Fighting prostate cancer in the Mexican healthcare system:

# Reducing inequality and improving care





# **About this report**



Prostate cancer is the most common type of cancer among Mexican men, making it a matter of urgent concern. There are multiple barriers to care, including a segmented provision of healthcare system services, social stigma that limits diagnosis, a lack of training for healthcare professionals, and limited resources, both material and human. While these challenges may loom large, this report seeks to identify and quantify precisely where these breakdowns in care occur and to illuminate possible solutions. With coordinated intervention, the diagnosis and treatment of prostate cancer can be vastly improved, including access to innovation.

This report aims to explore inequities surrounding high-quality care and prostate cancer across Mexico. Despite advances in innovative therapies and the establishment of more modern national cancer control strategies, both the data on outcomes and on-the-ground experience for patients indicate a great variation in access to impactful and timely care related to the second most prevalent cancer in Mexico. This was approached using two research phases described below.

Phase 1 of the research involved a literature review which (1) evaluated the epidemiological burden of prostate cancer in Latina America and Mexico and its risk factors, (2) sought to understand the direct and indirect burden of prostate cancer, (3) evaluated the current state of the Mexican health care system and (4) reviewed current clinical pathways and policy development which fosters the prevention of prostate cancer. It also looked to:

- Evaluate the state of prostate cancer care in Mexico and the source of inequities in the country.
- Identify and research the best practices for prostate cancer care in Latin America.

Phase 2 focused on a qualitative analysis of the inequities around prostate cancer by engaging stakeholders and initially conducting primary interviews to refine initial insights and conclusions associated with the burden of the disease. It also focused on developing a virtual expert panel to discuss the research findings and potential roadmaps moving forward, as well as refining the research. We would like to thank the following individuals for sharing their insight and experience:

- Dr Isabel del Rosario García Castellanos, Executive Secretary, Medical Director, Haz lo Posible Foundation, Mexico
- Dr Hugo Arturo Manzanilla Garcia, Urologist, Urology Department, General Hospital of Mexico
- Dr Miguel Gonzales-Block, Associate Researcher, Anahuac University; General Director, Evisys Consulting
- Ms Leticia Aguiar Green, Co-Coordinator, Latin American Movement against Prostate Cancer (MOLACAP)
- Ms Mayra Galindo Leal, Director, Mexican Association for the Fight against Cancer (AMLCC);
   President, Movement Together against Cancer
- **Dr Mario Basulto Martínez**, Urologist, Adjunct-Professor, Urology Department, High Specialty Regional Hospital of the Yucatan Peninsula (UNAM)
- Dr Rocío Ortiz-López, Cancer Research Director, Monterrey Institute of Technology and Higher Education (ITESM)
- Dr Francisco Rodriguez-Covarrubias, Urologist, Department of Urology, Salvador Zubirán National Institute of Medical Sciences and Nutrition (INNSZ); Former President, Mexican Association of Urologic Oncology
- **Dr Javier Medrano Sanchez**, Urologist, Urology Department, Aranda de la Parra Hospital, Guanajuato; Head of Urology Services, IMSS Specialty Hospital National Medical Center of Bajío, Guanajuato; Vice President, National Association of Urologists (ANUER)
- **Dr Luisa Torres-Sánchez**, Researcher in medical science, National Institute of Public Health; Member of the National Researchers System
- **Dr Mariano Sototmayor de Zavaleta**, Urologist, Urology Department, Salvador Zubirán National Institute of Medical Sciences and Nutrition (INNSZ)

Astellas commissioned this study, which was independently conducted by the Economist Impact team. The Economist Impact bears sole responsibility for the content of the report. The findings and views expressed in the report do not necessarily reflect the views of the sponsor. The research was led by Marcio Zanetti, with input from The Economist Impact team consisting of Giulia Garcia, Carolina Zweig, Camilo Gutierrez and Mateus Getlinger. The report was written by Biz Pedersen and edited by Melissa Lux and Alcir Santos Neto.

# **Contents**

- **5** Executive Summary
- 6 Introduction: The burden of prostate cancer
- **7** Chapter One: The political environment
- **9** Chapter Two: The healthcare environment
- **14** Chapter Three: Success stories from Latin America
- **16** Chapter Four: The way forward
- **19** References

# **Executive summary**

Prostate cancer is the second most common type of cancer among the male population worldwide. In 2020 alone, 1,414,259 million new cases were reported globally, resulting in 375,304 deaths. Prostate cancer rates have continued to rise over the past two decades in Mexico, currently becoming the most common cancer (incidence rate of 42.2 per 100,000) among Mexican men and the first leading cause of cancer in Mexico (mortality rate 10.6 per 100,000). One out of every seven Mexican men will have prostate cancer during their lifetime.

With these facts in mind, prostate cancer should be prioritized by the Mexican government. While efforts have been made to provide free universal healthcare, the system provision of services remains segmented, with resources particularly strained due to the covid-19 pandemic. To address this crisis, it is necessary to increase the resources available to medical practitioners. However,

nedical practitioners. However, additional resources alone will not be sufficient to improve the quality of care

available to patients.

Efforts must be made to raise awareness among the public

about prostate cancer and the value of early detection, while simultaneously working to reduce social stigma around the preventive care specific to this disease. Early detection is not only key to preventing prostate cancer death, but it also can significantly reduce the cost incurred by the healthcare system.

