

Chapter 3

Tackling inequalities in health and health care in Israel

Israeli society is characterised by deep economic and social divisions, with poverty rates that are greater than in most other OECD countries. The government and health funds are taking serious steps to address prevailing inequalities in health and health care quality by population group, socio-economic status and geography. The government has recently developed an ambitious action plan and taken significant steps for reducing inequalities in health care. This is highly commendable, especially considering the challenging social-economic environment within which inequalities in Israeli society are nested. Despite this, further improvements can be made. Information on access to and the quality of hospital care for different groups is lacking, for example. Other key issues deserving closer attention are the growing financial burden of out-of-pocket payments; the need for strengthening the focus on culturally tailored primary prevention and health promotion services among high-risk groups; and the need to monitor how changes in the capitation formula impact on geographical variations in staffing and infrastructure. The government will need to monitor carefully the outcomes of the reform plan, and continue to strengthen incentives, rewards and penalties for providers and funds. Importantly, achieving the government's goal of reducing health inequalities will require action across government departments and measures to reduce wider socio-economic differentials driving health inequalities.

3.1. Introduction

The Israeli Government has shown strong commitment to address inequalities in the health system. This is regarded as a key pillar of a strategy to improve quality of care. Equity is an important goal of high-quality health care systems, and appears as a cross-cutting dimension in several frameworks used for assessing the performance and quality of national health care systems. This goal is not unique to Israel. Many OECD countries actively seek to reduce inequalities in health and health care.

Quality improvement programmes do not necessarily reduce inequalities, and differential uptake and/or implementation can actually widen them. Reducing inequalities in health and health care is important for reasons additional to the underlying goal of social justice that is valued in most countries. A reduction in the avoidable ill health and premature death associated with such inequalities can lower health care costs and increase working lives, productivity and employment. Making equity an explicit target is therefore a hallmark of the Israeli Government's commitment to improve quality.

While many determinants of health and health inequalities lie outside the health care system, they are also influenced by the design and quality of health care systems and can be shaped by public policy. The quality of services and how they are organised can, for example, impact on health and health inequalities through their impact on the uptake of, compliance with and treatment outcomes of services among different population groups. High-quality care must therefore be responsive to the particular health care needs of different groups, especially those at risk of poor health. Health care systems can play a significant role in improving health and ameliorating inequalities by providing high-quality, person-centred and equitable health promotion, disease prevention and health care services. The design of health care systems, such as financing, insurance coverage, regulation, use of incentives and specific interventions, and geographical penetration can also have a significant impact on inequalities in health and health care – for better or for worse. Many countries deploy these (and wider) system levers in their strategies for reducing inequalities in health and health care. The ability to monitor these inequalities is an essential pre-requisite for the development of equity promoting strategies, and for assessing their impact, and requires information systems that are fit for purpose to support such measurement.

This chapter reflects on the Israeli Government's plans and policies to tackle inequalities in health care, making suggestions for areas where current actions could be strengthened further. The chapter examines the quality of health care services in Israel in the context of prevailing health inequalities, focussing in particular on variations in health care quality for

sub-groups of the Israeli population. It starts by examining variations in health and health care quality for different population groups and regions. It goes on to discuss the key factors implicated in variations in health care quality, and how these challenges could be addressed in order to reduce health inequalities. Although the scope of this chapter does not extend to the wider determinants of health, wide socio-economic inequalities prevailing in Israel remain a major driver of health inequalities irrespective of the performance of the health care system.

3.2. The Israeli health care system is designed to provide equity in health care, and moves are underway to reduce prevailing inequalities

Equity of health care provision for all Israelis is an underpinning principle of the Israeli health care system (see Box 3.1). The government has made commendable efforts to address disparities in health. Besides providing universal coverage, the Ministry of Health (MOH) has been active in developing and implementing strategies to tackle inequalities in health and health care. Since 2009/10, when the goal of reducing inequalities was announced, the MOH has directed earmarked budgets towards this goal, both through direct governmental action and through the aegis of the health funds and other agencies (see Horev and Averbuch, 2012 for an overview). The *Pillars of Fire* action plan for 2011-14 outlines its goals and deliverables for addressing the underlying drivers of inequalities in health care. Some key recent initiatives are shown in Box 3.2. Inequality reduction strategies are developed through close collaboration between the MOH and key stakeholders, such as the health funds, hospitals and local authorities. Through its publications, the MOH also tries to keep health inequalities high on the public agenda.

Box 3.1. Equity and human rights in health care provision are enshrined in the Israeli legislation

The National Health Insurance Law (NHIL) of 1995 enshrines the right to health care of every Israeli, and universal coverage by mandatory health insurance. Key elements of the law anchor the principles of universality and equality of access: entitlement to a specified insurance benefits package; choice of insurance provider; regulations to prevent “cream-skimming” of patients; and a funding mechanism based on progressive taxation. The Law also provides the right to services that are timely, of reasonable quality, and within reasonable distance from the insured’s place of residence. The insurance basket has recently been extended to include dental care for children.

The Patients’ Rights Law, enacted in 1996, goes beyond equity of access to ensuring respect for and consideration of patients, dignity and privacy, informed consent, patient confidentiality and access to medical records. It prohibits discrimination on grounds of religion, race, gender, nationality, country of origin or any other such basis. It obliges medical institutions to provide treatment in cases of emergency, regardless of financial coverage.

Box 3.2. The Israeli Government has significant measures underway to tackle inequalities in health care: Some key initiatives since 2009/10

In 2008 the President of Israel established a task force to recommend ways to close social gaps in Israel, including in the health sector. An action plan by the MOH to narrow health inequalities was initiated in 2009. In 2010 the MOH declared its obligation to deal with health inequalities by including it in the list of MOH targets and a comprehensive strategic policy planning process took place. A special unit was established in the MOH and a strategy was formulated for reducing inequalities in health. The goal of narrowing health disparities was included as second among the MOH's seven "Pillars of Fire" goals for 2011-14. Based on these goals, an action plan for narrowing health inequalities was developed.

Objective 2 under the "Pillars of Fire" goals relates to reduction of health care inequality. The target objectives identified here include:

1. reducing the disparity in financial access to health services;
2. reducing the influence of cultural differences in the utilisation and quality of health services;
3. providing sufficient quality and professional health care personnel to the periphery;
4. improving the physical infrastructures in the peripheral regions;
5. providing incentives to the health funds for undertaking activities to reduce disparity;
6. establishing a database for information relating to morbidity, accessibility to and availability of services, and relating to intervention activities effective in reducing disparity in the health sector.

A comprehensive overview of strategic decisions, policies and interventions to address health care inequalities can be found in Horev and Averbuch (2012). Those include, for example:

- development of a national plan to tackle inequalities;
- a directive requiring all health care providers to provide access to culturally appropriate services in the main spoken languages;
- abolition of fees at governmental mother-infant care centres;
- extension of insurance cover to include dental care for children;
- changes to co-payment system *e.g.*, extending exemptions to elderly patients with chronic disease, family ceilings on expenditure on pharmaceuticals and reductions of copayments for generic medicines;
- establishment of a new medical school in Galilee, which will upgrade services in the North;
- incentivising training and recruitment of nurses from the Bedouin community in the South;

- incentivising the recruitment of health care professionals to the periphery, including through salary increases;
- planned increase in the number of hospital beds overall and in the periphery;
- allocation of NIS 60 million for improving the hospital infrastructure in the periphery;
- extension of the capitation formula to include distance from urban areas (in addition to age and sex);
- retrospective incentives (conditional on performance) to health funds for infrastructure and health promotion initiatives in the periphery and to disadvantaged populations;
- five-year plan for improving the health of the Bedouin community;

Several of these initiatives are discussed in further detail later in this chapter.

Source: Horev, T. and E. Averbuch (2012), “Coping with Health Inequalities: A Roadmap for Developing a National Plan. The Israeli Experience”, Health Economics and Insurance Division, Ministry of Health, Jerusalem.

Although the government plays the lead role in national policy development, macro-level system design and regulation, the health funds are key to implementing strategies for reducing health care inequalities because of their responsibility for delivering frontline services. They also play a key role in the development of health care capacity, either directly through their own network of staff and facilities, or through contractual services. The organisational commitment of the two largest health funds (Clalit and Maccabi) to reducing inequalities in health care delivery, and in developing their own inequality reduction action plans as part of overall frameworks for quality improvement, is commendable, as there is no mandatory requirement for them to do so, and given the financial challenges they face with strict government controls on public funding.

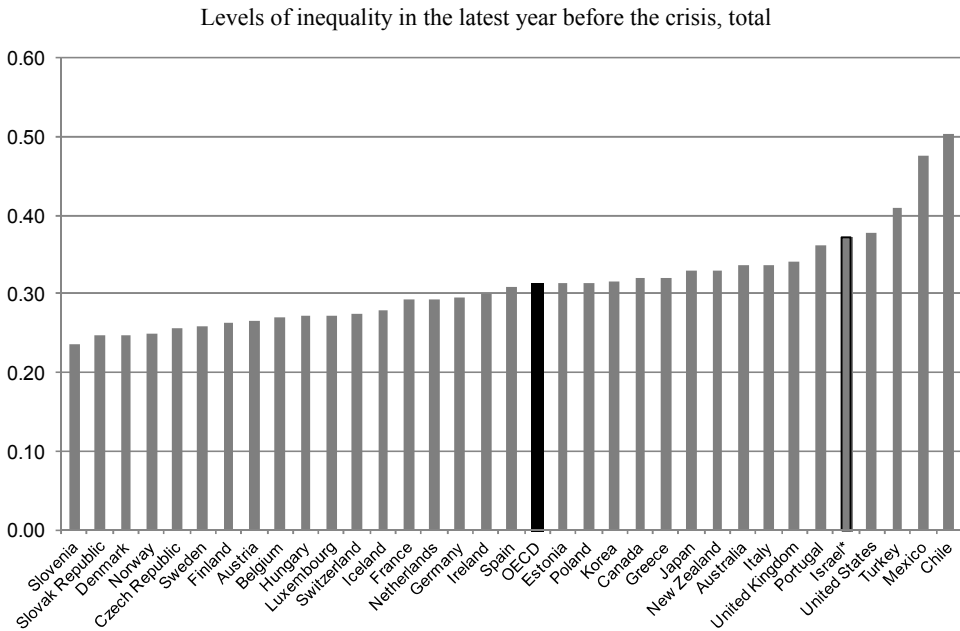
Despite these efforts by the MOH and insurance funds to tackle inequalities, they may not be sufficient if inequalities in Israeli society are not addressed. Much of the health inequities in Israel find root in socio-economic, ethnic and geographical inequities, which are difficult to disentangle and grapple. As reported by WHO (2008), social and economic policies have a determining impact on health equity.

