Adult vaccination spend in EU4 & UK as a share of total pharmaceutical expenditure (2023)



In Europe, the adult vaccination expenses show ***a moderate increase of 0.2%-0.3%*** of total pharmaceutical expenditure over time (2013-2022)

EU4 & UK countries show substantial variations in adult vaccination spend with ***Germany spending the maximum share (1.7%)*** and ***Spain spending the minimum (0.1%)*** as a share of total pharmaceutical expenditure (2023)

Increasing proportion of elderly individuals (≥65 years) among adult populations in Europe requires additional investments for adult vaccinations[1,2]

- Other than infectious disease prevention, adult vaccinations lead to avoidance of long-term co-morbidity risks, hospitalizations and premature deaths, and provides extensive individual, social and economic benefits, particularly in elderly adults[1,2]

Note: Adult vaccinations include Influenza, Td/TdaP, Hepatitis B, Herpes zoster, Pneumococcal vaccines; Source: [1]IQVIA Institute Report 2023; [2]Eurostat 2023
Abbreviation: Td- diphtheria and tetanus; TdaP- diphtheria, tetanus and pertussis

Improved access, increased awareness and routine follow-up may help to recover adult vaccination programs

Strategies to overcome declination in adult vaccination

Possible approaches to expand adult vaccination

- ***Adult vaccination as a standard of care:*** Ensuring appropriate financing for the implementation of accessible vaccination programs with a focus on prevention
- ***Improved accessibility to vaccination programs:*** Increasing the ***number of vaccinators*** (e.g., including pharmacists) and ***creating additional access points*** for vaccination facilities supported by laws and regulations
- ***Monitoring progress and follow-up: Capturing, analyzing and reporting vaccination data*** to track progress and enable follow-up along with improving the availability of digital data infrastructure
- ***Increased awareness among citizens:*** Providing support, encouragement and incentives to the HCPs to have ***routine conversations about vaccination with the patients.*** Raising ***media and public awareness*** about the consequences of infectious diseases and the importance of adult vaccination may also be beneficial[1]

EU/National initiatives for adult vaccination recovery

World Health Organization

The European Immunization Agenda 2030 (EIA2030)

- ***Implementation of the experiences gained during COVID-19*** in strengthening the vaccination of ***older adults or adults with co-morbidities throughout the life course***
- ***Exploring and establishing collaborations*** within and outside the health sector to promote the life course approaches, such as ***maternal health services, occupational health, social care services for older adults*** etc.
- ***Expansion and diversification of vaccination pathways*** including vaccination ***during pregnancy, in health workers and in older adults***.[2]

Vaccines Europe

Four action plans for prioritizing adult vaccination

- To prioritize and incorporate adult vaccination in ***national immunization plans***
- ***Increase awareness and education*** among citizens, patients and HCPs on the consequences of VPDs and the benefits of adult vaccinations
- ***Extending the scope of vaccination*** by HCPs, pharmacies, workplaces etc.
- Establishing and expanding ***E-vaccination cards, national digitalized registries*** for adult vaccination including reminder and recall system for improved effects[3]

The Adult Immunization Board (AIB)

- ***Reduce the impact of VPDs*** in European adults
- ***Provide evidence-based guidance*** on fundamental technical and strategic issues
- ***Monitor the progress*** of adult vaccination programs[4]

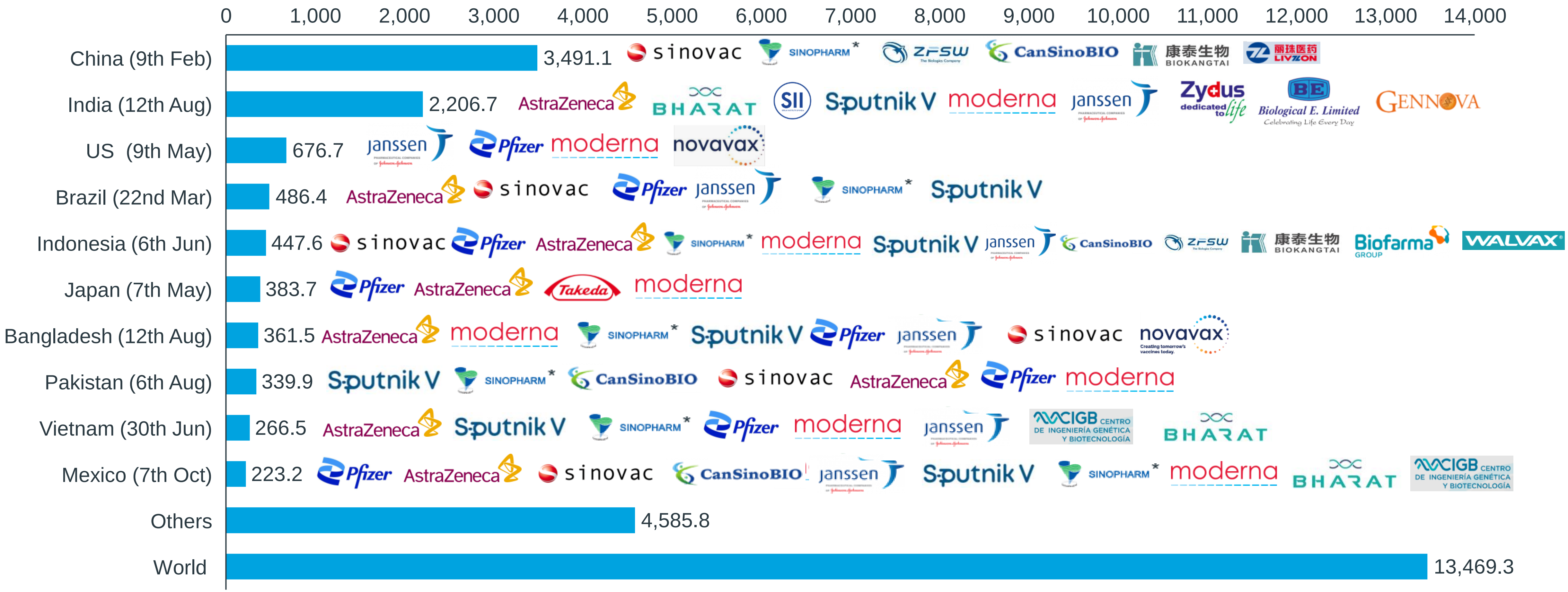
- COVID-19 pandemic resulted in substantial decline on routine vaccination programs in adults, which impacted the overall health, quality of life and mortality in adults
- Establishment of regulatory policies and improvement of vaccination strategies are necessary for improving coverage rates and the protection of adults, especially elderly population and adults with co-morbidities

Source: [1]IQVIA Institute Report 2023; [2]EIA2030; [3]Vaccines Europe 2022; [4]The Adult Immunization Board 2023; Abbreviation: VPD – vaccine preventable disease

Deep Dive into COVID-19 Vaccination

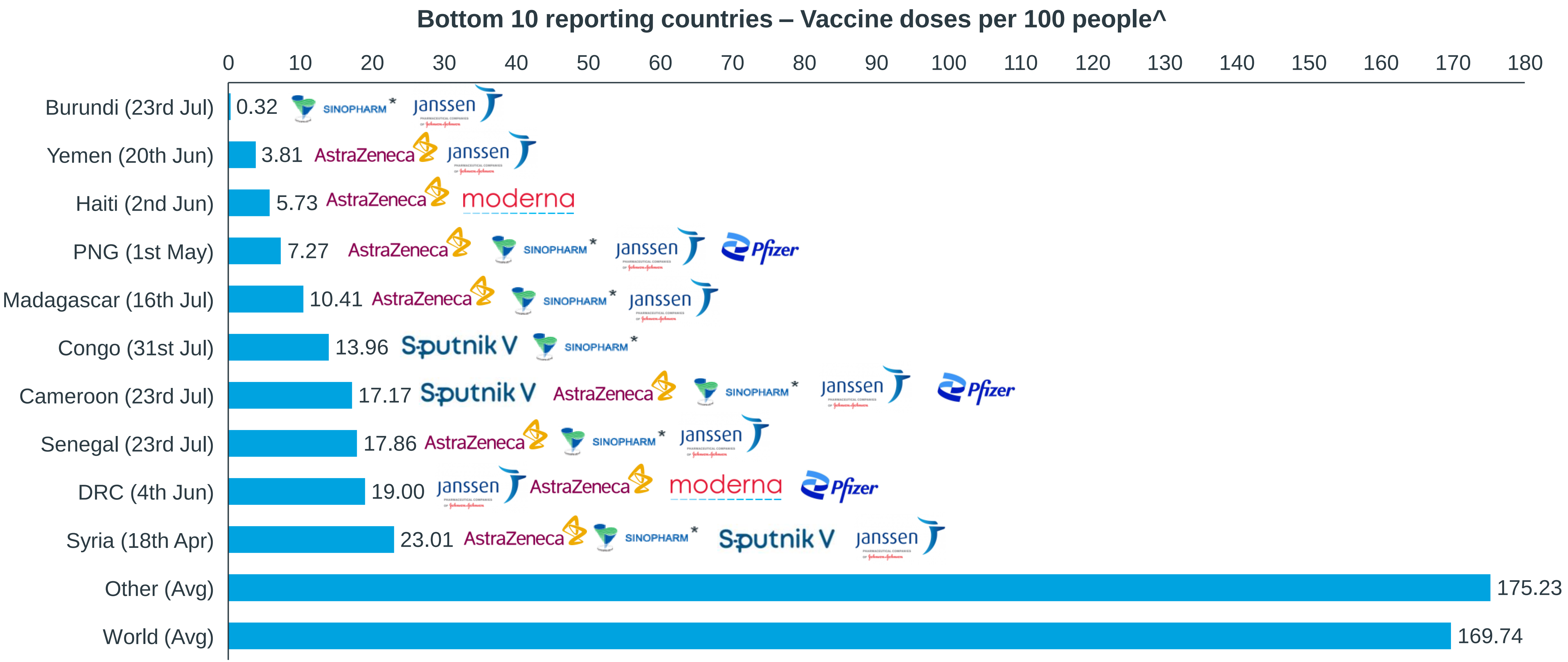
By August 2023, more than 13 billion vaccines have been administered globally

Top 10 countries – Total vaccinations (Total number of COVID-19 vaccination doses administered, M)



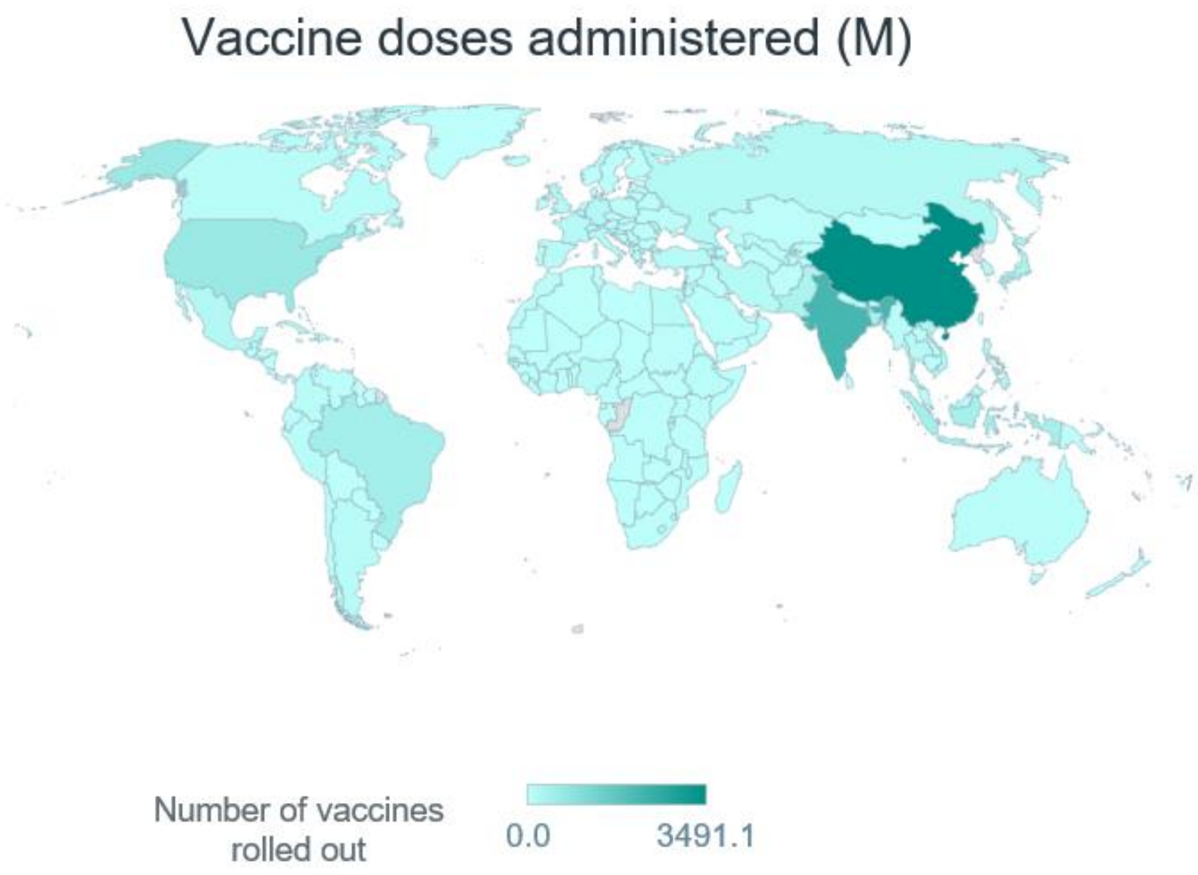
Sources: IQVIA European Thought Leadership, 31/08/2023. Vaccine rollout data: Max Roser, Hannah Ritchie, Esteban Ortiz-Ospina and Joe Hasell (2020) - "Coronavirus Pandemic (COVID-19)". Published online at OurWorldInData.org. Retrieved from: 'https://ourworldindata.org/coronavirus' on 14/08/2023

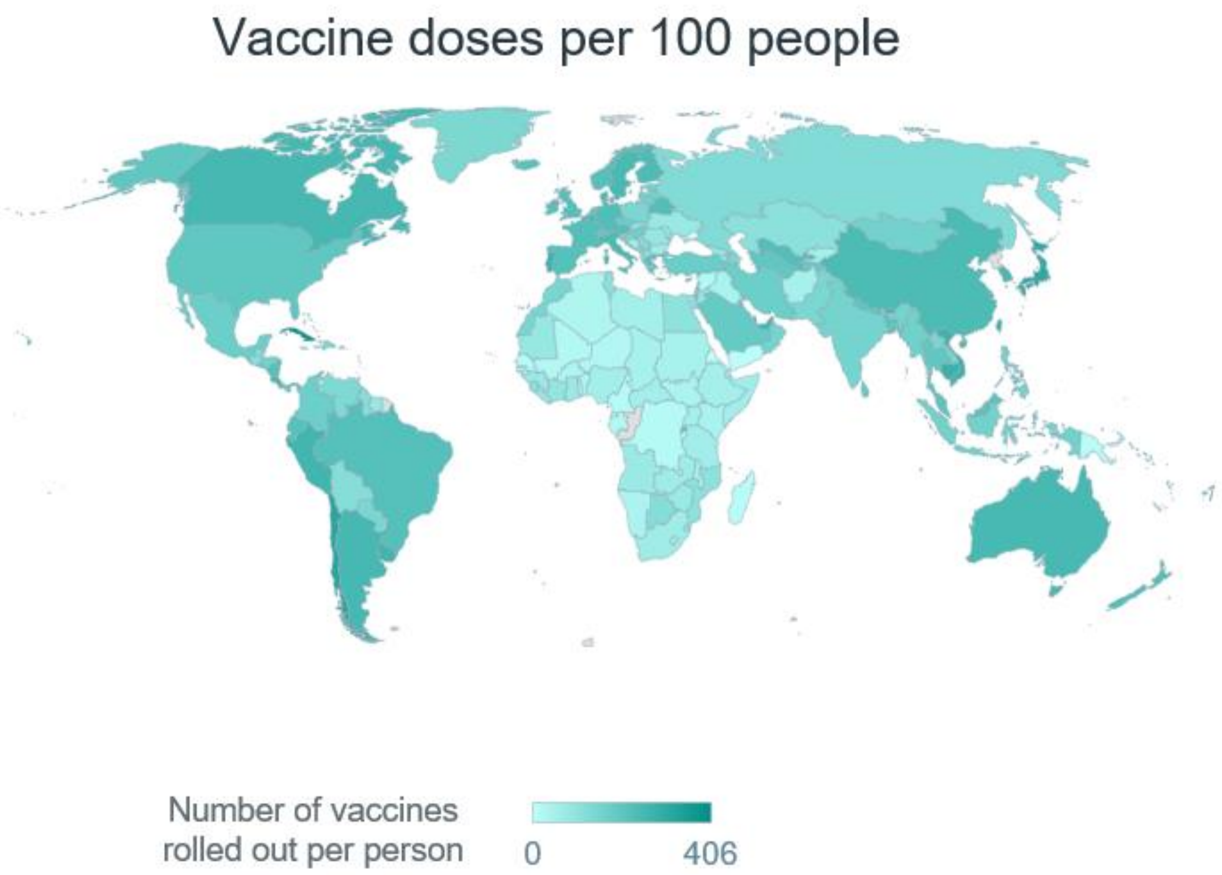
There are more than one type of COVID vaccine approved, even in the least vaccinated countries



Sources: IQVIA European Thought Leadership, 31/08/2023. Vaccine rollout data: Max Roser, Hannah Ritchie, Esteban Ortiz-Ospina and Joe Hasell (2020) - "Coronavirus Pandemic (COVID-19)". Published online at OurWorldInData.org. Retrieved from: 'https://ourworldindata.org/coronavirus' on 14/08/2023. ^Excludes Eritrea, Marshall Islands, Micronesia and the Vatican which have not reported vaccine doses in OWID. PNG = Papua New Guinea, DRC = The Democratic Republic of the Congo

Across the EU4 & UK, on average more than two doses have been administered per person





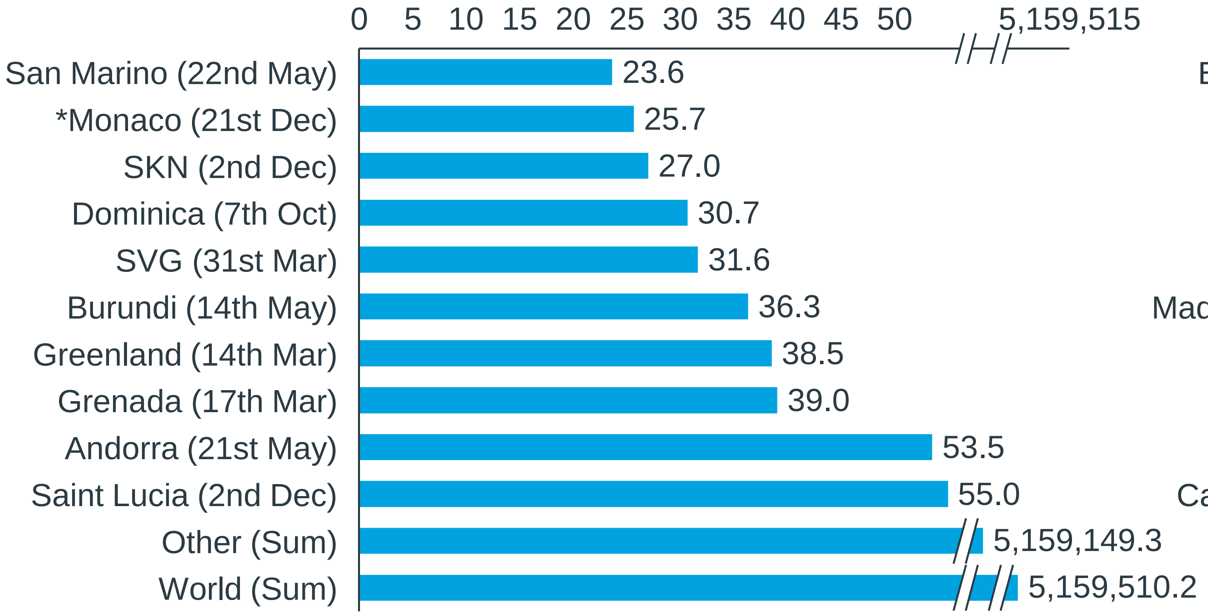
Sources: IQVIA European Thought Leadership 31/08/2023. Vaccine rollout data: Max Roser, Hannah Ritchie, Esteban Ortiz-Ospina and Joe Hasell (2020) - "Coronavirus Pandemic (COVID-19)". Published online at OurWorldInData.org. Retrieved from: 'https://ourworldindata.org/coronavirus' on 14/08/2023. Vaccine approval data: https://COVID19.trackvaccines.org/vaccines/, https://www.nytimes.com/, https://www.ft.com/, https://www.raps.org/

Note: Doses per person are inclusive of all age groups

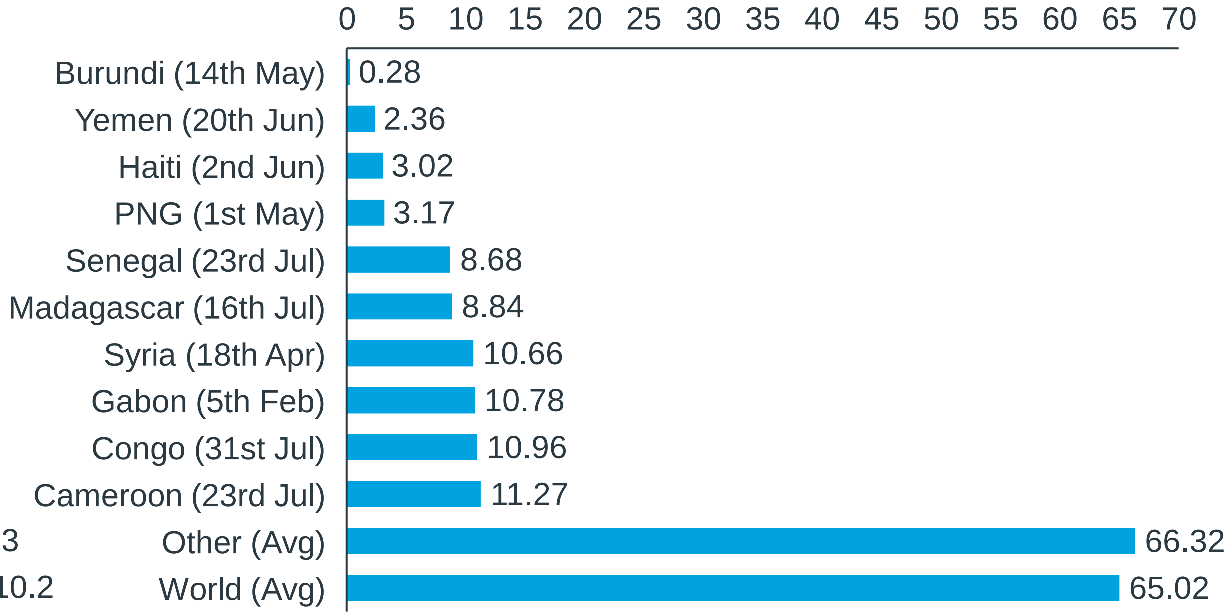
Majority of the bottom 10 reporting countries are from Africa, in terms of proportion of population vaccinated

Bottom ten countries by absolute number of fully vaccinated people, represent a mix of low to lower-middle income countries

Bottom 10 countries – Fully vaccinated people (Thousands)^



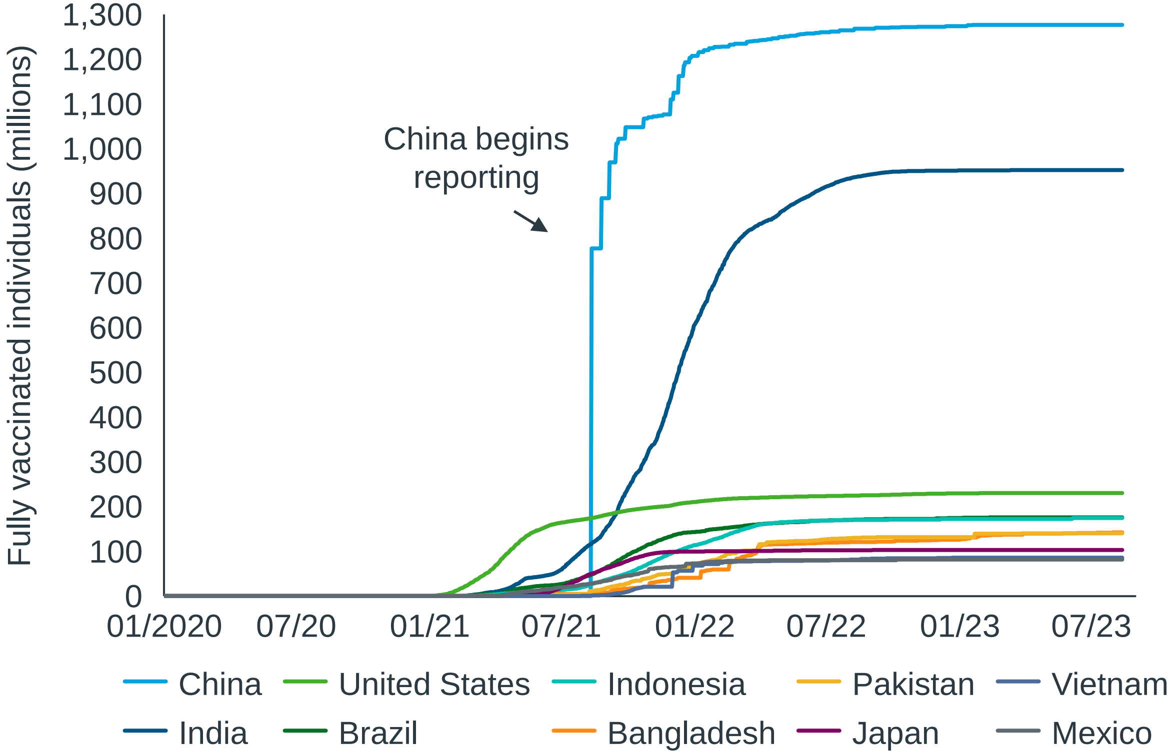
Bottom 10 countries – Share of population fully vaccinated (%)^



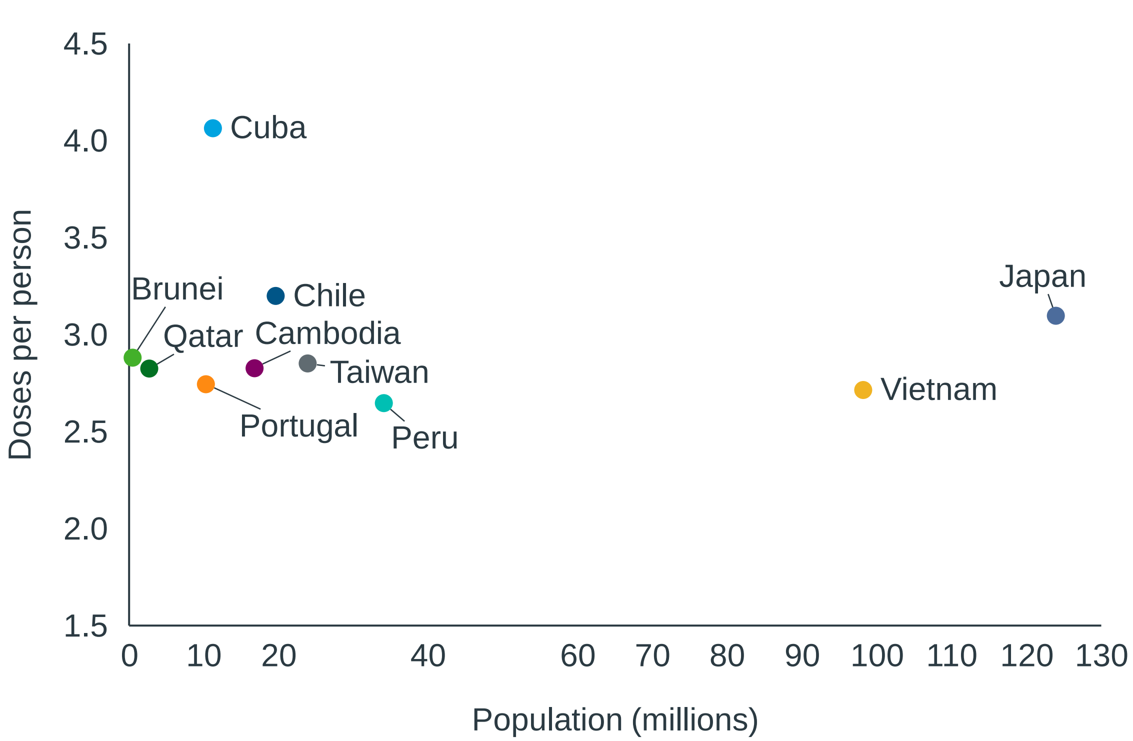
- Graphs represents the number/share that have received all doses prescribed by the vaccination protocol
- Individuals are counted if they have received one dose of a vaccine with a one dose protocol or two doses of a vaccine with a two dose protocol
- Data is only available for countries which report the breakdown of doses administered by first and second doses

Sources: IQVIA European Thought Leadership, 31/08/2023 analysis of data provided on the OurWorldinData.org website. Vaccine rollout data: Max Roser, Hannah Ritchie, Esteban Ortiz-Ospina and Joe Hasell (2020) - "Coronavirus Pandemic (COVID-19)". Published online at OurWorldInData.org. Retrieved from: 'https://ourworldindata.org/coronavirus' on 14/08/2023.
Notes: SKN = St. Kitts and Nevis, SVG = St Vincent and the Grenadines, PNG = Papua New Guinea; *denotes year 2021
^Excludes Eritrea, Marshall Islands, Micronesia, the Vatican, Liechtenstein and Switzerland which have not reported fully vaccinated people in OWID

While high population countries dominate absolute numbers of fully vaccinated people, small-mid sized nations dominate doses per person



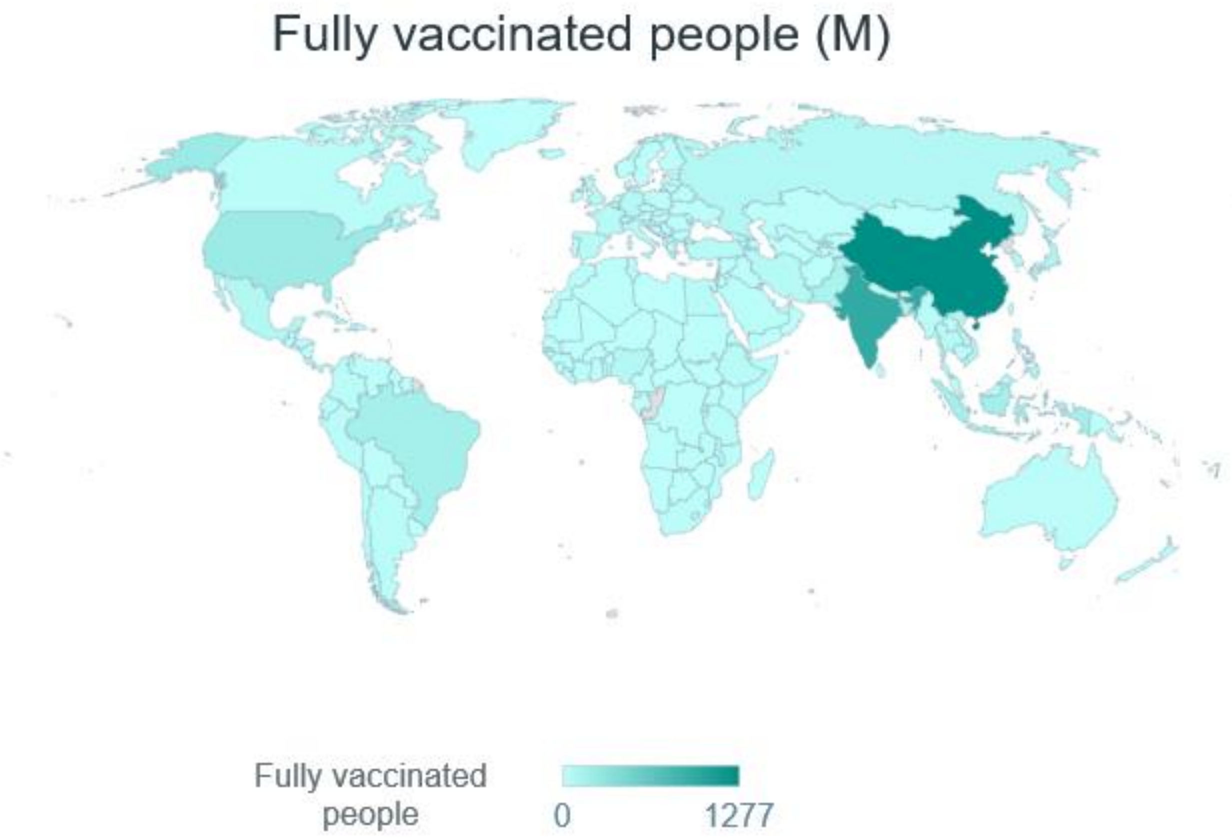
Top 10 countries by number of doses per person

