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This edition of the Health Systems in Action Insight for Israel was written by Ruth Waitzberg and Nathan Shuftan.

The Health Systems in Action series

The Health Systems in Action Insights series supports Member States in the WHO European Region that are not in the European Union. The Insights for each country are intended to:

• provide core information and data on health systems succinctly and accessibly
• outline the country health system context in which WHO’s European Programme of Work is set
• flag key concerns, progress and challenges health system by health system
• build a baseline for comparisons, so that Member States can see how their health systems develop over time and in relation to other countries.

The series is co-produced by the WHO Regional Office for Europe and the European Observatory on Health Systems and Policies. It draws on the knowledge and understanding of the WHO Country Offices and of the Division of Country Health Policies and Systems (CPS), the Barcelona Office for Health Systems Financing and other WHO/Europe technical programmes; as well as the Health Systems in Transition series and the work of the European Observatory on Health Systems and Policies.

The Insights follow a common template that provides detailed guidance and allows comparison across countries. The series is publicly available on the websites of the WHO Regional Office for Europe and the European Observatory on Health Systems and Policies (eurohealthobservatory.who.int).

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This edition of the Health Systems in Action Insight for Israel was written by Ruth Waltzberg and Nathan Shuflan.
HEALTH SYSTEMS IN ACTION: ISRAEL

Key points

- Israel’s National Health Insurance (NHI) covers all residents. The system is centralized under the Ministry of Health, with four competing non-profit health plans responsible for service provision and payment.

- Residents have free choice among the four health plans; each offers the same benefits package (the “health basket”).

- Patient rights are legislatively anchored, and patients have a wide array of digital tools to help them make decisions regarding their health.

- Health spending per capita and as a % of GDP is lower than in the EU and in many high-income countries in the WHO European Region.

- The predominance of primary care and community-based specialist clinics in Israel gives outpatient care a major role. Referrals are needed for some specialists and hospital care. Provision of dental care was incorporated into the health basket for children and older adults between 2012 and 2018.

- 64.8% of current health expenditure in 2019 came from public sources. Voluntary health insurance (VHI) also plays a large role in health financing, representing 11% of current health expenditure in 2019.

- The growing share of VHI spending reflects the high population use, as 82% of adults obtain VHI policies through their health plan, and a further 49% obtain VHI from a private commercial insurer, resulting in dual VHI coverage. Most obtain VHI to shorten waiting times, expand choice of provider, or get other services not covered by the health basket (such as certain pharmaceuticals).

- Despite NHI and (for many) VHI coverage, out-of-pocket payments persist and accounted for just over one fifth of current health expenditure in 2019.

- Life expectancy at birth in Israel rose from 79 years in 2000 to 83.4 years in 2018, and it appears that the impact of COVID-19 on life expectancy was relatively small in comparison with many other European countries.

- Maternal and infant mortality rates have been halved since 2000. These rates differ by population group and are higher among Muslims.

- Cancers are the main cause of death in Israel, though their share in all causes of death has decreased since 2000, as have premature mortality rates. Major health threats facing the population are unhealthy diets, obesity and rising shares of older people with dementia.

- Israel was one of the first countries to start a COVID-19 mass vaccination campaign for the first and second doses, which were rolled out in record time, and the first country to administer third and fourth doses.

- Israel is not a member of any international antimicrobial resistance or consumption surveillance networks in the WHO European Region, but available data show that rates of antimicrobial resistance are comparable with some Western European countries.
1 ORGANIZING THE HEALTH SYSTEM

Israel's National Health Insurance features four competing health plans responsible for the provision and payment of the publicly financed basket of services

The health system in Israel is overseen by the Ministry of Health, which has planning, policy making, regulatory and even ownership roles (of some hospitals, see Section 3). The National Health Insurance (NHI) system covers all residents (non-residents may voluntarily enrol). Israel has a centralized health system, with the Ministry of Health's regional health offices tasked with carrying out implementation of nationally developed policies. Collection and pooling of NHI funds is done by the National Insurance Institute, an organ of the central government. Service provision and payment are the responsibilities of the four nationwide health plans (HPs) and enrollees can freely choose among them; they are independent non-profit entities and were first established in 1911.

A major reform to the health system, the 1995 NHI law, introduced mandatory health insurance (with no opt-out), increased regulation over benefits and transferred some of the government's role in service provision to the HPs. The NHI law also codified that HPs cannot reject applicants and transferred some roles from the HPs to the government, such as the collection of contributions along with a redistribution of funds based on risk-adjusted capitation to promote equity in financing.

Members may change HPs at any time, up to twice a year. Populations excluded from NHI coverage include soldiers and prisoners, who are covered by parallel (public) systems (2% of the population in 2021); temporary residents and foreign workers who have private health insurance (1%); undocumented migrants, and tourists without permission to work (about 1% of the population) (HSPM, 2015; Tikkanen et al., 2020). Patient rights in Israel were codified into law in 1996; patients can use call centres, web pages and assistance from consumer organizations to make informed decisions about health care (Brammli-Greenberg et al., 2014).