Inequality in Israel is wide and rising

Income inequalities in Israel are wide and persisting. The average income of the richest 10% of the population in Israel is about 14 times that of the poorest 10% (OECD, 2011a). The Gini coefficient for Israel, which is

a measure of income inequality ranging from zero (full equality) to 1 (when only one person concentrates all income), is among the highest in the OECD (Figure 3.1). It has also been grown by over 4 percentage points since the mid 1980s, one of the highest rates of increase in the OECD. Widening gaps between the rich and the poor, coupled with other dimensions of inequities such as education, ethnicity, and distance from the Centre, are reflected in health inequalities.

Figure 3.1. Gaps between rich and poor are higher in Israel than in most OECD countries



* Information on data for Israel: <http://dx.doi.org/10.1787/888932315602>.

Note: The Gini coefficient ranges from 0 (perfect equality) to 1 (perfect inequality). Gaps between poorest and richest are the ratio of average income of the bottom 10% to average income of the top 10% Income refers to disposable income adjusted for household size. Latest year refers to 2007 for Denmark, 2006 for Japan and 2009 for Chile.

Source: OECD (2011), *Society at a Glance – OECD Social Indicators*, DOI: 10.1787/soc_glance-2011-en.

There are variations in health status and disease prevalence between population groups in Israel

Health status varies significantly within the Israeli population, primarily in association with population group, socio-economic status (SES) and area of residence: non-Jews, poor SES groups, and those living in the north and south periphery regions experience worse health than Jews, higher

SES groups and those living in the Centre. These characteristics are often correlated: for example, Arabs are more likely than Jews to be both poor and live in the periphery. They can also have independent effects, which combine to create a multiple axis of health disadvantage: for example, Ethiopian migrants experience the health disadvantages associated with poor SES, but they also have high diabetes prevalence (over 20%) associated with diet and lifestyle changes following migration.

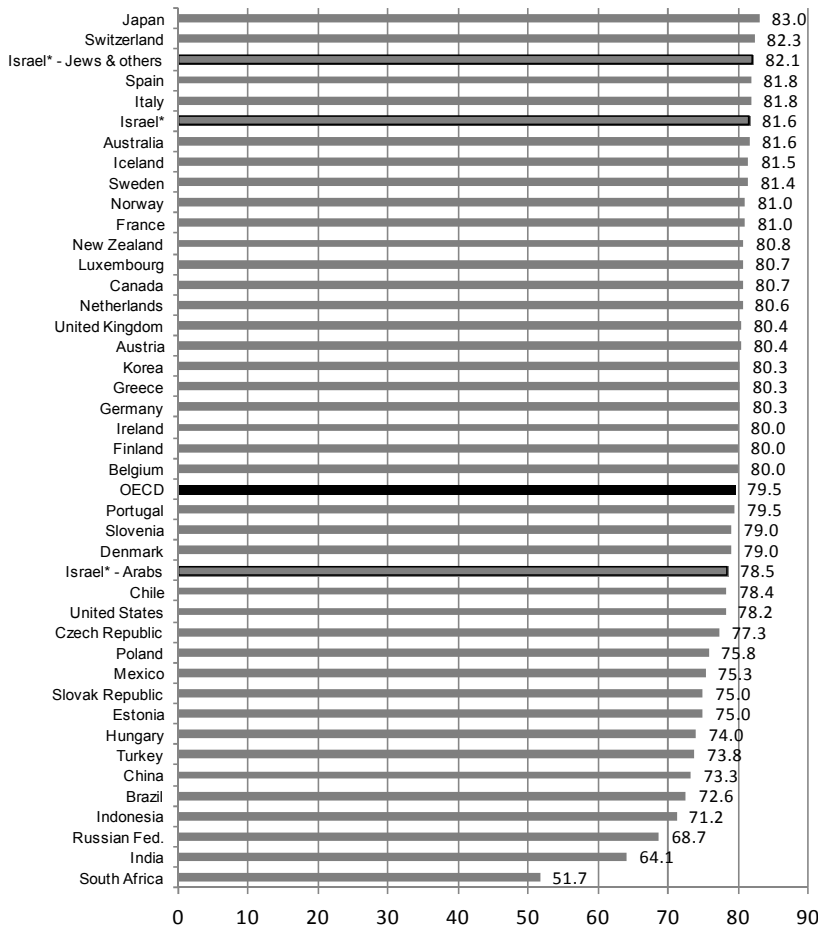
Life expectancy is widely used as an indicator of a nation's health. Although life expectancy is subject to many wider social determinants, it is in part amenable to improvement through health care interventions. Life expectancy in Israel (81.6 years) compares well with the OECD average (79.5 years) (Figure 3.2), and is rising for both Jews and non-Jews. Israeli Arabs have higher life expectancy than several OECD countries and Arab and Muslim countries in the region. However, Arabs constitute the largest non-Jewish group in Israel (20% of the population), and their longevity disadvantage relative to Jews (4 years in men, 3.2 years in women) persists. Arabs have higher mortality from several leading causes – including those covered by Israel's Quality Indicators for Community Health (QICH) programme – such as cancer (males only), diabetes, circulatory and respiratory disease (Table 3.1).

These patterns reflect socio-economic and cultural differences between communities. For example, research shows that variations in mortality between Arab and Jewish localities are largely accounted for by socio-economic differences between localities (Chernichovsky and Anson, 2005). Mortality differs significantly also within these populations: for example, all-cause mortality among Jews born in Asia, Africa and Europe-America is up to 70% higher than among Israeli-born Jews. While socio-economic and cultural differences explain most of the inequities in health, there are also some inequalities linked to geography (Table 3.2). Some differences within the Arab community (between Muslims, Druze and Bedouins) are greater than those between Arabs and Jews, in part due to socio-economic differentials (Averbuch *et al.*, 2010). These epidemiological patterns illustrate the diversity of the Israeli population overall and within particular population groups.

Infant mortality is a sensitive barometer of health. Although it reflects the impact of wider socio-economic determinants, the quality of maternal and child health services also impact significantly on outcomes of pregnancy and infancy. Israel's infant mortality compares favourably with the OECD average, and is lower than rates in some high-income countries (Figure 3.3). Although infant mortality is falling in all groups, differentials persist within the Israeli population. Mortality in Arab babies is over double the rate in Jews (6.8/1 000 live births and 2.7), primarily due to four-fold higher

mortality from congenital malformations resulting from consanguineous marriages (Rosen and Samuel, 2009). It is a major contributor to the life expectancy disadvantage of Arabs. There are also marked socio-economic gradients in infant mortality: mothers with less than four years schooling have a four-fold higher rate than those with over 16 years of education. Rates in the North and South are double that in the Centre (Table 3.2). These patterns reflect the correlation between ethnicity, SES and area of residence.

Figure 3.2. Israel's life expectancy at birth compares well with other OECD countries, 2009



* Information on data for Israel: <http://dx.doi.org/10.1787/888932315602>.

Source: OECD (2011), *Health at a Glance 2011 – OECD Indicators*, DOI: 10.1787/health_glance-2011-en; Ministry of Health (2010), *Health in Israel: Selected Data 2010*, Jerusalem.

Table 3.1. Arabs have worse health status than Jews for several indicators

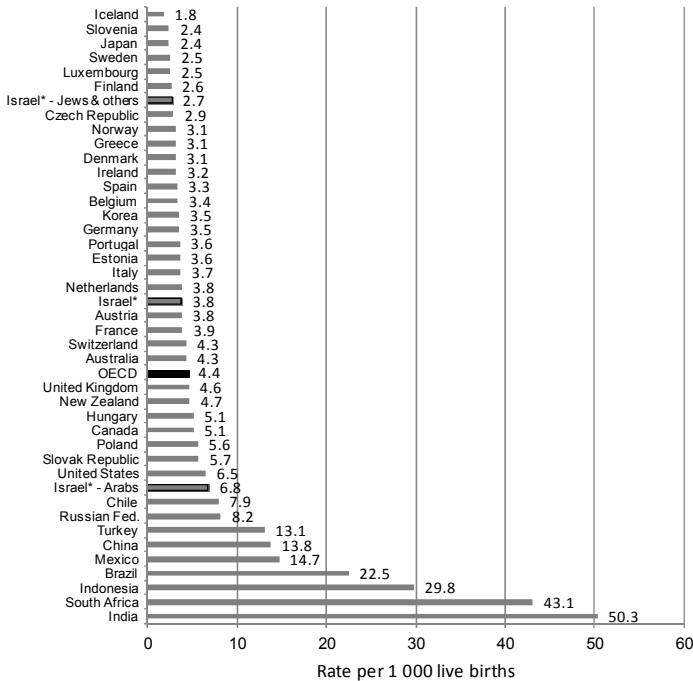
Variable	Jews		Arabs		Date
	Males	Females	Males	Females	
Life expectancy					
2000	77.1	81.2	74.6	77.9	
2009	80.3	83.9	76.3	80.7	
Age-adjusted mortality/100 000:	*				
Respiratory system diseases	53.5	38.4	116.9	55.7	2007
Cerebrovascular diseases	41.7	32.4	47.9	58.2	
Heart disease	148.7	96.2	220.7	133.1	
Diabetes	41.3	30.5	90.1	90.6	
Lung cancer	46.1	17.7	75.1	14.1	
All cancers	211.6	172.3	227.3	152.4	
ALL CAUSES	741.6	525.5	990.8	703.5	
(All cause mortality for Jews born in:					
Israel	-527.3	-358.1			
Asia	-833.9	-480.2			
Africa	-831.6	-618.2			
Europe-America)	-778.3	-528.3			
Age-adjusted cancer incidence/100 000:					
All cancers	312.1	268	261.1	212.8	2007
Lung	29.5	14.4	51.3	7	
Breast	-	87.7	-	73.2	
Prostate	79.3	-	38.8	-	
Mortality ages 10-24/100 000:	*				
Natural causes	15.2	9.8	21.1	16	2007
External causes	21.5	5.7	42.7	**	
Child mortality <5 /1 000 live births	3.2		9.1		2009
Infant mortality/1 000 live births	2.9		6.7		2006-08
Infant mortality from congenital anomalies/1 000 live births	0.8		2.5		2005-07
Stillbirth rate/1 000 births	5.3		6.8		2008