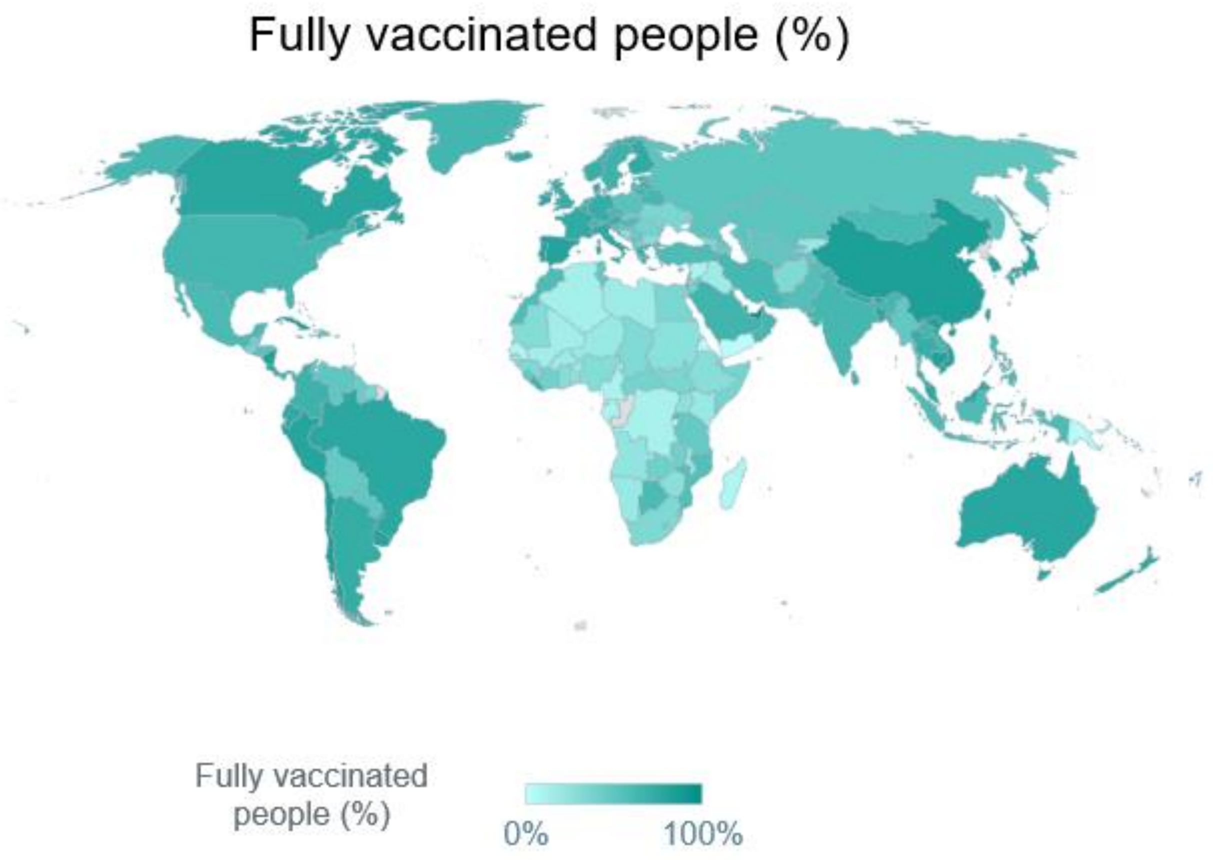


- Graphs represent the number/share that have received all initial doses prescribed by the vaccination protocol
- Individuals are counted if they have received one dose of a vaccine with a one dose initial protocol, two doses of an initial two dose protocol, etc.
- Data is only available for countries which report the breakdown of doses administered

Source: IQVIA European Thought Leadership, 31/08/2023 analysis of data provided on the OurWorldinData.org website. Vaccine rollout data: Max Roser, Hannah Ritchie, Esteban Ortiz-Ospina and Joe Hasell (2020) - "Coronavirus Pandemic (COVID-19)". Published online at OurWorldInData.org. Retrieved from: 'https://ourworldindata.org/coronavirus' on 14/08/2023

In the EU4 & UK, on average ~79% of the population is fully vaccinated; Spain is leading with ~86% of individuals fully vaccinated





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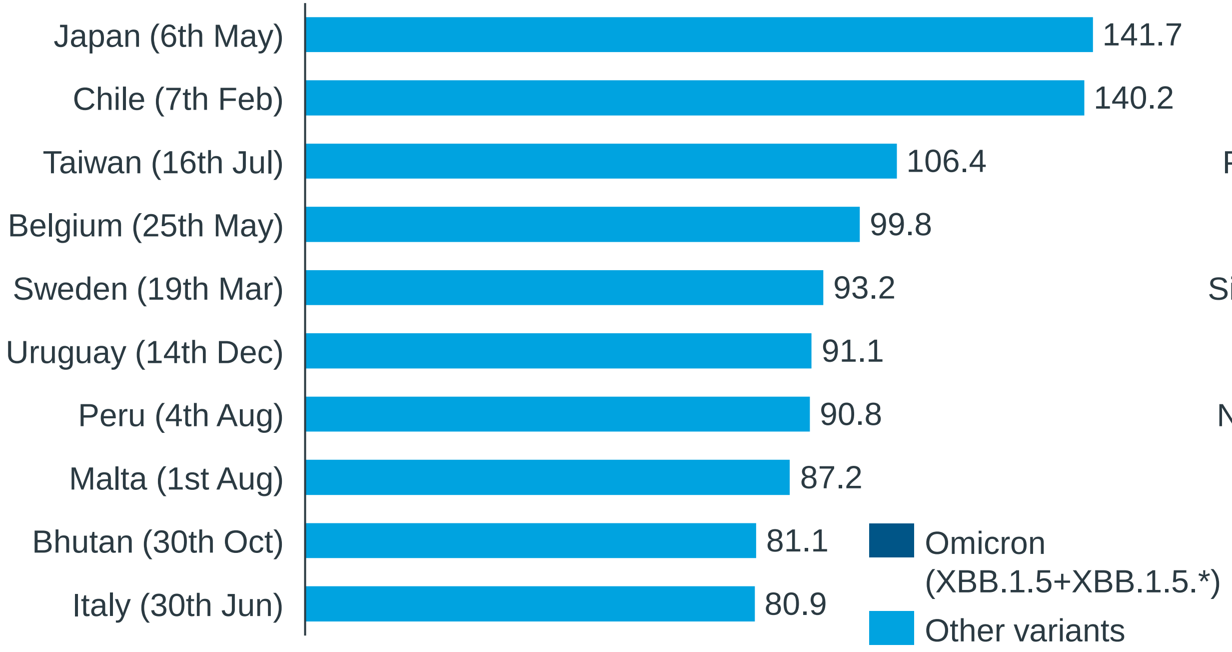
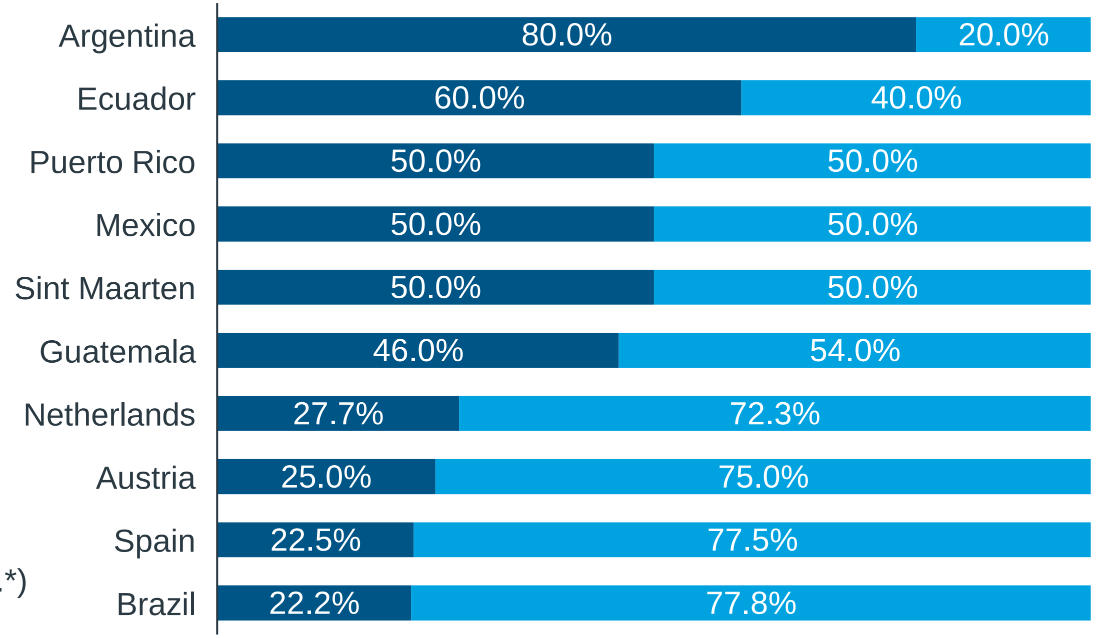
Among EU nations, Belgium, Sweden and Italy are in the top ten countries administering the maximum number of booster shots per hundred people

Top 10 countries by booster doses and the countries with the highest share of omicron cases sequenced illustrates how the variant spread globally in a short period of time

Booster doses per hundred people



Top 10 countries by highest share of sequenced cases of omicron in the past four weeks*



Booster doses are doses administered beyond those prescribed by the original vaccination protocol – for example a 3rd dose of the Comirnaty vaccine

Note that Variants of Concern may be overrepresented, as suspected cases are likely to be sequenced preferentially or faster than other cases

Source: IQVIA European Thought Leadership 31/08/2023. Booster shot rollout data: Max Roser, Hannah Ritchie, Esteban Ortiz-Ospina and Joe Hasell (2020) - "Coronavirus Pandemic (COVID-19)". Published online at OurWorldInData.org. Retrieved from: 'https://ourworldindata.org/coronavirus on 14/08/2023. *Excludes results with 100% of sequenced cases as omicron, as these countries likely only sent omicron cases to be sequenced and confirmed, as at 16/08/2023 https://www.gisaid.org/hcov19-variants/

Vaccination and booster dose strategies adopted by countries

As per the recommendation of the Joint Committee of Vaccination and Immunization (JCVI), the UK government is offering **COVID-19 booster dose in Autumn 2023** to adults ≥65 years, residents in a care home for older adults, clinical risk group aged 6 months- 64 years, frontline health and social care workers, household contact individuals of age 12-64 years for people with immunosuppression and caregiver or staffs of age 16-64 years for care homes for older adults. JCVI also advised the autumn program should **aim to complete vaccination by early December 2023** (Aug 2023)[1]

The Standing Committee on Vaccination (STIKO) recommends further booster doses for people >6 months with increased risk, people >60 years of age, residents of care facilities, medical and nursing staff, preferably with a variant adapted mRNA vaccine (July 2023)[2]. Pregnant women, regardless of their age, should be vaccinated with Comirnaty and not Spikevax. Basic immunization and a booster is recommended to unvaccinated pregnant women in their second trimester (July 2023)[3]

The Ministry of Health of Italy announces a **national vaccination campaign against COVID-19 (2023/2024)** to prevent mortality, hospitalization and severity of COVID-19 in elderly, highly frail people, pregnant women and health and social health workers. It is expected to be launched with the use of new updated monovalent XBB 1.5 formulation of mRNA and protein vaccines (expected to be approved by EMA and AIFA for late summer/early autumn and doses are expected to be available by October) (Aug 2023)[4]

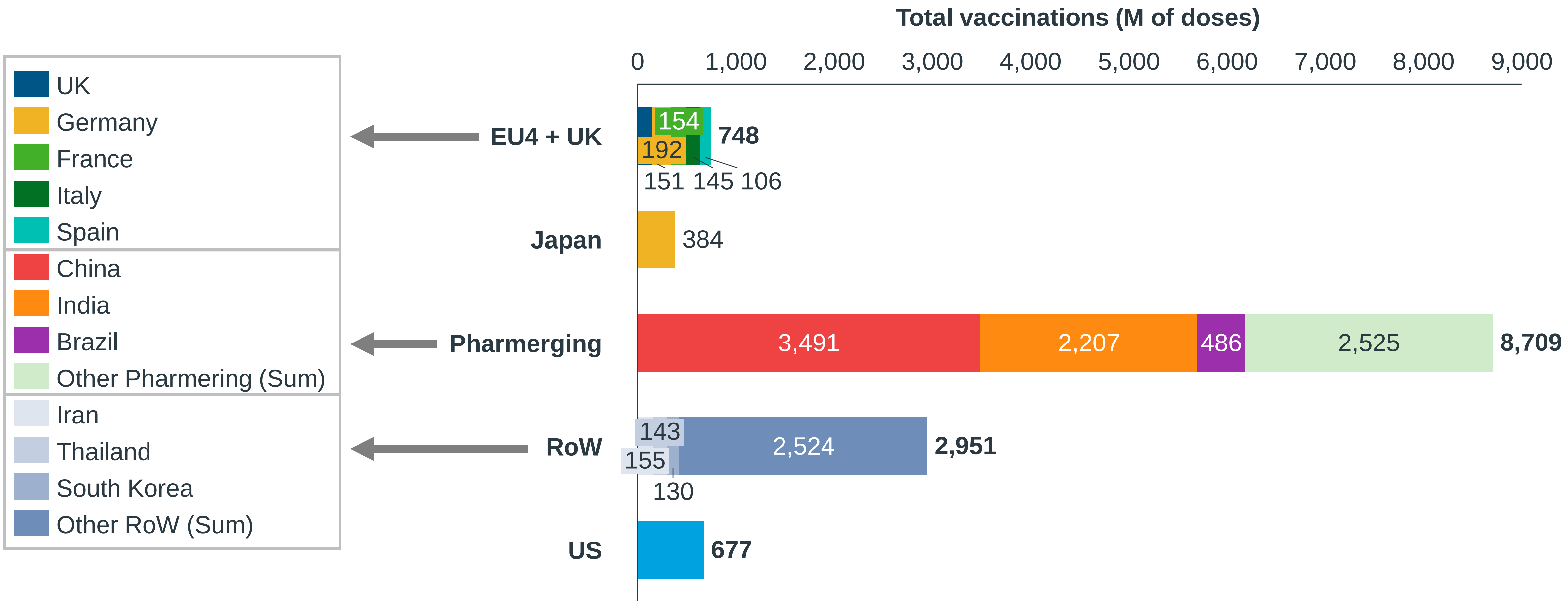
Spain Ministry of Health declares the end of health crisis caused by COVID-19 and continues its work to establish appropriate recommendation for COVID-19 vaccination and to integrate it into national vaccination programs (July 2023)[5]

France Ministry of Health and Prevention has prepared for **autumn vaccination campaign** for COVID-19 in 2023-2024. The campaign targets risk groups recommended by the French National Authority for Health (HAS) are people of ≥65 years, people with co-morbidities, pregnant women, immunocompromised people, health workers and caregivers (July 2023)[6]. HAS is evaluating the place of Bimerax vaccine in the vaccination strategy and requires additional data from clinical trials and longer follow-up period before considering its use (June 2023)[7]

Sources: [1]JCVI recommendation; [2]STIKO Germany; [3]STIKO Germany pregnant women; [4]Ministry of Health Italy; [5]Ministry of Health Spain; [6]France autumn booster campaign; [7]HAS evaluating Bimerax

As of August 2023, EU4 and UK countries have administered ~748 M doses

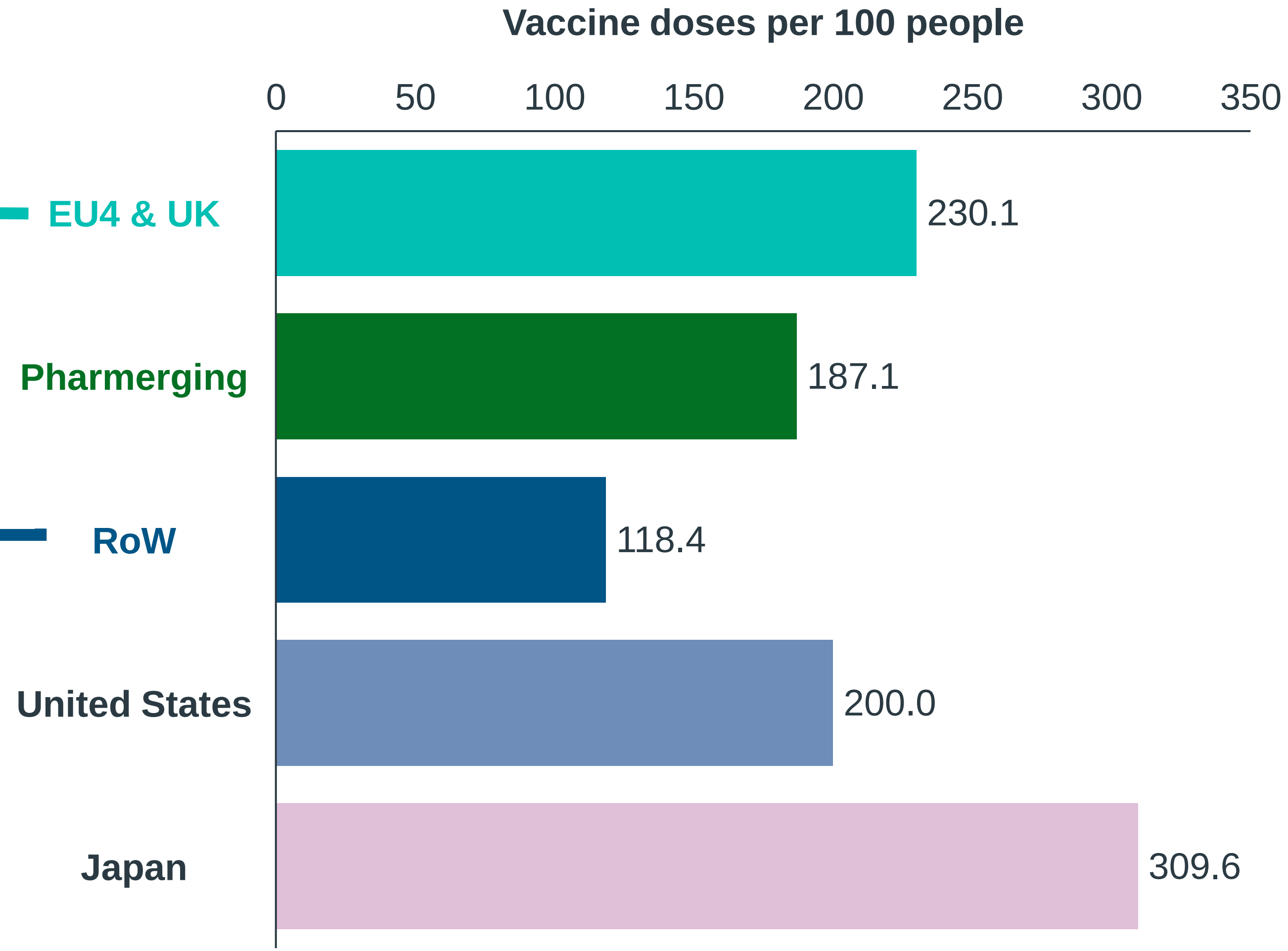
Total COVID-19 vaccine doses administered at the regional level



Sources: IQVIA European Thought Leadership, 31/08/2023. Vaccine rollout data: Max Roser, Hannah Ritchie, Esteban Ortiz-Ospina and Joe Hasell (2020) - "Coronavirus Pandemic (COVID-19)". Published online at OurWorldInData.org. Retrieved from: 'https://ourworldindata.org/coronavirus' on 14/08/2023.
Note: Pharmerging countries include China, India, Brazil, Turkey, Russia, Indonesia, Bangladesh, Mexico, Saudi Arabia, Pakistan, Egypt, Algeria, Colombia; South Africa, Ukraine, Phillipines and Vietnam

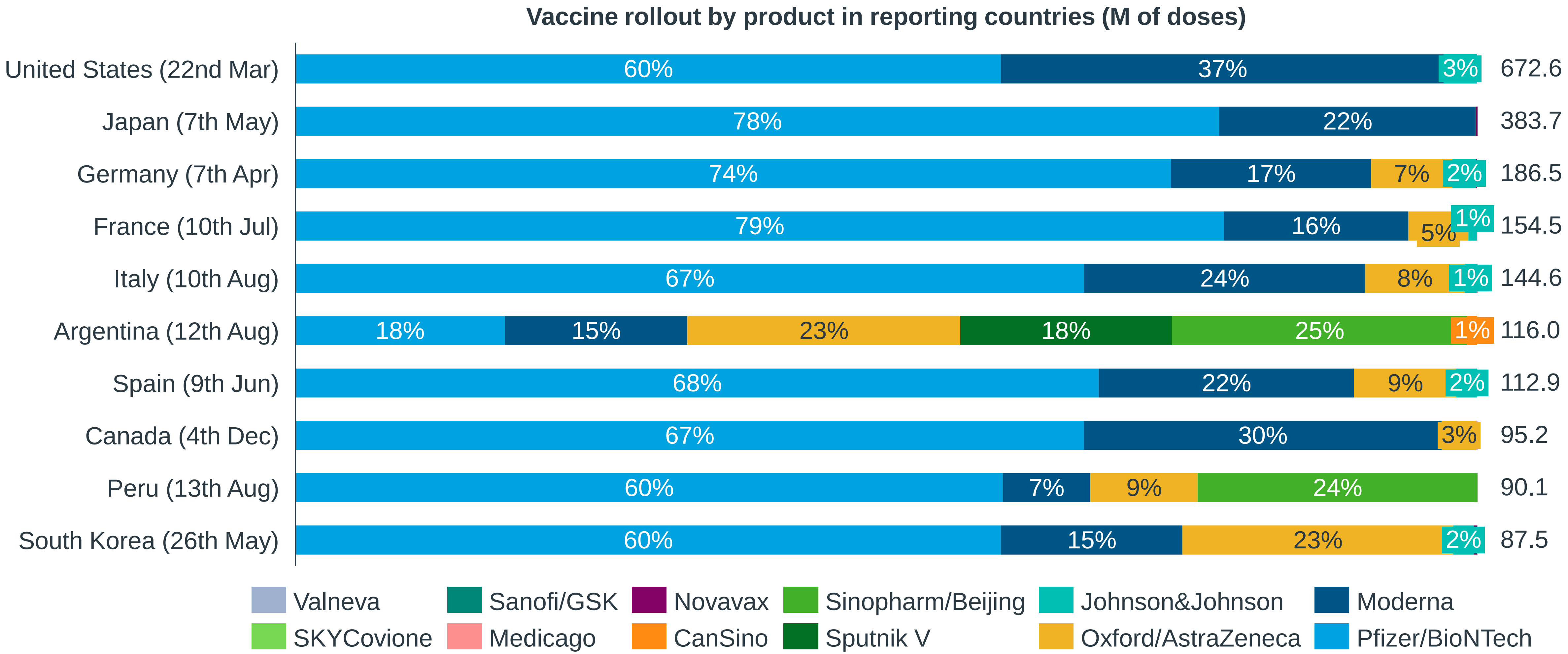
EU4 and the UK have administered more vaccines per hundred people than the United States and Japan

Country	Vaccine doses per 100 people
Italy	244.9
Germany	230.6
France	227.8
United Kingdom	224.0
Spain	222.5
China	244.8
Brazil	225.9
India	155.7
Other Pharmerging (Avg)	158.0
South Korea	250.2
Thailand	198.9
Iran	175.5
Other RoW (Avg)	110.7



Sources: IQVIA European Thought Leadership, 31/08/2023. Vaccine rollout data: Max Roser, Hannah Ritchie, Esteban Ortiz-Ospina and Joe Hasell (2020) - "Coronavirus Pandemic (COVID-19)". Published online at OurWorldInData.org. Retrieved from: 'https://ourworldindata.org/coronavirus' on 14/08/2023.
Note: Pharmerging countries include China, India, Brazil, Turkey, Russia, Indonesia, Bangladesh, Mexico, Saudi Arabia, Pakistan, Egypt, Algeria, Colombia, South Africa, Ukraine, Phillipines and Vietnam

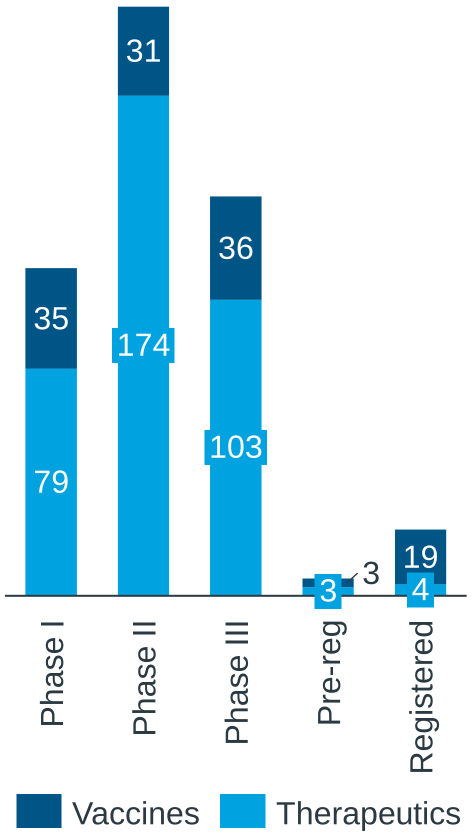
In European countries, the Pfizer vaccine is the most widely used vaccine, followed by the Moderna vaccine

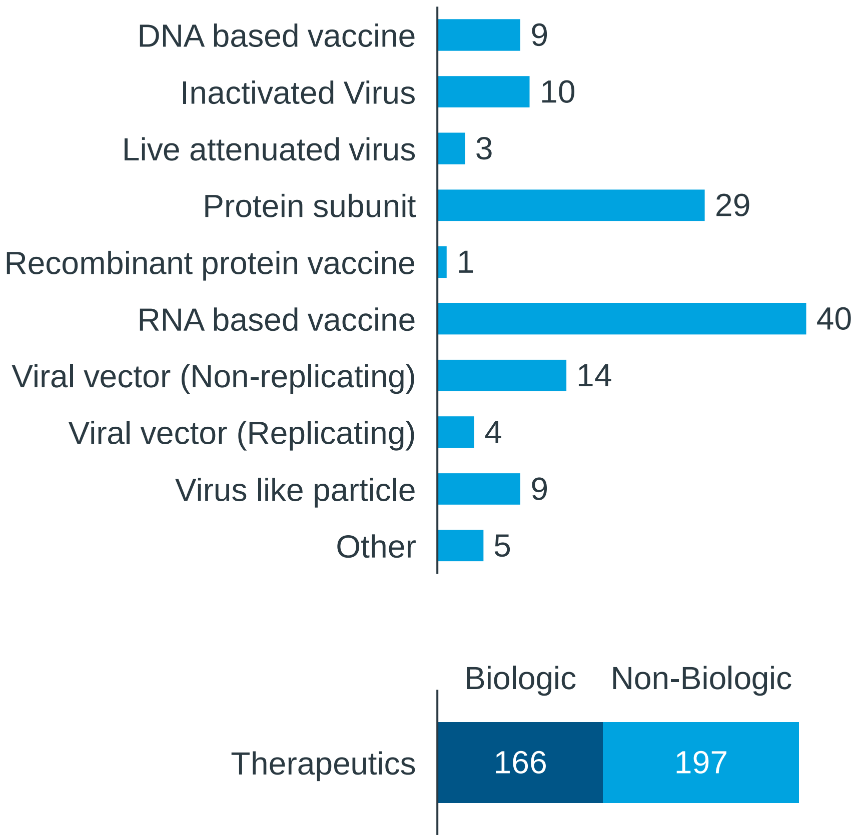


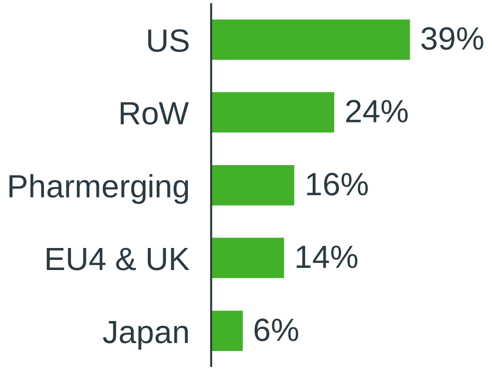
Sources: IQVIA European Thought Leadership, 31/08/2023. Vaccine rollout data: Max Roser, Hannah Ritchie, Esteban Ortiz-Ospina and Joe Hasell (2020) - "Coronavirus Pandemic (COVID-19)". Published online at OurWorldInData.org. Retrieved from: 'https://ourworldindata.org/coronavirus' on 14/08/2023
Note: Vaccine rollout data by product is not reported for UK in OurWorldInData.org

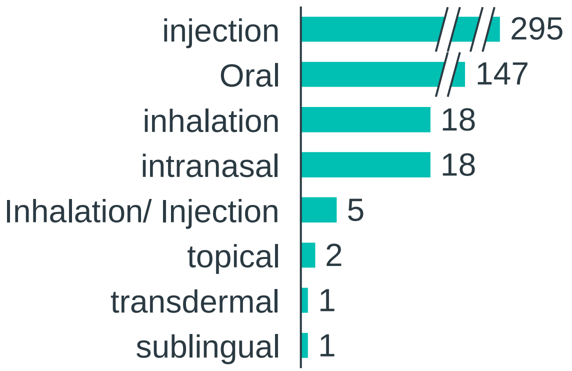
Current COVID-19 pipeline is dominated by therapeutics; EU4 & UK-based companies account for ~14 % of total drugs under development

As more drugs are developed, the majority of clinical trials for therapeutics are in early phases









- Drugs under development by corporation nationality, EU4 & UK contribute ~14% of therapies in development, whereas the US lead with ~39%
- The most prevalent COVID-19 therapy formulations in development are injectables and oral medications

Source: IQVIA Pipeline Intelligence. Data exported on 11/08/2023; Notes: Data is excluded for vaccine candidates which are pre-clinical or terminated in development. Vector NR = Vector Non-replicating. Vector R = Vector Replicating. VLP = Virus Like Particle; *Corporation Nationality: Nationality of a corporation with a specific licensing relationship in a region or therapy franchise

COVID-19 vaccination – Recent news updates

Vaccine updates for new variants

Vaccine manufacturers and regulatory authorities are focusing on updating booster shots for the new variants

- EMA's Emergency Task Force has recommended **updating vaccines to target the dominant XBB strains** of Omicron. The European Medicines Agency (EMA) and the European Centre for Disease Prevention and Control (ECDC) also noted that monovalent vaccines may provide protection against present dominant and emerging strains (June 2023)[1]
- EU Committee for Medicinal Products for Human Use (CHMP) recommends extension of marketing authorization for **Spikevax** Bivalent Original/Omicron BA.4-5 for active immunization to prevent COVID-19 **in individuals ≥6 months of age** (July 2023)[2]

Further vaccine updates globally

Globally, vaccine approvals continue for novel vaccines and approved vaccines are extended for wider age groups

- The Vaccine and Related Biological Products Advisory Committee (VRBPAC) of US FDA recommended COVID-19 vaccines to be updated with a **monovalent formulation** to provide protection **against the Omicron variant XBB.1.5** for use by the fall of 2023 (June 2023)[3]
- Daiichi-Sankyo's **DAICHIRONA (monovalent- original strain)** is the first Japan-made mRNA vaccine for COVID-19 that has been approved in Japan for manufacturing and marketing (August 2023)[4]
- Public Health Agency of Canada (PHAC) released updated guidelines on the use of COVID-19 vaccine. Updates include recommendations for the use of Moderna **Spikevax Bivalent** vaccine(Original/Omicron BA.1 and Original/Omicron BA.4/5) as a booster dose for individuals 6-17 years of age. Use of **Novavax Nuvaxovid** vaccine is also recommended as a primary series in individuals ≥12 years of age and as a booster dose for adults ≥18 years of age (June 2023)[5]