The health basket is funded by both earmarked social contributions and general taxation

The NHI in Israel offers coverage to all residents, and entitlement is not contingent on payment of contributions. The public system is funded by a combination of social health insurance contributions via payroll (the "health tax"), paid by everyone aged 18 years or older (or after military service), with exceptions for some groups, and general taxation (income, value-added tax and customs). In 2021, social health insurance contributions represented 47% of the NHI budget, whereas government transfers from general taxation represented 53% (Ministry of Health, 2021a). The health basket is a positive list of benefits and by law the same across all four HPs, covering a broad array of services and fully publicly funded. The health basket is subject to specification and annual updates to add new drugs, other technologies and services by a designated committee. Non-covered care, such as dental care for adults younger than 65 years or care from private providers, is purchased privately through voluntary health insurance (VHI) or out-of-pocket payments.

Services included in the health basket include emergency, primary and inpatient care (free of charge) and specialist care, diagnostic examinations, rehabilitation care and medicines (with co-payments for visits to physicians and co-insurance for medicines; discounts and spending caps apply to designated groups). Public health is the direct responsibility of the Ministry of Health. In 2015, mental health was added to the health basket and became the responsibility of the HPs, rather than the Ministry of Health (see Box 3). In recent years, dental care for children and adults aged 65+ was added to the health basket (HSPM, 2018). The VHI market has grown dramatically in the last two decades. In 2021, 82% of the adult population aged 22 years and above owned VHI marketed by their HPs (HP-VHI); a further 49% owned commercial VHI offered by for-profit insurers (see Box 1) (Laron, Maoz-Breuer & Fialco, 2022). Palliative care is covered by the health basket (albeit with loose guidelines).

Outpatient care is mainly provided at the HPs’ primary care clinics and community-based specialists

For the most part, primary care in Israel is provided by employed health professionals in HP-owned clinics, although the HPs also contract with independent physicians (who can work with multiple HPs). This is also the case for specialized outpatient care, where community-based providers play a significant role, whereas both hospitals and community-based providers provide emergency care and technology-intensive specialty care. Pharmaceuticals are provided through a mix of HP-owned and independent pharmacies and HPs incentivize patients to use generic drugs. Provision of long-term care at the community level is the National Insurance Institute’s responsibility, whereas institutional long-term care receives separate financing from the government and has suffered from fragmentation. Mental health care coverage was taken over by the HPs in 2015, but the government still operates most associated facilities. In terms of current health expenditure by type of service, outpatient care (47%) received the highest share in 2019, followed by inpatient care (26%), medical goods (14%), long-term care (8%) and collective services (5%) (OECD Health Statistics, 2021).
Patients with medical needs either first contact their general practitioner (GP), who is usually employed by their HP (the standard for enrollees of two HPs) or go directly to a specialist. For surgery, patients may choose the hospital (but not the surgeon) for their operation, subject to the agreements that their HP has with given hospitals. Access to hospital-based care usually requires a referral. Those with HP-VHI or commercial VHI can also seek care from private providers or self-employed professionals and do so to choose a particular surgeon, shorten waiting times or improve the conditions of their hospital stay. Online consultations, particularly since the outbreak of coronavirus disease 2019 (COVID-19), have greatly increased in recent years and patients have been able to digitally renew prescriptions and access their medical records (see Section 3). Enrollees can also check their benefits via phone, messaging applications, online chat or email. They can furthermore take advantage of several government websites that display:

- if the medicine, service or device is covered by NHI and/or HP-VHI (see Box 1), including rates of co-payments (https://call.gov.il/infocenter/index?page=home);
- how much a prescription drug would cost (including the maximum price) (https://www.health.gov.il/Subjects/Finance/DrugPrice/Pages/default.aspx);
- how much an over-the-counter drug would cost (including the maximum price) (https://www.health.gov.il/Subjects/Finance/Pages/OTC.aspx).

**Box 1**

The role of VHI in Israel is growing

More than 80% of Israeli residents covered by NHI also have VHI. VHI is used for care provided by private hospitals and health professionals, to shorten waiting times, to choose particular surgeons or to obtain services not covered by NHI, such as specific pharmaceuticals. There are two types of VHI. One is a group insurance marketed by HPs to their members, known as HP-VHI, and the other is commercial VHI (individual or group insurance) sold by for-profit insurers. HP-VHI provides benefits in-kind while commercial VHI reimburses patients in cash, with higher reimbursement rates than HP-VHI. Another difference between the two is that commercial VHI can cover pharmaceuticals not covered by the health basket. Commercial VHI premiums are higher than those for HP-VHI, which are based only on age. In addition, HP-VHI does not require medical underwriting and must cover any interested individual.

The share of the population (aged 22 years and older) covered by HP-VHI increased from 64% in 2000 to roughly 82% in 2021, whereas the share covered by commercial VHI increased from 26% in 2000 to 49% in 2021. About half of the adult population own both types of VHI, resulting in dual VHI coverage for some aspects of care (Laron, Maoz-Breuer & Fialco, 2022). Dual coverage leads to an unnecessary financial burden on households and in 2018, VHI premiums represented 40% of households’ private spending on health (Ministry of Health, 2021a). That year, VHI amounted to 13% of current health expenditure, whereas out-of-pocket payments amounted to another 20%, meaning that despite being another layer of financial protection, VHI is not reducing the burden of out-of-pocket payments.