* Refers to Jews and others; ** Rate based on small numbers.

Table 3.2. South and north districts have higher mortality rates than other districts in Israel, 2010

District	Infant mortality per (provisional data) 1 000 live births 2010	Standardised death rate per 1 000 population 2010
Central	2.4	4.9
Tel Aviv	2.7	5
Jerusalem	4.1	4.8
Haifa	4.1	5.4
North	4.4	5.5
South	6	5.4
TOTAL	3.7	5.1

Source: Ministry of Health (2010), *Health in Israel: Selected Data 2010*, Central Bureau of Statistics, Jerusalem.

Figure 3.3. Israel's infant mortality rates compare well with other OECD countries, 2009

* Information on data for Israel: <http://dx.doi.org/10.1787/888932315602>.

Source: OECD (2011), *Health at a Glance 2011 – OECD Indicators*, DOI: 10.1787/health_glance-2011-en; Ministry of Health (2010), *Health in Israel: Selected Data 2010*, Jerusalem.

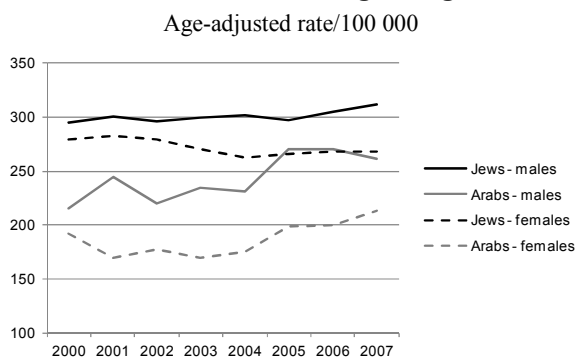
Internationally, SES is a strong predictor of health status. Income inequalities are both wide and widening in Israel (Figure 3.1; OECD, 2011d), exemplifying the challenges faced by its health care system in reducing health inequalities. For example, socio-economic inequalities in total and cardiovascular mortality widened by over 40% between 1983-1992 and 1995-2004 (Jaffe and Manor, 2009). Compared with 15% in Jews, 51% of non-Jewish families are below the poverty level; the proportion of children below poverty level is 24% and 63% respectively. Despite equivalence in legal entitlements, Arabs have lower levels of education, employment and income, and higher proportions live in the periphery regions most disadvantaged in terms of health care and other infrastructure. Socio-economic gradients operate also within groups: for example, SES is the main predictor of limiting long-term illness within the Arab population (Daoud *et al.*, 2009).

These differences in health status reflect underlying differences in disease burden. The 2009 Israeli national health survey shows higher reported prevalence of hypertension, myocardial infarction and stroke

among Arabs than Jews. The prevalence of diabetes at ages 35-64 is more than double among Arabs than Jews; they also have a younger age at onset. Diabetes prevalence varies over two-fold by net household income (14% and 6.2% in below and above average income households respectively) and three-fold by educational status (23.4% in those with under eight years schooling compared with 7.5% in those with over 12 years schooling). Diabetes prevalence in the low SES group is almost 5 times higher than in the general population (16% vs. 3.4%).¹

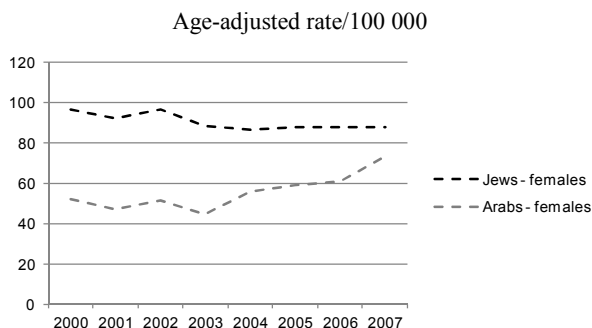
Also notable is the changing epidemiology of disease, with overall cancer incidence rising in Arab men and women by 21% and 11% between 2000 and 2007. Breast cancer in Arab women increased by 40%, reflecting both lifestyle changes and increased and earlier detection resulting from rising uptake of mammography (Figures 3.4 and 3.5 show trends in the incidence of all cancers and breast cancer among Jews and Arabs).

Figure 3.4. Cancer incidence is rising among Arabs in Israel



Source: Ministry of Health (2010), *Health in Israel: Selected Data 2010*, Jerusalem.

Figure 3.5. Breast cancer incidence among Arab women is catching up with rates among Jewish women in Israel



Source: Ministry of Health (2010), *Health in Israel: Selected Data 2010*, Jerusalem.

Although cancer incidence is higher among Jews than Arabs, mortality differs little between Jewish and Arab men (Table 3.1). A contributory factor is the high incidence of lung cancer among Arab males (nearly double that in Jews), accounting for 20% of all cancers in Arab men and with no decline over the decade, and reflecting differences in the prevalence of smoking between Jewish and Arabs.

Access to community health care does not appear to be a major obstacle, but treatment outcomes vary

High-quality health care systems enable timely and affordable access to effective services for all residents as appropriate to their needs. Barriers to access from within the health care system can arise from supply-related factors, such as the geographical distribution of facilities and staff, their levels of training, education and cultural sensitivity, the organisation of services, their distance from users and availability of affordable transport. Even with systems providing universal insurance coverage, the scope of the benefits package and co-payments can pose barriers to access. Demand-related factors such as age, SES, health beliefs and literacy, and information about local services can also impact on access to and uptake of health care.

The 2009 health survey – covering the permanent population of Israel – showing higher visits per capita to physicians, family doctors and dentists, and higher hospitalisation rates, among Arabs than Jews suggests that Arabs do not have problems accessing health care services. However, whether or not this differential is commensurate with their higher morbidity is unclear from the data, and visits to physicians, family doctors and dentists, and hospitalisation rates, are lower among larger households. Public opinion surveys suggest that out-of-pocket costs are a deterrent to seeking medical treatment, especially among low-income groups and the chronically ill (Brammli-Greenberg *et al.*, 2011).

The QICH show improving performance on many indicators (Manor *et al.*, 2011), signalling the achievements of Israel's highly effective primary care-oriented health care system. Table 3.3 shows QICH performance by SES. Performance on many process measures (*e.g.* risk factor assessments) shows no SES differences, or is better in the low SES group (defined as exempt from co-payments), showing an inverse socio-economic gradient. Prescription of drugs following cardiac surgery is also higher among exempt than non-exempt patients.⁷ The reasons for these socio-economic patterns are unclear, but one explanation could be greater morbidity and/or contact with services in the exempt population. Another possible explanation could be that this reflects the result of targeted programmes for the disadvantaged by health funds. No SES differences were apparent for some outcome indicators *e.g.* blood

pressure and LDL control in diabetic patients. Overall, these patterns are evidence of the widespread population reach of Israel's well-established community care programme.

Table 3.3. Selected (unadjusted) QICH indicators by SES status¹ in Israel, 2007-09

Indicator	Low SES (%)	High SES (%)
Indicators showing poorer rates in low SES compared with high SES group		
Asthma prevalence**	2.4	0.9
Use of asthma control medication	72.8	80.9
Mammography rates	64.7	68.8
Influenza vaccination 65+	51.8	59.5
Prescription for statins following CABG surgery	83.4	84.7
LDL control following CABG surgery**	69.2	73.4
LDL control following cardiac catheterisation**	70.1	73.4
Diabetes: prevalence**	16.1	3.4
Diabetes: HbA1C <7%**	46.7	48.7
Diabetes: HbA1C >9%**	13.8	12.3
Indicators showing similar rates in low/high SES groups		
Colon cancer screening – FOBT	28.6	27.1
Colon cancer screening – colonoscopy	19.4	20.7
Children 9-18 months with a haemoglobin record	74	73.4
BP control 20-54**	96.1	96.6
BP control 55-74**	86.4	87.8
Prescription for statins following cardiac catheterisation	84.7	84.8
Diabetes: recording of HbA1C	92.9	92
Diabetes: assessment of LDL cholesterol	90.9	90.1
Diabetes: assessment of microalbuminuria	73.4	74.7
Diabetes: assessment of blood pressure	92.9	91.4
Diabetes: assessment of BMI	84.2	83.2
Diabetes: controlled LDL**	65.4	65.8
Diabetes: controlled BP**	68.9	68.4
Indicators showing better rates in low SES compared with high SES group		
Influenza vaccination in people with asthma	52.5	37.8
BMI assessment at 14-18	68.2	60.1
Weight assessment at 20-54	78.9	68.9
Weight assessment at 55-74	73.7	67.4
Height assessment at 20-54	76.5	65.3
Height assessment at 55-74	88.3	85.5
BMI assessment at 20-64	81.3	68.1
LDL assessment 35-54	89.4	82.3
LDL assessment 55-74	80.7	75.5
LDL control 35-54**	71.3	69.5
LDL control 55-74**	76.9	74

1. Low SES defined as entitlement to exemption from or reduction in co-payments.

** Indicators marked with ** are prevalence or treatment outcomes. The others are process measures.

Source: Manor, O, A. Shmueli, A. Ben-Yehuda, O. Paltiel, R. Calderon and D.H. Jaffe (2011), *National Program for Quality Indicators in Community Health in Israel. Report for 2007-2009*, School of Public Health and Community Medicine, Hebrew University-Hadassah, Jerusalem.