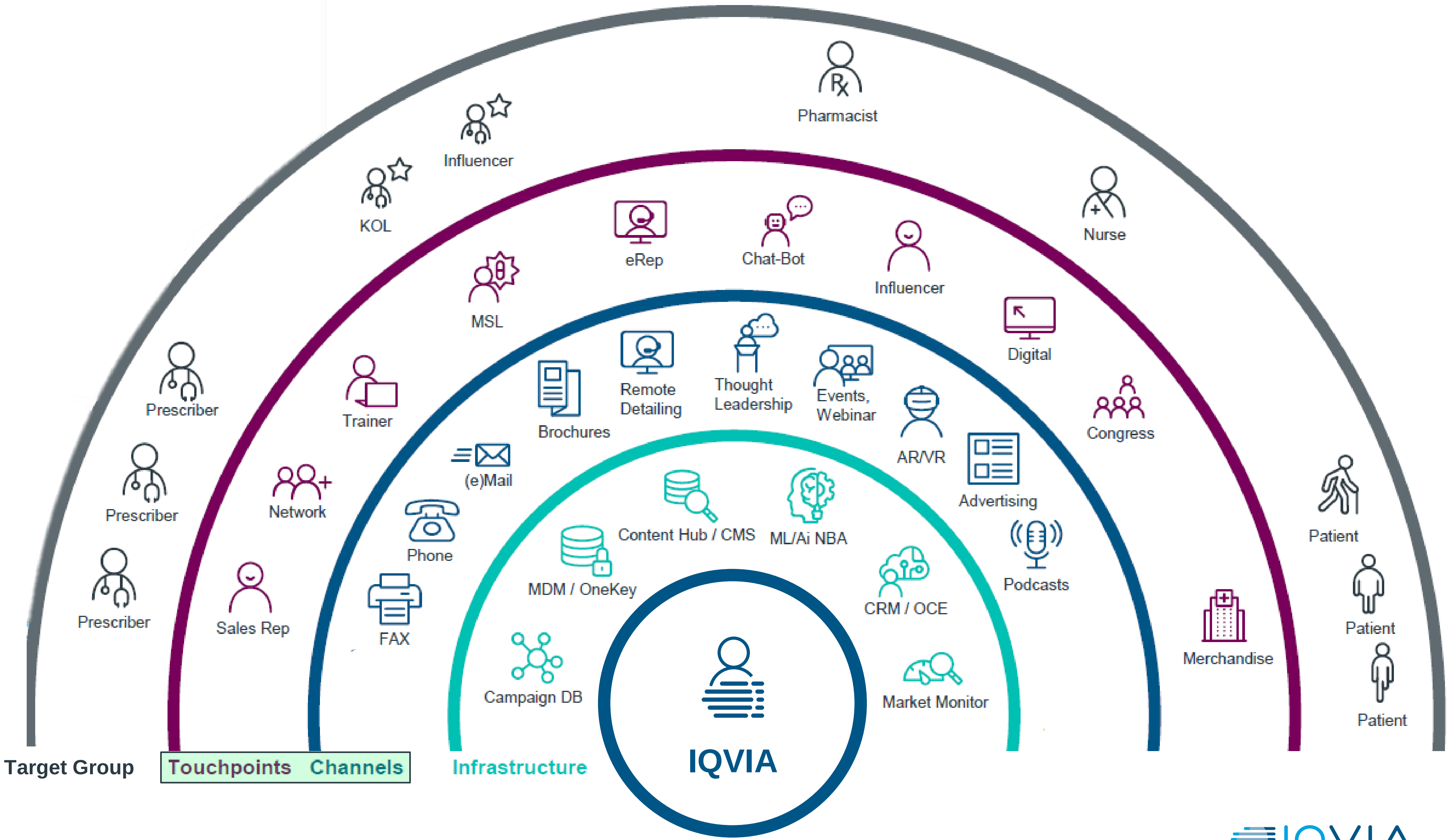
Sources: IQVIA European Thought Leadership 31/08/2023. [1]EU vaccine update; [2]Moderna; [3]US FDA recommendation; [4]Japan monovalent vaccine; [5]Canada vaccine update

Channel Preference Survey 2023 results

Engaging with health systems requires an orchestrated omnichannel approach to meet customer needs

Six enablers for successful post-pandemic customer engagement

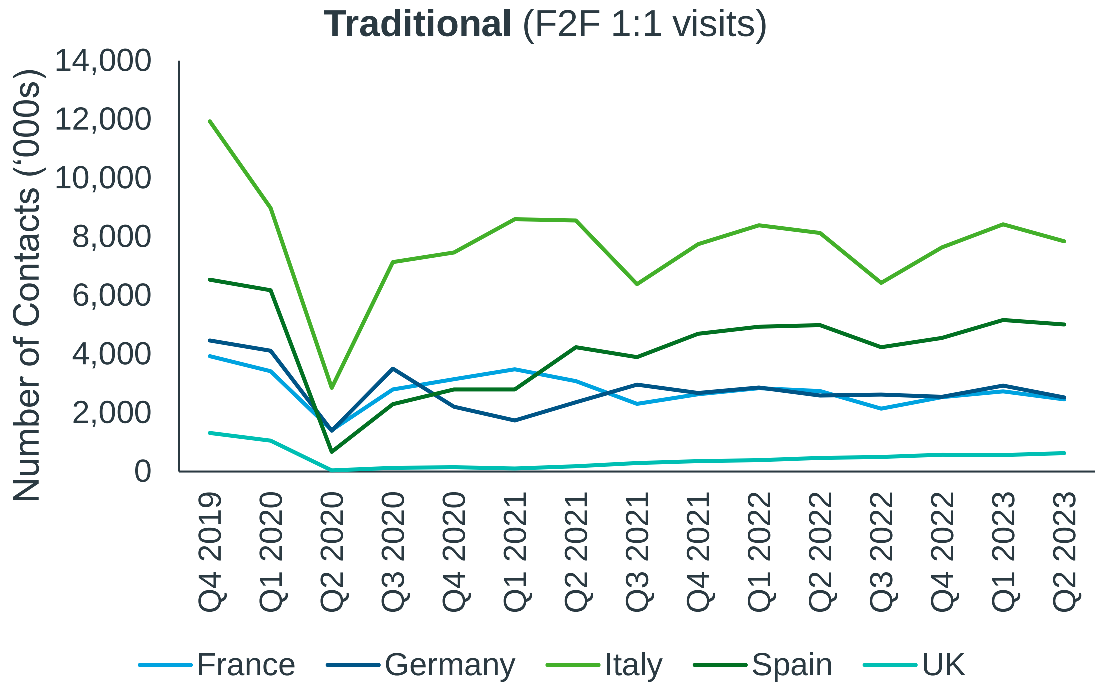
- **Channel mix**
- **Content**
- **Customer focus**
- **People**
- **Technology**
- **Change Agility**

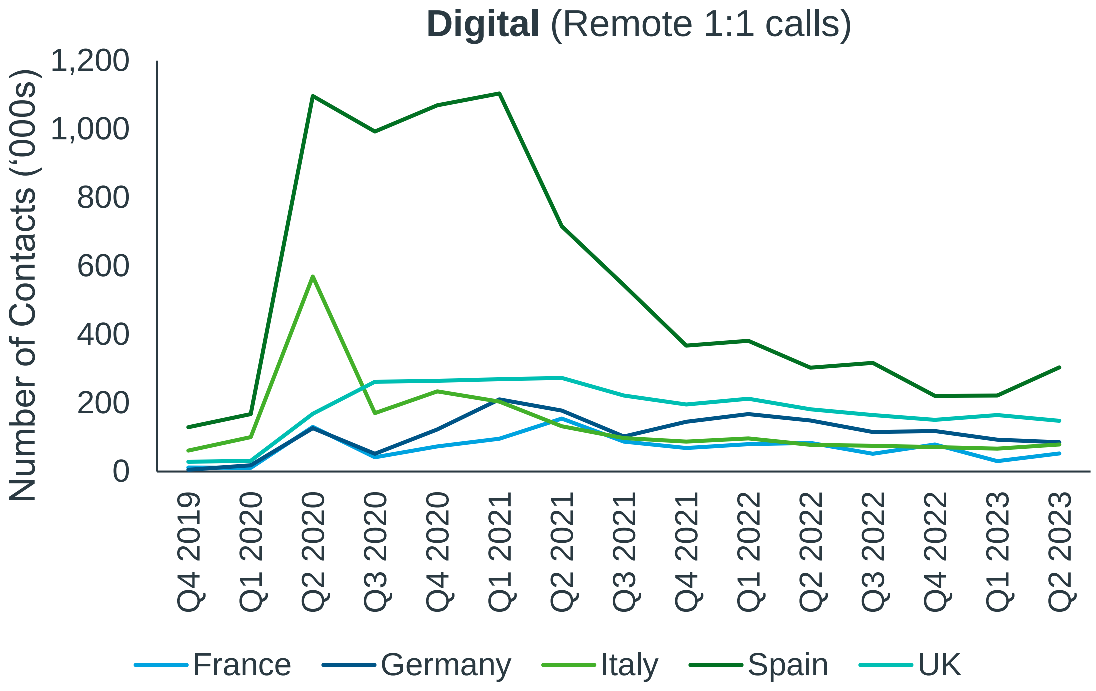


Source: IQVIA EMEA Thought Leadership

Countries are now finding a new post-pandemic equilibrium for traditional and digital interactions

F2F and virtual remote contacts with HCPs





- Culture and expectations
- HCP channel preferences
- COVID-19 response
- Access to physicians

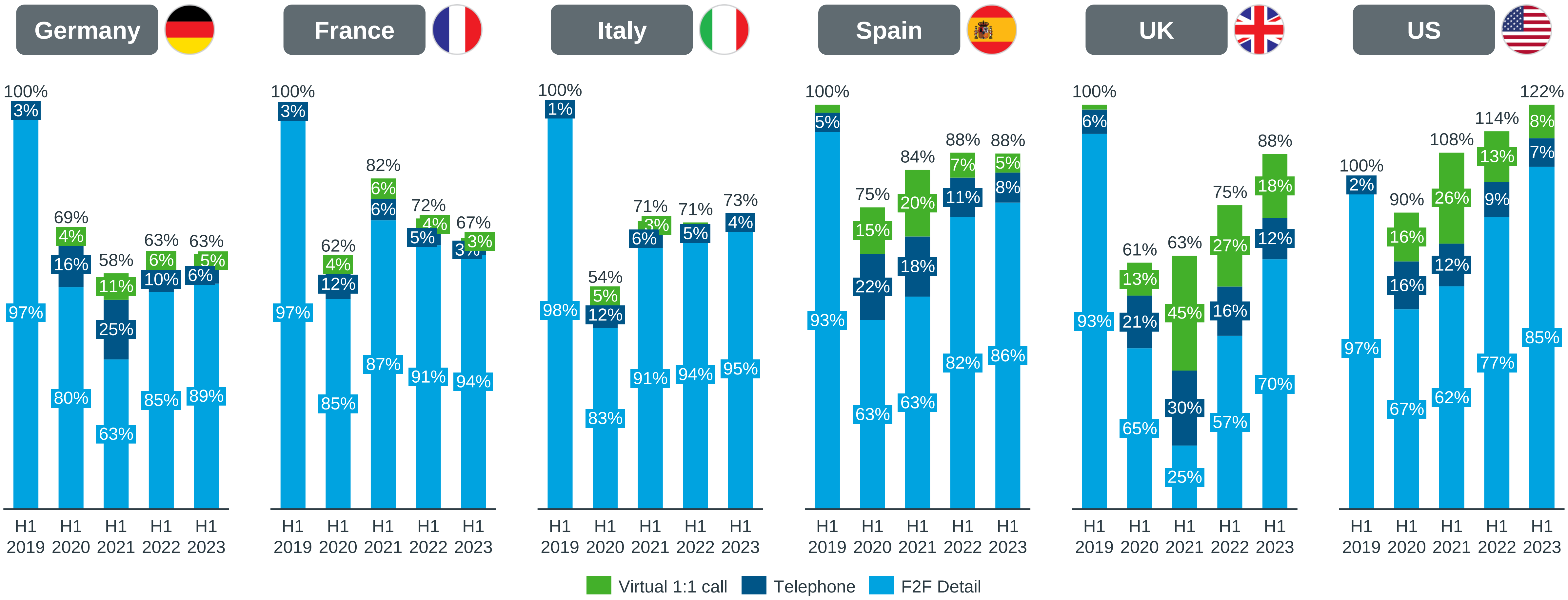
- Limitations on in-person interactions
- Promotional necessity
- Schedule around clinic time

Source: IQVIA EMEA Thought Leadership; IQVIA ChannelDynamics™ Data (EU4 & UK, all specialties, all therapy areas)

Life sciences companies need to make the most of interactive time with HCPs, which remains below pre-pandemic levels

Spain and the UK show the highest affinity for remote engagement

1:1 Interactive Contact Time by Channel



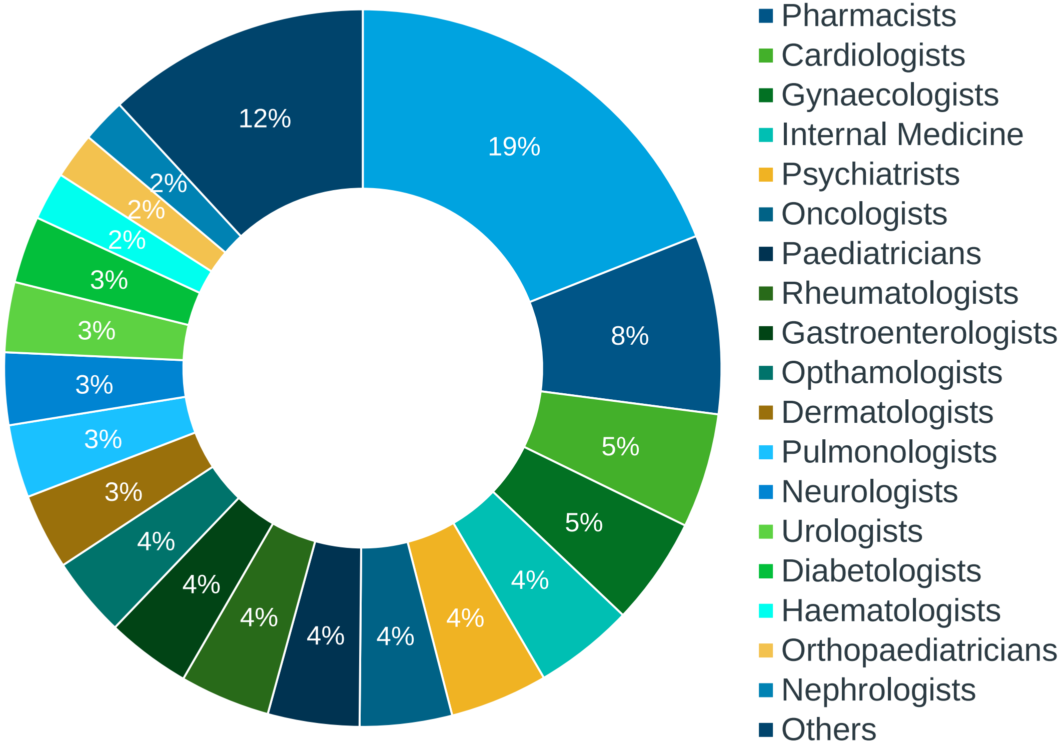
Source: IQVIA EMEA Thought Leadership; Channel Preference Survey 2023

The 2023 IQVIA ChannelDynamics™ Channel Preference Survey covered over 23,000 HCPs across 38 countries

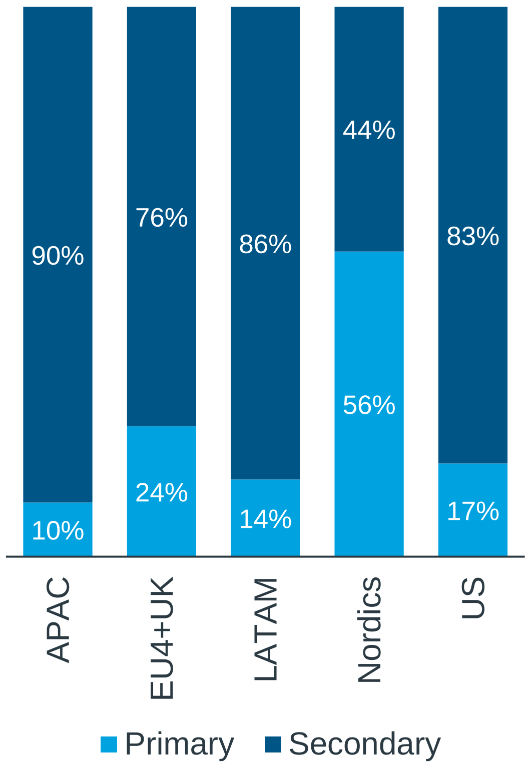
“Please enter - as a percentage – the **mix of interactions you would generally prefer over the course of a year**.
For example, if you would prefer about half of your interactions to be face-to-face, 1:1 in-person visits, please indicate 50%”

Total	**23,253**
	1,102
	1,597
	3,419
	1,751
	969
	1,845
+33 other countries	12,570

Respondents by Specialty



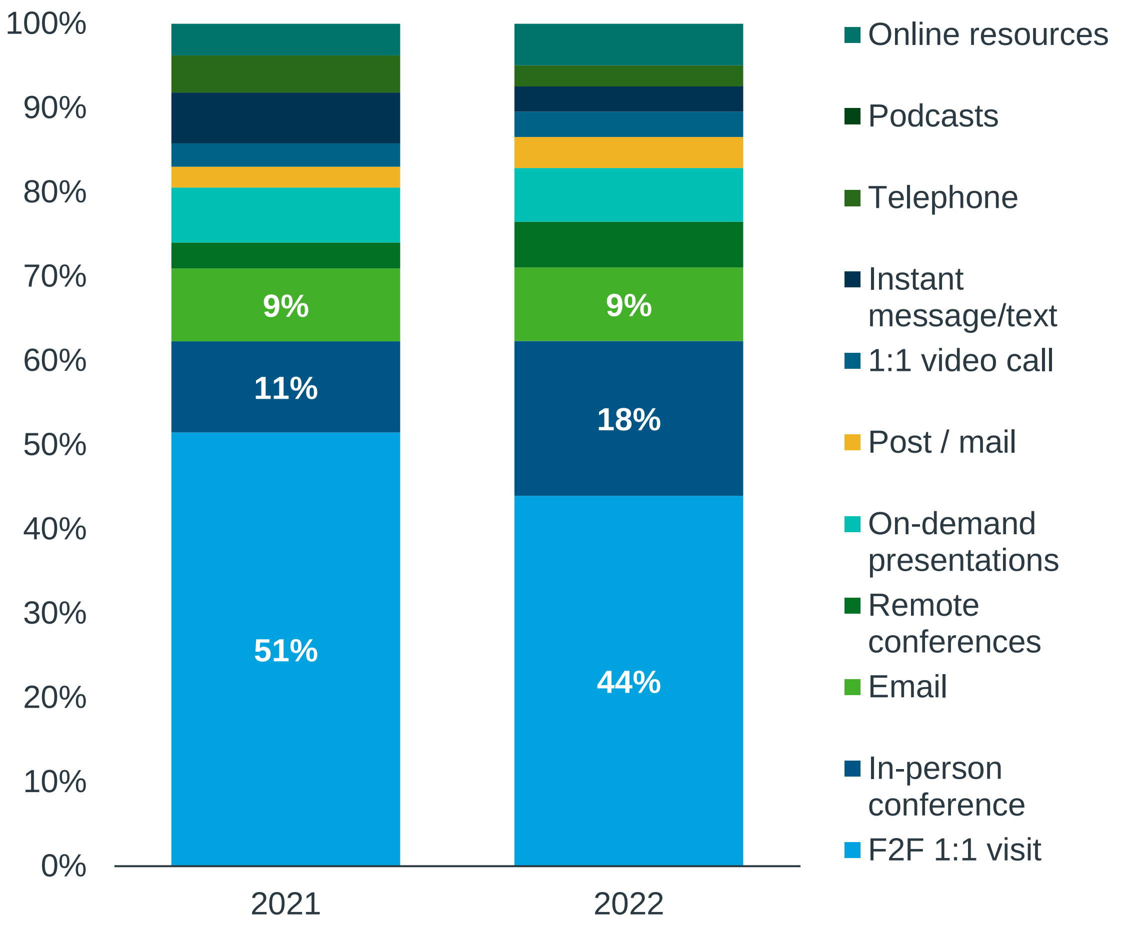
Split of respondents by care setting

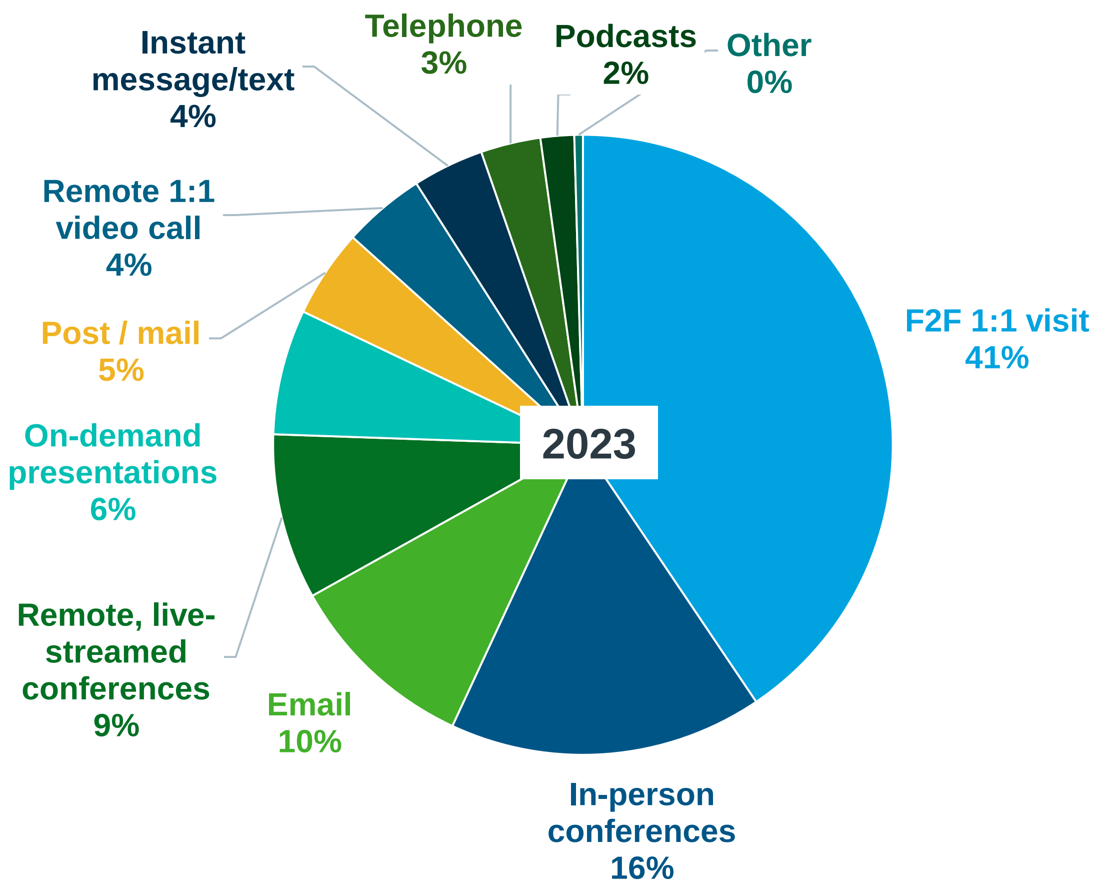


Source: IQVIA EMEA Thought Leadership; Channel Preference Survey 2023

F2F visits, in-person conferences and emails uphold the top three positions as the most preferred channels over time

Aggregated EU4 & UK and US channel preference splits

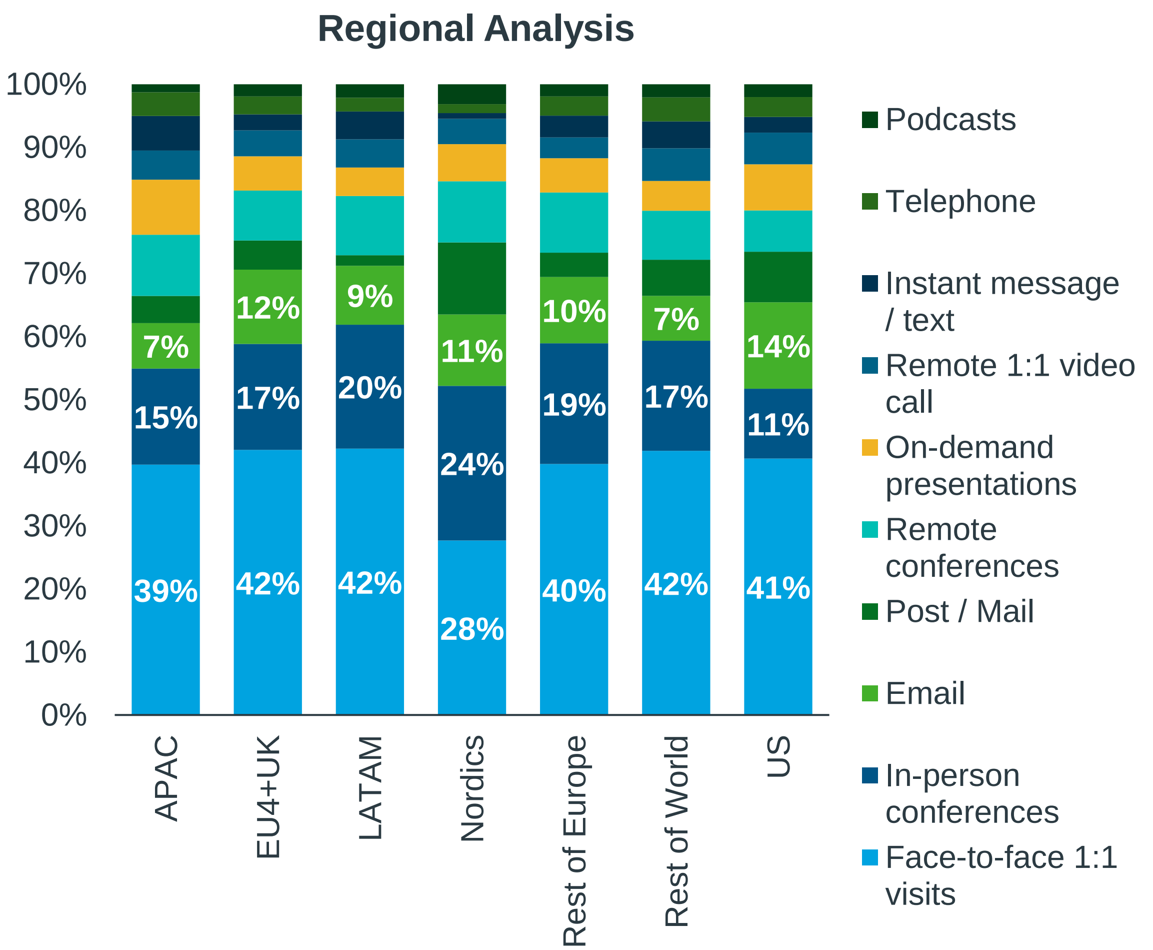


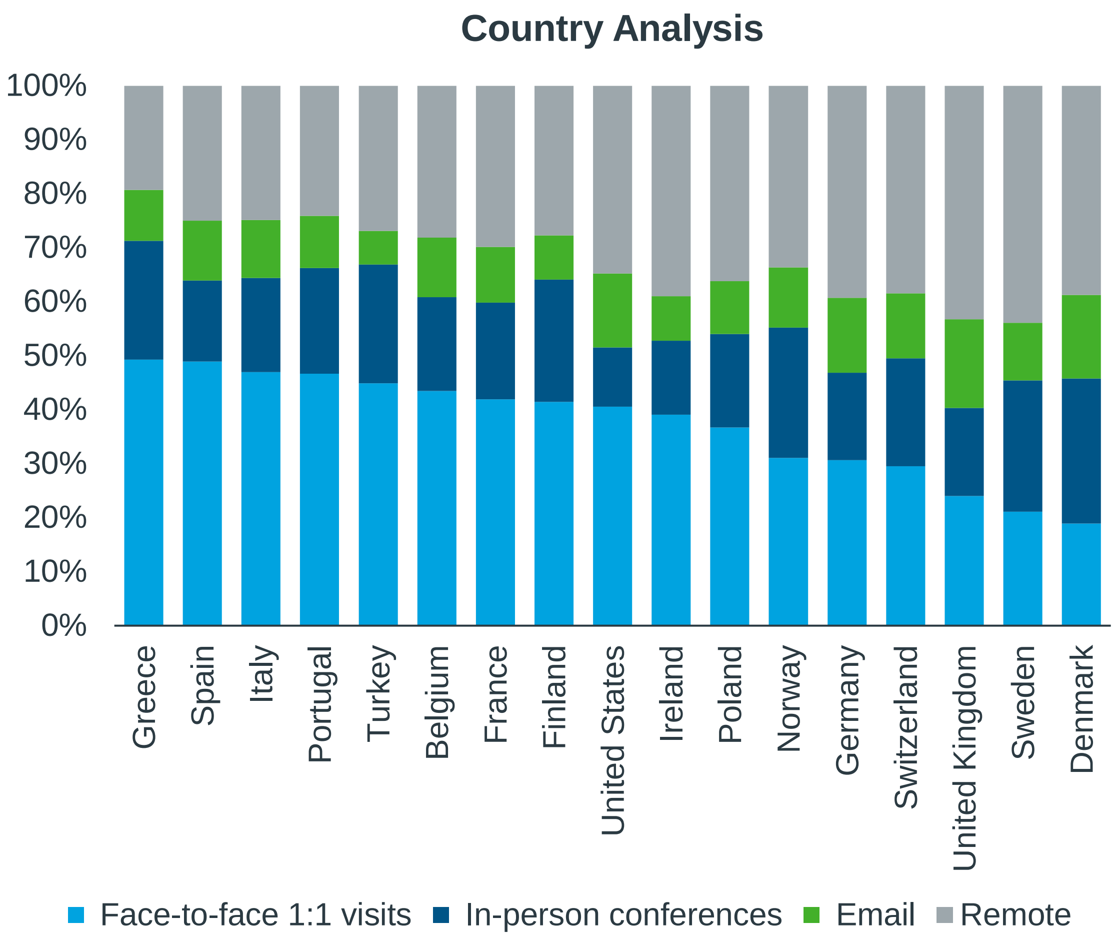


Source: IQVIA EMEA Thought Leadership; Channel Preference Survey 2023

Globally, F2F is the most preferred channel but there is significant regional and country-level variation

2023 preferred channel mix across major markets

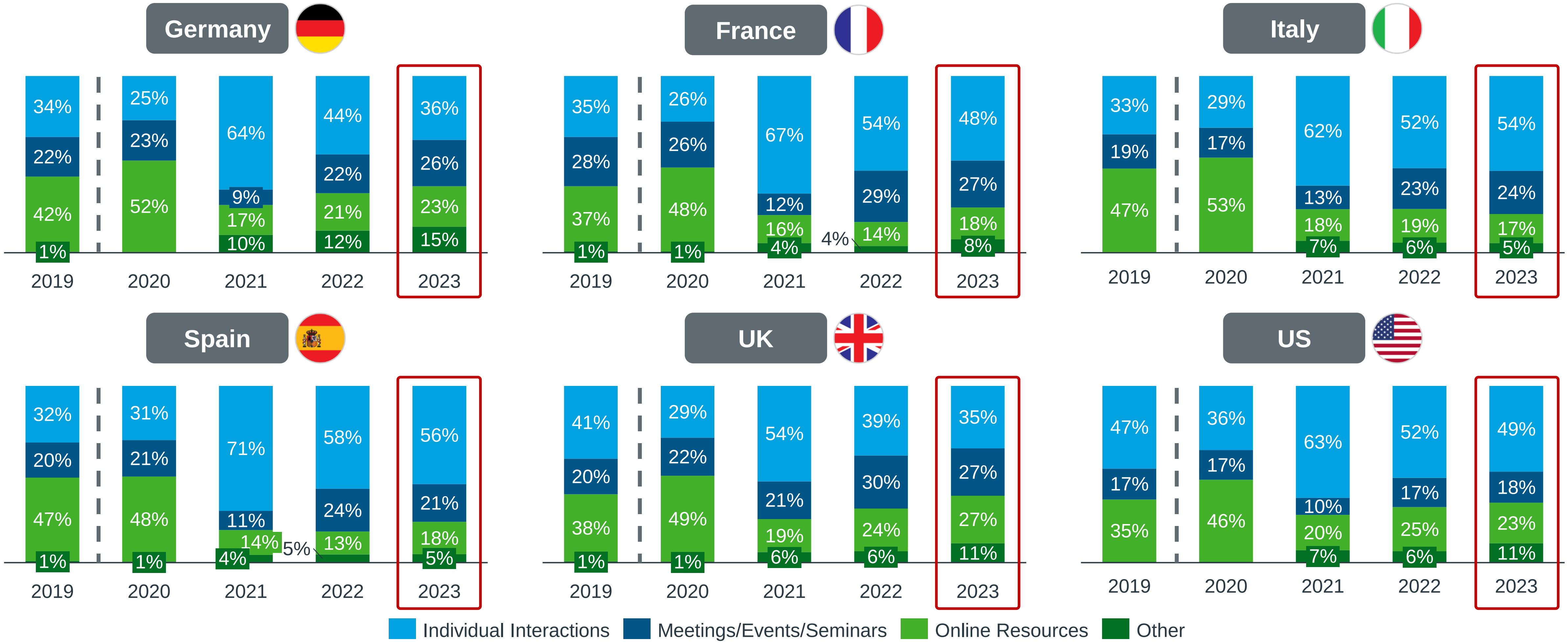




Source: IQVIA EMEA Thought Leadership; Channel Preference Survey 2023

Significant country level variation in channel preference continues into 2023

HCP Promotional Channel Preference over time (July 2019 – July 2023)