Many reforms have attempted to regulate and improve the efficiency of the VHI market in Israel, the most recent of which was first proposed in 2016 and again in 2021 (Brammli-Greenberg & Waitzberg, 2020). This reform seeks to address the use of commercial VHI to reduce dual VHI coverage, increase competition and correct other failures in the commercial VHI market (including difficulty in understanding policies, being able to compare the terms of one policy to another and barriers to switching insurers). A uniform and basic policy for surgical insurance was also introduced, with the option to purchase additional insurance coverage separately (for example, for surgeries abroad, medicines, treatment for severe diseases). (Capital Market Authority, Insurance and Savings, 2018). In 2021, there was a proposal to add a prohibition on the sale of overlapping/dual VHI.
In a 2021 survey about the level of responsiveness of the Israeli health system, 88% of respondents reported being satisfied with their HP’s services, and 68% were satisfied with the overall health system (Laron, Maoz-Breuer & Fialco, 2022). Although not universal, some HPs have explored setting limits or guidelines on how much time physicians spend with patients. Patients can switch their GP every quarter. In 2022, HP enrolment (with the same health basket) was also opened to refugees from Ukraine (Ministry of Health, 2022a).

2 FINANCING AND ENSURING FINANCIAL PROTECTION

Health spending per capita is lower than in the EU and in many high-income countries in the WHO European Region

Per capita spending on health in Israel amounted to US$ 3,326 in 2019 (purchasing power parity), which was slightly higher than the average for the WHO European Region (US$ 3,179), but lower than the average for the region’s high-income countries (US$ 4,346) and the European Union (EU) (US$ 4,055) (Fig. 1).

Overall health spending amounted to 7.5% of gross domestic product in 2019. This was below the average for the region’s high-income countries (8.2%). Health spending as a share of gross domestic product in Israel has increased by less than a percentage point since 2000 and year-to-year changes only consisted of small fluctuations.

Israel’s publicly funded share of health expenditure is comparatively low

The publicly funded share of current health expenditure in Israel accounted for 64.8% in 2019 and was below the average for the EU (73.9%). The share of out-of-pocket payments decreased from 29.5% of current health expenditure in 2000 to 21.0% in 2019, which was just above the average for high-income countries in the WHO European Region (19.4%), but almost equal to the EU average (20.9%) in 2019 (Fig. 2). Another important source of funding is VHI, which accounted for 11% of current health expenditure in 2019, an increase from 4% in 2000.

As a share of total government expenditure, funding for health made up 12.1% in 2019, which was an increase from 9.4% in 2000 but below the EU and high-income countries’ average of 14% (WHO, 2022b). The level of public spending on health as a percentage of gross domestic product slightly
From 2000 to 2019, health spending in Israel increased, from 4.3% in 2000 to 4.8% in 2019, but remained below the averages for the region’s high-income countries (5.9%) and the EU (6%) (Fig. 3).

Despite the broad population coverage of the NHI, the declining share of out-of-pocket payments, along with increasing shares of VHI from current health expenditure in the last two decades, 5.7% of Israeli households still faced catastrophic health spending in 2019 and 4% were at risk of impoverishment, impoverished or further impoverished (Fig. 4). Although the rate of catastrophic health spending in Israel is similar to the average of the WHO European Region, it is higher than most EU countries. It is also striking that the dual coverage (of the NHI and two types of VHI) still leaves residents financially unprotected from catastrophic health spending.

Israeli households are not fully protected from catastrophic health spending, despite NHI and high rates of VHI uptake

Israel has high levels of unmet needs, though differences persist between income groups

Among Israeli adults, 42.3% self-reported unmet needs for health care or medicines due to cost, distance or waiting times in 2021 (Fig. 5). Distance and waiting times were the main reasons for unmet needs: over one third (35%) of adults reported forgoing diagnostic examinations or health care in the last year because of waiting times, while 18% reported forgoing care because of long distances. A further 12% of adults reported unmet needs as a result of high costs. Specifically, 5.5% reported forgoing diagnostic examinations or health care in the last year, 5% forwent visits to health providers, 6% did not purchase prescription drugs and another 5% consumed a lower dose of prescription drug due to cost (Laron, Maoz-Breuer & Fialco, 2022). Service costs remain a barrier for those with lower incomes, as a higher share of the poor forwent care due to cost in 2021 (19% compared with the overall average of 12%). Periphery residents are also underserved (see Section 3), and report higher shares of unmet needs due to long distances.
Surprisingly, within Israel, a higher share of those in the top income quintile reported unmet needs (52.9% in 2021), mainly due to waiting times (48%), whereas the share for those in the lowest income quintile was similar to the national average. The rich tend to forgo publicly funded care more than the average and seek private providers to skip waiting times, mainly funded by VHI. Those who do not have VHI report lower rates of unmet needs than others, probably as the result of alternative private providers being less accessible. Measured waiting times in Israel, however, are not significantly higher than in the EU, and in 2016 25% of Israeli adults waited more than a month to see a specialist, similar to the rates in the Netherlands, Germany and Switzerland, and lower than Canada, Norway, Sweden, New Zealand, the United Kingdom, Australia and France (OECD, 2020). In addition, in 2021 a lower share of the poor forwent care due to waiting times (31% compared with the overall average of 35%).

