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A report by The Economist Intelligence Unit

DIABETES IN THE GULF

The Policy
Challenge



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About this report

Diabetes in the Gulf: The policy challenge is an Economist Intelligence Unit report, sponsored by Janssen. It assesses the current status and potential impact of diabetes in the six Gulf Co-operation Council states—Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the UAE; reviews current approaches to tackling the disease in the region; and explores further possible opportunities to help combat diabetes. In this report, diabetes refers to type 2 diabetes.

In July-August 2015 The Economist Intelligence Unit (EIU) conducted 18 interviews with experts on diabetes in the Gulf region, including policymakers, policy advisers, academics and health practitioners. The insights from these in-depth interviews appear throughout the report. The EIU would like to thank the following individuals (listed alphabetically) for sharing their insight and experience:

- Dr Muhammad Abdul-Ghani, professor, University of Texas Health Science Centre at San Antonio, US
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- Dr Cother Hajat, public health consultant, UAE
- Dr Abdulla Al Hamaq, executive director, Qatar Diabetes Association, Qatar

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- Dr Soeren Mattke, managing director, RAND Health Advisory Services, RAND Corporation, US
- Dr Martin O'Flaherty, senior lecturer in epidemiology and health services research, University of Liverpool, UK
- Dr Faisal Al-Refai, director of clinical services, Dasman Diabetes Institute, Kuwait
- Dr Kamil Salamah, general secretary, Saudi Diabetes & Endocrine Association, Saudi Arabia
- Professor Adel El-Sayed, chair, Middle East and North Africa region, International Diabetes Federation, Belgium
- Dr Shahrad Taheri, director, Clinical Research Core, Weill Cornell Medical College in Qatar, Qatar
- Dr Mohammed Zamakhshary, associate professor, Alfaisal University, Saudi Arabia

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Executive summary

Rising economic prosperity in the Gulf region since the turn of the century, stimulated by a boom in hydrocarbons, has brought with it a sharp rise in diabetes rates among local populations. For example, the prevalence of the disease in Kuwait rose from 7% in 2000 to 17.8% in 2013, according to the International Diabetes Federation (IDF). Now, in Saudi Arabia, 23.9% of the population is affected by the disease; in Kuwait, 23.1%; and in Qatar, 19.8%. The global average figure is far lower, at 8.3%.

This report, based on in-depth interviews with 18 experts in diabetes in the Gulf region, assesses the current status of diabetes in the six Gulf Co-operation Council (GCC) states and its potential impact. It also takes stock of some of the policies that are being introduced in response to the growing burden of diabetes across the region. Finally, it looks ahead, to ask the question what more can or should be done to combat the disease. The main findings of the research are presented below.

● **The populations of the Gulf countries are suffering high rates of diabetes due largely to overweight and obesity, among the key risk factors in diabetes.** Overweight and obesity, in turn, are down to the growing popularity of Westernised foods in the region that are often laden with salt or sugar, as well as the sedentary

lifestyle of many sections of the Arab population. Academic research, for example among Middle Eastern migrants in Sweden,¹ also indicates that Arabs may have a genetic predisposition to the disease.

● **The economic burden of diabetes in the Gulf region is growing.** According to estimates from the IDF, healthcare spending on treating diabetes in the Middle East and North Africa region was US\$16.8bn in 2014; this is set to reach US\$24.7bn by 2035. The direct costs of providing treatment for diabetes could rise even more dramatically in some parts of the region, for example in Abu Dhabi, where it may rise fourfold by 2030. But there is potentially an even bigger price to pay: the development of the region may be at stake, just as the Gulf states push through efforts to diversify their economies away from oil and involve the local workforce in the knowledge economy.

● **Sporadic and isolated policy responses are evident in the region—not a coherent regional approach.** Some countries are implementing the World Health Organisation's so-called "best buys"—such as reducing salt intake in food, raising taxes on tobacco and alcohol or promoting public awareness of diet and physical activity. Others have established wider healthcare strategies to tackle diabetes or launched initiatives to target specific aspects

¹ Ahlqvist, E., Ahluwalia, T. S. and Groop, L., "Genetics of type 2 diabetes", *Clinical Chemistry*, Vol. 57, No. 2, pp. 241-254, February 2011.

of disease management or prevention. These include screening initiatives that monitor the progress of those with diabetes and help to prevent new cases of the disease. Action that is successful in one country can often be implemented in another.

● **More must be done in the region if diabetes is to be halted.** For one thing, more investment is needed to raise healthcare in the Gulf to developed-world levels; for another, there is scope in some Gulf countries to expand and improve their primary healthcare systems. Wider reform of the healthcare system may help policymakers to address many of these shortfalls. But reform need not be a precondition for the successful treatment, and indeed prevention, of

diabetes. In the short term, measures such as screening may be implemented fast, and at little cost. Moreover, the drivers of diabetes are to be found outside the health system, not inside it.

● **Policymakers have a number of opportunities to help combat the disease.** Policymakers have various policy options at their disposal to help tackle diabetes, including further improvements to primary healthcare; a cross-governmental approach that includes the input of various different ministries; tough, new regulation of food and beverages, including taxes on fizzy drinks; and the engagement of the wider community in the battle against diabetes—first and foremost with religious leaders in the region.

Introduction

As oil prices rose from below US\$20 per barrel in the late 1990s to above US\$140 per barrel in mid-2008, the economic fortunes of the six member states of the Gulf Co-operation Council (GCC) rose as well. Some countries are now pushing through ambitious programmes to diversify their economies away from dependence on hydrocarbons. These programmes include efforts to foster knowledge economies and employ more local staff, reducing reliance on foreign workers.