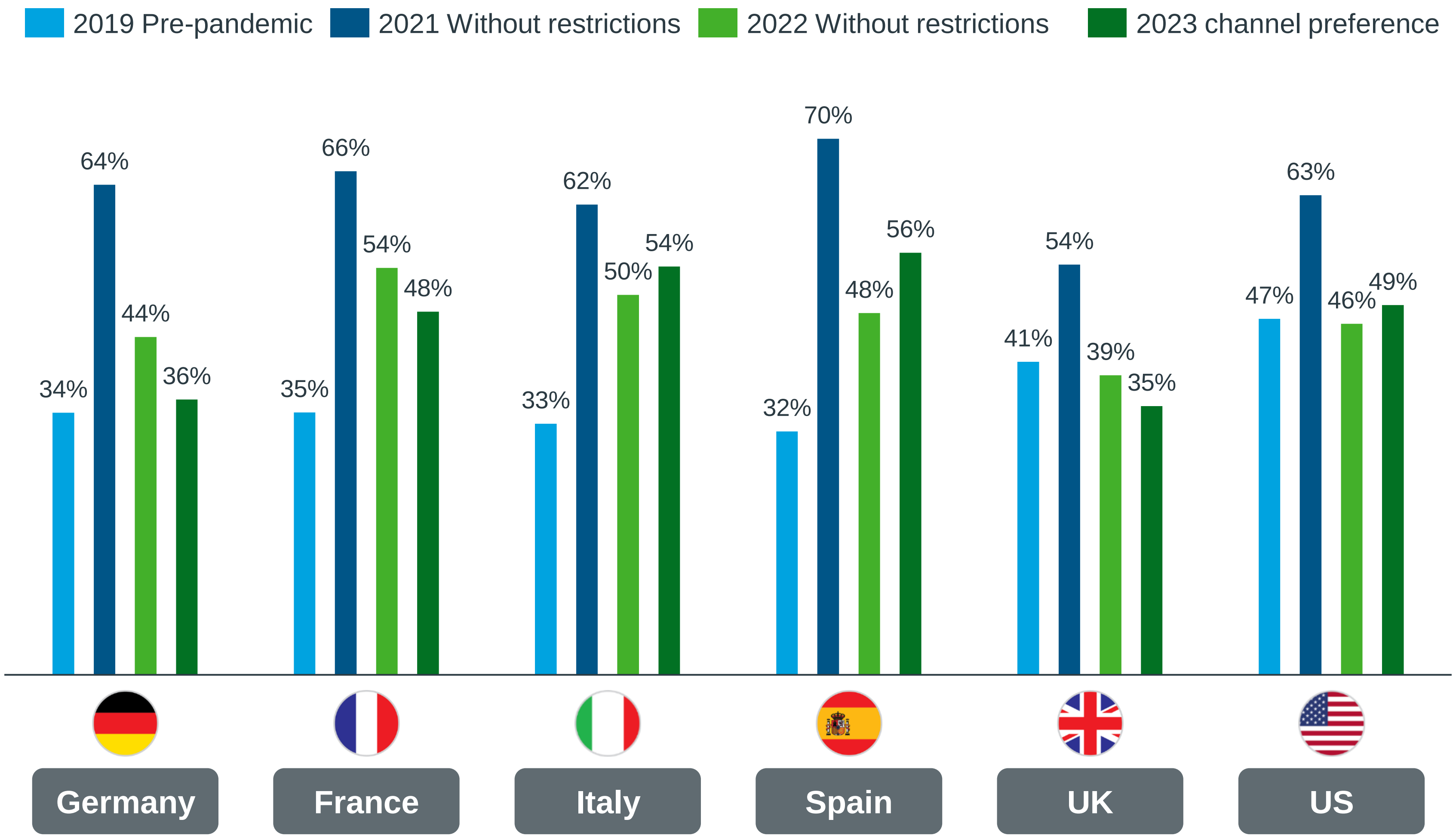


Source: IQVIA EMEA Thought Leadership; Channel Preference Survey 2023; Individual interactions refers to face to face rep visits, one to one telephone and video call; meetings/events cover live and remote conferences; online resources refer to email, online information resources, self guided presentation and podcasts (2023); other cover instant messaging and postal mailing

HCP preference for individual interactions has remained higher than pre-pandemic in France, Italy, Spain and the US

HCP Preference for Individual Interactions (2019-2023)

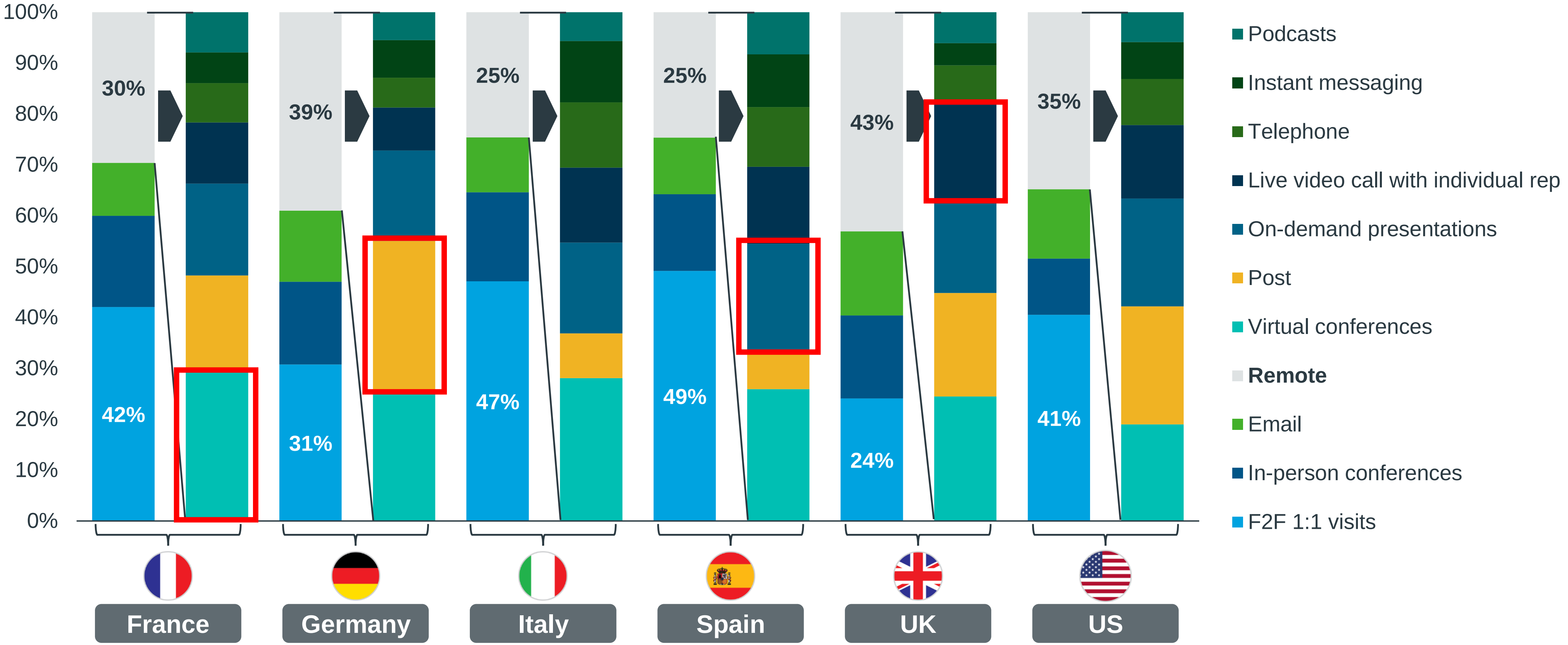
Individual Interactions
Face-to-face, one-to-one visits
1:1 Telephone call (audio only)
1:1 video call (e.g., via Zoom, Teams etc.)
Instant message/text (e.g., via WhatsApp)



Source: IQVIA EMEA Thought Leadership; Channel Preference Survey 2023

Remote channels contribute to 25-43% of overall preference, showing how a shift from F2F are needed in certain markets

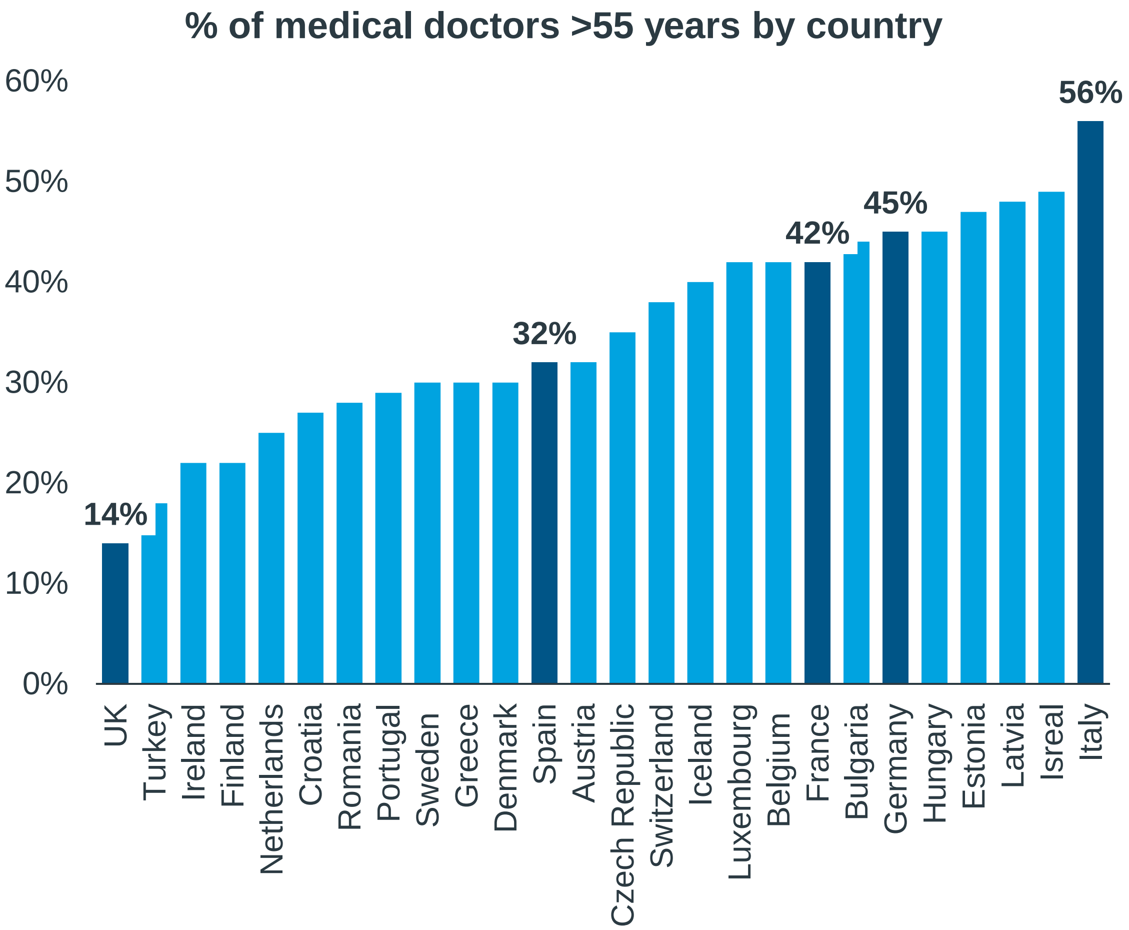
Building the case for omnichannel interactions across the EU4 & UK

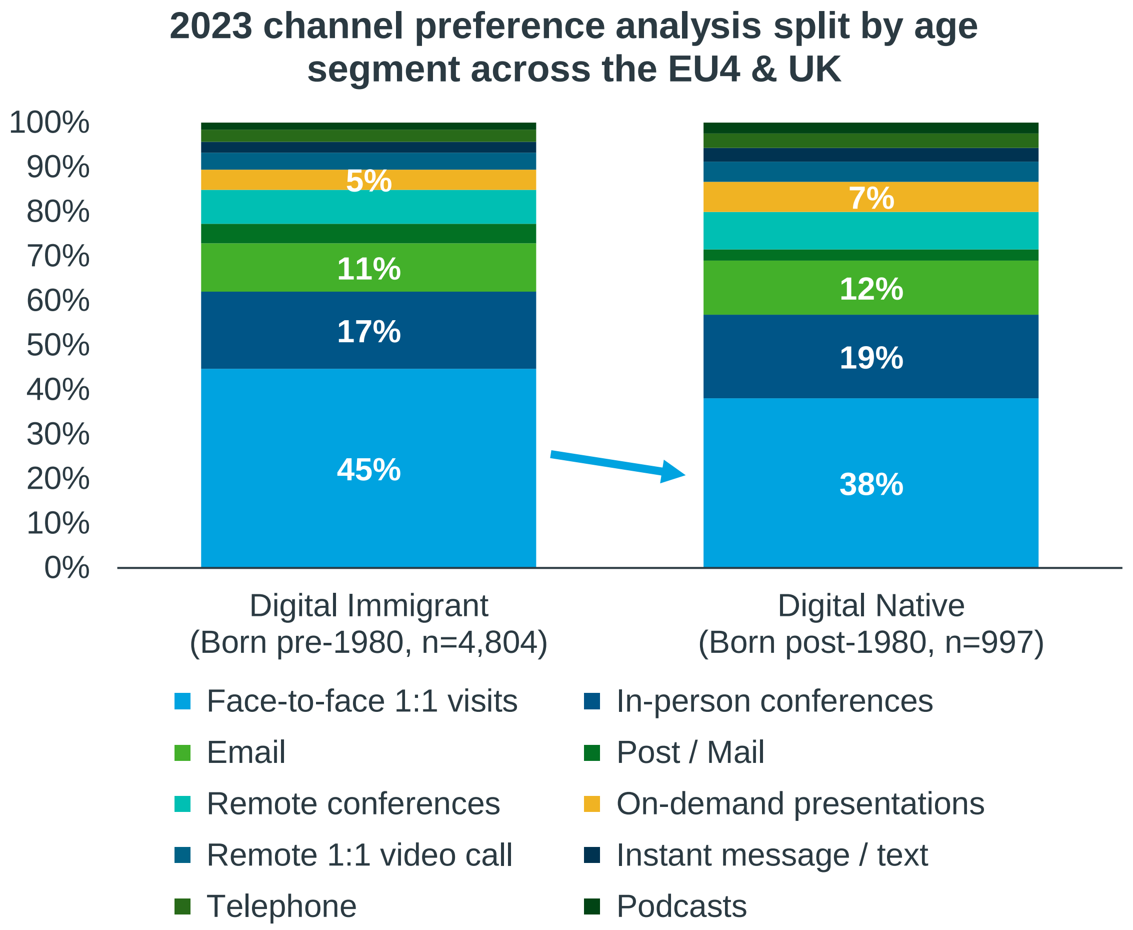


Source: IQVIA EMEA Thought Leadership; Channel Preference Survey 2023

Digital natives and immigrants show significant channel preference alignment, with natives preferring marginally less F2F

Life sciences companies need to engage with an older demographic today but also need to focus on a younger, more digitally astute customer base in future



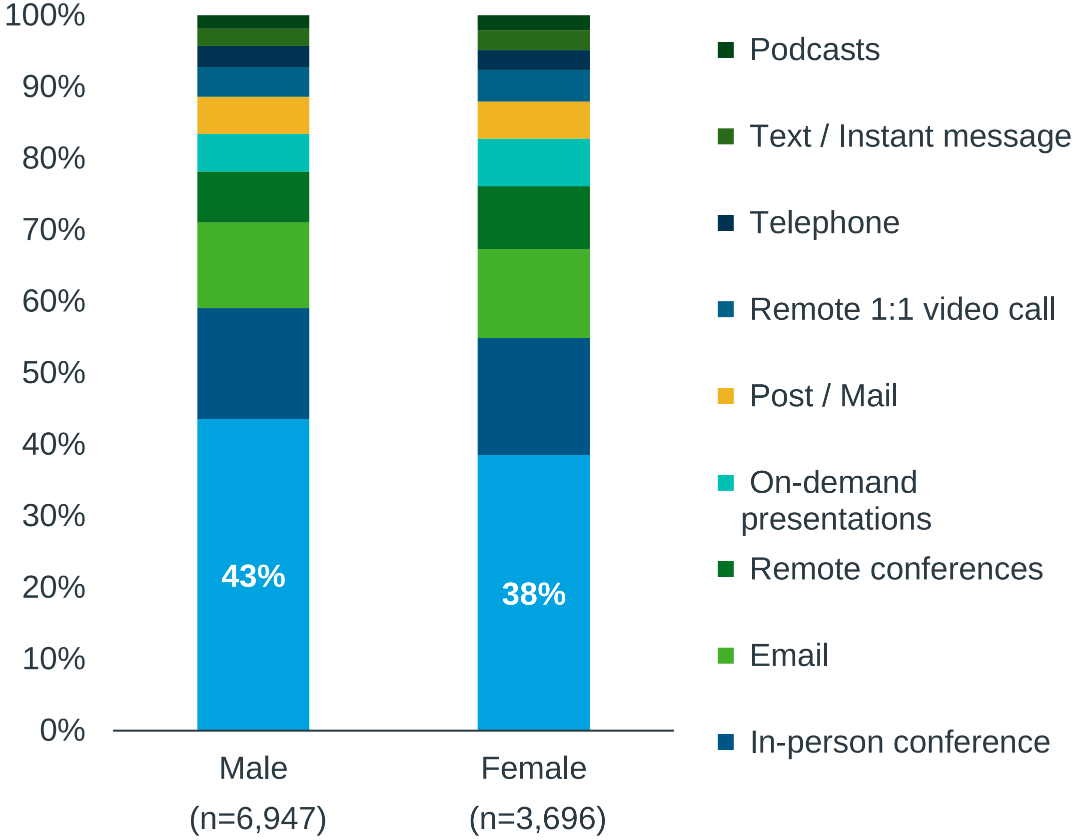


Source: IQVIA EMEA Thought Leadership; % Medical doctors aged 55 and above by country (World Health Organisation); Channel Preference Survey 2023

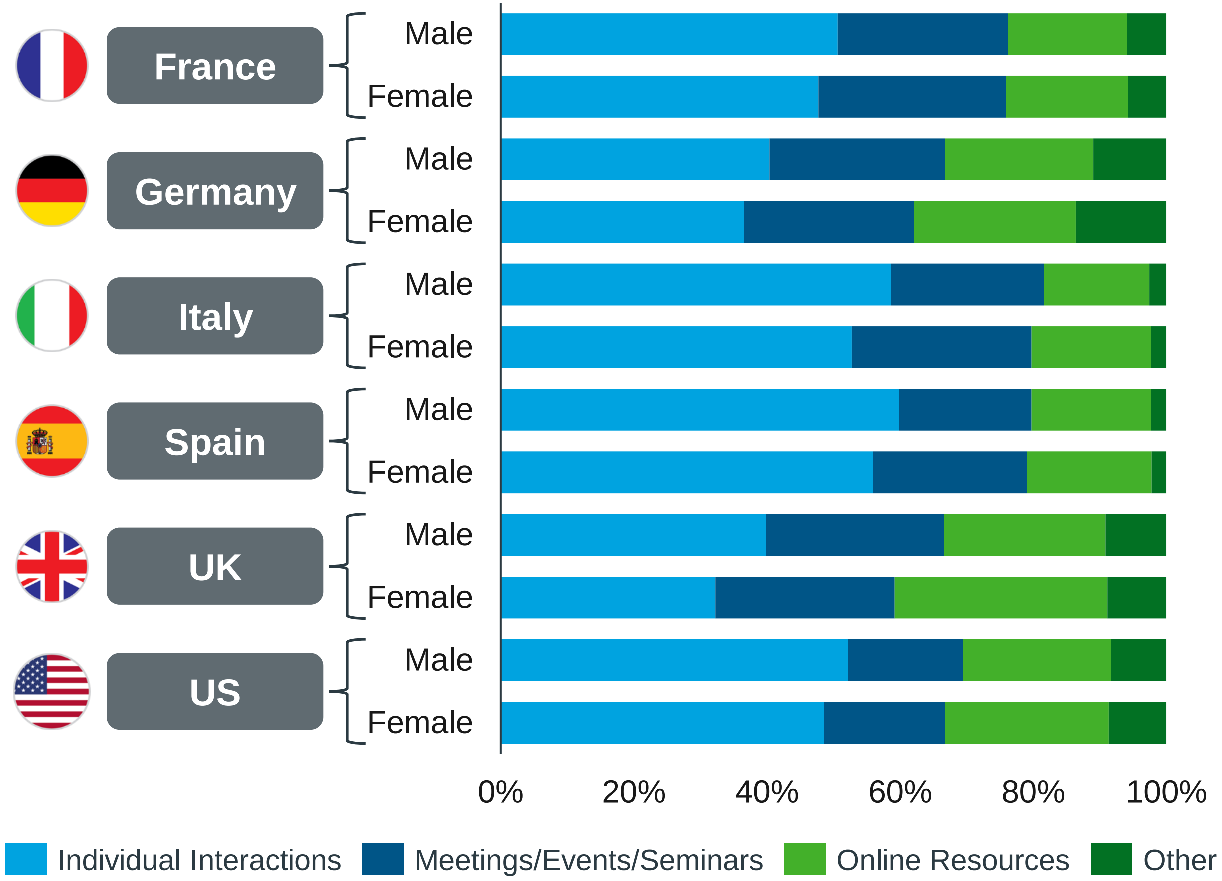
The 2023 survey shows limited differences in channel preferences between men and women

EU4 & UK and US channel preferences, split by gender

Aggregated channel preference



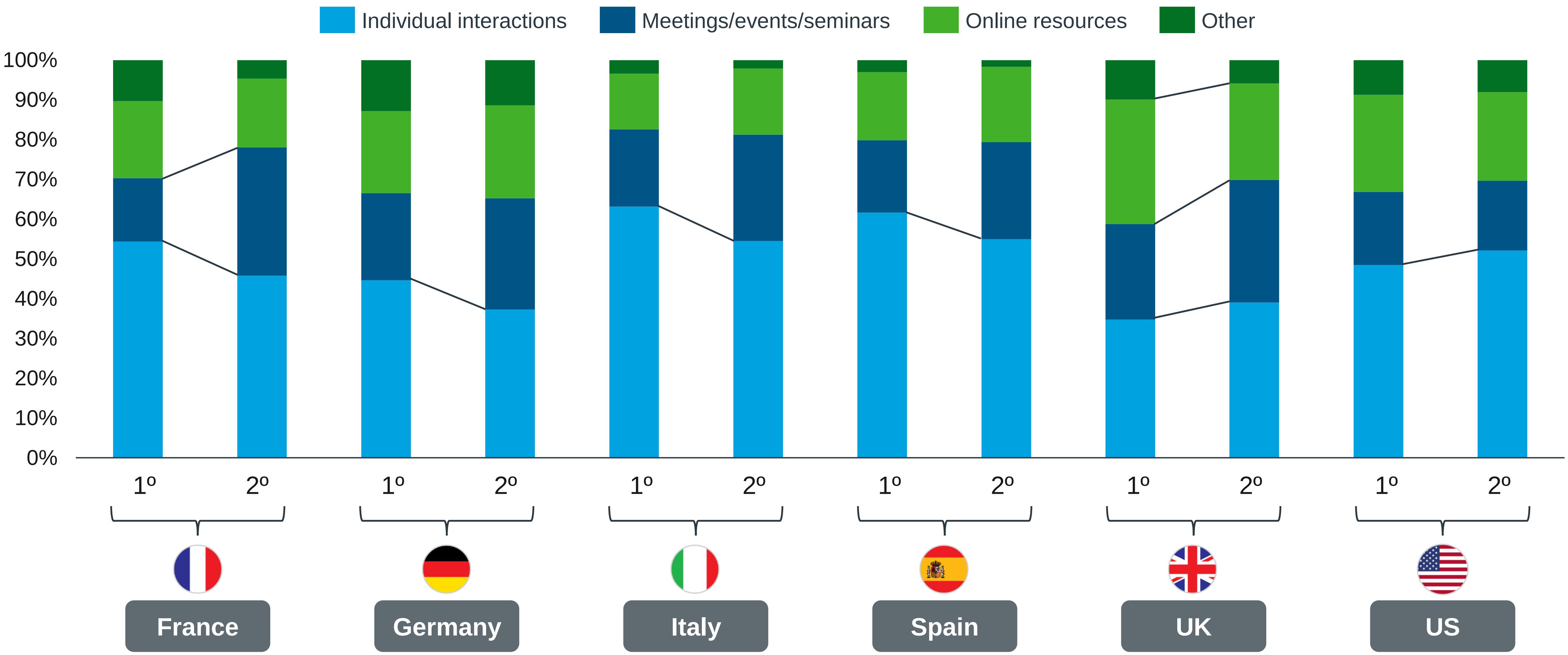
Gender splits by country



Source: IQVIA EMEA Thought Leadership; Channel Preference Survey 2023

Secondary care HCPs prefer more group events than HCPs from primary care

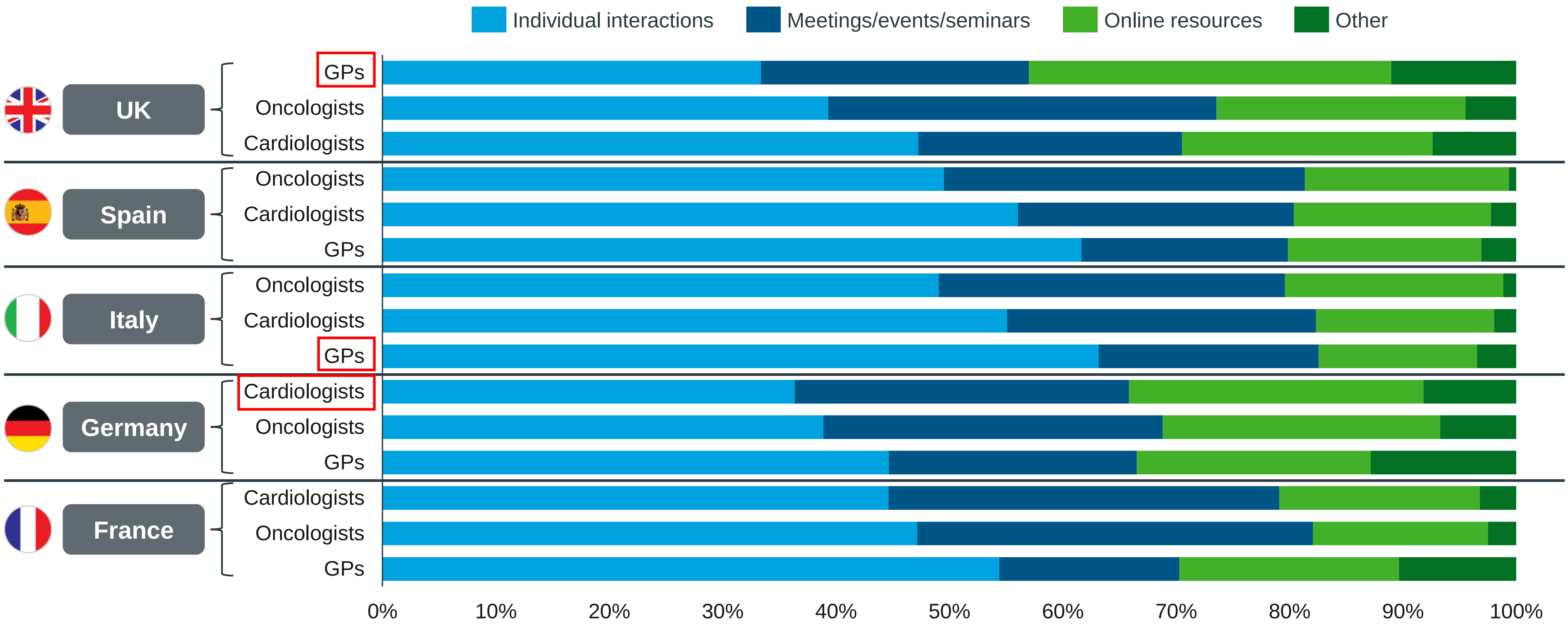
Primary vs. secondary HCP channel preferences in US, EU4 & UK



Source: IQVIA EMEA Thought Leadership; Channel Preference Survey 2023

GPs show an affinity towards individual interactions in the EU4 but in the UK many prefer online resources

HCP specialty level analysis across EU4 & UK



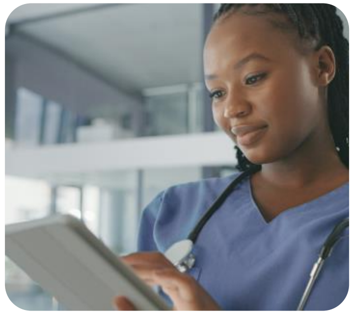
Source: IQVIA EMEA Thought Leadership; Channel Preference Survey 2023

What are the strongest factors influencing the commercial approach for life sciences companies?