The opposite is true for self-reported unmet needs and dental care, however, as just 8.8% of those in the top income quintile reported unmet needs in 2016, versus 31.1% in the lowest income quintile (the national average that year was 18.3%) (Fig. 6) (Brammli-Greenberg et al., 2019).

### 3 GENERATING RESOURCES, PROVIDING SERVICES AND ENSURING ACCESS

The rate of hospital beds per population is low, but most specialist care is provided in ambulatory clinics

The Ministry of Health, and two municipalities, own and operate 45% of acute care beds in general hospitals, in addition to many long-term care and psychiatric hospitals. Other owners of general acute care beds in Israel include the Clalit HP (30%), non-governmental organizations (22%) and the Maccabi HP and other private for-profit owners that own private hospitals (3%). The hospital system itself has a low bed-to-population ratio, reflecting an intentional and long-running government preference to move as much care as possible to community-based settings. Most specialized outpatient care therefore takes place outside hospitals, while hospitals are the main sources of imaging, and inpatient and emergency care. Israel had 291 hospital beds per 100 000 population in 2020, compared with 501 per 100 000 population in the EU in 2018 and 553 per 100 000 population in the WHO European Region in 2014 (Fig. 7). By 2020, hospital beds in Israel stood at 291 per 100 000 population.
Israel’s strong primary care is supported by HP’s digital services, widely used by members

Israel has a strong primary care sector. In 2021, 63% of adults aged 22 years or older reported having their care coordinated, usually by their GP (Laron, Maoz-Breuer & Fialco, 2022). The HPs own not only primary and specialist care clinics, but also laboratories, diagnostic centres and pharmacies. Information technology developed and employed by the HPs includes detailed electronic medical records also available to providers and patients. These data enable integrated care, patient empowerment and research (Balicer & Afek, 2017). Digital services, such as electronic prescriptions, virtual visits and communication with health care providers, have existed for more than two decades and have further increased during the COVID-19 pandemic. For example, in 2021, 66% of the population aged 22 years or older accessed their own records, 55% communicated with their HP or physician through the website or app of their HP, and 44% communicated with their physician through video calls or chat (Laron, Maoz-Breuer & Fialco, 2022). In 2021, about one third of all yearly interactions with GPs were made digitally.

Israel monitors and publishes key quality of care indicators

Israel has an extensive and long-running programme to monitor quality of care in community-based settings (where HPs have published available data since 2004; https://en.israelhealthindicators.org/), and indicators for comparing the quality of hospital care were launched in 2013 (OECD, 2012). The Quality, Service and Safety Authority at the Ministry of Health publishes hospital-specific data on various indicators (Ministry of Health, 2021d). At the time, the public release of comparative data for conditions such as stroke, continuity of care, hip fractures and depression represented a big step towards transparency in hospital care. These data are available for download from a dedicated website and enable patients to compare hospitals based on the indicators of greatest importance to them (https://statistics.health.gov.il/views/_9/-?:embed=y&:showVizHome=no&:showTabs=y&:display_count=y&:display_static_image=y&:linktarget=_self).

Recent initiatives have helped to replenish health workforce numbers that are projected to decline in Israel

There were 440 physicians per 100 000 population in 2020, of which 390 were practicing physicians—a slight increase from 412 per 100 000 population in 2000 (Ministry of Health, 2021d). The rate in 2020 was higher than the WHO European Region average (358 per 100 000 population), and the EU average (382 per 100 000 population) (Fig.8). However, the projections are that the rates of physicians might drop significantly in the next few years as one quarter of the physicians were older than 67 years (the retirement age) in 2020. The physician-to-population ratio might have dropped substantially during the previous decade had it not been for several studies commissioned by the government to evaluate future workforce needs. To ward off predicted shortages, Israel undertook a series of measures, starting in the mid-2000s, that still continue. These included opening two medical schools (in a so-called “periphery region”), expanding class sizes and faculties at existing medical schools (along with increased financial support), easing licensing examinations for those who obtained their medical degree abroad and permitting physicians to continue working after the mandated retirement age (HSPM, 2016). Due to the expected retirement of a substantial share of physicians, expansion of the physician workforce remains a key goal for the Israeli health system.

There were 800 nurses per 100 000 population in Israel in 2020, of which 560 were practicing nurses. The total number of nurses per population was similar to the WHO European Region (816 per 100 000 population) but below the EU average (915 per 100 000 population) and representing a nearly 12% increase from 2000 (708 per 100 000 population) (Ministry of Health, 2021d). Similar to the situation with physicians, there were projected shortages of nurses, which helped to kick off a new recruitment drive. This included more study grants and

**Fig.7**
The number of hospital beds per 100 000 population in Israel is far below averages for the EU and the WHO European Region overall

Sources: OECD (2022) for Israel; WHO (2022a) for the WHO European Region; Eurostat (2022) for the European Union.
the option for an accelerated study duration for those who had already completed bachelor’s degrees in other fields. As in other countries, Israel has also faced the challenge of unequal workforce distribution across its six administrative districts. There is a clustering of both nurses and physicians in the centre of the country, especially compared with the North and South Districts (considered “periphery regions”; see Table 1).