However, inequalities are apparent even in this flagship programme of Israeli health care. The low SES group compares unfavourably on cholesterol control following heart surgery and on some QICH preventive measures *e.g.* mammography and flu vaccination. Mammography rates are also significantly lower among Arab women compared with Jews (Central Bureau of Statistics, 2011). Research into adherence to screening recommendations for early detection of breast and colorectal cancer found that low SES patients, Arabs, immigrants and those without supplementary insurance do fewer such tests, even though they are highly accessible and covered by the insurance package (Wilf-Miron *et al.*, 2011); this suggests that factors other than cost, such as physical and social environment, cultural norms and beliefs, and health literacy also mediate in low uptake. Overall performance on some QICH is weak (Chassin, 2012), and any inequalities within these signify even poorer quality of care for disadvantaged groups.

The QICH for diabetes presents an anomalous picture: risk factor assessment rates in low SES diabetic patients are similar to or better than rates in the high SES group, and low SES patients with poor glycaemic control (HbA1C >9%) have higher insulin prescription rates (Table 3.3). Despite this, glycaemic control is worse in the low SES group. Similar patterns appear in the previous QICH report for 2005-07, showing the persistence of these patterns, and a multivariate analysis also showed that exemption status among diabetic patients is a predictor of better performance on process measures but worse outcomes (Jotkowitz *et al.*, 2006). These patterns may have various explanations *e.g.* low SES patients have long-established disease, insulin is started late, or that lifestyle changes and adherence to insulin use are more difficult to achieve. Poor control in this group is of particular concern, given their five-fold higher prevalence of diabetes. As Arabs are mainly from the low SES group, they risk the triple jeopardy of early onset, high prevalence and poor control. The reasons for these patterns need to be understood, and monitoring of referral rates to specialists for poorly controlled diabetic patients or those who have co-morbidities is important.

In contrast to the rich profiling of variations in quality of community care routinely undertaken in Israel, data about hospital, specialist and tertiary care provided to different population groups and regions is lacking. This gap is a major obstacle to assessing the equity and quality of hospital care for different groups and regions, especially as there is some evidence of underutilisation in use of specialist and diagnostic services by people of low SES (Shadmi *et al.*, 2011).

3.3. Israel has a good information architecture for measuring inequalities but there are some important gaps

Israel has good data for profiling inequalities in population health and community care, but there are some critical gaps in information

A major barrier faced by many health care systems in improving health care quality and reducing inequalities is the lack of comprehensive, routinely available data on population health and health care quality stratified by the relevant dimensions of inequality. The availability of such information is imperative for understanding the scale and nature of the problem, informing policy development and resource allocation, targeting strategies and outreach services, and evaluating impact. It is also important for getting health inequalities on the public and political agenda. The Israeli civil registration and health care information systems provide a considerable amount of data routinely that can be used for these purposes, but there are some salient gaps.

Table 3.4 summarises the inequality dimensions available for different national data sources in Israel. There is a well-developed information architecture for measuring population health inequalities through its vital statistics and registration systems, which provide comprehensive data on fertility and mortality *e.g.* by religion, population group and district (but not SES). Periodic population health surveys provide data on risk factors such as smoking and physical activity, use of health care services, disease prevalence and uptake of selective preventive services by a range of demographic and socio-economic characteristics. These surveys are a useful tool for monitoring cross-sectional patterns and trends in these variables at national level, and over time. However, the surveys are conducted at intervals (the latest were in 2004 and 2009), and survey-based data are a poor substitute for comprehensive, ongoing data on disease prevalence and health care utilisation derived, for example, from disease registers and health care data that has full population coverage, and which also has the potential to provide supporting diagnostic and clinical information that surveys cannot provide.

The universality of electronic patient records for community care enables data for specified QICH indicators to be extracted and for this information to be used to measure inequalities systematically and inform improvements in community health care quality:

- Rich national QICH data on the reach of preventive services and quality of community care (for selected chronic diseases) delivered to population groups by age, sex and SES is available annually. From 2012, the data will also be available separately for the four health funds.

Table 3.4. National data sources and the inequality dimensions available

National data source	Inequality dimensions publicly available (excluding age and sex, which are generally available)	Comments
Population health data		
Fertility	Religion, population group, district	Comprehensive data on population health status stratified and published by key dimensions of inequality other than SES.
Infant mortality (overall and by cause), stillbirths	Religion, population group, years of mother's schooling, district	
Mortality: overall and by cause of death	Religion, population group, place of birth, district	
Health survey: risk factors, self-assessed health, use of health care, disease prevalence, influenza vaccination and mammography uptake	Population group, place of birth, size and density of household, years of schooling, employment status, household income, district	Useful data on risk factor prevalence stratified and published by key dimensions of inequality. Disease prevalence and health care utilisation rates derived from health care data with full coverage would be preferable to survey-based data.
Health care data		
National registries <i>e.g.</i> cardiac surgery		Data not publicly available.
Cancer registry: overall and individual cancers	Religion, population group	Comprehensive data on incidence stratified and published by dimensions of inequality.
Community care: QICH	SES (measured as exemption from co-payments)	Rich data available. Population group, district would be a very useful addition.
Hospital care	Data on ED visits, hospital discharges, length of stay, procedures only available by age, sex only.	Data on access, quality and outcomes of care overall and for different groups is poorly developed and needed by population group, SES, district.

Source: Compiled by the OECD.

- The two largest health funds analyse the data for their insured populations for inequalities in uptake and quality of community care, and actively use it to inform their quality improvement and inequality reduction activities. They do this at two levels: a) aggregate level *e.g.* performance variations by clinic or district, and b) disaggregated level *e.g.* performance variations at physician level, or patients not reaching treatment goals. Box 3.3 describes Clalit's programme for improving quality overall and reducing inequalities in health care by driving improvements in low performing clinics.

Box 3.3. Using evidence-based quality improvement measures to reduce inequalities at Clalit

Clalit (3.8 million enrollees) has the largest share of low SES groups, immigrants, rural inhabitants, elderly and people with disabilities. It has implemented several initiatives to improve health and access to care, and promote health education and cultural competency for disadvantaged populations. In 2008, CHS developed a primary care focused strategy for reducing disparities. Seven evidence-based quality indicators for primary prevention and disease control that showed variation by SES and ethnicity were identified for quality improvement and disparity reduction.

Recognising that quality improvement does not of itself reduce disparities, 55 low-performing clinics with 10% of Clalit enrollees were selected for implementation of disparity reduction interventions. The performance gap between the low-performing and other clinics fell by 40% after a year.

This success was based on a mix of a) top-down organisational policy change, goal-setting, continuous measurement, management support, use of incentives, and b) bottom-up empowerment of local staff to plan and implement interventions tailored to local populations. CHS concludes that focusing organisational resources on clinics that serve disadvantaged populations but are failing to address their health needs is key to closing the health and health care quality gap. This case study illustrates how increased equity and quality improvement can be integrated, to raise the quality bar overall and reduce inequalities within.

Source: Balicer, R.D., E. Shadmi, N. Lieberman, S. Greenberg-Dotan, M. Goldfracht, L. Jana, A.D. Cohen, S.D. Regev-Rosenberg and O. Jacobson (2011), “Reducing Health Disparities: Strategy Planning and Implementation in Israel’s Largest Health Care Organization”, *Health Services Research*, Vol. 46, pp. 1281-1299.

However, the lack of disaggregated, comparative QICH data by district and population group is a limitation in identifying and addressing variations in performance. Another constraint is the way SES is currently defined in QICH: entitlement to exemption from or reduction in co-payments, which in turn is determined by NHIL criteria that are updated periodically and include poorer population groups, as defined by the National Insurance Institute (NII). They include, for example, people in receipt of low-income supplements, elderly welfare recipients, children with disabilities, and those with large families and selected chronic diseases. This definition of low SES risks excluding some vulnerable groups, such as low-income households not eligible for income support and supplements (OECD, 2010b).

In contrast to the relatively rich data available for community care, data on access to, use and outcomes of hospital and specialist care, and mental health care, are virtually non-existent, except for the limited information periodically available from population health surveys. Consequently, it is not possible to comment on variations in access to and quality of secondary

care services for different groups, which is a major constraint in analysing inequalities in health care. Though worthwhile efforts have recently been initiated by the Israeli Government to co-ordinate data collection on inequalities with a view to identifying and filling gaps, addressing these gaps in data ought to become an ongoing priority.