Four key components from the Channel Preference Survey to create HCP personae

1. **Country**
   - Culture, historical expectations and access
2. **Specialty**
   - Different priorities, workloads and patient groups
3. **Age**
   - Digital affinity, social media and generational norms
4. **Gender**
   - Limited differences in channel preference

Building HCP personae



HCP archetypes need to reflect channel preferences and desire to interact

E.g., traditional in-person, digital-only, hybrid etc. (weekly, monthly)

Incorporate multiple data sources

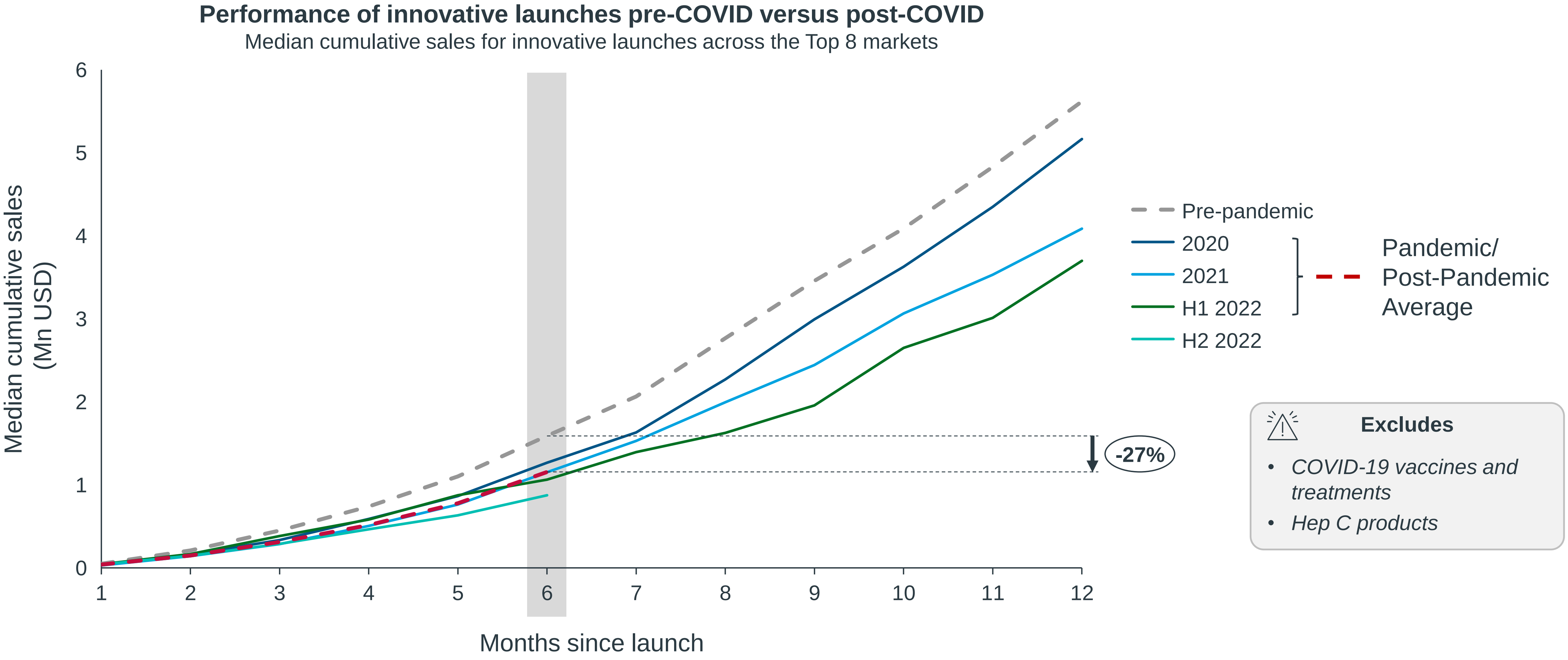
E.g., **age, gender, specialty,** engagement history, prescription volumes, social media presence and digital affinity

Source: IQVIA EMEA Thought Leadership

New Active Substance, plus Innovative Launch Analysis

On average, post-pandemic launch trajectories still underperform, and the most recent cohort perform worst

Top 8



Excludes

- *COVID-19 vaccines and treatments*
- *Hep C products*

Source: IQVIA EMEA Thought Leadership; IQVIA MIDAS Monthly June 2023; Notes: Rx only; USD in CER; Pre-pandemic launches: H2 2016 to 2019; Includes NAS launches as well as other launches considered to be significantly innovative (e.g. non-NAS launches in a new therapy area, orphan disease or new combinations including an innovative branded medicine); Excludes Hep C products, COVID-19 Vaccines and Treatments; Countries included are US, China, Japan, UK, Germany, Italy, France, Spain

You can explore more Thought Leadership on Launch on the IQVIA website

Post Pandemic Launch Environment

Launch Excellence VIII

Overcoming Pharma's Launch Performance Problem

Success Multiplied: Launch Excellence for Multi-Indication Assets

Launch Excellence VII

Commercial model

Editing the DNA of Pharma’s Go to Market model

HCP Channel Preference in an increasingly complex landscape

Riding out the storm: The future of post-Pandemic customer engagement

Transcending the traditional focus of oncology commercialisation

Real World Evidence/Medical Affairs

Excellent launches are winning the evidence battle

Making Real World Evidence meaningful and actionable

Their Finest Hour: Medical Affairs in a Disrupted World – IQVIA

Medical affairs next frontier: Unlocking Omnichannel Engagement

In the thick of it: Medical Affairs, strategic partner to other functions

OPEX

Re-defining OPEX Modelling for a Competitive Future

Growth through Commercial

Therapy area

A new dawn: At the cusp of the CNS decade

Paving the path in haematological cancers

In the Eye of the Storm: PD-(L)1 inhibitors

Cell, Gene and RNA: A decade of progress

Company type

Large pharma launch issues:

No more surprises: Understanding predictors of Launch success (with AZ)

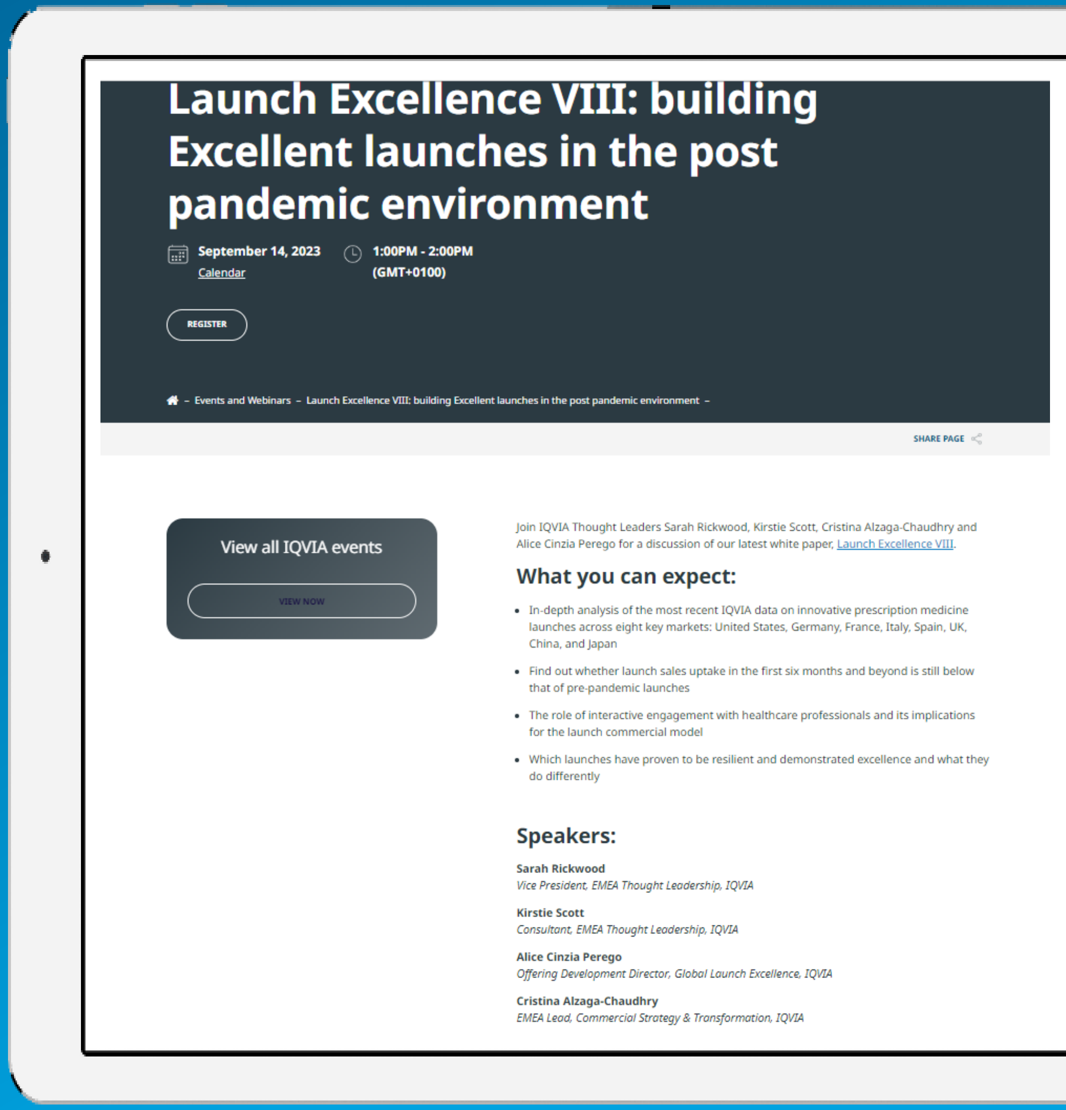
Launch Excellence: Escaping the complexity Trap

EBP launch issues:

Emerging Biopharma challenges of European commercialisation

Sign up for our September 14th Launch Excellence webinar

https://www.iqvia.com/events/2023/08/launch-excellence-viii-building-excellent-launches-in-the-post-pandemic-environment



Medicine Demand and Supply

Increase in Volume growth in Germany & UK across all segments YTD 2023 compared to the same period last year

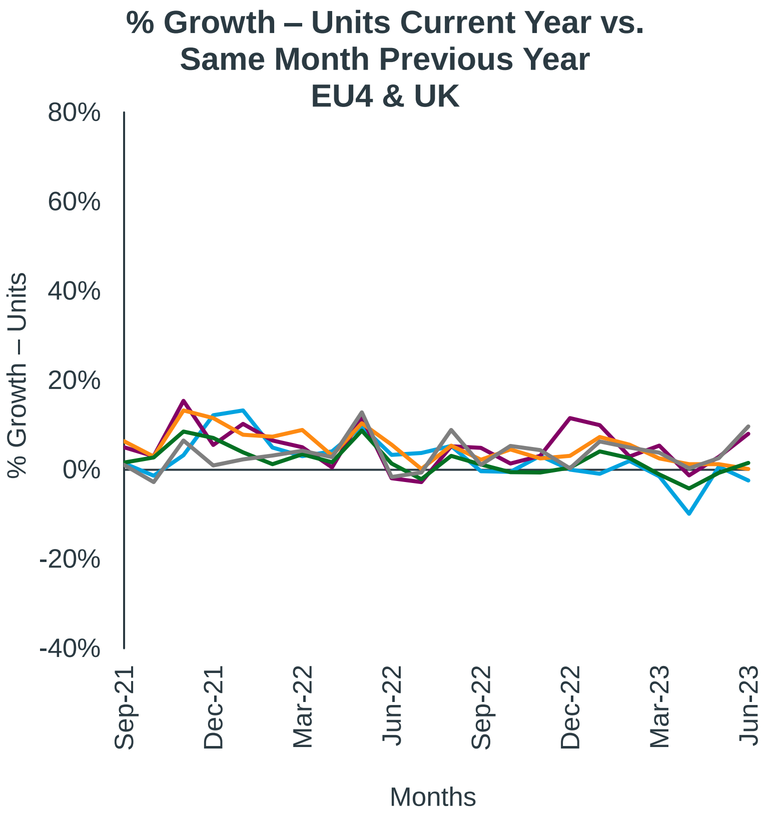
						
COVID-19 Reported Numbers**	***Total Cases***	25,940,840	38,437,756	13,980,340	40,086,999	24,680,562
	Total Deaths	191,211	174,979	121,852	171,684	228,802
CH Market Units Growth	*YTD-2023 vs. 2022[1]*	-9.8%	4.1%	-24.6%	-4.0%	0.3%
	Latest Month[4]	-9.2%	-2.9%	-23.3%	-1.6%	3.3%
Rx Retail Units Growth	*YTD-2023 vs. 2022[2]*	-2.0%	4.7%	3.0%	0.3%	4.6%
	Latest Month[4]	-2.4%	8.0%	0.2%	1.5%	9.7%
Rx Hospital Units Growth	*YTD-2023 vs. 2022[3]*	2.2%	3.2%	4.4%	7.3%	5.5%
	Latest Month[4]	0.6%	3.6%	-2.8%	10.9%	10.4%

Note: Retail pharmacy sales/Rx data has been used across countries. Any cross-country analysis needs to account for differences in healthcare systems.
[1]IQVIA CH Customized Insights – Italy, Germany, Spain, France (Monthly sell-out data), UK (Monthly sell-in data); Only OTC segment coverage for UK
[2]IQVIA MIDAS data – Retail panel – Italy, Germany, Spain, France (Monthly sell-out data), UK (Monthly sell-in data)
[3]Monthly IQVIA MIDAS data – Hospital panel – Italy, Germany, Spain, France, UK
[4]Latest month – August 2023
**Source: COVID-19 Epi data in the WHO European Region (WHO), data extracted on 29th August 2023

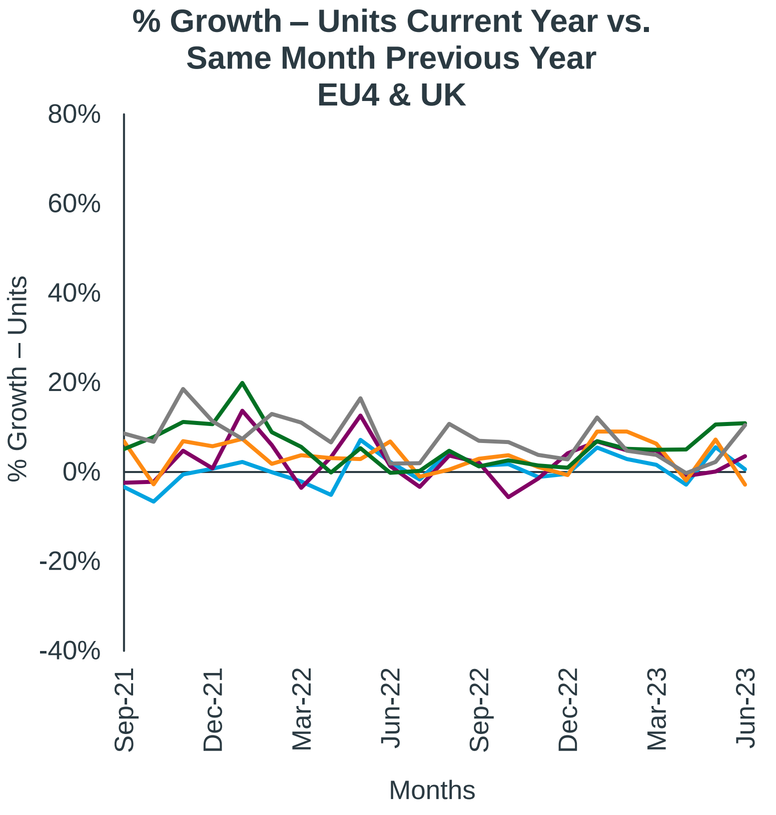
UK and France showed highest volume growth in retail and hospital market respectively in June 2023

The consumer health market is declining, except in the UK

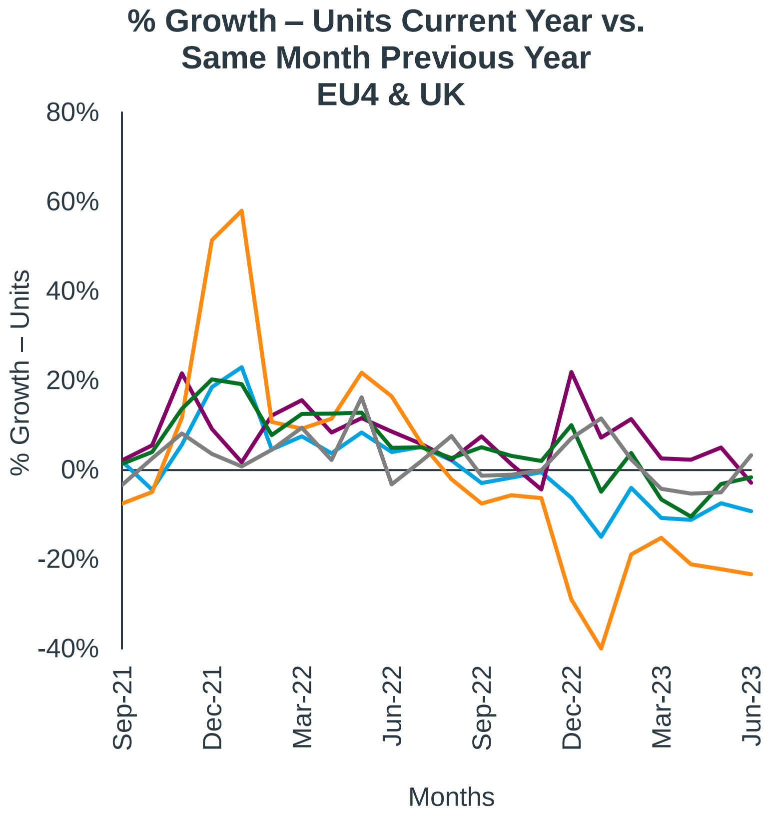
Retail Rx market



Hospital market



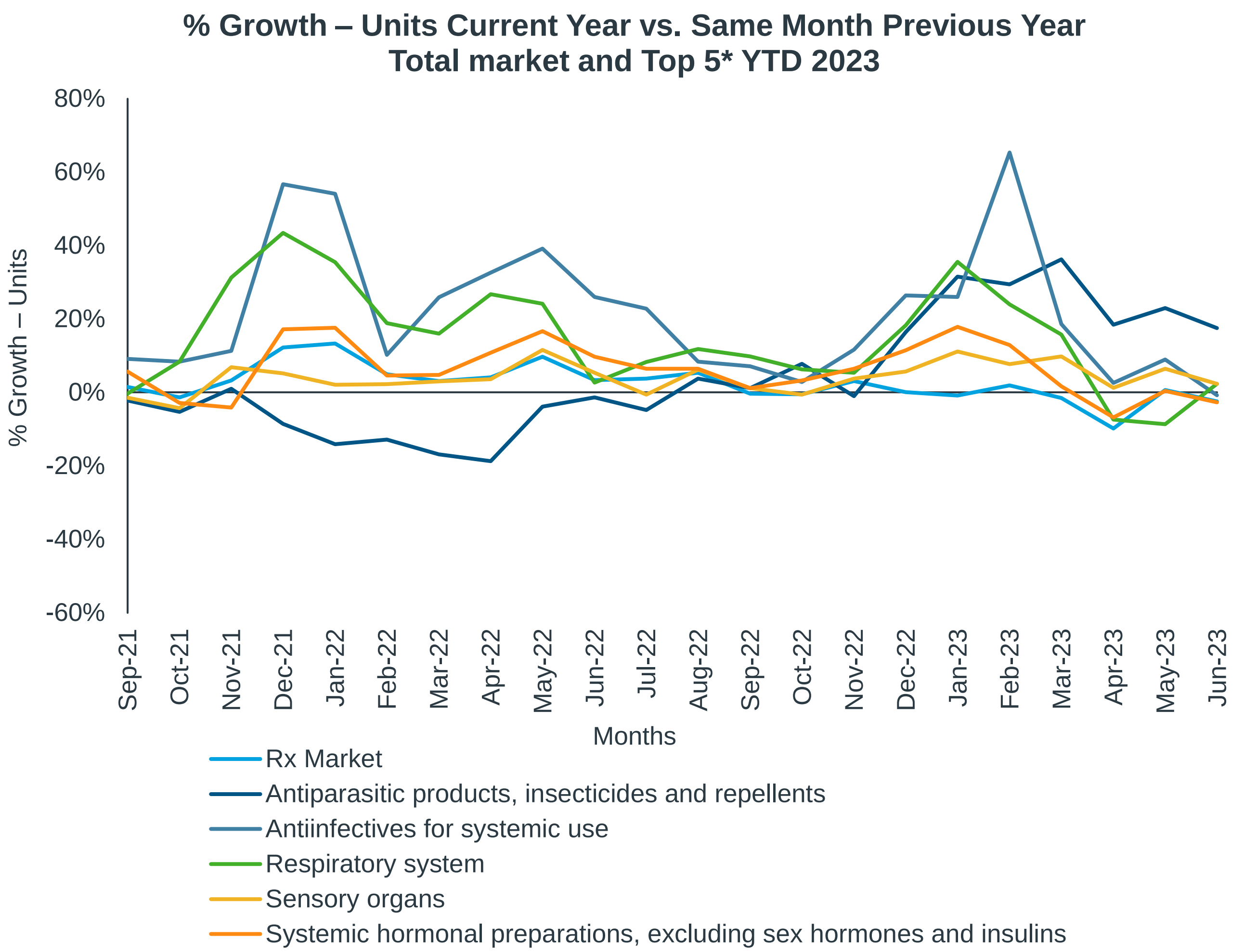
Consumer Health market



Italy Germany Spain France UK

Source: IQVIA CH Customized Insights, IQVIA MIDAS data (Retail panel) – Italy, Germany, Spain, France (Monthly sell-out data), UK (Monthly sell-in data); Monthly IQVIA MIDAS data – Hospital panel; August 2023

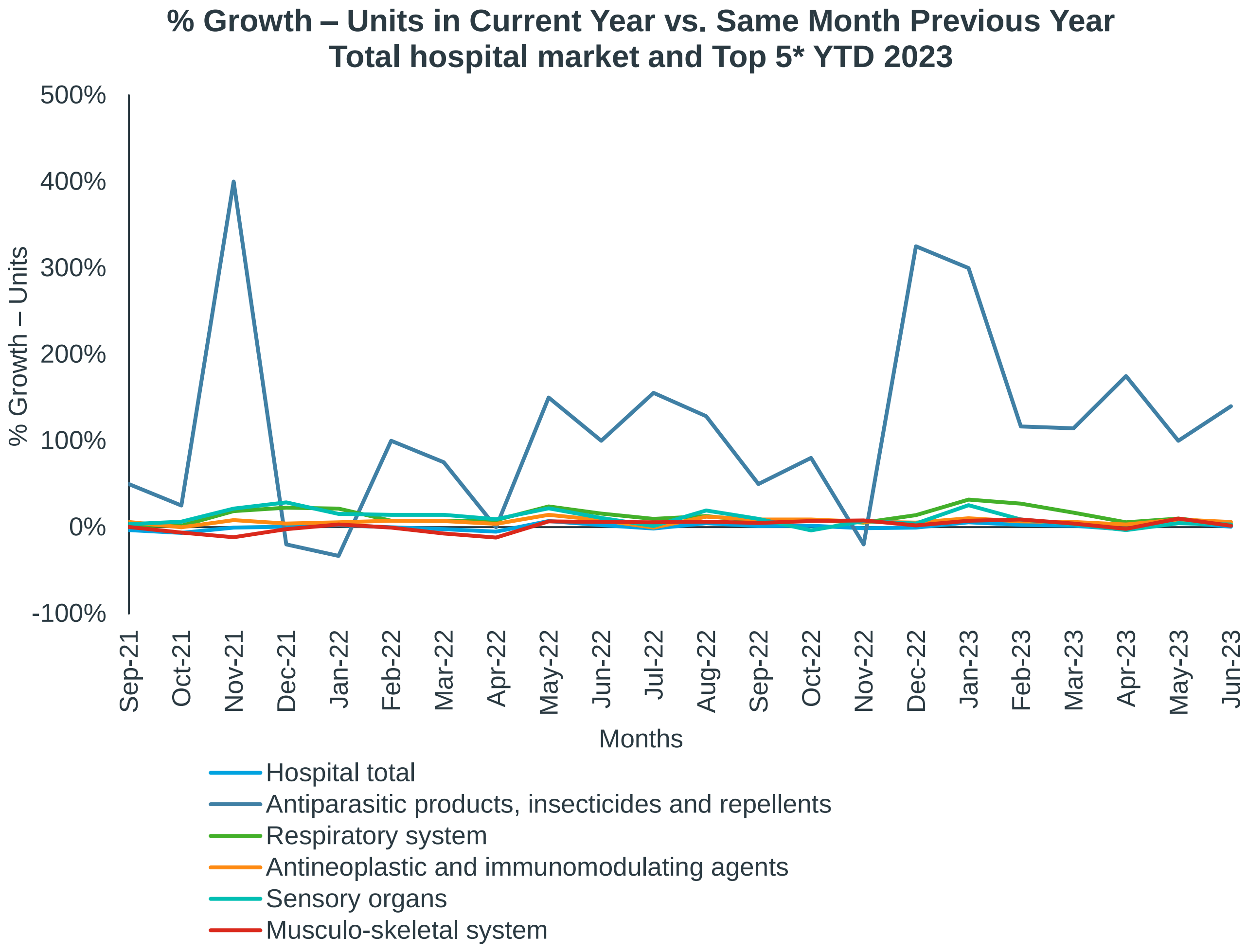
The Italian retail prescription volume sales declined by 2% YTD 2023 compared to the same period last year



Top* 2 ATC3 classes within Top* 5 ATC1 classes by Units Growth YTD 2023 vs. YTD 2022	Units Growth Jan 2023 vs. 2022	Units Growth Latest month 2023 vs. 2022	Units Growth YTD 2023 vs. 2022
Rx Market	-0.9%	-2.4%	-2.0%
Antiparasitic products, insecticides and repellents	31.5%	17.6%	26.0%
Anti-Malarials	75.0%	20.0%	32.3%
Anthelmintics	25.0%	17.5%	23.6%
Antiinfectives for systemic use	26.0%	-0.7%	18.8%
Cephalosporins & Combs	56.7%	7.4%	36.0%
Broad Spectr.Penicillins	39.3%	2.8%	26.5%
Respiratory system	35.6%	2.3%	8.7%
Corticoids	107.5%	-9.7%	35.8%
Anticholinergics In Combination With B2-Agonists	50.8%	26.8%	29.9%
Sensory organs	11.1%	2.3%	6.4%
Ophth A-Inflam+A-Infect	24.2%	12.4%	15.8%
Miotics+Antiglauc.Preps.	2.3%	-2.1%	0.3%
Systemic hormonal preparations, excluding sex hormones and insulins	17.9%	-2.7%	3.7%
Plain Corticosteroids	27.4%	-6.5%	5.7%
Thyroid Preparations	6.2%	1.5%	1.5%

*Top in terms of YTD 2023 Growth
Source: IQVIA MIDAS monthly sell-out data – August 2023 | Retail pharmacy panel – captures sales of Rx products only

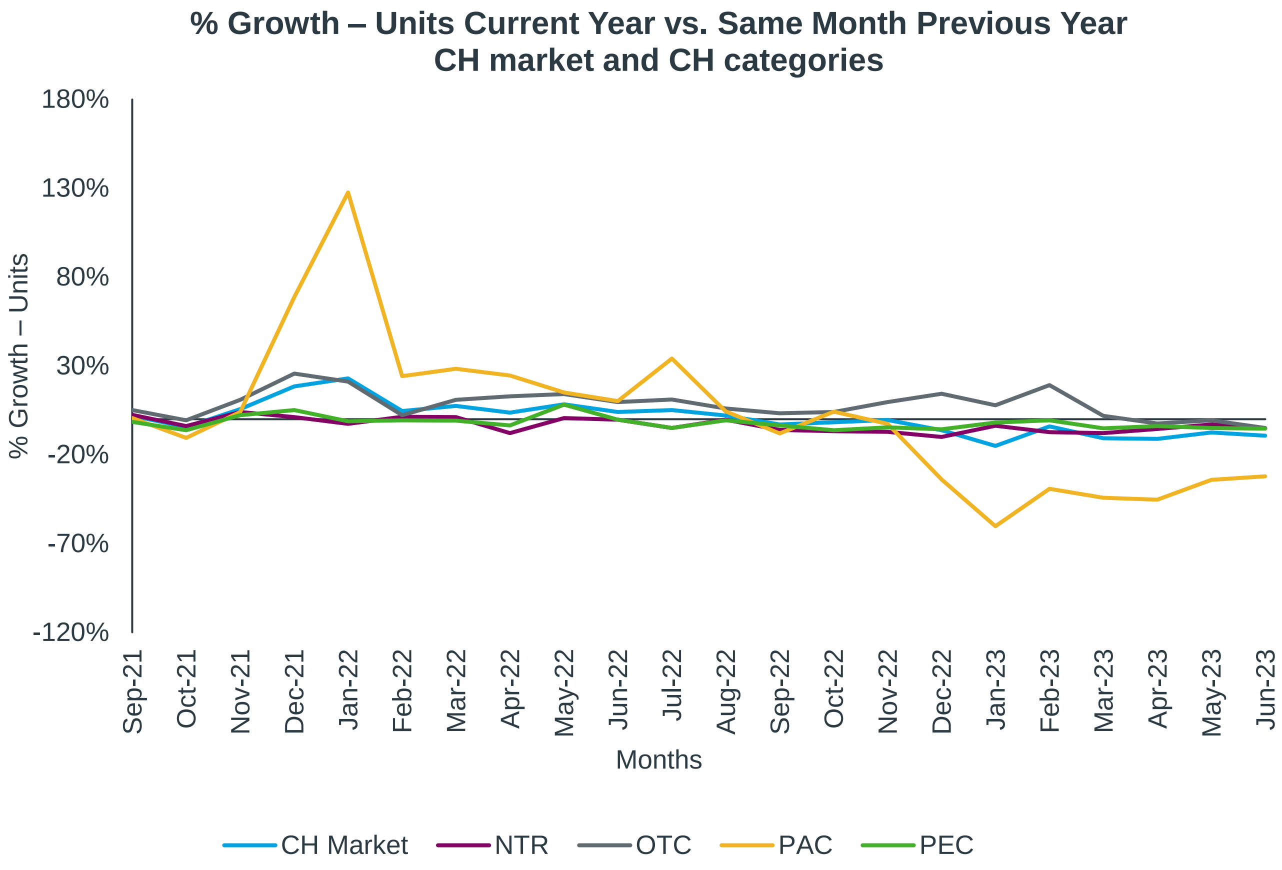
The hospital market in Italy grew by 2.2% in YTD 2023 compared to 2022



Top* 6 ATC Classes by Units Growth YTD 2023 vs. YTD 2022	Units Growth Jan 2023 vs. 2022	Units Growth Latest month 2023 vs. 2022	Units Growth YTD 2023 vs. 2022
Hospital Market	5.5%	0.6%	2.2%
Antiparasitic products, insecticides and repellents	300.0%	140.0%	133.3%
Respiratory system	31.9%	3.3%	15.4%
Antineoplastic and immunomodulating agents	10.2%	5.9%	6.8%
Sensory organs	25.6%	3.1%	6.3%
Musculo-skeletal system	7.6%	1.5%	5.0%
Genito-urinary system and sex hormones	6.3%	9.5%	4.0%

*Top in terms of YTD 2023 Growth
Source: IQVIA MIDAS monthly data – August 2023 | Hospital panel

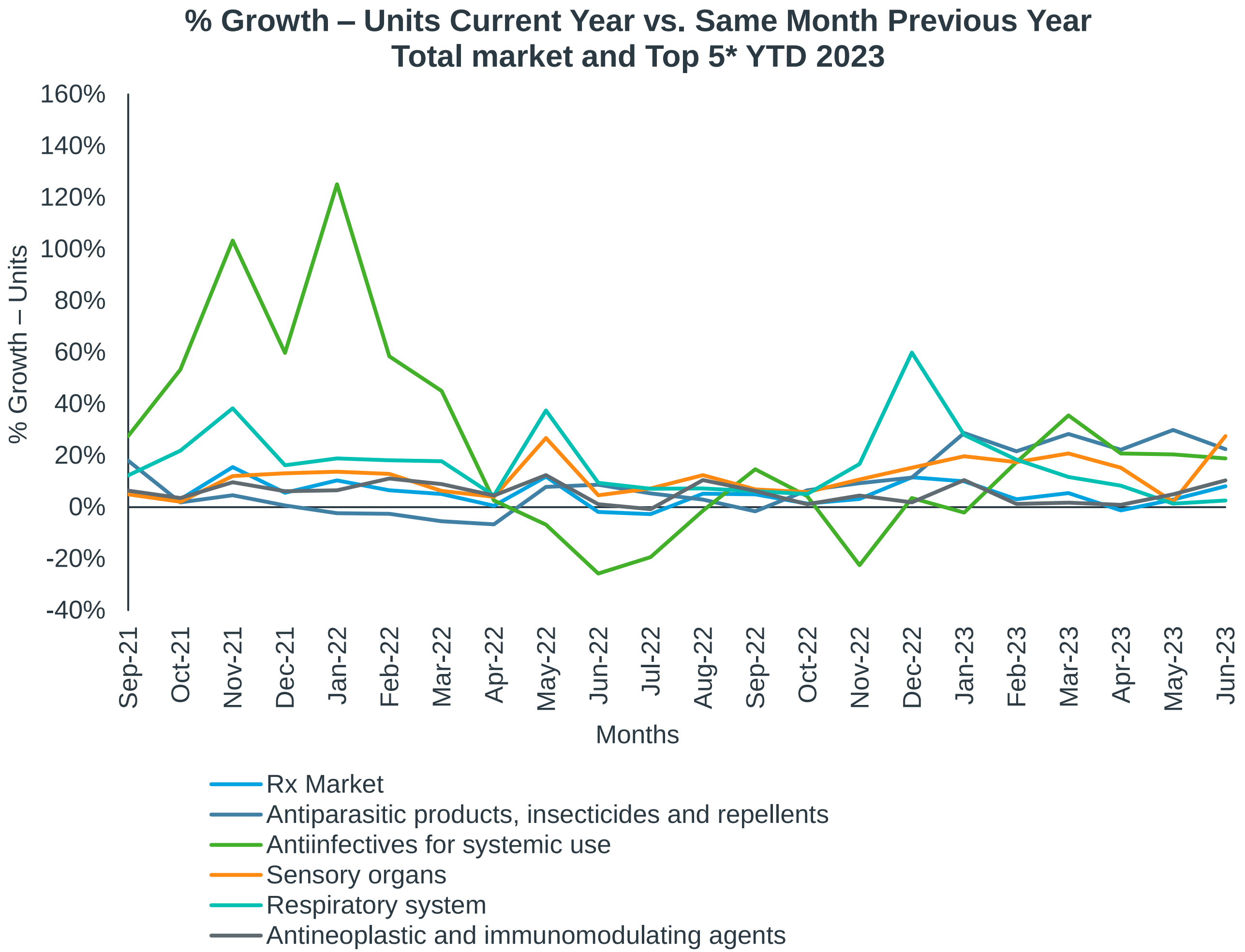
The Consumer health market in Italy declined by 9.8% in YTD 2023 compared to the same period last year