But the hydrocarbon boom did more than bolster the region's wealth; it also accelerated the growth of lifestyle-related conditions—including diabetes, cardiovascular disease and strokes—that have in the past been associated with developed countries and are increasingly evident in developing countries today.

In Kuwait, for example, diabetes prevalence, which was 7% in 2000, had risen to 17.8% by 2013, while in Saudi Arabia it rose from 9.4% in 2000 to 20.2% in 2013. Over the same period global prevalence rose from 4.6% to 8.3%, and in Europe it went up from 4.9% to 8.5%. Prevalence in some GCC states could reach 50% within ten years, estimates Alfons Grabosch, a healthcare consultant based in the UAE.

Behind this rising prevalence of diabetes lie a number of issues, such as poor diets

characterised by Western-style foods rich in calories and laden with salt and sugar, and a lack of physical exercise. A genetic predisposition to diabetes also appears to play a role.

The sharp rise in diabetes presents a two-fold threat to the region. First, if the disease is not kept in check, the costs of healthcare treatment will weigh heavily on government budgets in the region. In particular, as growing numbers of the region's youth become diabetic, the costs of providing lifetime care will soar. Abu Dhabi's spending on the treatment of diabetes is expected to quadruple between 2010 and 2030.

Second, and more critical still, are the serious risks that high levels of overweight and obesity, as well as a high prevalence of diabetes and the complications that may accompany the disease, present to the region's economic development and to plans to diversify its economies away from hydrocarbons towards fostering a knowledge economy.

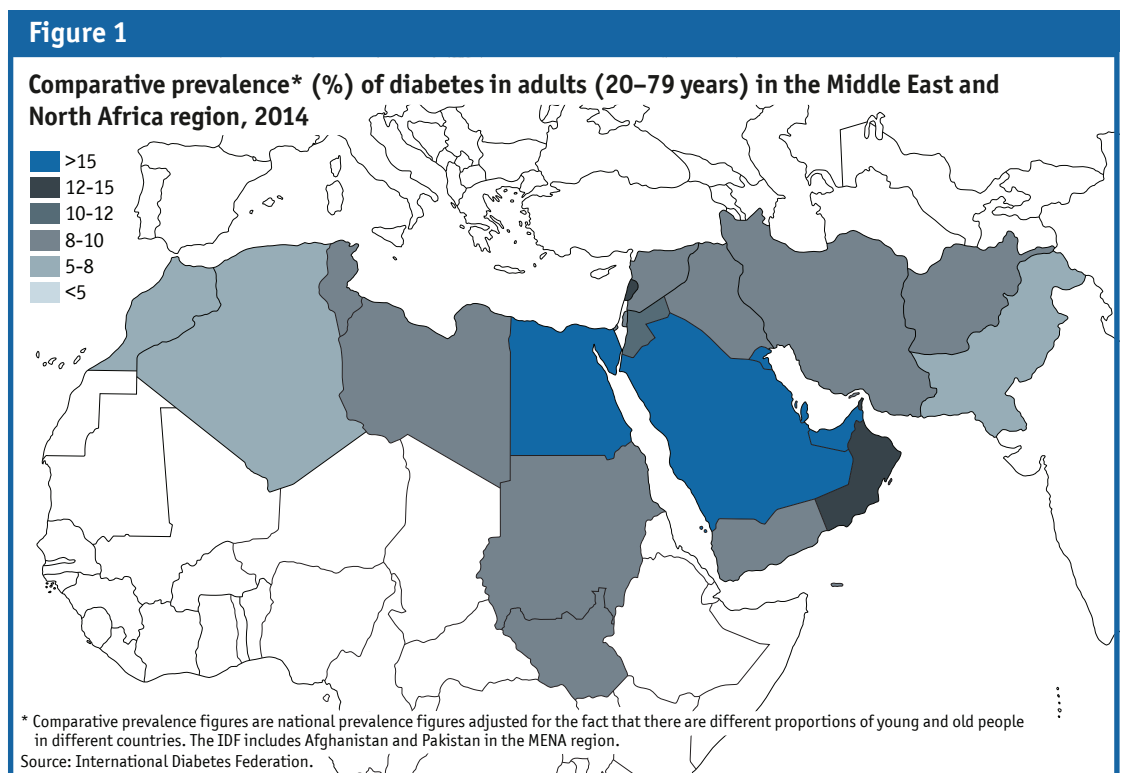
Thus far, countries in the Gulf region appear to have identified the threat of diabetes; some have put in place policies and initiatives to tackle the disease. Yet, today, there is still little evidence of concerted action. There is a clear and urgent need to combat diabetes in the Gulf.

1 The growing burden of diabetes in the Gulf

As oil and gas have provided the Gulf region with vast riches, they have also brought with them something altogether less welcome: diabetes. According to comparative prevalence figures from the International Diabetes Federation (IDF), 23.9% of the adult population had the disease in Saudi Arabia in 2014, 23.1% in Kuwait, 21.9% in Bahrain, 19.8% in Qatar, 19% in the UAE, and 14.5% in Oman. By contrast, most recent IDF estimates indicate that 8.3% of adults globally are living with diabetes. Prevalence in the Gulf countries is also much higher than in the wider Middle East and North Africa (MENA) region, where the average is 11.3%, thanks to much lower rates in countries such as Algeria (7.3%), Pakistan (7.9%) and Iran (10%).

The growth of diabetes in the Gulf region has been significant in recent times. The prevalence of the disease in Kuwait was 7% in 2000, for example, but had risen to 17.9% by 2014 (national prevalence figures, not comparative figures as above), according to IDF data. And in Saudi Arabia, points out Tawfik Khoja, director general of the Health Ministers' Council for Gulf Co-operation Council (GCC) states, national prevalence had been 2.2% in the mid-1970s and 4.9% in the mid-1980s; it then increased to 9.4% in 2000 and rose further, to 20.5%, in 2014. Between 2000 and 2014 global prevalence accelerated from 4.6% to 8.3%.