Access to health services has improved since 2000, but the South District still lags behind

The universal health coverage index – a global indicator that monitors progress towards Sustainable Development Goal 3 target 3.8.1 on coverage of essential health services – increased from 76.7% in 2000 to 84.3% in 2019, exceeding the WHO European Region average (77.1%) (Fig. 9). As mentioned above, access to care in periphery regions, as well as in small towns, remains an issue. Additionally, waiting times vary by type of care and location. In 2020, although the median waiting time nationwide for visiting specialists was 21 days, it was shorter in the North District (14 days) but longer in the South District (30 days), despite both being periphery regions. Across the country, chronically ill patients and those seeking certain types of specialists waited longer than the median (nationwide 30 days). As a result of NHI waiting times, about 15% of all patients needing a specialist sought private care funded by VHI (Brammli-Greenberg et al., 2021).

Table 1
Israel faces geographic disparities in the distribution of physicians and nurses

<table>
<thead>
<tr>
<th></th>
<th>Average</th>
<th>Tel Aviv</th>
<th>Centre</th>
<th>Jerusalem</th>
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<th>South</th>
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<td>Practicing physicians</td>
<td>3.9</td>
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<td>2.5</td>
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<tr>
<td>Practicing nurses</td>
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<td>5.6</td>
<td>4.8</td>
<td>4.9</td>
<td>4.9</td>
<td>3.8</td>
<td>7.8</td>
</tr>
</tbody>
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Note: National data per 1 000 population and for the years 2018–2020.
Source: Ministry of Health (2021d).
Health Systems in Action: Israel

Israel performs well on routine childhood vaccinations and treatment of tuberculosis

Routine childhood vaccinations are funded directly by the Ministry of Health and are provided at well-baby clinics, of which the ministry is the main owner, along with municipalities and HPs. Israel records high percentages for first and second immunizations against measles, measuring 99% and 96% coverage, respectively, in 2019. A similar trend can be observed for the diphtheria, tetanus toxoid and pertussis (DTP3) vaccinations: Israel increased the vaccination rate from 93% of infants in 2000 to 99% in 2020.

Israel has reduced its tuberculosis (TB) incidence by over 70% since 2000 and the rate per 100,000 population was just 2.4 in 2019 (much lower than the respective EU and WHO European Region averages of 9.3 and 23.3 in the same year). Effective treatment coverage of TB in Israel, on the other hand, has been rather stagnant since 2000 and stood at 75.7% in 2017, though still above the EU and WHO European Region averages (Fig. 10). This indicator is a success rate measured through administrative data and includes the positive cases of TB who successfully complete treatment without bacteriological evidence of failure (WHO, 2022d).

4 IMPROVING THE HEALTH OF THE POPULATION

Life expectancy in Israel is one of the highest in the WHO European Region, and the gender gap is small

Life expectancy at birth has been steadily rising in Israel, from 79 years in 2000 to 83.4 years in 2018. This was much higher than the WHO European Region’s average for 2017 (the last available year), which was 78.3 years, and also above the EU average (80.9 years in 2018) (Fig. 11). The life expectancy gap between males (81.4 years) and females (85.3 years) stood at 3.9 years in 2018 (down from 4.4 years in 2000), which was a smaller difference than in the EU (5.3 years) or the WHO European Region (6.3 years). Despite the gender gap being smaller than in many other countries, behavioural risk factors [see below] are more common among men, and standardized death rates for major noncommunicable diseases among men aged 30–69 years amounted to 204 deaths per 100,000 population in 2018, compared with 133 among women in the same age group.
Early research into the impact of COVID-19 in Israel shows a comparatively small impact: in the first calendar year of the pandemic, life expectancy at birth fell by about 1.5 months for both males and females while life expectancy at 65 years fell by 2.9 months. This decline is much smaller than the reductions of a year or more seen in several EU countries (Weinreb, 2021a).

Mortality rates in 2020 are estimated to have been higher among the Arab and ultra-Orthodox Jewish populations (for the latter four times higher than the general population), which has been attributed to higher rates of comorbidities (particularly diabetes, which is three times higher in the Arab population than in the Jewish population) (Weinreb, 2021a, 2021b).

Maternal and infant mortality are low, but gaps exist between population groups

In 2000, an estimated 7 women per 100 000 live births died in Israel from pregnancy or complications from delivery. This rate declined to 3 maternal deaths per 100 000 live births by 2017, lower than the EU (6.3 per 100 000 live births) and WHO European Region (12.7 per 100 000 live births) averages. Infant mortality in Israel followed a similar trajectory and decreased from 5.6 deaths per 1 000 live births in 2000 to 3 deaths per 1 000 live births in 2019, which was below the EU average (3.4 deaths per 1 000 live births) and less than half of the rate in the WHO European Region (7 deaths per 1 000 live births) (Fig. 12a and b). Nevertheless, infant mortality varies by population group, with differing rates of deaths per 1 000 live births among Jews (1.6), Christians (1.8), Druze (2.2) and Muslims (5) (CBS, 2021). To reduce these disparities, the Ministry of Health has created a special division and has funded an intervention programme to reduce the infant mortality among Bedouin Arabs (Rubin et al., 2017).