CH Categories and top* 2 classes within each category by Units Growth YTD 2023 vs. 2022	Units Growth Jan 2023 vs. 2022	Units Growth Latest month 2023 vs. 2022	Units Growth YTD 2023 vs. 2022
CH Market	-15.0%	-9.2%	-9.8%
Nutrition (NTR)	-3.7%	-5.1%	-5.4%
Gluten-Free & Low Prot.Prds	-2.2%	-0.6%	-2.7%
Food For Adults	-4.7%	-9.2%	-7.1%
Over-the-Counter Drugs (OTC)	7.83%	-5.0%	3.2%
Cough, Cold and Other Respiratory Products	23.5%	-14.3%	14.8%
Digest & Oth Intest Prod	14.1%	2.0%	9.0%
Patient Care (PAC)	-60.2%	-32.2%	-44.8%
Incontinence Care Prds	6.7%	2.5%	3.2%
Prds For Bladder Problems	-1.3%	-0.6%	-0.8%
Personal Care (PEC)	-1.9%	-5.3%	-3.7%
Beauty Products For Women	12.8%	2.8%	4.7%
Unisex Beauty Products	11.2%	0.8%	-0.2%

*Top in terms of YTD 2023 Growth
Source: IQVIA CH Customized Insights monthly sell-out data – August 2023

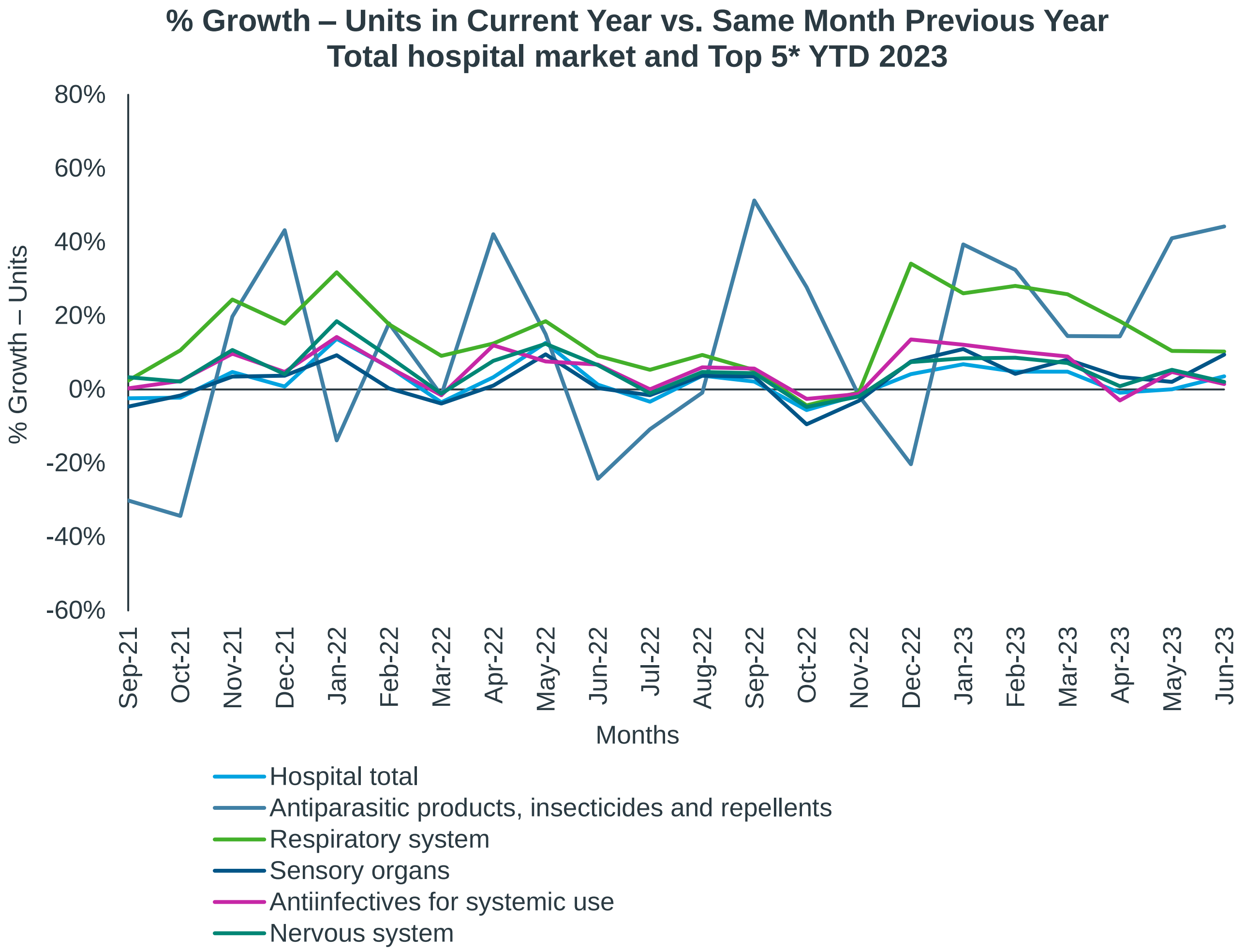
The German retail market grew by 4.7% YTD 2023 compared to the same period last year



Top* 2 ATC3 classes within Top* 5 ATC1 classes by Units Growth YTD 2023 vs. YTD 2022	Units Growth Jan 2023 vs. 2022	Units Growth Latest month 2023 vs. 2022	Units Growth YTD 2023 vs. 2022
Rx Market	10.0%	8.0%	4.7%
Antiparasitic products, insecticides and repellents	28.7%	22.5%	25.7%
Ectoparas.Incl Scabicide	26.9%	15.2%	24.6%
Anthelmintics	10.0%	17.9%	14.4%
Antiinfectives for systemic use	-2.1%	18.9%	17.4%
Bacterial Vaccines	38.9%	25.0%	24.5%
Polyval Immuno-Globl I.V	0.0%	18.2%	7.2%
Sensory organs	19.7%	27.5%	17.0%
Miotics+Antiglauc.Preps.	4.8%	9.5%	3.7%
Ocular Antineovasc.Prods	-9.2%	8.9%	-0.6%
Respiratory system	28.0%	2.5%	11.0%
All Oth A-Asthma & Copd	14.3%	42.9%	22.7%
Cystic Fibrosis Products	20.0%	14.3%	13.5%
Antineoplastic and immunomodulating agents	10.5%	10.3%	4.9%
Interleukin Inhibitors	21.9%	23.5%	19.0%
Protein Kinase Inhibitor Antineoplastics	12.1%	14.3%	11.5%

*Top in terms of YTD 2023 Growth
Source: IQVIA MIDAS monthly sell-out data – August 2023 | Retail pharmacy panel – captures sales of Rx products only

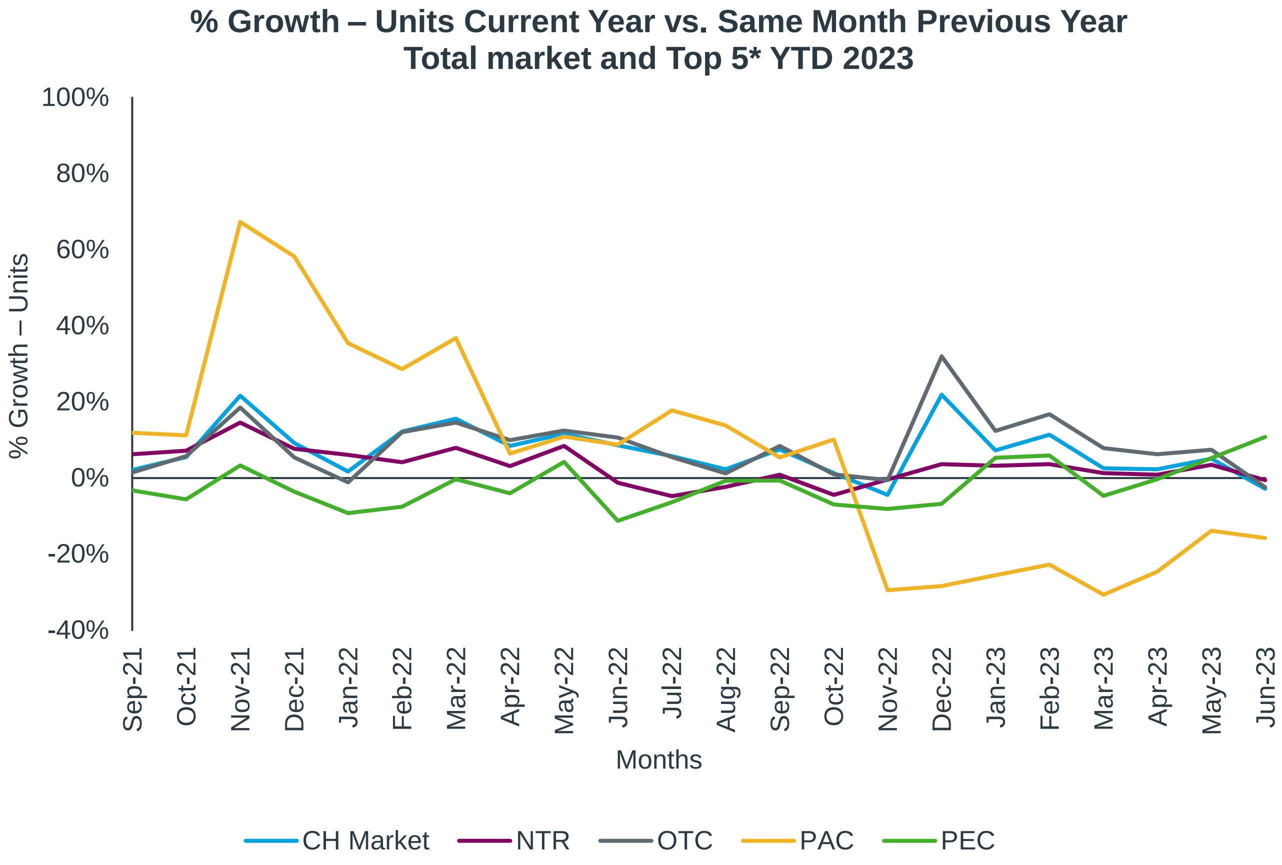
The German hospital market grew by 3.2% in YTD 2023 compared to the same period last year



Top* 6 ATC Classes by Units Growth YTD 2023 vs. YTD 2022	Units Growth Jan 2023 vs. 2022	Units Growth Latest month 2023 vs. 2022	Units Growth YTD 2023 vs. 2022
Hospital Market	6.9%	3.6%	3.2%
Antiparasitic products, insecticides and repellents	39.3%	44.2%	29.7%
Respiratory system	26.1%	10.3%	19.9%
Sensory organs	10.9%	9.5%	6.3%
Antiinfectives for systemic use	12.2%	1.4%	5.6%
Nervous system	8.4%	2.0%	5.4%
Cardiovascular system	11.3%	1.5%	4.9%

*Top in terms of YTD 2023 Growth
Source: IQVIA MIDAS monthly data – August 2023 | Hospital panel

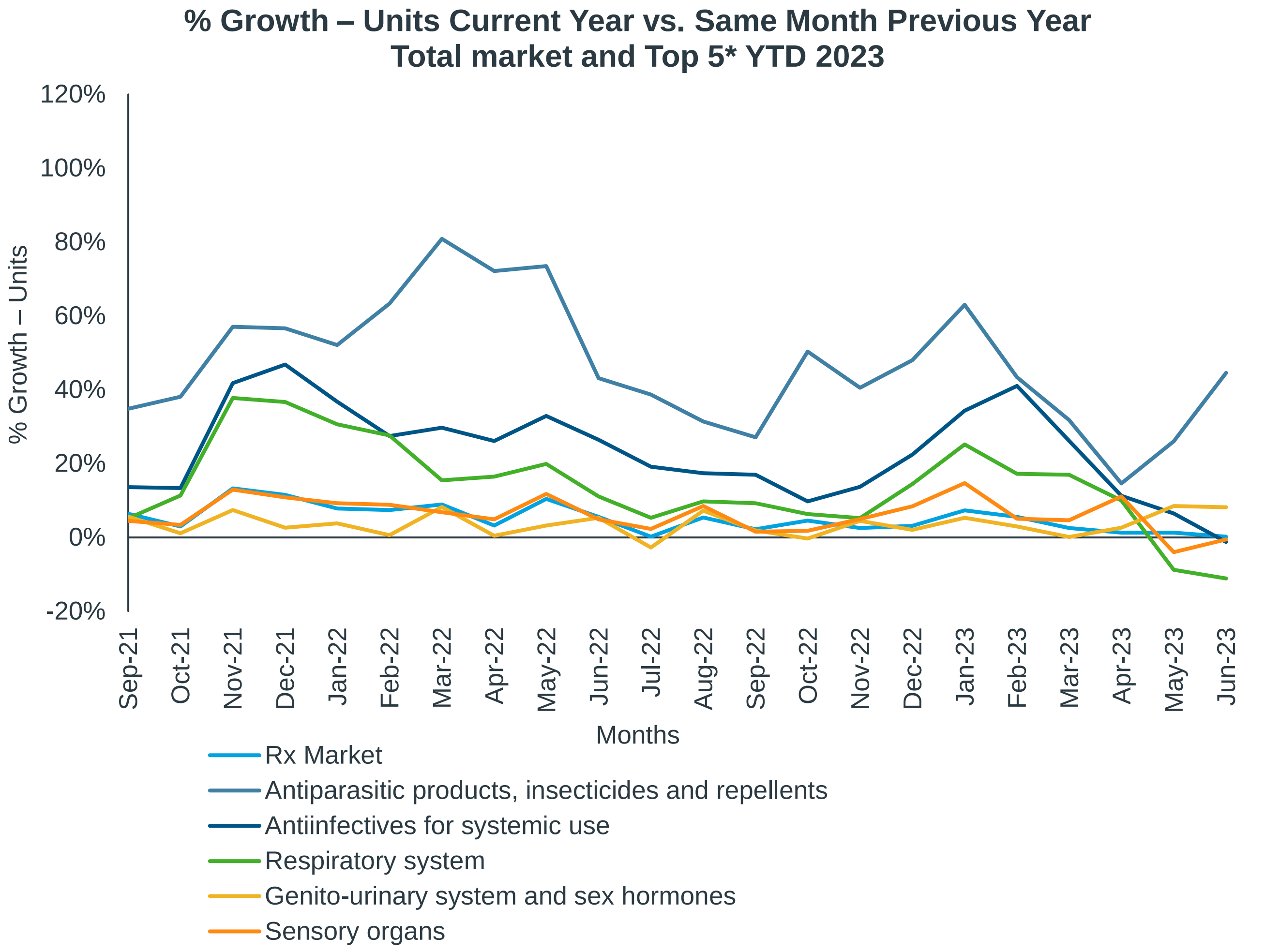
The consumer health market in Germany grew by 4.1% YTD 2023 compared to the same period last year



CH Categories and top* 2 classes within each category by Units Growth YTD 2023 vs. 2022	Units Growth Jan 2023 vs. 2022	Units Growth Latest month 2023 vs. 2022	Units Growth YTD 2023 vs. 2022
CH Market	7.2%	-2.9%	4.1%
Nutrition (NTR)	3.2%	-0.5%	2.0%
Enteral Nutrition Products	28.6%	9.3%	13.3%
Baby Foods	-17.7%	-27.6%	-19.9%
Over-the-Counter Drugs (OTC)	12.36%	-2.4%	7.9%
Cough, Cold And Other Respiratory Products	30.2%	-9.5%	16.6%
Vitamins, Minerals And Nutritional Supplements, Tonics And Other Stimulants	6.5%	6.3%	7.4%
Patient Care (PAC)	-25.5%	-15.8%	-22.8%
Incontinence Care Prds	7.8%	10.2%	9.1%
Advanced Dressings	7.5%	3.5%	1.9%
Personal Care (PEC)	5.4%	10.8%	3.6%
Unisex Beauty Products	8.9%	20.5%	5.4%
Beauty Products For Women	2.8%	5.1%	2.5%

*Top in terms of YTD 2023 Growth
Source: IQVIA CH Customized Insights monthly sell-out data – August 2023

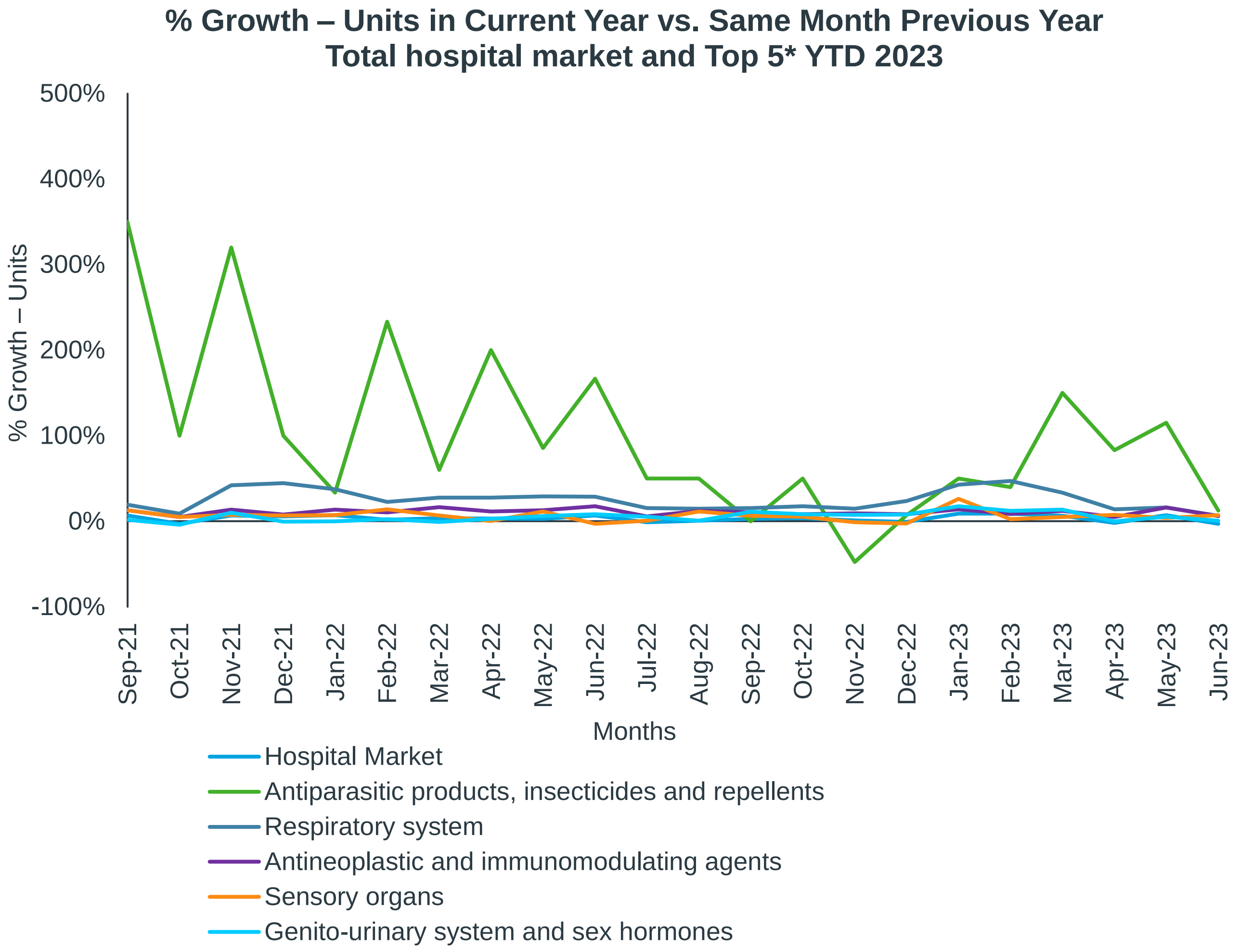
The Spanish retail market grew by 3% YTD 2023 compared to the same period last year



Top* 2 ATC3 classes within Top* 5 ATC1 classes by Units Growth YTD 2023 vs. YTD 2022	Units Growth Jan 2023 vs. 2022	Units Growth Latest month 2023 vs. 2022	Units Growth YTD 2023 vs. 2022
Rx Market	7.3%	0.2%	3.0%
Antiparasitic products, insecticides and repellents	63.0%	44.6%	36.6%
Anti-Malarials	100.0%	34.8%	51.5%
Anthelmintics	58.4%	37.6%	38.4%
Antiinfectives for systemic use	34.4%	-1.2%	19.0%
Broad Spectr.Penicillins	44.2%	4.1%	26.7%
Cephalosporins & Combs	40.2%	1.8%	22.1%
Respiratory system	25.2%	-11.1%	7.7%
Anticholinergics In Combination With B2-Agonists	23.4%	19.0%	19.7%
Antihistamines Systemic	29.9%	-11.6%	9.9%
Genito-urinary system and sex hormones	5.4%	8.1%	4.6%
Urinary Incontinence Prd	7.5%	7.8%	6.9%
Bph Products	3.8%	4.0%	4.7%
Sensory organs	14.7%	-0.6%	4.6%
Anti-Infectives-Eye	34.1%	-0.9%	11.4%
Ocul.A-Aller.Decon.A-Sep	3.1%	-14.5%	2.5%

*Top in terms of YTD 2023 Growth
Source: IQVIA MIDAS monthly sell-out data – August 2023 | Retail pharmacy panel – captures sales of Rx products only

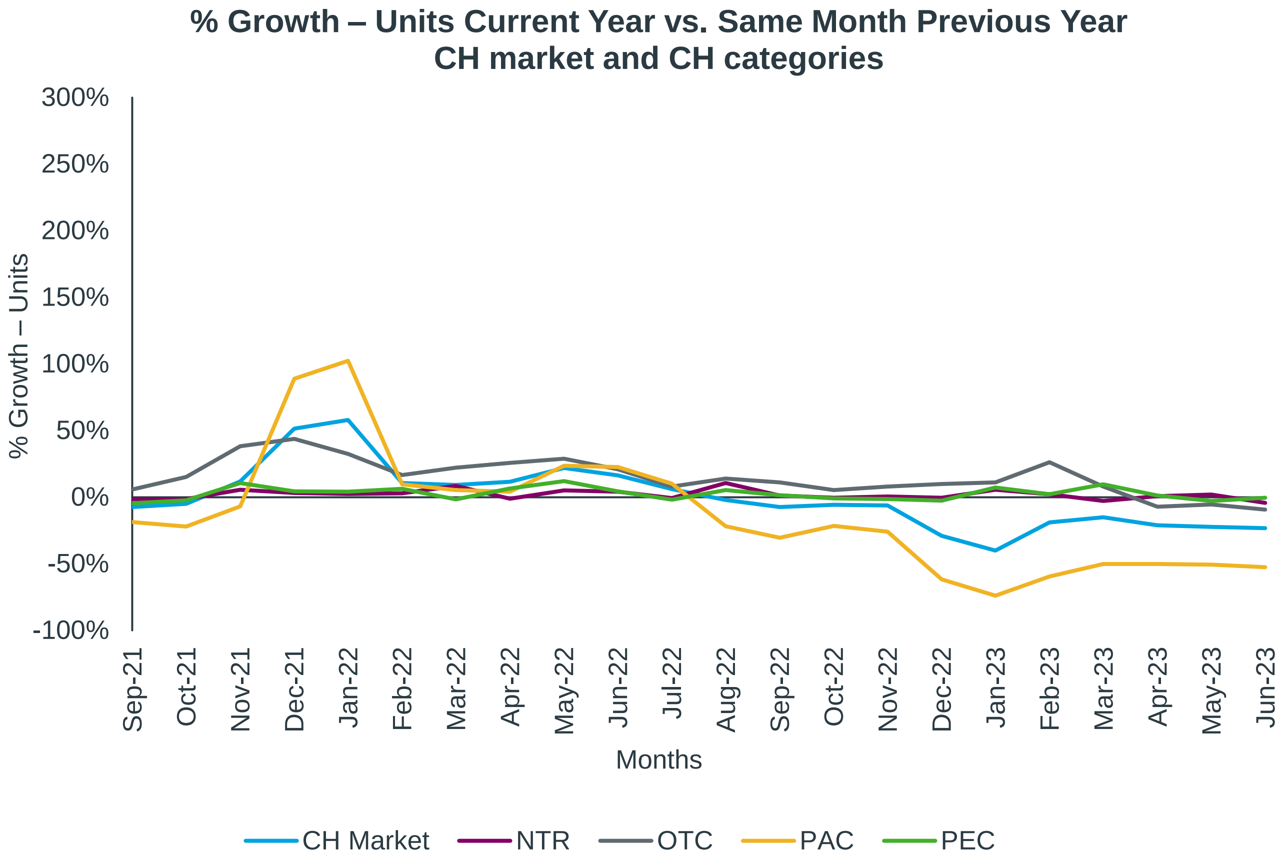
The Spanish hospital market grew by 4.4% YTD 2023 compared to the same period last year



Top* 6 ATC Classes by Units Growth YTD 2023 vs. YTD 2022	Units Growth Jan 2023 vs. 2022	Units Growth Latest month 2023 vs. 2022	Units Growth YTD 2023 vs. 2022
Hospital Market	9.0%	-2.8%	4.4%
Antiparasitic products, insecticides and repellents	50.0%	12.5%	70.1%
Respiratory system	42.9%	6.5%	26.4%
Antineoplastic and immunomodulating agents	14.1%	6.1%	10.4%
Sensory organs	26.4%	7.2%	8.3%
Genito-urinary system and sex hormones	17.8%	0.9%	8.2%
Antiinfectives for systemic use	13.2%	-0.6%	6.2%

*Top in terms of YTD 2023 Growth
Source: IQVIA MIDAS monthly data – August 2023 | Hospital panel

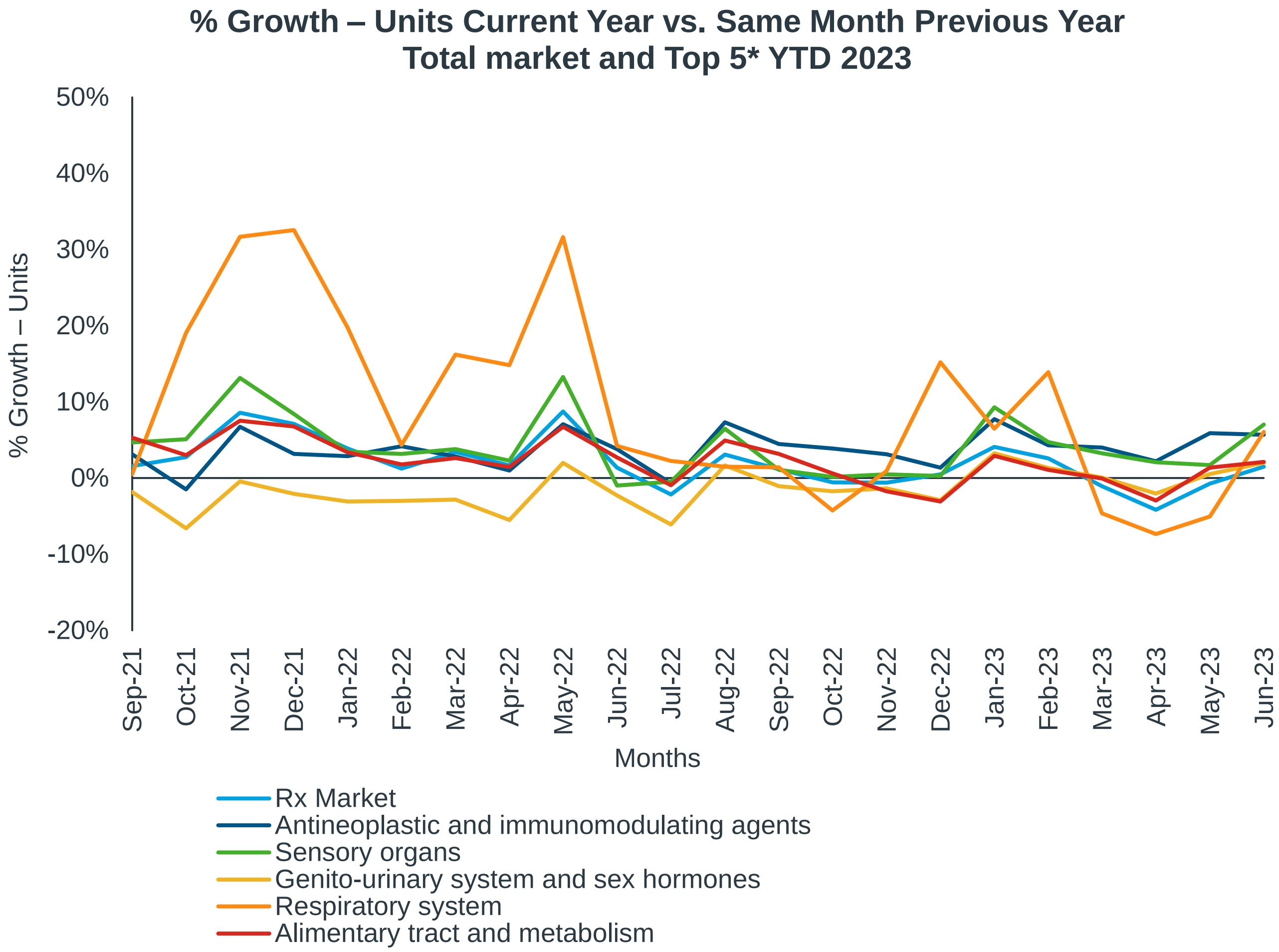
The Spanish consumer health market declined by 24.6% in YTD 2023 compared to the same period in 2022



CH Categories and top* 2 classes within each category by Units Growth YTD 2023 vs. 2022	Units Growth Jan 2023 vs. 2022	Units Growth Latest month 2023 vs. 2022	Units Growth YTD 2023 vs. 2022
CH Market	-40.0%	-23.3%	-24.6%
Nutrition (NTR)	5.5%	-4.3%	0.4%
Enteral Nutrition Products	9.1%	-0.4%	5.4%
Baby Foods	5.8%	-1.5%	3.0%
Over-the-Counter Drugs (OTC)	11.19%	-9.2%	3.3%
Cough, Cold And Other Respiratory Products	36.1%	-28.0%	13.0%
Digest & Oth Intest Prod	11.0%	-1.1%	4.1%
Patient Care (PAC)	-73.8%	-52.6%	-59.1%
Stomacare Products	6.7%	9.1%	7.2%
Orthopaed/Antirheum Aid	10.7%	9.5%	5.2%
Personal Care (PEC)	7.3%	-0.4%	2.6%
Unisex Beauty Products	31.8%	0.2%	12.4%
Beauty Products For Women	11.5%	0.5%	5.9%

*Top in terms of YTD 2023 Growth
Source: IQVIA CH Customized Insights monthly sell-out data – August 2023