Information for measuring quality of health care for different groups has gaps

Israel's efforts to reduce health care inequalities would be significantly aided if gaps in data for measuring variations in access and quality for different groups and regions were addressed:

- The lack of QICH data disaggregated by geography and population group is an obstacle to comprehensive understanding of variations in the quality of community care for different groups. Performance on these indicators can conceal geographical or population group variations that may be additional to those indicated by SES. The community care programme is in the vanguard of health care delivery in Israel, offering unique opportunities for prevention and early intervention. The ability to identify and tackle variations in quality at this stage is therefore critical in reducing the unequal burden and impact of disease, and for raising quality overall. The government proposal to disaggregate the QICH by geographical areas classified by a geographical measure of deprivation would be a significant step forward, when implemented.
- Population group is closely associated with health status, and should be routinely recorded in patient records and used for analysing inequalities in access and quality of health care. While this is a sensitive issue in Israel and data protection legislation restricts the transfer of population group information across services and via record linkage, it is a key dimension in health inequalities in Israel, and is widely used (see Table 3.4). It is associated with distinct cultural, religious and socio-economic features that influence lifestyles, decision-making behaviours, health care usage, health status and health care outcomes. In recognition of this, the health funds sometimes ascribe population group to patient records, based on patient characteristics. This unofficial practice of inferring population group should not be necessary. Assessment of variations in health care quality and the delivery of culturally appropriate services that reduce inequalities would be facilitated by the routine availability of this information. The recording of language, religion and a more robust measure of SES than exemption status would also

enhance the practical utility of information in this context. Ultra-orthodox Jews, for example, have distinctive health behaviours and patterns, such as low uptake of preventive care including mammography and late diagnosis of breast cancer, but they are difficult to identify as a group in the available data. The government is examining the legal and technical issues entailed in expanding the demographic information (such as language and education) collected on patients.

- The poorly developed information architecture for Israel's hospitals is a significant barrier to measuring access to and the quality of hospital, specialist and tertiary care for population sub-groups and regions. Hospitals have well-developed electronic patient records that are used internally for the clinical management of patients, and to monitor and improve the quality of care. The government also monitors hospital quality. But the data is not used to measure access and quality for patient sub-groups or regions (hospitalisation rates based on population surveys are unsatisfactory for this task). It is therefore not possible to assess, for example, whether access to specialist care or elective surgery is equitable and appropriate to need, or whether some groups have higher admission rates for preventable complications of chronic conditions. The government has proposals for enhancing the centrally compiled database for hospitals, which will provide an opportunity to rectify this gap that should not be missed.
- Although this review does not cover mental health care, the absence of data on the quality of mental health services – community and inpatient – is also a notable gap, especially since the burden of mental health problems in many countries is often greater among socio-economically disadvantaged groups.

The government is funding the Gertner Institute for the Study of Epidemiology and Health Policy to compile a research and statistical database of evidence-based interventions and international best practice for reducing inequalities in health care. The Institute will also map gaps in the data available for measuring inequalities. This should enhance Israel's capacity for implementing evidence-based interventions for reducing inequalities, and improve longer-term availability of data for monitoring inequalities in health care and the impact of inequality reduction strategies.

How information is used to measure and address inequalities in health care can be improved

There is potential for strengthening the use of the rich health information infrastructure of Israel to tackle inequalities in health and health care:

- The government should use the rich data available on population health to undertake a comprehensive health care needs assessment by district, which takes into account the population's socio-demographic composition, fertility, morbidity, mortality and patterns of health care usage. It should take account of high-risk groups, such as children and the elderly, low SES groups, and new immigrants within each district. This information should inform the development of targeted policies and action plans for reducing health inequalities and ensuring that the availability of health care resources and infrastructure map to them.
- The disease registers *e.g.* for cancer, diabetes, cardiovascular and infectious diseases can be used to analyse variations in disease prevalence and health care quality for populations sub-groups and regions (depending on the completeness of the registers/audits and level of clinical detail available). Other than for cancer and congenital birth defects, little of this data is in the public domain and it is unclear whether and how it is used to measure variations in disease prevalence and the delivery and outcomes of care, and for shaping quality improvement strategies. There appears to be significant untapped potential for greater deployment of disease registers for these purposes, as has been done with, for example, cardiac surgery and diabetes clinical audit databases in many countries. Israel's national notification system for infectious diseases is to be extended to include chronic disease, also potentially providing rich data in the future for these purposes.
- In addition to the QICH indicators, electronic patient records for community care can be used to identify patients with multiple co-morbidities and those not meeting all the assessment and treatment criteria for a particular condition. An example is an indicator on the proportion of diabetic patients who received all scheduled tests within the year; or those not meeting control thresholds on blood pressure, cholesterol and HbA1C, which could help to identify diabetic patients that may need referral to specialist care, or those with co-morbidities. It would also be useful to extend QICH to

include quality indicators for other chronic diseases (see Chapter 2) and the monitoring of outcomes *e.g.* for diabetic patients.

- More comparative data on inequalities in health care needs to be in the public domain in order to highlight the variations between providers, regions, population groups etc, drive improvements in the quality of services and reduce variations, raise public awareness, and for use by multiple stakeholders, including health planners, policy makers, the health funds and researchers.

3.4. Rising out-of-pocket payments for health care have implications for equity of access and quality

The rising burden of co-payments can impact negatively on utilisation of health care

The low level and growth of public funding for health care in Israel over the years has coincided with increasing dependence on privately funded health care through co-payments, supplementary and voluntary health insurance (see Chapter 1). Annual average real-term growth in health expenditure per capita between 2000 and 2009 was only 1.5%, compared with the OECD average of 4%. Public funding as a proportion of total health expenditure fell from 70% in 1996 to 58% in 2009 (OECD average is 72%), and is the fifth lowest in OECD countries. Households with supplementary insurance (80%) and out-of-pocket expenditure (excluding private insurance) as a proportion of health expenditure (28%) are both among the highest in the OECD. Private health expenditure is regressive, with the lowest income households spending 7.2% of disposable income on health care, compared with 3.6% in the top income quintile.

A key element of quality, embedded in Israeli legislation, is equitable access to health care. The NHIL provides universal entitlement to a broad package of services. Subsequent legislation (1998) allowed the health funds to levy user charges for components of the benefits package, including visits to physicians and specialists, diagnostic tests and pharmaceuticals, with the intention of curbing excessive use of health care resources and boosting health fund revenues.

Cost-sharing by health care users can reduce the burden on public finances. However, user charges can be regressive if they increase financial burdens on those with greater health care needs, who also tend to be less able to pay (*e.g.*, low-income earners, migrants, and the elderly). As in many other OECD countries, Israel has exemptions for high-need and/or low income groups to protect their access to services. Specifically, co-payments

in Israel are subject to exemptions, discounts and ceilings for recipients of income maintenance and disability allowances, older people, patients with chronic disease or specified illnesses (Table 3.5). About 10% of the population are exempt or receive discounts, and the co-payment, ceiling and exemption schemes of the health funds have to be approved by the government.

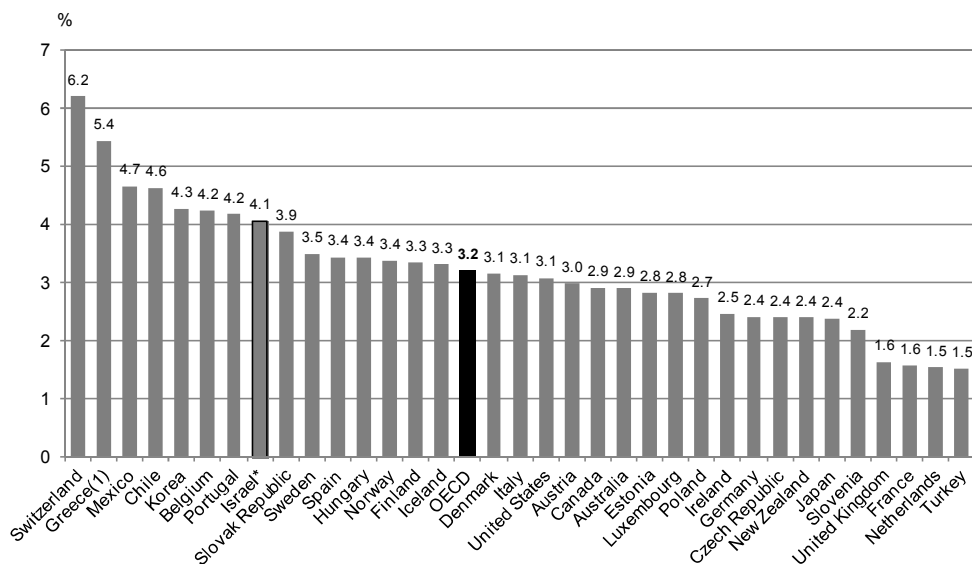
Table 3.5. Co-payments: Rates, ceilings and exemptions in operation

Visits to physicians and clinics	<p>Co-payments</p> <p>First visit in a quarter to primary care provider: flat rate charge of NIS 0-7.</p> <p>First visit in a quarter to a secondary care provider: flat rate charge of NIS 22.</p> <p>No charge for subsequent visits in the same quarter to the same centre/professional.</p> <p>Ceilings</p> <p>Quarterly ceiling per household of NIS 118-176 (depending on health plan).</p> <p>When the ceiling is reached, patients continue to receive treatment without further co-payments.</p> <p>For pensioners or households with recent immigrants the ceiling is halved.</p> <p>Full exemption from co-payments</p> <p>Pensioners in receipt of the income supplement (see OECD, 2010).</p> <p>Patients with end-stage renal disease, cancer, AIDS, Gaucher disease, thalassaemia or tuberculosis (only for their conditions).</p>
Pharmaceuticals	<p>Co-payments</p> <p>Generally 15% (10% for generic) of the purchase price, with a minimum payment of</p> <p>Ceilings and exemptions:</p> <p>A ceiling on quarterly pharmaceutical charges for the chronically ill (NIS 280).</p> <p>This is halved for pensioners and those in receipt of the NII's Income Support programme (see OECD, 2010).</p>

The implementation of these principles has resulted in the main in an integrated, efficient and equitable health care system with universal coverage. However, since the NHIL was enacted, co-payments for services in the benefits package have been rising (Elhayany and Vinker, 2011), even though have moderated to remain within inflation in recent years. Out-of-pocket expenditure as a proportion of final household consumption in Israel (4.1%) is higher than that of several OECD countries and the OECD average (3.1%) (Figure 3.6). Co-payments could potentially become burdensome for some groups and households, in particular for pharmaceuticals. For example, large family households could accumulate

substantial co-payment bills for frequent prescriptions for minor ailments. Moreover, not all indigent and disadvantaged groups meet the exemption criteria (OECD, 2010b) and some patients are unaware of their entitlements (Brammli-Greenberg *et al.*, 2006).