Some maternal and infant care is provided at well-baby clinics (including vaccinations, see above), which have relatively good population outreach. The HPs are also active in maternal and newborn health services in Israel, serving as a main contact point with their women’s health centres that provide important screenings, some of which are not covered by the health basket.
Death rates due to cancer and other diseases have dropped in recent years, but dementia-related deaths have risen sharply

Approximately 124 deaths per 100,000 population in Israel in 2018 were attributed to cancers, a decline from 163 deaths per 100,000 population in 2000 (Fig. 13). Many of the new technologies/medications submitted and accepted into the health basket over the past two decades have been for cancer. The mortality rate for ischaemic heart disease, previously the second and now the third leading cause of death in Israel, has declined greatly, from 96 per 100,000 population in 2000 to 34 deaths per 100,000 population in 2018. The second, fourth and fifth leading causes of death in 2018 (as deaths per 100,000 population) were respiratory diseases (38), diabetes (22) and stroke (20), and these have also decreased, with rates for the latter two causes roughly halving since 2000. In 2019, the age-adjusted prevalence of diabetes in Israel was 9.7% among adults aged 20–79, higher than the European average of 6.3% (MoH, 2019). Dementia, the sixth leading cause of death in 2018, increased sharply between 2008–2010 and 2017–2019, by 68% among women and 65% among men (Ministry of Health, 2022b).

The HPs receive retrospective payments from the Ministry of Health for enrollees with severe diseases. There have also been special screening programmes in recent years that are aimed at increasing treatment and awareness for target populations.

Premature mortality rates have also declined

Premature mortality (among those aged 30–69 years) from four major noncommunicable diseases (cardiovascular diseases, cancers, diabetes mellitus and chronic respiratory diseases) declined from 293 per 100,000 population in 2000 to 167 per 100,000 population in 2018 (Fig. 14). This was far below the most recent averages for the WHO European Region (359 per 100,000 population in 2017) and the EU (261 per 100,000 population in 2018). Age-adjusted (premature) mortality as a result of heart disease, stroke or diabetes is higher among Arabs compared with Jews, whereas age-adjusted incidence and mortality of cancer were higher among Jews. One of the reasons is the higher prevalence among Arabs of risky behaviours such as smoking and unhealthy diets. The Ministry of Health has developed comprehensive programmes to reduce these gaps (Muhsen et al., 2017).
The COVID-19 pandemic had a stronger impact on specific communities, while general preparedness for mass mortality facilitated the response

As of January 2022, the cumulative number of officially recorded COVID-19-related deaths in Israel stood at 96 per 100,000 population, which was much lower than the average in the WHO European Region (197 per 100,000 as of February 2022). Initial research appears to show a minor impact of COVID-19 on overall life expectancy in Israel (see above), but during certain periods in 2020 and 2021, excess mortality was higher than in previous years (Fig. 15). The rollout of the first two doses of the COVID-19 vaccine was speedy, and Israel managed to vaccinate a high proportion of its population in record time (Rosen, Waitzberg, & Israeli, 2021). The rollout relied on the primary care foundations of the HPs (Waitzberg & Davidovitch, 2021), and their experience with mass vaccinations and other public health threats over the past decades (Waitzberg, 2022). Israel was also the first country to offer third and fourth vaccination doses. Special outreach and culturally adapted policies were needed to engage cultural minorities, such as ultra-Orthodox Jews and Arabs, to comply with public health responses (Rosen, Waitzberg, Israeli, et al., 2021; Waitzberg et al., 2020). Due to lower trust in government and its institutions, and exposure to misinformation, these groups took longer to adhere to physical distancing, quarantine and mask regulations. They also took longer to get vaccinated, altogether leading to higher morbidity and mortality rates (Schattner & Klepfish, 2020; Muhsen et al., 2021; Adini, Cohen & Spitz, 2022; Saban et al., 2022).

Unhealthy diets and obesity are the most concerning risk factors

Behavioural and biological risk factors are major contributors to mortality in Israel, although they fall below WHO European Region and EU averages. High systolic blood pressure, or hypertension, was estimated to account for 17.2% of mortality in 2019, compared with 25.0% in the WHO European Region and 20.8% in the EU (Fig. 16). Dietary risks, alcohol and tobacco consumption, and low levels of physical activity are major behavioural risk factors, although they are estimated to contribute less to mortality in Israel than in the EU and the WHO European Region, and deaths due to high levels of low-density lipoprotein cholesterol also accounted for a smaller share of overall mortality (IHME, 2019). However, the prevalence of adolescent obesity has increased 4-fold and the prevalence of severe obesity 20-fold in the last decades and the prevalence of diabetes is expected to increase accordingly (Bardugo and Twig, 2021).
In Israel, smoking prevalence in 2019 stood at 20% of those aged 15 years or older. This figure was higher among males (28.9%, down from 39.1% in 2000) than females (13.5%, down from 24.2%). Smoking is also more prevalent among Arabs (24.4%) than Jews (19%) (Ministry of Health, 2021b). Alcohol consumption in Israel amounts to 3 litres per capita per year (age 15 years and older), the second lowest among OECD countries (OECD, 2022a).