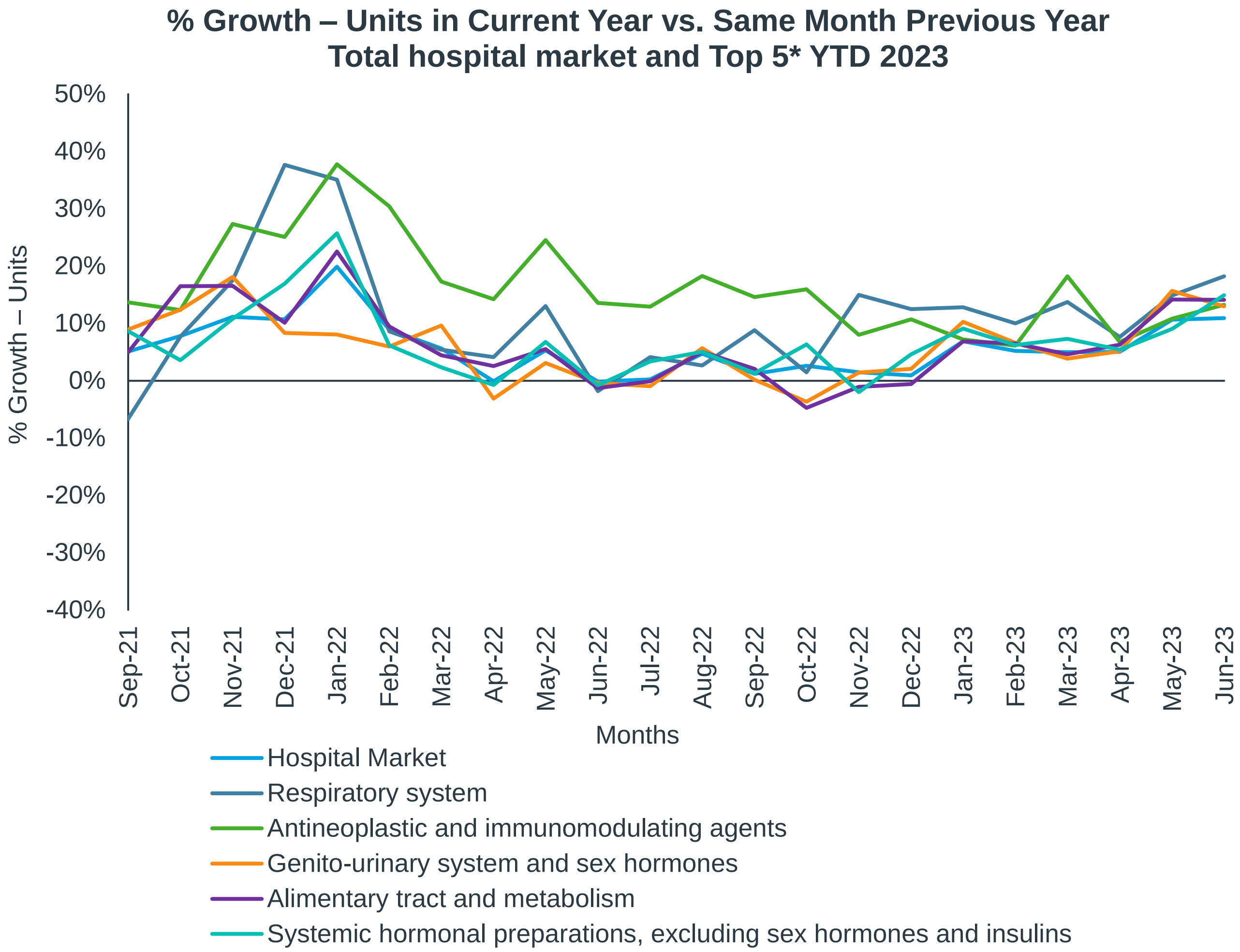
The French retail market grew by 0.3% YTD 2023 compared to the same period year ago



Top* 2 ATC3 classes within Top* 5 ATC1 classes by Units Growth YTD 2023 vs. YTD 2022	Units Growth Jan 2023 vs. 2022	Units Growth Latest month 2023 vs. 2022	Units Growth YTD 2023 vs. 2022
Rx Market	4.1%	1.5%	0.3%
Antineoplastic and immunomodulating agents	7.8%	5.7%	5.0%
Anti-Tnf Products	14.4%	9.4%	9.8%
Protein Kinase Inhibitor Antineoplastics	9.0%	9.7%	7.2%
Sensory organs	9.3%	7.0%	4.7%
Ocular Antineovasc.Prods	12.0%	7.0%	7.6%
Miotics+Antiglauc.Preps.	3.9%	2.2%	1.6%
Genito-urinary system and sex hormones	3.3%	2.0%	0.9%
Erectile Dysfunction Prd	10.8%	6.0%	5.7%
Gonadotrophins	7.5%	5.4%	4.7%
Respiratory system	6.5%	6.1%	0.8%
Anticholinergics In Combination With B2-Agonists	14.0%	12.2%	10.6%
All Oth A-Asthma & Copd	9.1%	6.4%	5.9%
Alimentary tract and metabolism	2.9%	2.1%	0.8%
Glp-1 Agonist A-Diabs	25.0%	21.4%	21.2%
Other Metabolic Products	3.6%	5.7%	2.9%

*Top in terms of YTD 2023 Growth
Source: IQVIA MIDAS monthly sell-out data – August 2023 | Retail pharmacy panel – captures sales of Rx products only

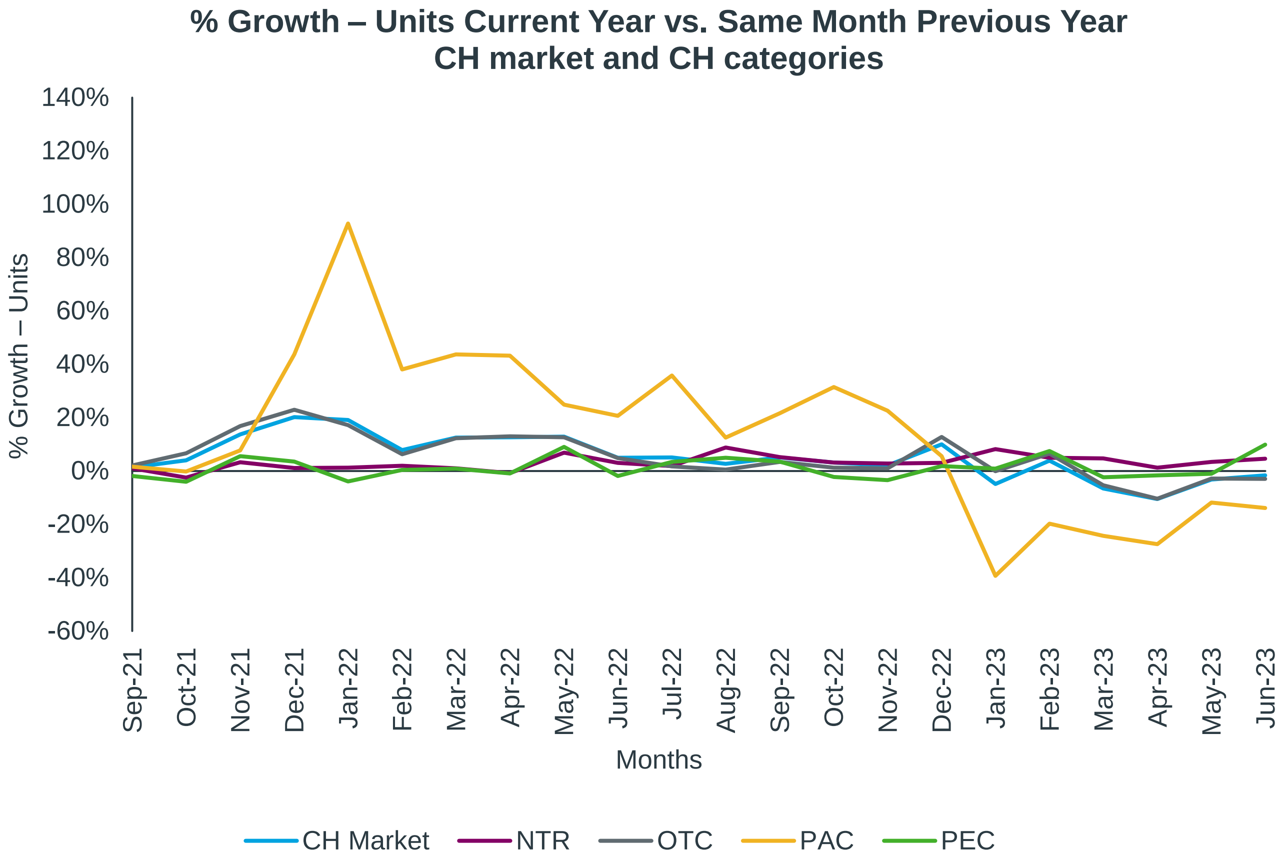
The Hospital market in France grew 7.3% YTD compared to the same period last year



Top* 6 ATC Classes by Units Growth YTD 2023 vs. YTD 2022	Units Growth Jan 2023 vs. 2022	Units Growth Latest month 2023 vs. 2022	Units Growth YTD 2023 vs. 2022
Hospital Market	6.9%	10.9%	7.3%
Respiratory system	12.8%	18.2%	12.9%
Antineoplastic and immunomodulating agents	7.2%	13.2%	10.5%
Genito-urinary system and sex hormones	10.3%	13.0%	9.1%
Alimentary tract and metabolism	6.9%	14.1%	8.7%
Systemic hormonal preparations, excluding sex hormones and insulins	9.1%	14.9%	8.7%
Cardiovascular system	8.5%	13.3%	8.3%

*Top in terms of YTD 2023 Growth
Source: IQVIA MIDAS monthly data – August 2023 | Hospital panel

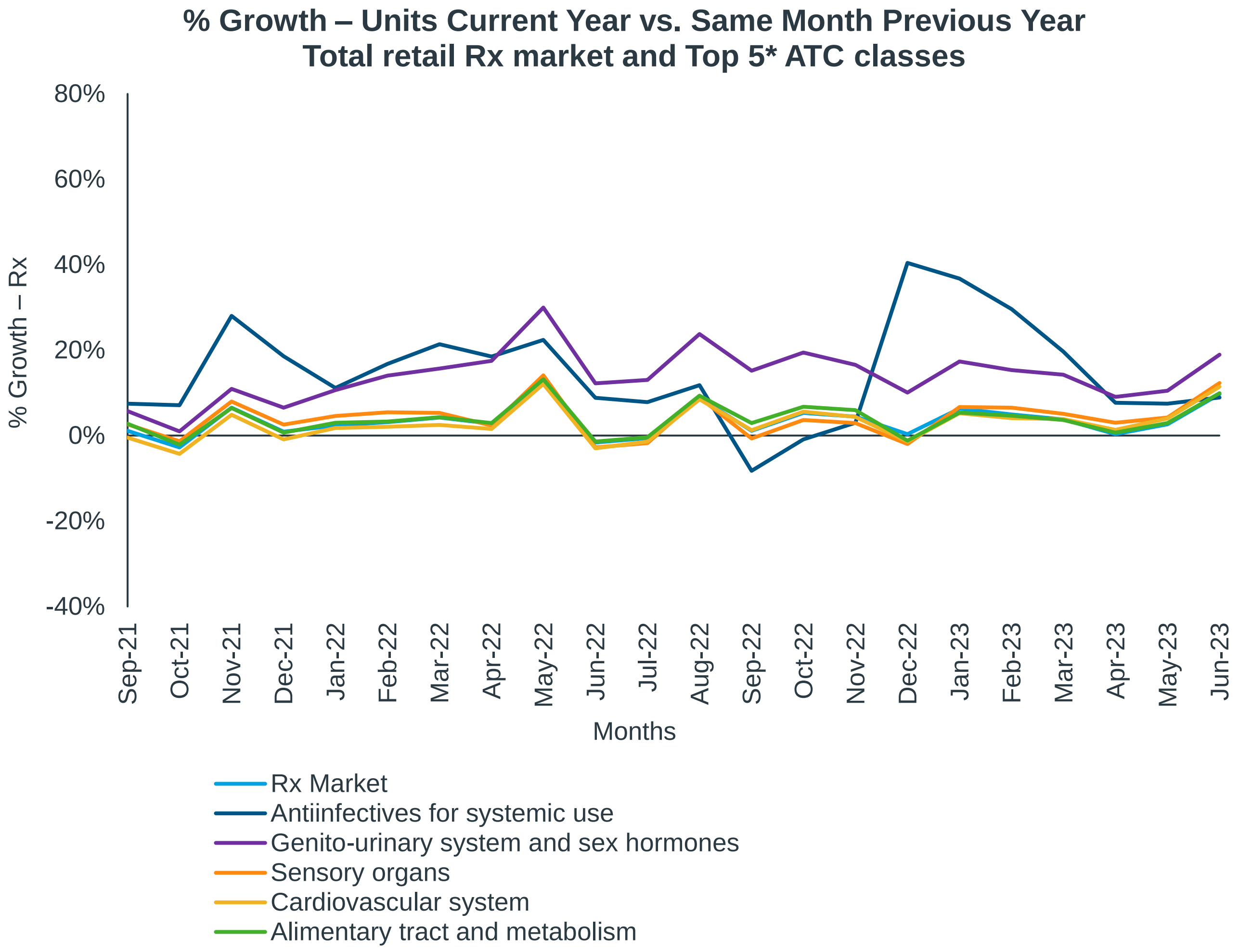
The French consumer health market declined by 4% YTD 2023 compared to the same period last year



CH Categories and top* 2 classes within each category by Units Growth YTD 2023 vs. 2022	Units Growth Jan 2023 vs. 2022	Units Growth Latest month 2023 vs. 2022	Units Growth YTD 2023 vs. 2022
CH Market	-4.9%	-1.6%	-4.0%
Nutrition (NTR)	8.2%	4.6%	4.5%
Enteral Nutrition Products	11.7%	7.5%	6.8%
Baby Foods	-0.5%	-2.6%	-1.8%
Over-the-Counter Drugs (OTC)	-0.04%	-3.0%	-2.7%
Eye Care	12.0%	15.3%	7.9%
Cough, Cold And Other Respiratory Products	15.1%	-12.4%	3.3%
Patient Care (PAC)	-39.4%	-13.9%	-24.0%
Advanced Dressings	14.9%	7.6%	6.1%
Surgical Absorbents	5.5%	4.1%	0.2%
Personal Care (PEC)	0.8%	9.8%	2.1%
Unisex Beauty Products	9.4%	25.2%	10.3%
Beauty Products For Women	6.2%	6.9%	4.6%

*Top in terms of YTD 2023 Growth
Source: IQVIA CH Customized Insights monthly sell-out data – August 2023

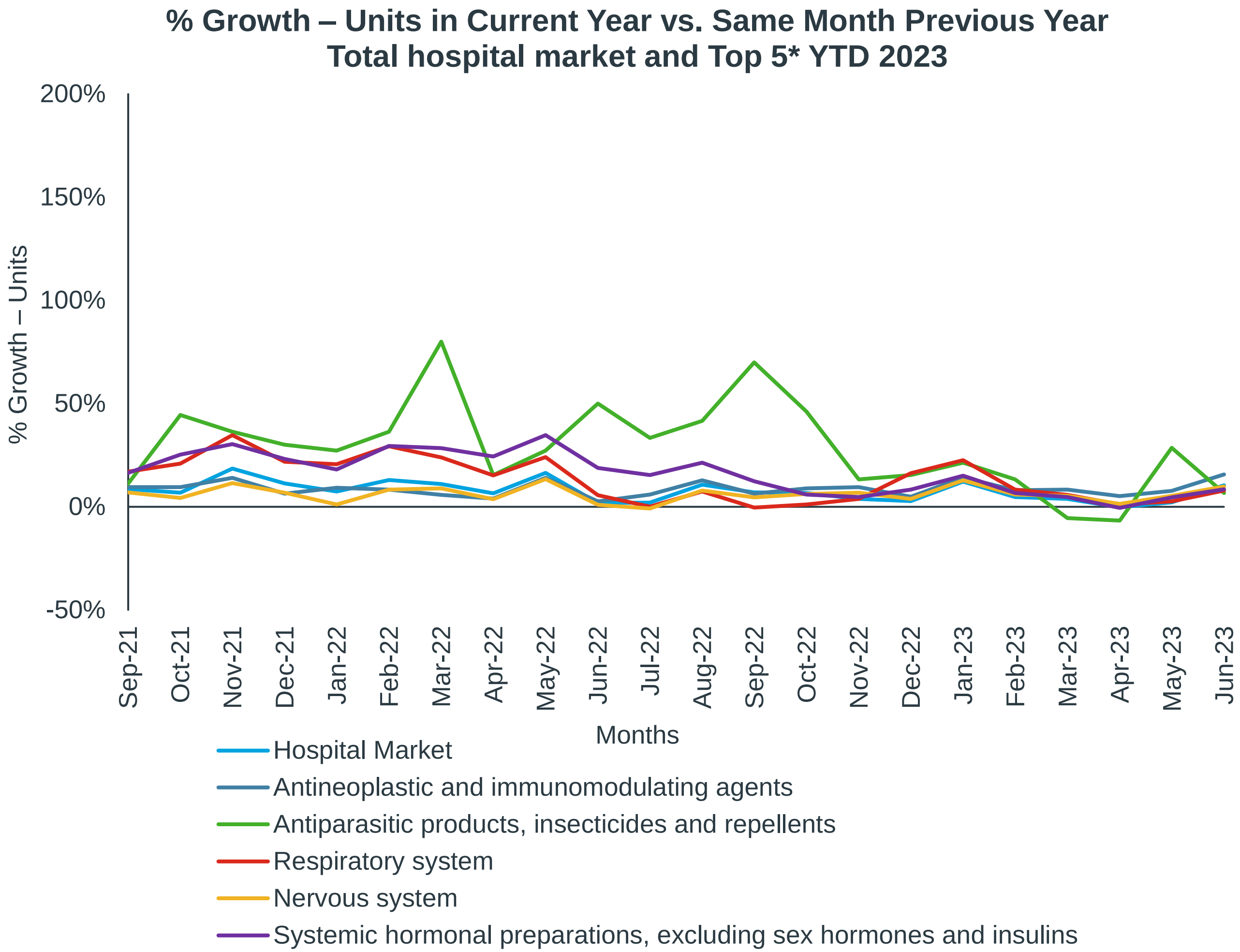
The UK retail prescription market grew by 4.6% in YTD 2023 compared to same period last year



Top* 2 ATC3 classes within Top* 5 ATC1 classes by Units Growth YTD 2023 vs. YTD 2022	Units Growth Jan 2023 vs. 2022	Units Growth Latest month 2023 vs. 2022	Units Growth YTD 2023 vs. 2022
Rx Market	6.3%	9.7%	4.6%
Antiinfectives for systemic use	36.8%	8.9%	18.1%
Viral Vaccines	49.2%	32.7%	33.7%
Broad Spectr.Penicillins	62.5%	7.1%	30.0%
Genito-urinary system and sex hormones	17.4%	18.9%	14.2%
Urinary Anti-Infectives	5.1%	21.8%	13.0%
Erectile Dysfunction Prd	5.0%	13.3%	5.8%
Sensory organs	6.7%	12.3%	6.4%
Ocul.A-Aller.Decon.A-Sep	3.1%	22.6%	8.5%
Miotics+Antiglauc.Preps.	4.4%	8.4%	3.3%
Cardiovascular system	5.3%	11.4%	5.0%
Cholest&Trigly.Regulator	7.4%	15.5%	8.0%
Calcium Antagonist Plain	7.6%	13.3%	7.2%
Alimentary tract and metabolism	5.4%	10.0%	4.5%
Sglt2 Inhibitor Antidiabetics	47.6%	49.4%	44.3%
Glp-1 Agonist A-Diabs	28.8%	33.1%	23.5%

*Top in terms of YTD 2023 Growth
Source: IQVIA MIDAS monthly sell-in data – August 2023 | Retail pharmacy panel – captures sales of Rx products only

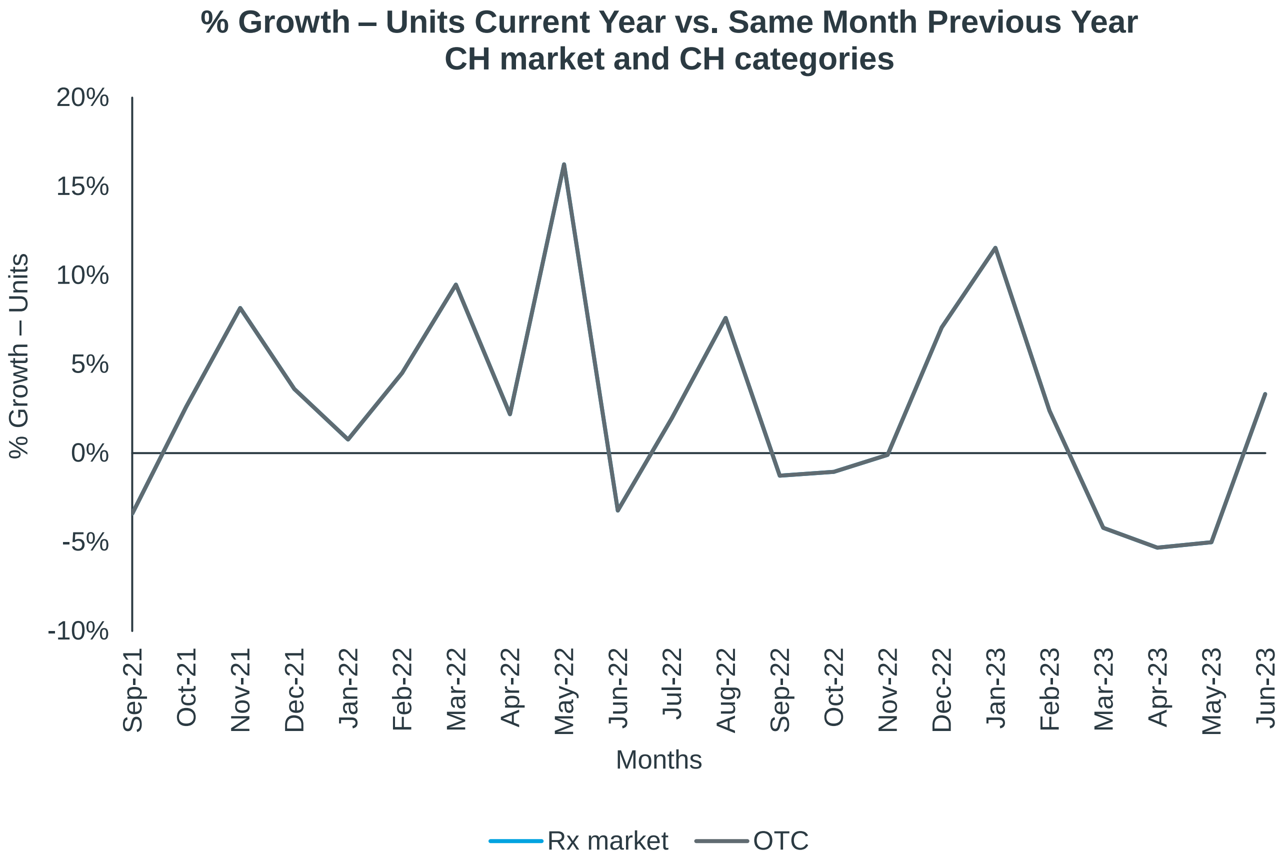
The UK hospital market grew by 5.5% YTD 2023 compared to the same period in 2022



Top* 6 ATC Classes by Units Growth YTD 2023 vs. YTD 2022	Units Growth Jan 2023 vs. 2022	Units Growth Latest month 2023 vs. 2022	Units Growth YTD 2023 vs. 2022
Hospital Market	12.2%	10.4%	5.5%
Antineoplastic and immunomodulating agents	14.2%	15.6%	9.9%
Antiparasitic products, insecticides an d repellents	21.4%	6.7%	8.8%
Respiratory system	22.5%	7.9%	7.9%
Nervous system	12.8%	9.8%	6.7%
Systemic hormonal preparations, excluding sex hormones and insulins	15.1%	8.5%	6.4%
Alimentary tract and metabolism	8.8%	15.9%	6.3%

*Top in terms of YTD 2023 Growth
Source: IQVIA MIDAS monthly data – August 2023 | Hospital panel

The UK consumer health market grew by 0.3% YTD compared to the same period last year



CH Categories and top* 2 classes within each category by Units Growth YTD 2023 vs. 2022	Units Growth Jan 2023 vs. 2022	Units Growth Latest month 2023 vs. 2022	Units Growth YTD 2023 vs. 2022
CH Market	11.6%	3.3%	0.3%
Over-the-Counter Drugs (OTC)	11.6%	3.3%	0.3%
Cough, Cold And Other Respiratory Products	38.9%	6.2%	8.5%
Vitamins, Minerals And Nutritional Supplements, Tonics And Other Stimulants	2.4%	7.4%	0.9%
Skin Treatment	1.4%	11.5%	0.0%
Digest & Oth Intest Prod	5.6%	3.3%	-0.7%
Pain Relief	14.3%	-4.0%	-4.6%

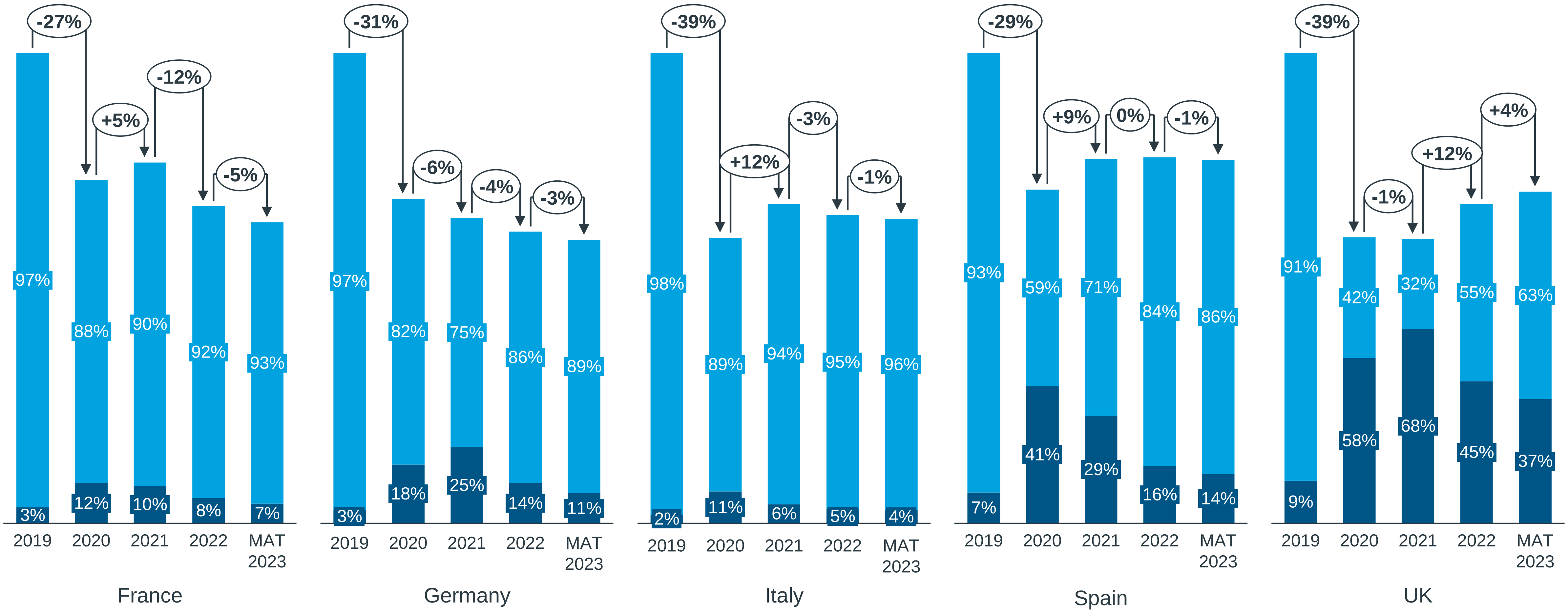
*Top in terms of YTD 2023 Growth
Note: IQVIA CH Customized Insights Data has coverage of only OTC segment (CHC 1-19,97 classes)
Source: IQVIA CH Customized Insights monthly sell-in data – August 2023

Engagement with Health Care Professionals

ChannelDynamics: Channel volume trends

Major markets: Full year 2019 vs. 2020 vs. 2021 vs. 2022 and MAT July 2023

Share of F2F & Remote interaction in promotional volume

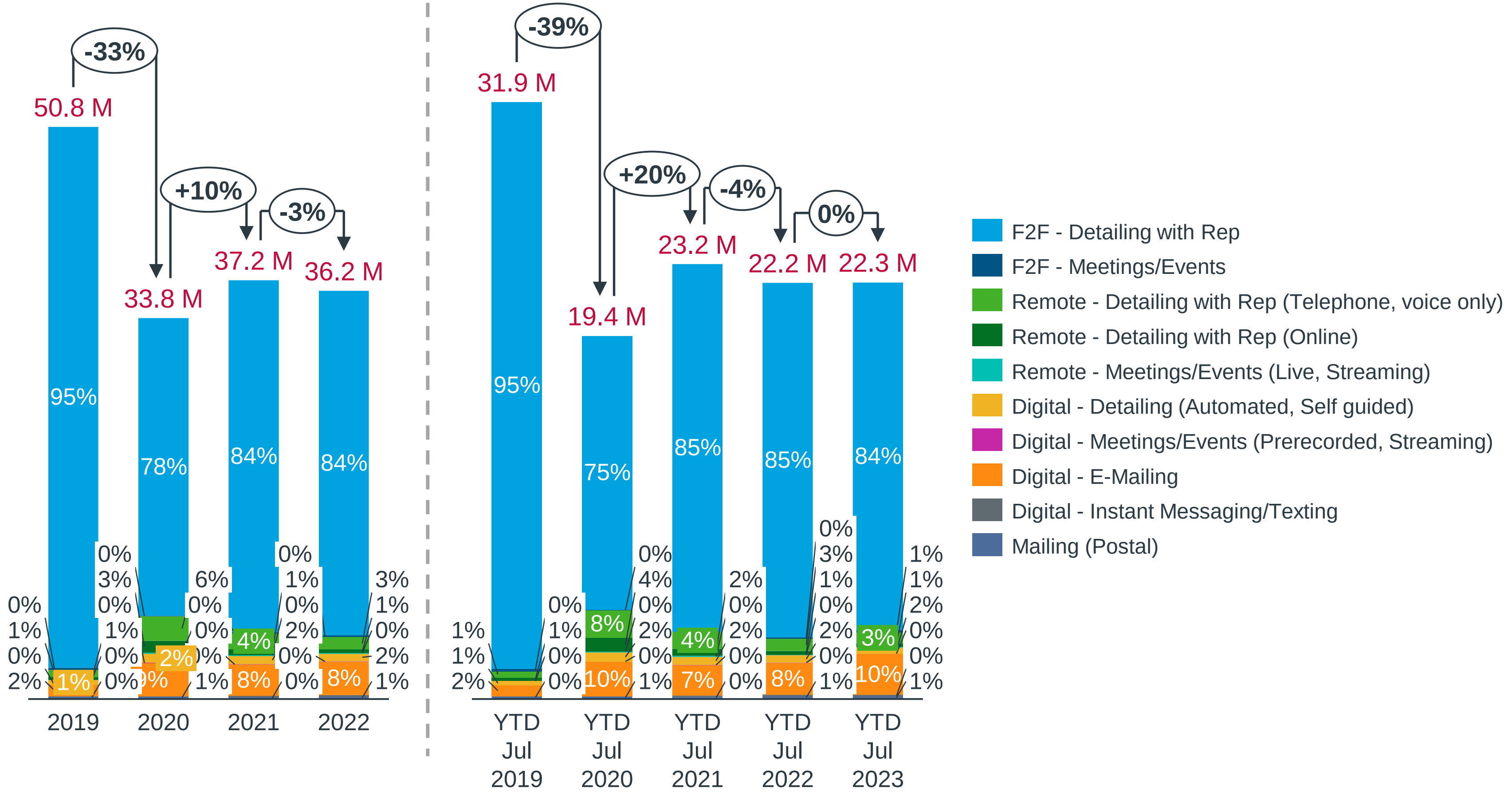


Source: IQVIA ChannelDynamics, F2F includes F2F detailing and F2F meetings, Remote includes phone detailing, e-detailing (live), e-meetings (live)

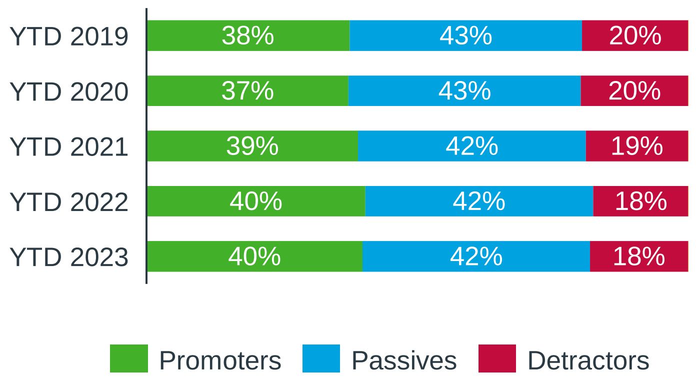
ChannelDynamics: Channel volume and performance trends

Italy: Full year 2019 vs. 2020 vs. 2021 vs. 2022 and year-to-date trends over 5-years