Figure 3.6. Out-of-pocket expenditure in Israel is nearly a third higher than the OECD average, 2009



* Information on data for Israel: <http://dx.doi.org/10.1787/888932315602>.

1. Private sector total

Source: OECD (2011), *OECD Health Data*, DOI: 10.1787/health-data-en.

Rising out-of-pocket costs, including for services included in the benefits basket, risk eroding the principles of equitable access to care embedded in the Israeli health care system. Rising out-of-pocket costs are reportedly leading higher proportions of low-income groups (who also have a higher prevalence of disease) and the chronically ill to delay or forgo medical care. Surveys show that by 2009 the proportion of respondents finding health care costs burdensome increased to 24%, and was higher among low-income groups (36%) and the chronically ill (35%) (Brammli-Greenberg *et al.*, 2011). The rate forgoing medication or medical treatment (including specialist care, check-ups and treatments included in the basket) or both due to cost was higher among low-income groups (22%) and the

chronically ill (18%) than the average (14%). Over one third (38%) of low-income respondents waived dental care due to cost.

The rising share of co-payments could impact negatively on use of care by individuals especially among those with chronic disease. For example, co-payments for dietary advice, prescription drugs and consultations with specialists could deter uptake by low-income diabetic patients (see also Chapter 4), who may need to draw on these services often. Compliance with medication and clinical outcomes have been shown to improve when prescription drugs are provided free to low-income Israeli patients who avoid medication for chronic conditions because of inability to pay (Elhayany and Vinker, 2011). Other evidence also shows that increased cost sharing for prescription drugs (including for chronic disease) is associated with lower drug treatment rates, worse adherence, poorer clinical outcomes and greater use of inpatient and emergency medical services, with cost-savings from restricting drug benefits being offset by increased costs of hospitalisation and emergency care (Goldman *et al.*, 2007; Gemmill *et al.*, 2008; Hsu *et al.*, 2006). These effects could be magnified among low-income groups with higher rates of chronic health problems, and exacerbate health inequalities. Non-adherence to treatment or medication also risks increasing wider socio-economic costs of avoidable ill health, such as unemployment and premature mortality.

The government has taken significant steps to reduce health care costs and improve access, but additional options should be considered

The government's *Pillars of Fire* action plan for 2011-14 includes an objective to reduce disparities in financial access to health care, and the government has taken some important steps to expand access to publicly funded services that are key to reducing health care inequalities:

- The abolition of fees at governmental *tipat halav* mother-infant care centres in 2010 makes maternal and child care more universally accessible and affordable, especially for low-income families, those with many children, and the populations of the periphery. These centres provide frontline antenatal, postnatal, genetic counselling and child health preventive services, and are key agents for improving maternal and child health. This move, supported by an allocation of NIS 40 million, should therefore reduce inequity of access and contribute to improving child health.
- The widening of insurance cover in 2010 to include (preventive and preservative) dental care for children up to age 10, to be extended to age 14 by 2013 (budgetary allocation rising to NIS 240 million over three years), will reduce inequalities in oral health and promote

child health overall. Oral health in children shows marked socio-economic gradients in most countries, and dental costs constitute a major cost burden in Israel.

These moves by the government are important for promoting the welfare of mothers and children. There is overwhelming international evidence that health inequalities in infancy and childhood are a key predictor of lifelong inequalities in health. Inequality reduction strategies therefore often prioritise improvements in the health and wellbeing of mothers and children, which depend on universal access to high quality maternal and child health services.

Some changes to co-payment systems made by the government will also help to reduce the financial burden of health care on disadvantaged populations. These include reduced fees for elderly patients with chronic disease receiving income supplements, a 10% discount for medication costs at ages over 75 years and reductions in co-payments for the use of generic drugs. Funding for long-term care, a long-standing challenge, is currently met mainly by supplementary or voluntary insurance, but there is a proposal to expand public coverage of community and institutional care, which would improve access. The government is also considering the inclusion of dental care for the elderly in the insurance basket.

Four out of five Israeli households purchase supplementary insurance from the health funds that augments or enhances services included in the benefits package (many aimed at the chronically or seriously ill), or covers services not provided such as dental and long-term care (Brammli-Greenberg and Gross, 2011). However, supplementary insurance rates among Arabic speakers (63% of the population) and low-income groups (66% of the population) are below average (81%). A review of supplementary insurance plans taken up by low-income groups could shed light on whether they include services that should be considered for inclusion in the basic package.

To ensure that financial barriers do not prevent the disadvantaged and those with a higher disease burden from accessing essential preventive and health care services, the government should continue to monitor and strengthen safety nets. The exemptions, discounts and ceilings should be reviewed regularly to see whether they can be extended, eliminated or frozen for some services or groups (*e.g.*, for people with chronic disease; co-payments for pharmaceuticals by large households; referrals to specialists for patients whose diabetes is poorly uncontrolled). As updating of the basket and its costs in the light of new technologies and drugs is subject to annual governmental review (including by the Ministry of Finance) and

updates, this is an opportunity to consider whether changes are compatible and keeping pace with quality and equity considerations.

Patients should be made aware of their entitlements to free or subsidised care, through information campaigns and in the course of direct contact with services. The government's 2011 directive on cultural and language competence, requiring (among other actions) health funds to provide members information in the main languages, will help raise awareness.

3.5. Reducing geographical inequalities in health care capacity should be a priority

Regions with the greatest health care need are under-served by health care services

Lack of access to quality health care is a contributor to health inequity, and is disproportionately experienced by people living in remote and rural communities. Although the NHIL requires equitable access to health care for all, there are marked regional imbalances in health care capacity, with the North and South being disadvantaged relative to other regions. One third of Israel's total population (31%), and 56% of its Arab population, live in these regions, where population health is also poorest and socio-economic deprivation greatest. Geographical imbalances in staffing and infrastructure should therefore be addressed as a matter of priority.

Relative to other OECD countries, Israel has a low overall bed (acute and long-term care) and nurse to population ratio, with a shortage of physicians forecast. It also has the highest acute care bed occupancy and almost the lowest lengths of stay. The focus of the Israeli health care system on community care with comparatively low hospital usage is a model that most countries aspire to in attempting to maintain health care quality during financially challenging times. However, inequalities in the geographical distribution of both community and hospital care capacity within this overall economical supply do impact negatively on access to and the quality of health care in the disadvantaged regions of the periphery.

Table 3.6 and Figures 2.9A and 2.9B in Chapter 2 show geographical variations in health care infrastructure and manpower in Israel. The ratio of acute care, long-term care, emergency care and delivery beds, MRI and CT machines, and dialysis stations to population is lower in the periphery relative to other regions – especially in the South. Staff availability in the periphery for both community and hospital care (physicians, nurses, dentists, paramedics, specialists) also compares unfavourably. These disparities are long-standing. Although OECD's international comparisons of regional density of staff are caveated because of differences in measurement unit

sizes, geographical differences in physician density in Israel are wider than in OECD countries other than Turkey, the United States and the Russian Federation (OECD, 2011c). Physician availability varies three-fold between the North and South on the one hand, and Tel Aviv on the other.

Moreover, health care capacity is distributed in inverse proportion to health care need, as the populations living in the northern and southern periphery also have the poorest health. Services facing the combined challenges of high demand and over-stretched infrastructure, staff shortages, recruitment and logistical difficulties will struggle to provide equitable access or a high standard of care. For example: many women giving birth at the Soroka Medical Centre in the South do not seek antenatal care, and follow-up of premature and sick neonates after discharge to isolated rural areas is constrained because of inadequate nurse numbers (although nurse vacancies have recently been filled); low bed capacity and high occupancy rates make it difficult to meet specified quality standards such as surgery for hip fracture within 48 hours of admission; they also lead to overcrowding and prolonged stays in emergency departments, patients being kept in corridors, and the risk of high infection rates.

Table 3.6. Health care infrastructure by district in Israel

Variable	National	South	North	Tel Aviv	Centre	Haifa	Jerusalem
Health care facilities 2009							
Delivery room beds/100 000 women aged 15-44	14.7	9.9	12.8	18.5	13	16.6	23.7
Delivery room beds/1 000 live births	1.5	0.9	1.4	2	1.4	2	1.8
Operating rooms/100 000	5.8	3.3	4	8.4	5.5	6.9	8.6
Recovery room beds/100 000	10.2	4.4	8	15.4	9.7	15.3	12.7
Emergency dept beds/100 000	14.9	9	14	15	13.9	19.3	24.9
Dialysis stations/100 000	15.4	13.6	14.3	18.8	12.2	21.5	19.7
Inpatient beds: acute/100 000	193.2	138.4	148.3	250.3	201.2	258	223

Source: Ministry of Health (2010), *Health in Israel: Selected Data 2010*, Jerusalem.