On the other hand, the percentage of mortality in Israel estimated to result from high fasting plasma glucose in 2019 (15.4%), which is an early indicator of diabetes (a declining but still major cause of death in Israel), stood above the EU and WHO European Region averages. Additionally, the percentage of people aged 18 years and older classified as overweight based on a body mass index over 25 kg/m\(^2\) was higher in Israel in 2019, at 64.3%, than in both the WHO European Region (58.7%) and the EU (59.4%). The prevalence of overweight has increased from 58.6% in 2000, and obesity, measured as having a body mass index over 30 kg/m\(^2\) for those aged 18 years and older, impacted similar percentages of the male (25.9%) and female (26.2%) populations in Israel in 2019. The share of deaths due to high body mass index was estimated to be 10.7% in 2019.

**Environmental risk factors are other contributors to mortality**

Environmental risk factors like air pollution, non-optimal temperatures and occupational risks were estimated to contribute to overall 9% of deaths in Israel in 2019. Air pollution's share was roughly the same in Israel (5.1%) as in the WHO European Region (5.2%), but higher than in the EU (3.9%). Non-optimal temperature deaths were nearly half the share in Israel (2.5%) as in the WHO European Region and the EU, and occupational risks were also lower in Israel.

**Box 2**

**A national plan for active and healthy living**

The National Plan for Health Promotion is an intergovernmental collaboration between the Ministries of Health, Education and Culture and Sport, and selected municipalities. The plan calls for promotion of healthy diets and changing the food served or sold in institutions such as schools, the army, large companies, factories and hospitals.

Since 2020, there has been a requirement to label food products with high amounts of sugar, salt or saturated fats, along with a voluntary label for healthy foods. In parallel, a collaboration with the food industry was established to reduce the amount of salt in some processed food products. This has been complemented by public communication campaigns to recommend healthy diets, including suggestions for party and holiday meal options.

Within the health system, the HPs provide training for primary care practitioners on health promotion. The HPs also offer programmes for their members on smoking cessation, healthy diets and reducing risky behaviours.

Finally, an inter-ministerial commission on health promotion was established in 2021 and the recommendations were presented to the Ministry of Health in 2022 (the Inter-ministerial Committee for the Promotion of Health and the Prevention of Chronic Illness).
In 2015 a reform added mental health services to NHI, shifting the responsibility and funding of services from the Ministry of Health to the HPs. The reform also broadened eligibility to services and initiated a shift of care from inpatient or day care settings to outpatient care at the community level. This was done through several initiatives:

1. **“Balancing homes”** are a new type of service funded by the HPs. They are designed to help prevent the need for psychiatric hospitalization of patients with acute mental health crises, while providing more intensive care than that provided in day clinics. Patients are entitled to short inpatient stays (for example, a week) in “collective houses”, where health professionals come to provide mental care. This includes psychiatrists, psychologists, social workers and persons with “lived experiences”.

2. **Psychiatric home care** as a substitute for inpatient care. Patients receive all services at home that would be provided in hospital or inpatient settings, such as physician care twice a week or a daily nursing visit. This was further scaled up in the context of the COVID-19 pandemic, with the HPs purchasing services from for-profit organizations.

3. **Crisis teams** that provide emergency care to avoid hospitalization. This service was launched during COVID-19 and has been kept. It is provided in hybrid format (in presence and virtual visits), mainly for children.

4. **Short-term emergency mental health phone visits**, consisting of up to six phone calls, funded directly by the Ministry of Health. This service was also initiated during the pandemic and the HPs continue to operate it to avoid deterioration; it is also effective in improving personal resilience.

5. **Eating disorder care teams** for integrated care at outpatient clinics (integrated care with general practitioners, psychiatrists, nurses and social workers).

6. The opening of **new outpatient mental health clinics**.

7. The development of **new digital services**.

Despite these new initiatives and services, long waiting times are still a concern for patients in the public system, mainly due to workforce shortages. Most psychologists prefer to work privately, as they can charge higher prices. In addition, the COVID-19 pandemic has resulted in a sharp growth in demand for mental health services and waiting times are longer, in both the public and private systems (Samuel & Kagya, 2022 forthcoming).

Substance abuse care is not covered by NHI and is still under direct responsibility of (and funded by) the Ministry of Health. The main barrier to adding this service to NHI is a lack of suitable professionals.
AMR data for Israel are not widely available internationally, but studies have shown Israel to be comparable with some European countries.

In response to an outbreak of carbapenem-resistant *Enterobacteriaceae* in 2006–2007, major shortcomings in infection control led to the establishment of the National Center for Infection Control, under the Ministry of Health. With this, Israel put in place a governance structure for the national monitoring and stewardship of antimicrobial resistance (AMR) (Schwaber & Carmeli, 2017). As Israel is not a member of any international AMR or antimicrobial consumption (AMC) surveillance networks in the WHO European Region, there are fewer data on AMC and AMR available for Israel internationally. However, AMR and AMC data are published sporadically in peer-reviewed literature. For example, in comparing national data with those from the European Antimicrobial Resistance Surveillance Network, Dickstein et al. (2019a) found that incidences of bloodstream infections caused by antibiotic-resistant organisms either stayed stable or decreased, putting Israel in line with countries such as Greece and Italy. The exception in this study was for carbapenem-resistant *Klebsiella pneumoniae* infections, which were markedly lower in Israel than in the other two countries.