In reality, the figures in the Gulf states may be



worse than the IDF figures indicate. The IDF estimates the prevalence of diabetes in Saudi Arabia in adults aged 20-79 years at 20.5% in 2014, for example, while research concludes that the overall prevalence of diabetes in Hail, a region of northern Saudi Arabia, is 31.1%.² Separate research forecasts the prevalence of diabetes in Saudi Arabia at 44.1% in 2022, assuming a continuing linear increase in obesity trends, or 39.5% if future obesity trends are capped.³

Overweight and obesity are among the main risk factors driving the diabetes epidemic in the Gulf. The proportion of the population in the Gulf states that is overweight or obese has been on the rise. Today, between two-thirds and three-quarters of adults in the six GCC countries are overweight or obese, and between 25% and 40% of under-18s are overweight or obese, according to estimates.⁴ The high proportion of overweight and obese children and adolescents is a particular concern.

“We’re relaxing”

Overweight and obesity are driven in part by diet. In the Gulf region, traditional diets are giving way to Western-style food. Martin O’Flaherty, senior lecturer in epidemiology and health services research at the University of Liverpool in the UK, says that people in the Gulf “are increasingly adopting more of a Western type of diet, full of calories, full of added sugar.”

Soeren Mattke, managing director at RAND Health Advisory Services, part of the RAND Corporation, a US research organisation, points out that the people of the Gulf countries once had modest quantities of food at their disposal and indulged only on special occasions. But then oil and gas prices boomed around the turn of the century—with oil prices rising from under US\$20 to over US\$140 per barrel in the decade to 2008—creating vast riches in the Gulf. “With this enormous wealth, they can indulge every day,” Dr Mattke remarks.

Furthermore, a largely sedentary lifestyle has taken hold among people in GCC countries as they move from air-conditioned homes in air-conditioned cars to air-conditioned offices. It helps little, says Kamil Salamah, general secretary of the Saudi Diabetes & Endocrine Association (SDEA), that “physical activities are a very weak part of the education curriculum throughout the GCC countries.” He points out that the female population does not have the same access to sports facilities as their male counterparts. “There is a big restriction as a consequence of religious practices and cultural norms,” according to Dr Salamah.

Abdulla Al Hamaq, executive director of the Qatar Diabetes Association, sums up the attitude that is widespread among the region’s native population since the boom in energy prices: “We are now very, very rich—and we’re relaxing.”

Lifestyle aside, it is also possible that the Arab populations of the Gulf have a genetic predisposition to diabetes. One study of Middle Eastern immigrants in Sweden, for example, found that the risk of developing diabetes among this group was two to three times higher than for native Swedes.⁵ Separate research suggests that the onset of diabetes is different in Arabs than it is in other people. “Diabetes manifests itself a little bit differently around the world,” points out Joachim Becker, a principal at US-based consulting firm Dendorf Associates. “Genetics plays a role.”

The effects of diabetes are profound. Those with the disease have a higher risk of developing serious health issues, including diseases affecting the heart and blood vessels, eyes, kidneys, nerves and teeth, according to the IDF. “In almost all high-income countries diabetes is a leading cause of cardiovascular disease, blindness, kidney failure and lower-limb amputation.”⁶

Not surprisingly, the financial burden of diabetes is high. In the Middle East and North Africa

² Ahmed, H. G., Ginawi, I. A. et al, “Current Burden of diabetes in Kingdom of Saudi Arabia in an epidemiological survey”, *Egyptian Academic Journal of Biological Sciences, Clinical Physiology & Molecular Biology*, 6(2): 85-91 (2014).

³ Al-Quwaidhia, A. J., Pearce, M. S. et al, “Comparison of type 2 diabetes prevalence estimates in Saudi Arabia from a validated Markov model against the International Diabetes Federation and other modelling studies”, *Diabetes Research and Clinical Practice*, Mar(2014);103(3):496-503.

⁴ Abdul Rahim, H. F., Sibai, A. et al, “Non-communicable diseases in the Arab world”, *The Lancet*, Vol. 383, No. 9914, pp. 356–367, January 25th 2014.

⁵ Ahlqvist et al, *Genetics of type 2 diabetes*.

⁶ IDF, “Complications of Diabetes”. Available at: <https://www.idf.org/complications-diabetes>

region US\$16.8bn was spent on diabetes care in 2014, according to estimates from the IDF, and this looks set to rise to US\$24.7bn by 2035. This includes medical spending on the treatment of diabetes by health systems as well as by people living with diabetes and their families, according to the IDF. Research focusing on the UAE has found that the annual per-capita treatment costs of those with diabetes are 3.2 times higher than the wider annual per-capita healthcare expenditure in the country.⁷ The Health Authority of Abu Dhabi (HAAD) expects the direct cost of providing diabetes treatment to the Emirati population of Abu Dhabi to rise fourfold between 2010 and 2030.⁸

The cost burden of diabetes in the Gulf has the potential to rise even further if the condition goes undiagnosed or untreated, increasing the likelihood of complications. According to the above-mentioned research focusing on the UAE, the cost of direct treatment is 2.2 times higher for those with diabetes-related microvascular complications; 6.4 times higher for patients with macrovascular complications; and 9.4 times higher for diabetes patients with both microvascular and macrovascular complications.⁹

Furthermore, the costs of dealing with diabetes could soar even further as today's overweight and obese youth in the Gulf region increasingly develop diabetes. As diabetes risks becoming a whole-of-adult-life disease across the region,

rather than an end-of-adult-life disease, growing numbers of those living with diabetes will be doing so for longer—increasing significantly the per-capita costs of providing patient care.