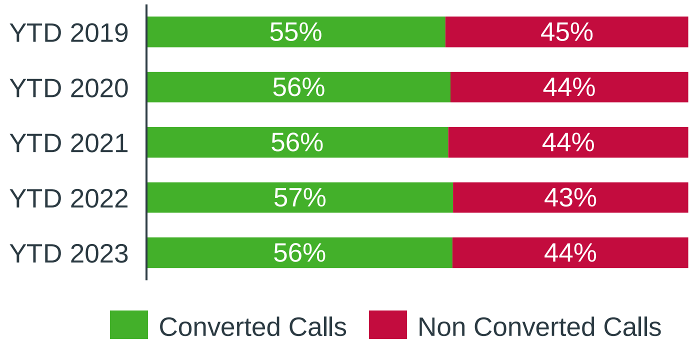
Share of projected promotional volume



NPS Category share



Converted Calls

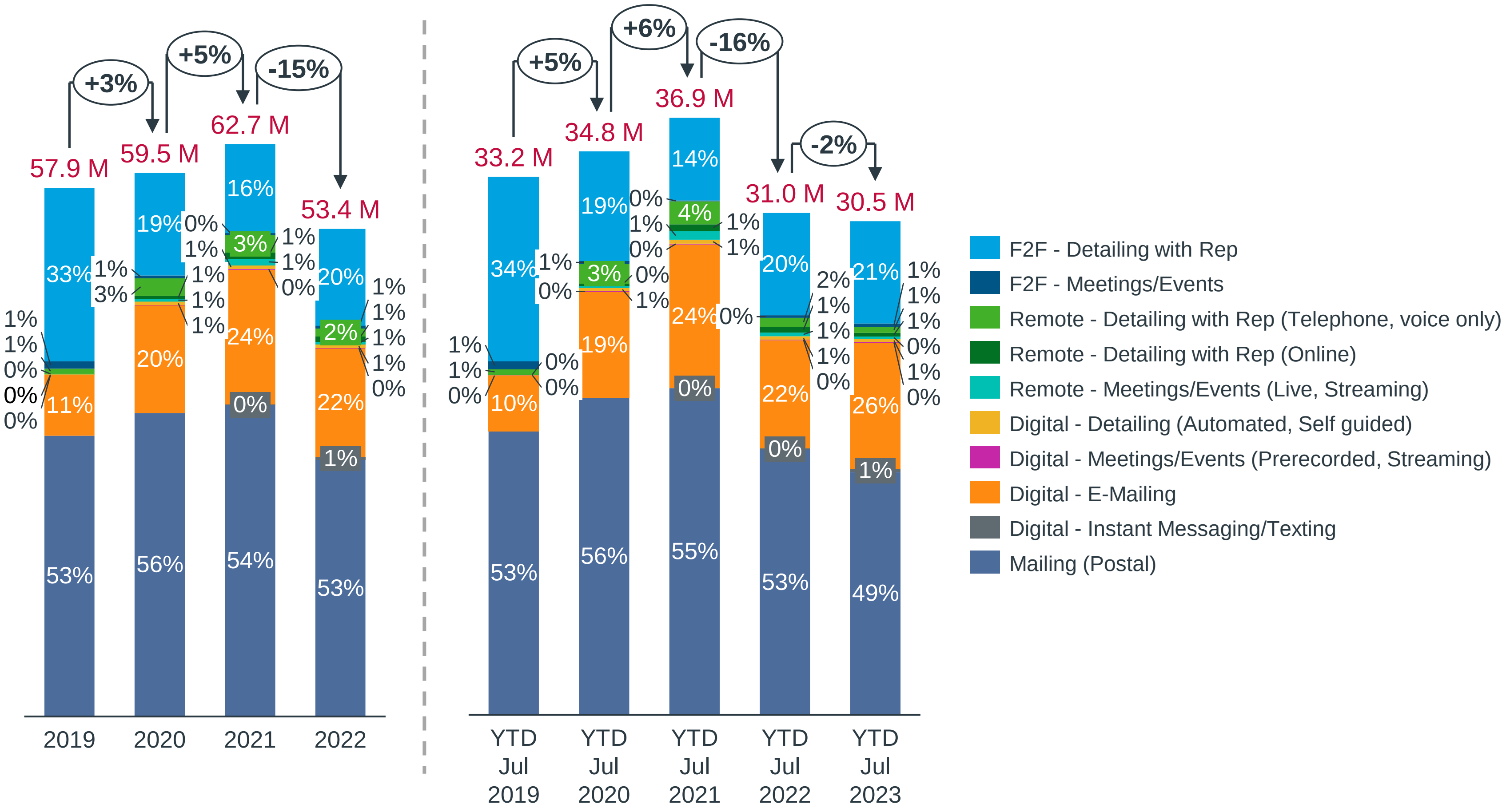


Source: IQVIA Global ChannelDynamics
Note: YTD data is till July for 2019, 2020, 2021, 2022 and 2023

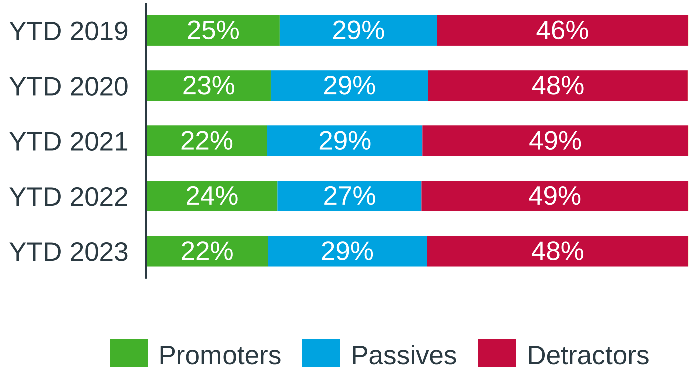
ChannelDynamics: Channel volume and performance trends

Germany: Full year 2019 vs. 2020 vs. 2021 vs. 2022 and year-to-date trends over 5-years

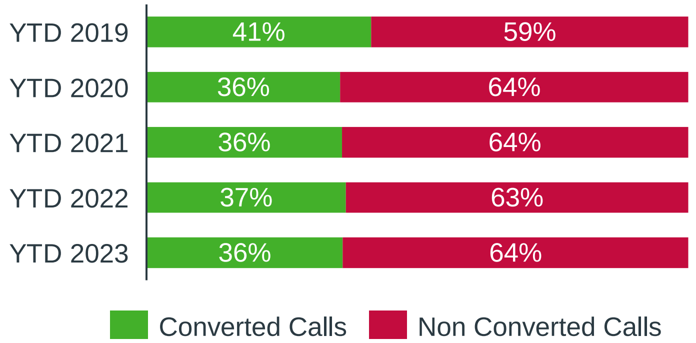
Share of projected promotional volume



NPS Category share



Converted Calls

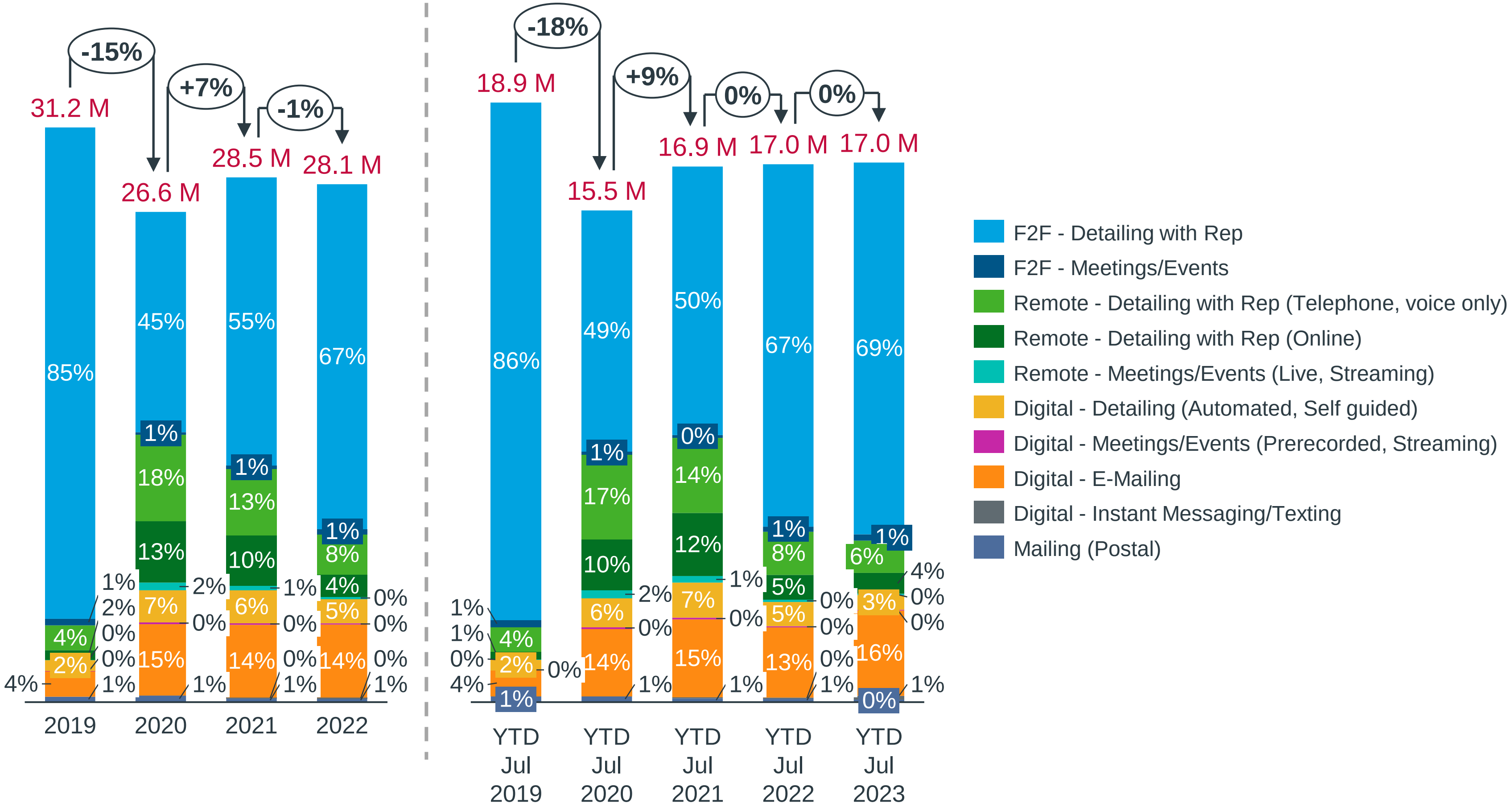


Source: IQVIA Global ChannelDynamics
Note: YTD data is till July for 2019, 2020, 2021, 2022 and 2023

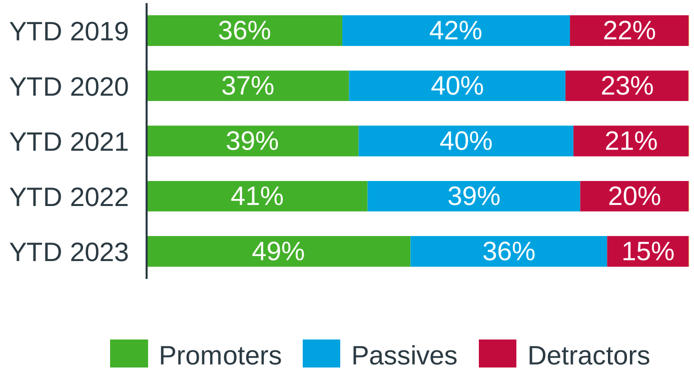
ChannelDynamics: Channel volume and performance trends

Spain: Full year 2019 vs. 2020 vs. 2021 vs. 2022 and year-to-date trends over 5-years

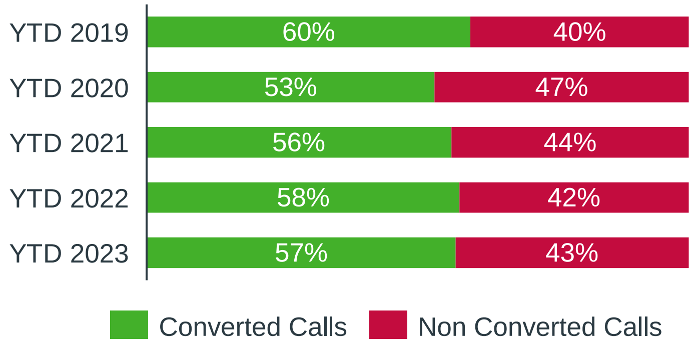
Share of projected promotional volume



NPS Category share



Converted Calls

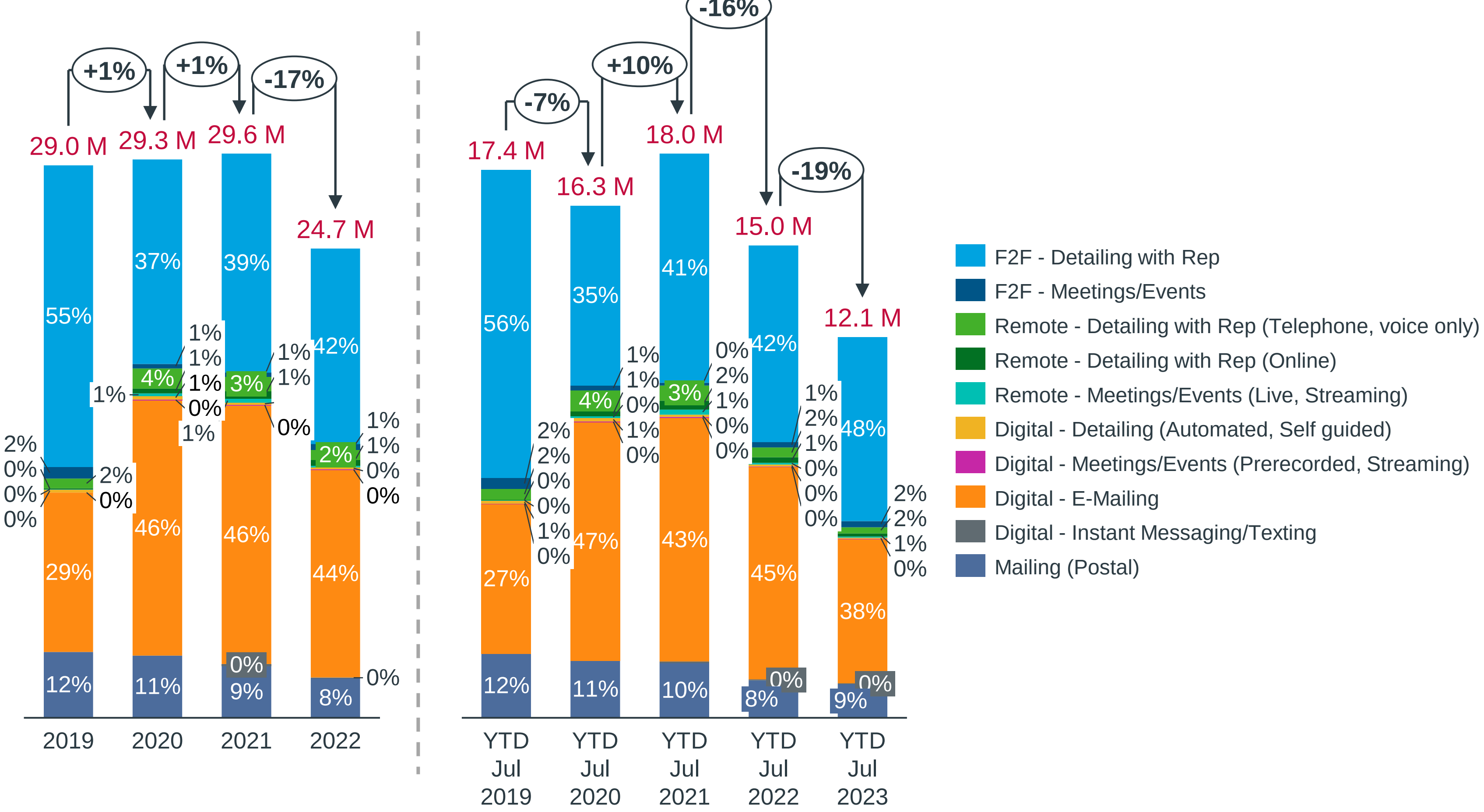


Source: IQVIA Global ChannelDynamics
Note: YTD data is till July for 2019, 2020, 2021, 2022 and 2023

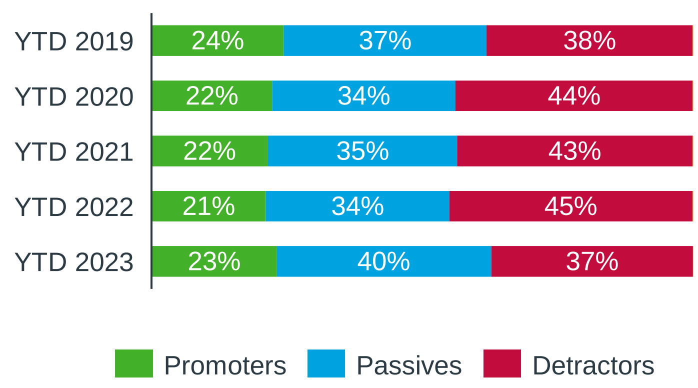
ChannelDynamics: Channel volume and performance trends

France: Full year 2019 vs. 2020 vs. 2021 vs. 2022 and year-to-date trends over 5-years

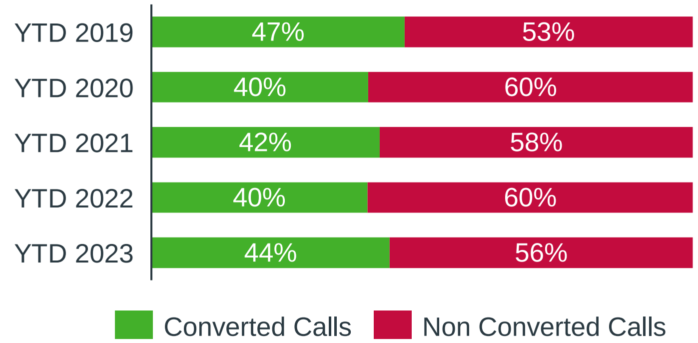
Share of projected promotional volume



NPS Category share



Converted Calls

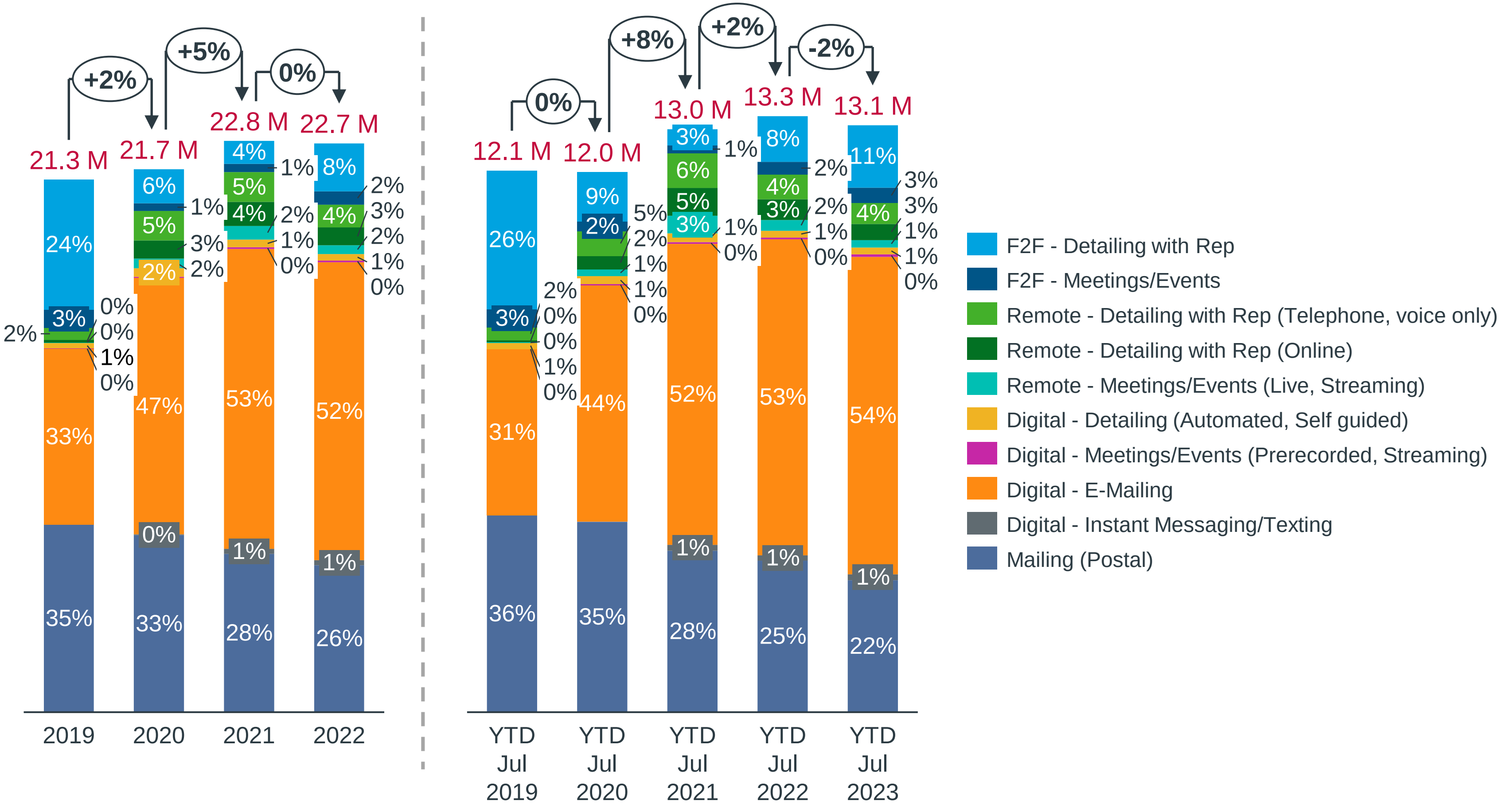


Source: IQVIA Global ChannelDynamics
Note: YTD data is till July for 2019, 2020, 2021, 2022 and 2023

ChannelDynamics: Channel volume and performance trends

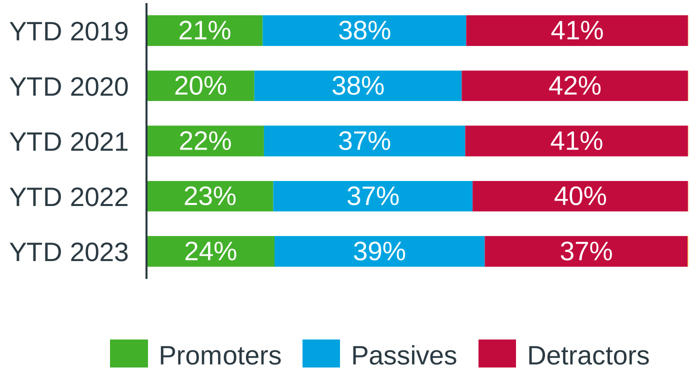
UK: Full year 2019 vs. 2020 vs. 2021 vs. 2022 and year-to-date trends over 5-years

Share of projected promotional volume

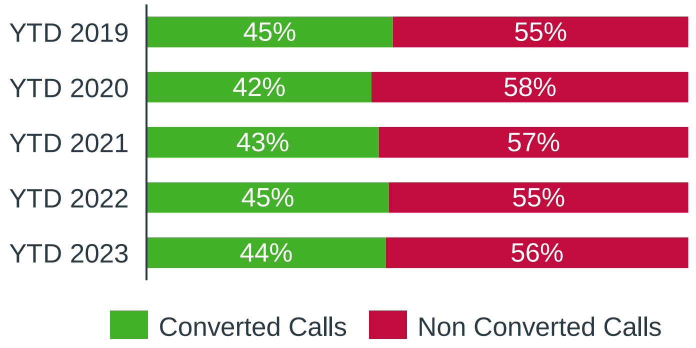


Source: IQVIA Global ChannelDynamics
Note: YTD data is till July for 2019, 2020, 2021, 2022 and 2023

NPS Category share



Converted Calls



Appendix: Data Sources and Methodology

Sources from secondary data research

Global adult vaccination trends (Slide 5)

Slide 5

- IQVIA Institute Report 2023
- EIA2030
- Vaccines Europe 2022
- The Adult Immunization Board 2023

Please note: IQVIA is not accountable for the accuracy of information from external data sources

IQVIA Sales Data Offerings Used and Methodology (1/2)

Data source	Frequency	Data source description	Geographic scope of data used in this report	Measures used for analysis	Calculations applied
Sell-out Data (IQVIA MIDAS, IQVIA CH Customized Insights)	Monthly	Details on sales of products dispensed at retail pharmacies This includes both prescription and non-prescription products Prescription products are classified using ATC classification Consumer health products cover products from OTC, PAC, PEC and NTR	• Italy: Rx and CH markets • Germany: Rx and CH markets • Spain: Rx and CH markets • France: Rx and CH markets	• Italy: Units • Germany: Units • Spain: Units • France: Units	**Italy, Germany, Spain, France:** • **Units Growth Jan 2023 vs. 2022** – To provide base view of the market from pre COVID-19 period (2019) in the years 2020, 2021 and 2022 • **Units Growth Latest month 2023vs. 2022** – To provide the latest trend in the market to understand the dynamic changes in trends • **Units Growth YTD 2023 vs. 2022** – To provide the YTD trend in the market to understand the long-term changes in trends
Sell-in Data (IQVIA MIDAS, IQVIA CH Customized Insights)	Monthly	Details on sales of products dispensed at retail pharmacies This includes both prescription and non-prescription products Prescription products are classified using ATC classification. Consumer health products covers products from only OTC segment	• UK: Rx and CH markets	• UK: Units	**UK:** • **Units Growth Jan 2023 vs. 2022** – To provide base view of the market from pre COVID-19 period (2019) in the year 2020, 2021 and 2022 • **Units Growth Latest month 2023 vs. 2022** – To provide the latest trend in the market to understand the dynamic changes in trends • **Units Growth YTD 2023 vs. 2022** – To provide the YTD trend in the market to understand the long-term changes in trends

IQVIA Sales Data Offerings Used and Methodology (2/2)

Data source	Frequency	Data source description	Geographic scope of data used in this report	Measures used for analysis	Calculations applied
IQVIA MIDAS Data	Monthly	Details on hospital panel retail sales	• Italy hospital market • Germany hospital market • Spain hospital market • France hospital market • UK hospital market	• Italy: Units • Germany: Units • Spain: Units • France: Units • UK: Units	**Italy, Germany, Spain, France, UK:** • **Units Growth May 2021 to YTD 2023** – To provide the latest trend in the market to understand the dynamic changes in trends

Market definitions – at ATC3 level of classification

Oncology	Respiratory		Diabetes	Vaccines	Cardiovascular	
L1A: Alkylating agents **L1B**: Antimetabolites **L1C**: Plant-based antineoplastics **L1D**: Antineoplastic antibiotics **L1F**: Platinum antineoplastics **L1G**: Monoclonal antibody antineoplastics **L1H**: Protein kinase inhibitor antineoplastics **L1X**: All other antineoplastics **L2A**: Cytostatic hormones **L2B**: Cyto hormone antagonists **V3C**: Radiopharmaceuticals	**Anti-asthma and COPD:** **R3A**: B2-agonists **R3B**: Xanthines **R3C**: N-steroidal respiratory anti-inflammatory **R3D**: Corticoids **R3E:** B2-agonist and R3C combinations **R3F**: B2-agonist and corticoid combinations **R3H**: PDE4 inhibitors, asthma/COPD **R3I**: Devices asthmatic conditions **R3J**: Antileukotriene anti-asthmatics **R3X**: All other anti-asthma and COPD products	**Cough, cold including Flu anti-virals:** **R5A**: Cold preparations **R5B**: Cough/cold preparations with anti-infectives **R5C**: Expectorants **R5D**: Antitussives **R5F**: Other cough and cold preparations **R4A**: Chest rubs and other inhalants **R2A**: Throat preparations **J5B**: Antivirals, other	**A10C**: Human insulin + analogues **A10D**: Animal insulin **A10H**: Sulphonylurea antidiabetics **A10J**: Biguanide antidiabetics **A10K**: Glitazone antidiabetics **A10L**:Alpha-glucosidase inhibitor antidiabetics **A10M**: Glinide antidiabetics **A10N**: DPP-IV inhibitor antidiabetics **A10P**: SGLT2 inhibitor antidiabetics **A10S**: GLP-1 agonist anti-diabetics **A10X**: Other drugs for diabetes **H4B**: Glucagon	**J7B**: Combination of vaccines **J7D**: Bacterial vaccines **J7E**: Viral vaccines **J7X**: All other vaccine-like products	**Antihypertensives:** **C2A**: Antihypertensives (of non herbal origin) plain **C2B:** Antihypertensives (of non herbal origin), combination with diuretics **C2C:** Rauwolfia alkaloids and other antihypertensives of herbal origin **C2D:** Rauwolfia alkaloids and other antihypertensives of herbal origin in combination with diuretics **C3A**: Diuretics **C7A**: Beta-blocking agents, plain **C7B:** Beta-blocking agents, combinations **C8A**: Calcium antagonists, plain **C8B:** Calcium antagonists, combinations **C9A**: ACE inhibitors, plain **C9B**: ACE inhibitors, combinations **C9C**: Angiotensin-II antagonists, plain **C9D**: Angiotensin-II antagonists, combinations **C9X**: Other renin-angiotensin agents	**Anticoagulants:** **B1A**: Vit K antagonists **B1B**: Heparins **B1C**: Platelet aggregation inhibitors **B1D**: Fibrinolytics **B1E**: Direct thrombin inhibitors **B1F**: Direct Factor XA inhibitors **B1X**: Other antithrombotic agents **B2C**: Proteinase inhibitors **Lipid regulators**: **C10A**: Cholesterol and triglyceride regulating preparations **C10C**: Lipid regulators, in combinations with other lipid regulators **C11A**: Lipid-regulating cardiovascular multi-therapy combination products

Market definitions – at ATC3 level of classification and Oral vs. IV/SC

Immunology	Pain
L4B: Anti-Tnf Products **M1C**: Spec Antirheumatic Agent	**M1A**: Antirheumatic N-Steroid **M1B**: Antirheumat Steroid Comb **M2A**: Top A-Rheumatics & Analg **M3A**: Muscle Relaxant,Peripher **M5X**: Oth Musculo-Skeletal Prd **N2A**: Narcotic Analgesics **N2B**: Non-Narcotic Analgesics **N2C**: Anti-Migraine Preps **N1A**: Anaesthetics General **N1B**: Anaesthetics, Local

NFC 1	Category
A (ORAL SOLID ORDINARY)	Oral
B (ORAL SOLID LONG-ACTING)	Oral
D (ORAL LIQUID ORDINARY)	Oral
E (ORAL LIQUID LONG-ACTING)	Oral
F (PARENTERAL ORDINARY)	IV/SC formulations
G (PARENTERAL LONG-ACTING)	IV/SC formulations

Channel Definitions (Slides 58-63)

F2F Detailing: Sales Rep face-to-face detailing

F2F Meetings: Meetings, events, congresses, seminars

Face to face interactions

E-Detailing: Online presentations – live with a rep or automated, self guided

Phone Detailing: Telephone communication with reps

E-Meetings: Streaming video – live webinar or pre-recorded webcast

Email: Opened email communication

Postal: Opened paper mail received by post

Remote interactions

2023 Channel Preference: aggregated interaction and channel groupings (slides 21-34)

Grouped channel	Options in survey	Interaction
Individual Interactions	Face-to-face, one-to-one sales representative visits	F2F interactive
	One-to-one telephone call with a live sales representative (audio only, without an internet presentation)	Remote interactive
	One-to-one video call with a live sales representative via Zoom, Teams, Skype etc.	
	Instant messaging/texting via WhatsApp, Skype, Facebook Messenger etc.	
Meetings/Events/Seminars	Attendance at on-site/live, in-person medical conferences, group meetings, symposia, congresses etc.	F2F interactive
	Remote, live streaming medical conferences, group meetings, symposia etc.	Remote interactive
Online resources	Emails	Non-interactive
	Podcasts (2023)	
	On-demand online access to self-guided or automated online presentations and reference resources	
	Online information resources such as websites and mobile apps (2021, 2022)	
Other	Postal mailing	
	Other (Please specify)	Others

Source: EMEA Thought Leadership; IQVIA ChannelDynamics™ Channel Preference Survey July 2023

2023 Channel Preference: Number of HCP responses (slides 21-34)

Countries/Regions			Number of responses
Germany	1102	EU4 & UK	8,838
France	1597		
Italy	3419		
Spain	1751		
UK	969		
Nordics			371
Rest of Europe			2,331
US			1,845
APAC			7,443
LATAM			1,737
Rest of World			688
Grand total (38 countries)			**23,253**

Thank You