The impact of these geographical imbalances in health care capacity is compounded by an environment prejudicial to good health, especially in the South: greater poverty and unemployment, and weaker social and community infrastructure, *e.g.* roads, public transport, electricity, water supply, sanitation and housing, especially in the “unrecognised settlements” in the South. Proximity to military action and the resulting casualties adds to the demands on services. Under-staffed community services and

geographical isolation mean that preventive services may not get the priority they warrant. Distances from hospitals and poor transport services, especially in the unrecognised settlements of the South, constrain access generally and make for obstacles and delays in accessing emergency services. These challenges to service provision and access are compounded because the Bedouin population is itinerant and population density in the Negev desert is very low. Although Bedouins constitute about 2% of the Israeli population, complications in pregnancy and delivery, acute conditions in infants such as gastrointestinal and respiratory disease, and the pressure on preventive services for mothers and children in the Negev, are for instance likely to contribute to high infant mortality in the Bedouin population. Given that almost one third of the Israeli population lives in the deprived regions of the North and South, investment in improving health care provision here has significant potential for reducing inequalities in health care and raising quality overall. Governmental initiatives to provide health care in this challenging environment and improve the health of the Bedouin community notwithstanding, the lack of wider community infrastructure is not conducive to good health among communities living in these areas.

Initiatives to reduce geographical inequalities in health care capacity should be monitored, evaluated and strengthened as needed

Using a mix of direct funding, financial incentives and changes to the capitation formula used for determining allocations to the health funds, the government has taken a number of significant steps recently that are designed to reduce the workforce and infrastructure deficits in the periphery and promote health improvement. Schemes directly funded by the government include:

- Establishment of a new medical school in Galilee, which will upgrade services in the North.
- Incentivising the training and recruitment of nurses from the Bedouin community in the South. Retention rates have been low (20%) owing to the cultural barriers to women working and the premium attached to high fertility. This strategy has longer-term potential for reducing the nursing shortage in the South, placing staff in their local communities and enabling health promotion, prevention and health care services to be provided by those who share the social, religious and cultural norms of the communities they are serving.

- The allocation of NIS 13.6 million for the five-year plan for the Bedouin sector, which includes building additional mother and infant care clinics, intervention programs to reduce congenital defects and mortality and initiating the use of mediators and health promoters.
- A planned increase in the overall number of hospital beds by 1 000 over six years, up to half of which may be earmarked for the periphery, and an allocation of NIS 60 million for improving the hospital infrastructure in the periphery. The likely impact on hospital capacity in the periphery is unclear and unlikely to improve the situation in the short term.

Although government is the overall architect of health policy and macro system design, it plays a limited role in the delivery of frontline services. In its national plan for narrowing health disparities, government defines the goals, target groups and incentives, while leaving health funds autonomous in implementation. This depends in the main on the responsiveness of and uptake by the health funds and health care professionals to government initiatives, which include:

- Incentivising physician and nurse employment in the periphery, including through sizeable incremental salary increases over time. As poor economic development, educational infrastructure, social amenities and the loss of private practice income are major obstacles to the recruitment and retention of staff in low-income areas such as the Negev and Galilee, this initiative should help to attract staff to the periphery, with initial results showing around 100 medical residents received bonus grants to undertake their residency in the periphery.
- Modification in 2011 of the capitation formula at a cost of NIS 160 million to include distance from urban areas in addition to age and sex (see Chapter 2), designed to prevent geographically based selection by health funds and encourage them to invest in the periphery.
- Retrospectively incentivising investment by the health funds in infrastructure and health promotion initiatives in the periphery and for disadvantaged populations by NIS 16.5 million annually.

As these initiatives have been introduced since 2010, when the governmental goal of reducing health inequalities was introduced, it is too

early to assess their impact and whether it will be adequate for reducing the sizeable and chronic regional imbalances by boosting capacity in the periphery. It is therefore important that:

- The government keeps under review the geographical distribution of health care infrastructure, staff and equipment in relation to health care need, in order to estimate the location and scale of the deficits. The review should allow for projected demographic changes in the population.
- The impact of current initiatives in redressing regional imbalances in health care capacity is monitored by the government and evaluated in light of the assessment above, to see if the impacts are adequate for bridging the deficits identified.
- The impact of recent changes to the capitation formula are monitored, and the formula is reviewed as planned in 2012, and recalibrated as needed to reflect accurately the determinants of health care need (such as morbidity, mortality, SES). Ensuring the capitation formula adequately reflects health care need is important because the populations served by the health funds differ significantly in terms of their socio-economic, demographic, health and location profiles. While the change to the funding formula goes in the right direction, it reflects health care need only partially, with the risk that the allocations may not reach the periphery (see also Chapter 2).
- Recruitment policies include vigorous efforts to train and recruit link workers, nurses, physicians etc from within local communities; high attrition rates can be expected to moderate over time. Regulation, financial incentives, personal and professional support can be used as levers for attracting staff to the periphery and retaining them (Dolea *et al.*, 2010; WHO, 2010).

In keeping with its decentralised, managed competition-based health care system, the government's strategy for reducing health inequalities is not prescriptive; it provides autonomy to health funds to respond as appropriate to national goals, criteria and incentives. This is similar to the approach of other OECD countries with managed competition models, such as Switzerland and the Netherlands, which have in the main succeeded in delivering equitable access to health care. The government will have a major role in monitoring the impact of the initiatives described above on reversing the wide and chronic regional inequalities in health care capacity in Israel and for steering funds and provider behaviour in the desired direction. This

could include strengthening the use of financial incentives and recognition of good results for funds and providers. The government can also use its regulatory authority, including scrutiny and inspection powers, to ensure that health funds are meeting national standards of equity and quality uniformly. Publication of comparative information on performance showing progress against agreed goals, and indicators measuring variations in capacity, access and quality, can also leverage improvement. Additional tolls that the Israeli Government may wish to consider include regional allocations for health funds, attaching conditions to the capitation formula to ensure funding flows to the periphery, government stimuli to infrastructure development in the periphery, and using its powers of ownership and licensing of facilities to redirect resources to more peripheral areas.

Until conditions improve, the wider socio-economic disadvantages, physical and social isolation, and lack of basic civic infrastructure and community services for people living in the unrecognised settlements in the South will continue to exercise independent, deleterious effects on health and health care quality, and contribute to the growing health differentials between the South compared with the Centre.

3.6. Health promotion and health education services for disadvantaged groups, and culturally competent care, should be strengthened further

The reach and quality of health promotion, health education and preventive services for groups at risk of poor health needs to be strengthened further, both at population level and in the context of primary care delivery. While government public health services and the health funds are very active in this regard, changes in health behaviours and primary prevention are secondary to the focus of health funds on delivering health care to patients. Despite the strong primary health care infrastructure, heavy caseloads, lack of training and inadequate incentives mean that the role of staff in primary prevention remains weak. Training and up-skilling physicians, practice nurses and other frontline staff in health promotion, disease prevention and provision of culturally appropriate care, and an awareness of health inequality issues can be strengthened further. Services targeting the reduction of risk factors such as smoking and obesity among disadvantaged groups, and promoting uptake of preventive services such as genetic counselling and mammography, should be a priority. Although mammography rates among Arab women have increased as a result of strenuous efforts by health funds, they remain relatively low (551/1 000 at ages 50-74 compared with 681 in Jewish women) illustrating the potential for preventive services to

reduce inequalities in health care and outcomes. According to OECD analysis on prevention, health education and promotion, regulation and fiscal measures, and counselling in primary care are cost-effective interventions in improving health and longevity (OECD, 2010a).

Table 3.7 presents data on smoking and physical activity among Israeli population sub-groups. The marked variations by population group and SES illustrate the importance of prioritising behaviour-modification strategies among high-risk groups. Smoking prevalence is inversely associated with SES, and high smoking prevalence among Arab men (crude rate of 446 per 1 000 compared with 250 in Jewish men) is reflected in their high mortality. Physical activity rates also show a positive socio-economic gradient, and are 4-fold higher among Jews than Arabs. These variations are reflected in regional differences, with the populations of the South and North being at highest risk. Rates of obesity and diabetes are high among Arab compared with Jewish women, and childhood obesity is positively associated with having a father of Asian-African origin and recent immigration, and negatively associated with the level of paternal education (Gross *et al.*, 2011). Targeted health promotion and prevention services for high-risk groups need to be strengthened. The priorities for primary prevention should be informed by the health care needs assessment, but the data on risk factor prevalence suggest priorities could be smoking cessation services targeted at Arab men and obesity reduction strategies targeted at low SES groups.

Table 3.7. Risk factors by population group in Israel (rates/1 000), ages 20+, 2009

	Smoking		Physical activity	
	Males	Females	Males	Females
Population group				
Jews and others	250	143	249	218
Arabs	446	37	69	51
Housing density				
< 1.0		193		249
1.0-1.49		220		151
1.5+		221		87
Years of schooling				
0-8		218		82
12-Sep		263		169
13-15		173		229
16+		131		291
District				
Central		190		221
Tel Aviv		198		242
Jerusalem		185		187
Haifa		212		204
North		225		157
South		230		188

Source: Israel Central Bureau of Statistics (2011), *Health Survey 2009*.

Socio-cultural norms and perceptions of disease influence health behaviours and decision making, such as low uptake of cancer screening among Arab and ultra-orthodox Jewish women, and language and cultural understanding of asymptomatic disease such as diabetes as barriers to access among Ethiopian immigrants. Data from the community care programme shows that low SES groups, Arabs, immigrants and those without supplemental insurance do fewer tests for early detection of cancer, even though these services are cost-free in the insurance basket (Wilf-Miron *et al.*, 2011). This illustrates the socio-cultural obstacles to preventive care that need to be overcome through outreach programmes and culturally adapted services.