Diabetes is not only a burden on government budgets; the disease weighs on factors that drive the economy, too, such as productivity. In the US, for example, research from the American Diabetes Association estimated the cost of diagnosed diabetes at US\$245bn in 2012; US\$176bn in direct medical costs and US\$69bn in indirect costs through reduced productivity.¹⁰ Indirect costs included inability to work owing to disability (US\$21.6bn), reduced productivity while at work (US\$20.8bn), lost productive capacity due to early death (US\$18.5bn), increased absenteeism (US\$5bn) and reduced productivity for those not in the labour force (US\$2.7bn).

For now, says Dr Mattke, “the swings in the oil price are much more important for the Gulf economies than the productivity of their workforce.” However, that will change as the region continues to diversify away from hydrocarbons. Shahrar Taheri, director of the Clinical Research Core at Weill Cornell Medical College in Qatar, points to the youthful demographic profile of the Gulf nations. “As people are developing chronic disorders at a young age, these countries won't be able to progress,” he warns. “The implications are huge.”

⁷ Al-Maskari, F., Mohammed El-Sadig, M. and Nicholas Nagelkerke, N., “Assessment of the direct medical costs of diabetes mellitus and its complications in the United Arab Emirates”, *BMC Public Health*, 2010; 10: 679.

⁸ Health Authority of Abu Dhabi, *Weqaya presentation*, October 27th 2011. Available at: <http://www.who.int/tobacco/mhealth/weqaya.pdf>

⁹ Al-Maskari et al, *Assessment of the direct medical costs of diabetes*.

¹⁰ American Diabetes Association, “Economic Costs of Diabetes in the US in 2012”, *Diabetes Care*, March 6th 2013. Available at: <http://care.diabetesjournals.org/content/early/2013/03/05/dc12-2625.full.pdf+html>

2

Policies and initiatives to combat diabetes

Awareness of diabetes is high in the Gulf region. “I don’t think you’ll find anyone in healthcare in the Middle East who isn’t aware that diabetes is a major issue,” says Oliver Harrison, senior vice president at US healthcare service provider Healthways International. As diabetes rates in the region have soared in the past decade or more, policymakers have responded with a number of policies and initiatives at the regional, national and local level. Many target overweight and obesity with initiatives to improve diet and promote physical activity.

The World Health Organisation (WHO) provides a basis for some of these efforts to combat diabetes. Notable in particular is the United Nations *Political Declaration on the Prevention and Control of Noncommunicable diseases* and the WHO’s *Global strategy on diet, physical activity and health* that focuses on what the WHO describes as “population-wide approaches to promote healthy diet and regular physical activity, thereby reducing the growing global problem of overweight and obesity”.¹¹ Ibtihal Fadhil, regional adviser to the WHO’s Noncommunicable Diseases Programme, confirms that the organisation works closely with the GCC states in the planning and implementation of diabetes programmes in the region.

At a summit in Qatar in December 2014 the leaders of the GCC states endorsed an updated plan to control noncommunicable diseases in the Gulf region. The 2014-25 plan, says Professor Khoja, “represents the highest level of political commitment on the part of the leaders of the [GCC] states to combat this epidemic.”

Furthermore, in efforts to overcome diabetes, the WHO is promoting cost-effective, evidence-based interventions in the GCC states that it refers to as “best buys”—for example, reducing salt intake in food, raising taxes on tobacco and alcohol and promoting public awareness of diet and physical activity.

Still, Adel El-Sayed, chair of the IDF for the MENA region, says that too few countries are fully implementing national diabetes programmes. In broad terms, few policymakers across the MENA region appear to be committed to tackling diabetes with the urgency that is required.

Nevertheless, some countries have established clear strategies to combat diabetes. *Oman’s Health Vision 2050*, released by the sultanate’s Ministry of Health in May 2014, states that “timely action will be taken to inform and educate the people so that they adopt a healthy life-style and food habits”.¹² *Health Vision 2050* acts as a basis for shorter-term plans, such as the ninth five-year *Health Development Plan 2016-20*, which includes targeted measures to realise the country’s vision.¹³

And in Qatar, the Supreme Council of Health, the body responsible for public health in the state, established the National Diabetes Strategy Committee in 2013 to agree on measures to tackle the disease. Dr Taheri of Weill Cornell Medical College in Qatar says that the committee “will co-ordinate a public health campaign; co-ordinate what’s happening in terms of diabetes care across different levels of healthcare; and [co-ordinate] more directed research to improve

¹¹ WHO, *Global strategy on diet, physical activity and health*, May 22nd 2004. Available at: http://www.who.int/dietphysicalactivity/strategy/eb11344/strategy_english_web.pdf

¹² Sultanate of Oman, Ministry of Health, *Health Vision 2050*, May 2014. Available at: <https://www.moh.gov.om/documents/16506/119833/Health+Vision+2050/7b6f40f3-8f93-4397-9fde-34e04026b829>

¹³ WHO, *Country Cooperation Strategy at a glance*, Oman, May 2014. Available at: http://www.who.int/countryfocus/cooperation_strategy/ccsbrief_omn_en.pdf

the clinical care of patients with diabetes.” The committee is scheduled to publish its final report in the coming months.

Disparate policies

For now, though, policy responses to the diabetes epidemic in the Gulf region appear to be driven less by co-ordinated strategies, such as those adopted in Oman and Qatar, than by individual initiatives. In some cases, such policies and initiatives target improvement in disease management—for example, preventing those with diabetes from developing complications linked to the disease, such as

cardiovascular disease and kidney failure. In some cases these policies and initiatives target prevention—prevention of developing diabetes among the healthy and among those at risk of developing the disease.