**AMC is trending downward in Israel**

An analysis from Low et al. (2013) found that the rate of AMC was 23.2 defined daily doses per 1,000 insured between 2000 and 2010. Furthermore, an analysis of consumption data found that defined daily doses decreased in all measured patient settings (community, medical wards, surgical wards, intensive care units and post-acute care hospitals) between 2012 and 2017, with the greatest percentage reduction taking place in post-acute care hospitals and indicating that National Center for Infection Control interventions so far have had stronger impacts in some settings than others (Fig. 17) (Low et al., 2013). Of usage declines, those of fluoroquinolones and penicillins were the largest.

**AMR and AMC are receiving more attention in Israel, though the COVID-19 pandemic has disrupted plans**

A national AMR action plan for Israel is under development, but the COVID-19 pandemic has impacted both the timeline and the funding available for the plan. Israel has laws and regulations addressing the prescription and sale of antimicrobials for human consumption and AMR training is part of educational programmes in the health sector (WHO, 2022e). Israel is the only large high-income country in the WHO European Region that does not report AMR or AMC data internationally to any of the AMR-related surveillance networks, including CAESAR, WHO AMC or GLASS. For rates of AMC and AMR to decline further, there is a need for effective high-impact policies and measures, including improved monitoring of consumption and resistance levels, rapid testing for patients to determine whether they have bacterial or viral infections, delayed antibiotic prescriptions and mass media campaigns.

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**Fig. 17**

The use of antimicrobials decreased in all patient settings between 2012 and 2017.

**Notes:** ICUs: intensive care units; PACHs: post-acute care hospitals.

**Source:** Dickstein et al. (2019b).
Moving towards universal health coverage

Since 1995 every resident has been entitled to health services under the NHI Law (see Section 1). Since then, efforts have been made to expand coverage even further, such as by adding free coverage for undocumented children who are not insured under the NHI system. New services were also added to the NHI package to expand the scope of coverage, including dental care for children and older adults. During the COVID-19 pandemic, all COVID-19-related services were provided free of charge to all individuals regardless of their legal status or insurance coverage (Waitzberg & Meshulam, n.d.).

Promoting health and well-being

A significant number of large-scale health promotion programmes have been implemented in Israel on a continuous base, to reduce smoking and home accidents, and improve physical activity, nutrition and diabetes control. Some target the general population, while others target specific population groups, such as the Arab population, which has higher rates of noncommunicable diseases, such as diabetes and respiratory diseases. Many of the health promotion programmes are culturally adapted to meet the specific needs of recipients.

During the last decade, the national programme EfshariBar (Health is Possible) has promoted active, healthy living. In January 2020 it established mandatory labelling of processed and packaged foods, with the aims of making nutritional information readily available to the public and encouraging informed choices in the purchase and consumption of healthy foods (see Box 2).
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WHO Regional Office for Europe

WHO is the authority responsible for public health within the United Nations system. The WHO Regional Office for Europe (WHO/Europe) covers 53 countries, from the Atlantic to the Pacific oceans.

To support countries, WHO/Europe seeks to deliver a new vision for health, building a pan-European culture of health, where health and well-being goals guide public and private decision-making, and everyone can make healthy choices. WHO/Europe aims to inspire and support all its Member States to improve the health of their populations at all ages. WHO/Europe does this by providing a roadmap for the Region’s future to better health; ensuring health security in the face of emergencies and other threats to health; empowering people and increasing health behaviour insights; supporting health transformation at all levels of health systems; and by leveraging strategic partnerships for better health.

European Programme of Work
‘United Action for Better Health in Europe’

The European Programme of Work (EPW) sets out a vision of how the WHO Regional Office for Europe can better support countries in our region in meeting citizens’ expectations about health.

The social, political, economic and health landscape in the WHO European Region is changing. United action for better health is the new vision that aims to support countries in these changing times. “United”, because partnership is an ethical duty and essential for success, and “action” because countries have stressed their wish to see WHO move from the “what” to the “how”, exchanging knowledge to solve real problems. The WHO European Region’s solidarity is a precious asset to be nurtured and preserved and, through the EPW, WHO/Europe supports countries as they work together to serve their citizens, learning from their challenges and successes.

The European Observatory on Health Systems and Policies

The European Observatory on Health Systems and Policies supports and promotes evidence-based health policy-making so that countries can take more informed decisions to improve the health of their populations. It brings together a wide range of policymakers, academics and practitioners, drawing on their knowledge and experience to offer comprehensive and rigorous analysis of health systems in Europe.

The Observatory is a partnership hosted by WHO/Europe. Partners include the governments of Austria, Belgium, Finland, Ireland, Norway, Slovenia, Spain, Sweden, Switzerland, the United Kingdom, and the Veneto Region of Italy (with Agenas); the European Commission; the French National Union of Health Insurance Funds (UNCAM), the Health Foundation; the London School of Economics and Political Science (LSE) and the London School of Hygiene & Tropical Medicine (LSHTM). The Observatory is based in Brussels with hubs in London (at LSE and LSHTM) and at the Berlin University of Technology.