A cultural practice that has significant negative health outcomes and poses a particular challenge for health care services is consanguineous marriages among Arabs. As in many Middle-Eastern countries, rates of congenital anomalies, recessive disorders and associated morbidity and mortality resulting from consanguinity are high in the Israeli Arab population. Although common, such marriages are associated with SES status (Sharkia *et al.*, 2008; Vardi-Saliternik *et al.*, 2002). Socio-economic development and improvements in women's educational and economic status, combined with health education, screening and genetic counselling programmes can help to reduce rates of consanguineous marriages and the high associated infant mortality, which is a significant contributor to the longevity disadvantage of Arabs. Some Middle-Eastern countries offer premarital screening programmes to help couples to make informed decisions. Although changing long-established cultural practices is both challenging and sensitive, the genetic counselling services provided by nurses to high-risk groups (such as the Bedouins) strive to promote change.

The adoption of healthy behaviours, uptake of preventive services, compliance with medical advice and ability to self-care depend on services being delivered by culturally competent professionals. Israel has a diverse population *e.g.* Arabs (Muslim, Christian, Druze, Bedouin), Jews (ranging from secular to ultra-orthodox), Ethiopian migrants and Russian Jews, each with distinctive cultural, religious, linguistic and behavioural features. Providing services that meet the needs of these diverse groups is an essential element of quality and a key challenge for the health care system (Epstein, 2007). Box 3.4 describes a Maccabi intervention for raising mammography rates among Arab women by addressing barriers to uptake. Services need to ensure they have the institutional capacity and skills to deliver it universally. A study of health promotion programmes (smoking, home accidents, physical activity, nutrition, diabetes control) found that although most programmes covered the Arab population, cultural competence and the infrastructure to promote it varied significantly at organisational level

(Rosen *et al.*, 2008). The importance of cultural competence is now well recognised in Israel, and a number of such initiatives are underway to promote culturally competent services.

Box 3.4. Using culturally tailored services to improve uptake of preventive services

MHS, the second largest health fund (1.8 million enrolees), provides community-based health services via self-employed physicians. In 2004, MHS launched a programme to improve quality of care and equity by increasing mammography uptake among Arab women. The top-down organisational drive was complemented by bottom-up solutions by local staff for improving screening rates based on their field experience. Barriers to access and uptake (such as lack of access and information, social norms, fatalism, risk of stigma) were identified by local Arab staff, and strategies developed for addressing them. Transparency of performance measurement secured management commitment and staff involvement. By 2005 mammography rates in Arab branches increased from 27% to 46% and overall MHS rates from 49% to 63%, resulting in quality gains for Arab women and overall, and reduced inequalities in breast cancer screening rates. Education, income, ethnicity, health insurance all had independent effects on uptake, illustrating the complex dynamics that drive health care decisions and inequalities even when there are no financial barriers to preventive care. In 2008, MHS implemented a comprehensive, long-term strategy to promote equity in service provision and health outcomes.

Source: Wilf-Miron, R., N. Galai, A. Gabali, I. Lewinhoff, O. Shem Tov, O. Lernau and J. Shemer (2010), “Organisational Efforts to Improve Quality While Reducing Health Care Disparities: The Case of Breast Cancer Screening Among Arab Women in Israel”, *Quality and Safety in Health Care*, Vol. 19, pp. 1-6.

Strengthening recruitment from local communities will increase the health care system’s capacity to meet the needs of all its users. Health care professionals and link workers recruited from minority communities can not only help reduce staffing shortages in the periphery, they are an effective medium for delivering health promoting messages, given their familiarity with the socio-cultural norms of the communities they serve. Upskilling and recruitment of community-based health care staff and link workers should therefore be priorities, and the establishment of community-based user groups such as Tene Bruit should be actively encouraged.

Fostering an equity conscious culture in secondary care should also be facilitated. Accreditation processes and clinical guidelines tailored to reflect the clinical needs of different population groups will support the delivery of patient-centred care. Hospital staff should have the appropriate clinical and cultural skills to deliver services accordingly.

Communication barriers can be a major obstacle to access for minority linguistic groups, and in patients’ interaction with services. Overcoming

language barriers is therefore important for improving the quality of services. A major recent initiative is the government's 2011 directive to health care providers requires them to provide access to culturally appropriate services in the main spoken languages (Hebrew, Arabic, Russian, English, and Amharic) (see Appendix C in Horev and Averbuch, 2012 for details). This initiative, implementation of which will be monitored in the hospital inspection and accreditation process (using a cultural competence tool developed by the MOH), should improve health care accessibility and quality for all population groups. It also signals the standards expected of a quality health care system in catering to the needs of its minority and disadvantaged users. The government will need to ensure through its inspection process that this directive is implemented routinely in the course of user interactions with health care staff, including in the context of preventive services.

Finally, it is important for minority groups to be empowered and enabled to have a voice on health care matters and engage in critical dialogue with policy makers, so they have a role in shaping policy, services and the context in which they are delivered. A study of late uptake of neonatal care among Bedouin mothers in the South found that the barriers were a combination of poor living conditions, physical inaccessibility, and perceived benefits of preventive care (Daoud *et al.*, 2010). This illustrates why preventive strategies need to be designed with a holistic understanding, based on dialogue, of the drivers of health behaviours and obstacles to uptake. A user-focussed service is at the heart of the quality agenda and key to empowering populations to shape their health, especially those at the margins of society. Further community-based patient organisations and advocacy groups such as Tene Bruit should be fostered through dialogue and modest start-up funding. This will encourage community involvement in health promotion and service provision. Building on the links that the government and health funds have with the voluntary sector can support this process.

3.7. Conclusions

Although health inequalities typify most societies (for example, life expectancy differentials between Israeli localities – eight years – are similar to life expectancy differences between London boroughs), a combination of social, cultural, historical and economic factors make addressing inequities in Israeli especially complex. It is therefore commendable that the Israeli Government has made tackling persistent inequalities in health and health care a priority. Equitable access to and uniformly high standards of health care for all users in accordance with their needs are essential hallmarks of a high-quality health care system.

The Israeli Government has embarked on an ambitious programme for reducing inequalities in health care since 2009/10. While it is too early to assess the impact of the policies implemented, the strategies are well directed and it will remain important to continue monitoring the initiatives underway. This chapter has sought to highlight a few areas where efforts could be strengthened or prioritised.

First of all, while community care is well developed and highly accessible overall, it is not clear that this applies in all regions and what the position is with respect to access and quality of hospital and specialist care for different groups. The growing burden of out-of-pocket payments and regional imbalances in health care capacity can impact negatively on both access to and the quality of care received by different groups. The high prevalence of risk factors and morbidity in some groups points to the need for continuing to strengthen targeted health promotion, prevention and chronic disease management programmes, such as smoking cessation services for Arab men and self-care among low SES diabetic patients. These services should be delivered by culturally competent staff recruited from their communities where possible. Accreditation processes and clinical guidelines can also be tailored to reflect the clinical needs of different groups, and hospital staff should be skilled to deliver services accordingly.

Making better use of its rich data on population health and bridging data gaps on the quality of care for different groups (especially hospital care and mental health care) will support Israel's efforts in this area. Such data should be used by the government and insurance funds to inform health care needs assessment in different regions, capacity planning and development, identification of variations in the quality of community and hospital care, and planning for demographic and epidemiological changes. Reducing out-of-pocket costs, in particular for chronic disease, and ensuring that patients are aware of their entitlements, will improve access, quality and outcomes for patients and has the added advantage of yielding longer-term cost savings from reduced avoidable morbidity.

Redressing the large and chronic regional disparities in health care capacity is a priority for improving quality of care and health outcomes in the periphery, where populations often experience the combined disadvantages of greater health care need, poverty, geographical isolation, poorer civic amenities, and also relative shortages of health care infrastructure. Current initiatives should be kept under review for their impact, and supplemented by additional measures such as changes to the capitation formula to better reflect health care need, greater use of financial incentives, rewards and penalties to steer providers and funds' behaviours, and community-based recruitment drives in the periphery.

Finally, the independent initiatives of the health funds (Clalit and Maccabi) in developing a variety of approaches to reducing disparities in health care quality within an overall programme of quality improvement have yielded good dividends. Sharing learning and good practice about “what works” could yield greater collective pay-offs and there may be scope for cost savings *e.g.*, in delivering health promotion and education services where there is geographical overlap in catchment populations. The well-established collaborative links between government and the health funds, and events such as the annual inequalities conference led by the Ministry of Health, provide worthwhile forum for regular dialogue. Measures to engage Meuhedet and Leumit are needed to ensure all the health funds are engaged in this national priority area.

Israel faces numerous challenges in reducing inequalities in health and health care: wide and widening inequalities in income and wealth, a culturally and religiously diverse population, new migrants, and a health care system that is economically funded by OECD standards. However, Israel has the critical building blocks in place to tackle this challenge: legislation requiring the health care system to apply principles of equity, universal health care insurance coverage, a government committed to reducing inequalities in health, active engagement of the Health Ministry, health funds and health care professionals (including the Israeli Medical Association) in achieving these goals, and a strong community health care system.

Realising its goal of reducing health inequalities is not a task for the health sector alone. It will require the government to also implement measures to reduce wider socio-economic differentials and foster working across government departments. Israel’s local governments, many of which are already involved in preventative health care, provide an ideal platform to facilitate this. Government attempts at raising the profile of health inequalities and engaging other departments in efforts to address poverty and social determinants of health inequalities should be reinvigorated. The hazards to health and health care in the unrecognised settlements of Southern Israel will remain unless the lack of basic infrastructure and geographical and social isolation are addressed. These are but a few examples of how important it is for the Israeli Government to address different dimension of socio-economic disparity, which will have important consequences on the ability of the health sector to address inequalities in health.

Notes

1. Diabetes prevalence in QICH is defined as the prescription of three medicines for diabetes; low SES group is defined as entitlement to exemption from or reduction in co-payments – about 10% of the insured population.
2. QICH indicators relating to pharmaceuticals measure patients receiving prescribed medication.

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