Some GCC states have brought in screening. One of the most prominent examples of screening in the Gulf is the *Weqaya* programme, launched by the HAAD in Abu Dhabi in 2008 to better understand noncommunicable diseases in the emirate, in particular diabetes; *Weqaya* in the Arabic language conveys the idea of “protection” or “prevention”. As part of the programme, all adult Emiratis are screened at

Abu Dhabi’s *Weqaya* programme

The *Weqaya* programme, launched by the Abu Dhabi Health Authority (HAAD) in 2008, has screened around 200,000 Emiratis—all consenting adults in the emirate—for diabetes or pre-diabetes. Each receives a *Weqaya* risk score delivered in a personal health report; the risk score shows the likelihood of a heart attack or stroke in the next ten years.

The results of the screening—which cost AED210 per adult Emirati, or around US\$57 at current exchange rates—showed around 18% of Emiratis to be diabetic; a further 26% to be pre-diabetic; and two-thirds to be overweight or obese. Figures suggested that diabetes rates in the emirate would continue rising without intervention, perhaps to 50% within 5-10 years, according to Alfons Grabosch, a healthcare consultant based in the UAE.

However, existing health-insurance data suggested that just 5.3% of adult Emiratis were diabetic. Dr Grabosch highlights

that those diabetic Emiratis were not being treated for the disease and were at higher risk of developing complications—weighing heavily on the emirate’s healthcare budget. “This remains a substantial problem elsewhere in the UAE and in other countries in the region,” he says.

For Abu Dhabi, meanwhile, the collection of granular medical data about Emiratis enables it to take targeted action to prevent and treat diabetes. Joachim Becker, a US consultant specialising in healthcare, says that Abu Dhabi is currently inviting international disease management companies to take over the healthcare management of the population—with a sharp focus on demonstrable outcomes. Performance incentives will be tied to improvements in the outcomes of these key performance indicators.

Table: *Weqaya* Programme Indicators

	Baseline	2011f	2012f	2013f	2014f	2015f
Obesity (%)	35	35	36	36	35	34
<i>Weqaya</i> population with pre-diabetes (%)	26	26	26	26	26	26
<i>Weqaya</i> population with diabetes (%)	18	19	20	20	21	21
Smoking (%)	11	12	12	11	11	10
Reduction in predicted incident cardiovascular mortality (%)	0	1	2	5	8	12

f = forecast

Weqaya presentation, 27 October 2011. <http://www.who.int/tobacco/mhealth/weqaya.pdf>

least annually for cardiovascular risk factors as a requirement for free health insurance coverage (see box). Initial findings suggested that around 45% of adult Emiratis had diabetes or pre-diabetes.¹⁴

Similarly, some Gulf states are setting up diabetes registries as part of efforts to tackle the disease. Action on Diabetes, a public-private partnership in Qatar, for instance, launched the Qatar National Diabetes Registry in 2013, an online database to collect data about those in the country with diabetes. The registry will enable the sharing of patient data across the institutions of the healthcare sector in Qatar. In addition, the IDF has praised efforts by Oman to monitor diabetes: "Oman has strength in its diabetes monitoring and surveillance," the IDF writes in its Oman scorecard.¹⁵ "There is a fully implemented framework for the monitoring and surveillance of diabetes."

Oman has excelled in providing primary healthcare facilities, too. After the country's national diabetes programme was set up in 1991, little time was lost in constructing new primary healthcare facilities across the country to prevent and treat diabetes and other noncommunicable diseases, explains Mohammed Lamki, senior consultant endocrinologist at the Royal Hospital in Muscat. "The government then proceeded, once they had the infrastructure, to encourage Omanis to go to family care and tackle hypertension, diabetes and chronic renal diseases," Dr Lamki says. The diabetes programme also led to the establishment of two national diabetes endocrine centres that provide a one-stop service for patients and provide training for future diabetologists and endocrinologists.

The WHO encourages partnerships to promote the prevention and management of noncommunicable diseases such as diabetes. In the Gulf, there are several examples. Among them is the Kuwait-Scotland eHealth

Innovation Network, a partnership between the Dasman Diabetes Institute in Kuwait, the Ministry of Health in Kuwait, the University of Dundee in the UK, the National Health Service in the UK's Tayside region, and Aridhia Informatics, a clinical informatics firm. "The partnership has been doing a lot of work around education for management of chronic diseases such as diabetes," says Azhar Ali, an executive director of the US-based Institute for Healthcare Improvement (IHI) who oversees its partnerships in the Middle East. "They have developed a diploma, and Master's programmes for diabetes care and education."

Research is another focus area for the WHO in its strategy to combat diabetes. In Qatar, research efforts have a sponsor in the Qatar Foundation for Education, Science and Community Development, which was established in 1995. Among other things, the foundation finances research into the treatment and prevention of diabetes. "It facilitates studies that aim to accurately identify how big the problem is, and more importantly, the reason for that, and then how you can address that in terms of treatment and in terms of prevention," explains Muhammad Abdul-Ghani, associate professor at the University of Texas Health Science Centre at San Antonio in the US. "The fact that you have a funding agency that puts diabetes as a top priority is extremely important."

In many cases, there is scope to implement policies and initiatives such as these in other countries across the GCC states. The countries "have a homogenous structure in terms of the culture and population," as Dr Fadhil of the WHO points out. In some cases, especially where policies and initiatives originate from outside the region, careful consideration may be needed of how best to implement them in the region. Dr Ali of the IHI emphasises the importance of adding context to these practices and interventions. "They cannot necessarily be copied and pasted and done exactly the same

¹⁴ Health Authority of Abu Dhabi, *Weqaya presentation*.

¹⁵ International Diabetes Federation, *Extract of the Global Diabetes Scorecard Tracking Progress for Action, Oman*. Available at: http://www.idf.org/sites/default/files/attachments/Oman_Scorecard.pdf

way in Qatar or in the UAE," he argues. "It's not a one-size-fits-all approach."

While the countries are relatively homogenous in terms of their structure and population, differences do exist in the structure of the healthcare systems in countries across the region. Take screening. How can patients be persuaded to be screened? "From 2008 to 2010

the *Weqaya* programme linked screening with the issuance of health insurance cards," says Dr Harrison of Healthways International. "That helped achieve uptake of more than 90%. It would seem possible to replicate this approach in other GCC states that are growing their health insurance coverage." For the time being, though, health insurance is not mandatory across most of the Gulf region. ■

3

The outlook for policy to tackle diabetes

Despite the implementation of a number of policies and initiatives to tackle diabetes in the Gulf, policymakers must step up their efforts to control the disease in the region. For one thing, investment in healthcare is low. World Bank data indicate that healthcare expenditure in the six states of the GCC bloc ranged from 2.2% to 4.9% of GDP in 2012, far lower than the average of 8.9% of GDP across the 34 countries of the Organisation for Economic Co-operation and Development (OECD; see chart). There is significant scope to boost levels of investment in healthcare across the Gulf, whether public or private.

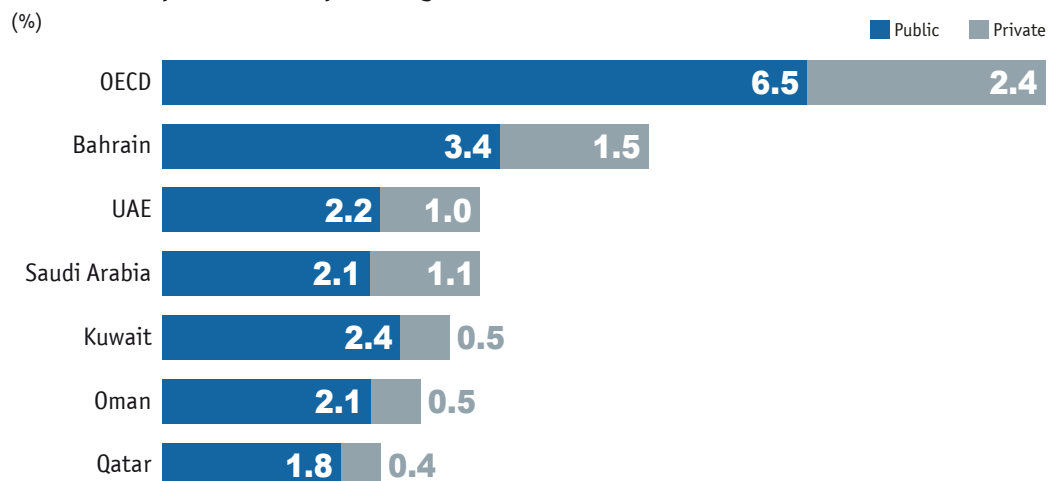
Given low investment in healthcare, it may come as no surprise that spending on diabetes treatment in the Gulf region is limited. While 9.5% of diabetes sufferers worldwide are in the MENA region (36.8m out of a total 387m),

according to IDF statistics, the region accounts for only around 3% of worldwide expenditure on diabetes treatment, equivalent to US\$17bn. Regional governments must make it a higher priority to allocate budgets to healthcare and boost investment in facilities to tackle diabetes. However, as several experts interviewed for this report confirm, it is not just *how much money* is spent on dealing with diabetes, but *how* it is spent that can make a huge difference.

One area that experts say is in need of investment is primary healthcare. “When we talk about diabetes, people think about tertiary and secondary care,” says Dr Fadhil of the WHO. “People need to believe in the role of primary healthcare.” A strong primary healthcare system, integrated into secondary and tertiary healthcare, is essential in combating diabetes. “All the money went into these fancy hospitals,

Figure 2

Healthcare expenditure as a percentage of GDP, 2013



Sources: World Bank; OECD.

[but] the basics haven't been sorted out. So all of those countries really have to break out of this fixation with high-tech medical care and start building robust primary-care workforces and infrastructure," explains Dr Mattke.

He also comments that the workforces across much of the primary healthcare systems in the Gulf are inadequate. "They are not particularly well paid and also not particularly well treated," he observes. "As a result, they are not terribly motivated." Dr Salamah of the SDEA echoes that sentiment: "We do not have sufficient healthcare providers in Saudi Arabia, that is, dedicated staff to look after diabetics, whether general practitioners, family medicine doctors, healthcare educators or diabetic educators." This viewpoint is backed up by research conducted in 2005, which found health educators in only 8% of the primary healthcare facilities in the kingdom at that time.¹⁶

Dr Ali of the IHI emphasises the importance of a team-based approach in primary care, "so it's not just a physician—you have nursing involved, diabetes educators, nutritionists and more." Combating diabetes is not only about controlling blood sugar, he argues; it's what he calls a "multi-system condition". "The evidence shows that a team-based approach is more effective in improving the management of diabetes."

Is deeper healthcare reform the answer?

Some Gulf states are reforming their healthcare systems to one extent or another; reform has the potential to address some of the shortfalls in healthcare by encouraging investment, providing incentives to improve healthcare outcomes and engaging the private sector, including through public-private partnerships. Deeper healthcare reform may have the potential to boost investment in healthcare and bolster primary healthcare systems across the region.

Dr Harrison suggests that "some structure of health systems is important. If the health

system is a free-for-all, with the majority of healthcare costs being spent out-of-pocket and it's relatively unregulated, it's difficult to see how you can inject the necessary structure and order into the healthcare system to tackle a complex disorder like diabetes. But that said, you can design a programme that works within a fully publicly funded system, a fully privately funded system or a hybrid, where the provider side is public, private or a hybrid. It's just a question of understanding the parameters of that health system and working within them."

In fact, to view deeper healthcare reform as a precondition for tackling diabetes may be mistaken. In the short term, the most urgent task is the treatment of those with the disease; targeted measures such as screening can be set to work faster than any healthcare system can be reformed. And in the long term, as policymakers increasingly focus on the prevention of diabetes, it is change beyond the healthcare system that is needed. "Healthcare is where diabetes comes home to [as a cost burden]," says Dr Harrison. "But the problem doesn't start in healthcare, so it's not directly influenced by the healthcare system."

To be sure, change beyond the healthcare system is a top priority for the WHO. The first objective listed in its *Global Action Plan for the Prevention and Control of Noncommunicable Diseases* is to "raise the priority accorded to noncommunicable diseases in development work at global and national levels and integrate prevention and control of such diseases into policies across all government departments." Yet, in the Gulf, while there is discussion among Gulf policymakers of the need for a multi-sectoral approach, evidence of concerted action remains limited for the time being. In Saudi Arabia, the SDEA is calling for such a multi-sectoral approach (see box).

Dr Taheri of Weill Cornell Medical College in Qatar comments: "The best approaches have been where all the stakeholders across the board have been on board in terms of developing an agenda towards obesity and diabetes. That is the

¹⁶ Al-Ahmadi, H. and Roland, M., "Quality of primary health care in Saudi Arabia: a comprehensive review", *International Journal of Qualitative Health Care*, 2005 Aug; 17(4):331-46.

A cross-government approach in Saudi Arabia

In a 2014 paper the Saudi Diabetes & Endocrine Association (SDEA) calls for a cross-sectoral approach in the fight against diabetes in Saudi Arabia as part of the country's National Health Project. The paper proposes that diverse ministries and agencies contribute to combating the disease, as follows.

Ministry of Health: Assigns the task of screening students in school each year. Students with abnormal findings are referred to health workers. Communication with the families of overweight children.

Ministry of Education: Ensures that only healthy foods are available in education facilities. Ensures that students complete one hour of walking or other physical activity daily, in school hours. Introduces "healthy living" into the curriculum.

Saudi Food and Drug Authority (SFDA): Sets national criteria for standards of healthy food and beverages. Mandates more comprehensive labelling of foodstuffs. Provides and enforces licensing for food producers.

Ministry of Agriculture: Enforces SFDA standards for food and beverages and prevents the use of harmful chemicals and hormones in agriculture. Establishes a reward system for best practice.

Ministry of Culture and Information: Restricts advertising of food not compliant with SFDA guidelines. Supports promotion of healthy lifestyles. Sponsors school sports activities. Supports health campaigns of charitable organisations.

Youth Welfare Organisation: Holds national youth camps to promote health and fitness. Provides reduced rates to widen access to sports facilities for those that are overweight. Establishes sports and wellness centres for females.

Ministry of Communication and Information Technology: Establishes a national electronic medical records system. Ensures the IT infrastructure is in place to support public, governmental and private healthcare facilities.

Ministry of Labour: Mandates pre-employment testing in the public and private sectors. Those identified as pre-diabetic or diabetic undergo periodic follow-up checks.

While some of these proposed measures may touch on thorny issues, the SDEA policy paper draws attention to some of the opportunities available if Saudi Arabia's leaders choose to sponsor a cross-sectoral approach to combating diabetes in the kingdom.

key—the co-ordination and the involvement right across the board: from the mayor to the police, to urban planning, to everything. Once everybody is involved, that's when the best outcomes occur." In Abu Dhabi, the *Weqaya* team has provided input into urban planning guidelines to include a focus on green spaces, cycle paths and walkability. "Without multi-sectorality, nothing will happen," states Dr Fadhil of the WHO.

In the Gulf, one particular opportunity presented by this approach is the involvement of food regulators and trade and finance authorities, as Dr Harrison observes. The Gulf countries import the bulk of their food from outside the

region—potentially providing governments with a lever with which to control the food available to their populations. "This means that you've got a key node at the ports where food is being imported where you can put regulations around the constituents of food," he comments. "That creates the control nexus where you can intervene to make sure that the food becomes healthier."

Structural measures

Gulf states may find themselves reaching for that lever. Dr O'Flaherty of the University of Liverpool points out that efforts elsewhere in the

world to promote physical activity have largely fallen flat; initiatives targeting improvements in diet have done better. Still, he believes that more must be done. “We are spending a lot of money on individual-level approaches to obesity and behavioural change regarding obesity, but compared to population level, they will not deliver enough benefit to justify their expense,” he says. “Structural measures are the most important strategy.”

That means regulation. Examples of regulation include banning trans fats, requiring clear food labelling or forcing reductions in salt in bread and breakfast cereals. The IDF is among those that have been calling for greater regulation to tackle diabetes. For his part, Faisal Al-Refaie, director of clinical services at the Dasman Diabetes Institute in Kuwait, would also like to see tougher regulation. “There is no obligation for food manufacturers in Kuwait to publically disclose the kind of detail that exists in the West,” he points out. “We would like to see it as a policy in Kuwait through legislation.”

Regulation may also include, for example, restrictions on marketing foods and beverages. “The key public health target for reducing obesity is focusing on reducing the marketing exposure to calorie-dense food, particularly on kids,” says Dr O’Flaherty. He believes that reducing marketing exposure to unhealthy foods—and in particular foods that are heavy in added sugar—is a powerful measure. This could entail requiring higher standards of advertising, restricting the times of day when unhealthy food and beverages may be advertised on TV, and ensuring that advertising includes space dedicated to healthy messaging.

There is room for even tougher measures, too. Among them is taxation of sugary food and drinks in order to reduce sugar intake, especially among children. Buyers of fizzy drinks are

sensitive to price, according to Dr O’Flaherty, who says that recent legislation in Mexico to tax sugary drinks has contributed to declining obesity rates there. “Taxing or making it more difficult to access sugar will be an important measure,” he foresees, “particularly given that [the Gulf] is one of the regions that is importing a lot of sugar.”

Efforts to tackle diabetes need not—and indeed must not—come from policymakers alone. Much of the impetus for effective change in behaviour patterns around diet and physical activity, points out Mr Becker, is likely to come from patriarchal or matriarchal figures within family clans. Engagement with the wider community also has an important role to play. Development of the vision and the strategies to combat the disease need to be driven in partnership with the community, for example with youth organisations, sports clubs, voluntary organisations and more.

There is significant scope for the religious side of the community to become more deeply involved in the fight against diabetes in the Gulf region. “I think we can all benefit from re-reading Hadith teachings, even for food and food portions,” argues Mohammed Zamakhshary, an associate professor at Alfaisal University in Riyadh, Saudi Arabia. Dr Zamakhshary points out that the Hadith teaches that one-third of the stomach is for food, one-third for water, and one-third is to be left empty—a plain message apparently understood by too few.

Co-ordinated public health messaging delivered by religious leaders can reach significant proportions of the population and can be potent. Says Dr Zamakhshary: “There is a very, very good body of knowledge in the Quran that I don’t think we tap into enough in terms of public-health messaging.”

Conclusion

The growth of diabetes in the Gulf region has been significant in the recent past, driven in part by the rise in oil prices from under US\$20 to over US\$140 per barrel in the decade to 2008. Without significant efforts to tackle diabetes, half of the population may suffer from the disease within the coming decade.

The direct economic burden of diabetes is high. Looking ahead, healthcare costs related to diabetes are likely to rise further as prevalence continues to rise, in particular among the young; this means that the growing numbers of those living with the condition will be doing so for longer. In the Gulf, diabetes risks becoming a whole-of-adult-life disease, rather than an end-of-adult-life disease.

However, the cost burden of diabetes also weighs heavily on the wider economy. In the Gulf countries, which are driving efforts to diversify away from oil and involve the local population in the knowledge economy, diabetes represent a significant risk to further development.

Experts interviewed for this report highlighted a number of policy recommendations to tackle the disease in the Gulf countries:

- **Boost investment in healthcare:** Investment levels in healthcare in the countries of the

region, ranging from 2.2% to 3.9% of GDP in 2012, fall far short of international norms, for example the OECD average of 9.3% of GDP. Clearly, there is scope to boost levels of investment in healthcare across the Gulf, whether public or private.

- **Adopt regional practices:** There is little evidence that Gulf policymakers are taking concerted action to tackle diabetes. However, policymakers in various GCC countries have implemented a number of sound, if isolated, measures and initiatives. In many cases, these examples of good practice can be replicated in other countries in the region as well.

- **Strengthen primary healthcare:** For many countries in the Gulf, a strengthening of primary-care infrastructure has significant scope to tackle diabetes, in particular by reducing complication rates. This includes staffing primary-healthcare institutions with qualified, motivated personnel and strengthening the ties between primary, secondary and tertiary healthcare. A team-based approach in primary healthcare can be effective in improving the management of diabetes.

- **Introduce screening:** Screening is a cost-effective way to track those who are at risk of developing diabetes and those who are already diabetic. Monitoring allows healthcare practitioners to take targeted action to address

areas of concern and enables patients to manage their approach to the disease, too.

- **Take a cross-government approach:** A multi-sectoral approach is needed to better tackle diabetes in the Gulf region. This requires an understanding that the burden of diabetes is falling on the healthcare system, but the causes of diabetes lie beyond the healthcare system. A multi-sectoral approach may include urban planning, education, labour, trade and more.
- **Introduce tough new legislation:** Regulation of unhealthy food and drink is needed to tackle diabetes in the Gulf. This includes restricting

advertising—especially to children—of products that are laden with sugar. A further need is taxation of sugary food and drinks in order to reduce sugar intake. Taxing fizzy drinks is likely to make a contribution to efforts to lower rates of overweight and obesity in the region.

- **Engage religious leaders:** Religious leaders across the Gulf bloc are in a position to deliver potent public-health messaging to the heart of the community. The wider community, including youth organisations, sports clubs, voluntary organisations and the like, can also be more deeply involved in tackling diabetes.

While every effort has been taken to verify the accuracy of this information, The Economist Intelligence Unit Ltd. cannot accept any responsibility or liability for reliance by any person on this report or any of the information, opinions or conclusions set out in this report.

LONDON

20 Cabot Square

London

E14 4QW

United Kingdom

Tel: (44.20) 7576 8000

Fax: (44.20) 7576 8500

E-mail: london@eiu.com

NEW YORK

750 Third Avenue

5th Floor

New York, NY 10017

United States

Tel: (1.212) 554 0600

Fax: (1.212) 586 1181/2

E-mail: newyork@eiu.com

HONG KONG

1301 Cityplaza Four

12 Taikoo Wan Road

Taikoo Shing

Hong Kong

Tel: (852) 2585 3888

Fax: (852) 2802 7638

E-mail: hongkong@eiu.com

GENEVA

Rue de l'Athénée 32

1206 Geneva

Switzerland

Tel: (41) 22 566 2470

Fax: (41) 22 346 93 47

E-mail: geneva@eiu.com