Medical professionals must also receive further training and education specific to prostate cancer to facilitate early detection. By increasing their knowledge of the disease and the available treatments, patients will receive a significantly higher quality of care. Inequity must also be addressed by ensuring even distribution of resources among hospitals in urban and rural areas. None of these changes will be possible without shifts in the current policies.

In addition, Mexico can learn from the success stories of other Latin American countries. These initiatives focus on cancer, typically involving state and non-state actors, such as patient advocacy groups, researchers and physicians, and a restructuring of the care pathway in their efforts.

By addressing this health issue from multiple angles, Mexico will be able to improve the quality of care it can offer prostate cancer patients while simultaneously reducing costs to the system.



# Introduction: The burden of prostate cancer

Prostate cancer is the second most common type of cancer among the male population worldwide, counting 1,414,259 new cases and causing 375,304 deaths in 2020.¹ Among both sexes in Latin America and the Caribbean, Prostate cancer is the most frequent tumor and is the fourth highest mortality rate among all cancers, with an incidence of 214.522 per 100,000 cases in 2020. Table 1 shows the burden of the disease in selected countries.

Table 1. Prostate cancer rate country comparison (2020)

Population	Incidence (ASR)	Mortality (ASR)	Survival rate (morality/incidence)
Mexico	42.2 per 100,000	10.6 per 100,000	0.25
Brazil	78 per 100,000	13.7 per 100,000	0.18
Colombia	49.8 per 100,000	11.9 per 100,000	0.24
Chile	56.7 per 100,000	14.0 per 100,000	0.25

Source: Global Cancer Observatory (2020)<sup>1</sup>

In Mexico, prostate cancer has increased in the last two decades. Among men, it is currently the second most incident cancer in the country, with 26,742 new cases in 2020.¹ It is also the third leading cancer death, with 7,457 cases in the same year.¹ According to data from the Mexican Institute of Social Security (IMSS), one in seven men will suffer from the disease in their lifetime.² ¹ ¹ This type of cancer is a preventable and detectable disease and must be considered a health emergency. The country has made some progress in recent years, but there are still many limitations that affect pathways for quality care.

The first chapter of this report will highlight the political environment, including economic and socioeconomic challenges. The second chapter will examine the healthcare environment and prostate cancer care. The third chapter will explore success stories from Latin America and what the country could replicate in its scenario to improve prostate cancer care. The final chapter shows the way forward and recommended efforts in four main areas.

# **Chapter One:**The political environment

It is difficult to discuss healthcare without examining the political context within a country. With each administration comes new priorities and new approaches to healthcare. For example, in December of 2020, the government announced universal free medical services in federal hospitals. However, as the healthcare system remains segmented, there is concern about policy implementation.

One example of the challenges of developing and implementing new policies is the creation of a National Cancer Registry (RNC). The development of this comprehensive registry was one of the government's goals; however, thus far, the program has yet to be established.<sup>5</sup> Meanwhile, the country has the National Cancer Registry Network (NCRN), a population-based cancer registry. However, there is no obligation for hospitals or health facilities to submit their official data to this registry, and it is used by ten states, only representing 12.15% of the population.<sup>5</sup> With such limited participation, the registry cannot serve its intended purpose.

Therefore, these trends may pose a difficulty for change in the country, particularly in healthcare, which impacts the scenario of prostate cancer care in Mexico, which requires changes in its care pathway. Furthermore, the pandemic placed pressure on the Mexican healthcare system. This additional strain on resources has affected the government's ability to enact and fund new policies.

# **Economic challenges**

While Mexico is the second-largest economy in Latin America, it has consistently underperformed in growth, inclusion, and poverty reduction for the past 30 years.<sup>6</sup> Additionally, the covid-19 pandemic has taxed strain on the Mexican economy, causing it to contract 8.2% in 2020 – higher than the overall 7% contraction of the region during the same period.<sup>7</sup> Though Mexico's real GDP is expected to grow, reaching 5.9% in 2021, it is nonetheless estimated that the economy will not recover before 2023.<sup>8</sup>

This all adds to an economic situation that may represent budget cuts for cancer care expenses and inefficient resource allocation for healthcare in general. With ever-growing inequality and poverty rates, the low-income population's access to prostate cancer treatment, which already was a significant issue before the pandemic, may prove to be even more limited, with variables such as time of diagnosis or limitation of primary care possibly getting even worse.

This recovery is also tightly linked to the recovery of the US economy. For example, while the peso is expected to return to its prepandemic value by the end of 2021 and continue to appreciate until 2023<sup>6</sup>, this forecast is mainly based on the anticipated rebound of the US economy. In turn, this will create a rebound in

the manufacturing sector, increase oil prices, and create a stable fiscal position.<sup>6</sup>

### **Socioeconomic barriers**

Prior to the pandemic, Mexico was already among the 25% most unequal countries globally. The pandemic has only further emphasized this issue as women, low-educated and informal workers have borne the brunt of the responsibility for rebuilding the economy, without necessary resources or aid from the government. Table 1 highlights the macroeconomic indicators of the country.

Mexico's population is the second-largest in Latin America and is expected to reach 134.1 million by 2024.<sup>11</sup> Although this is only a 1% growth rate, it will especially impact the labor force, as almost a quarter of the population is under 15 years old. But healthcare and education will hinder the capitalization of this demographic trend.<sup>12</sup>

Low-skilled female workers have lost more jobs and have suffered significant income losses of any portion of the population.<sup>10,13</sup> This fact is alarming when considered in the context of

prostate cancer and the vital role that women play as caregivers and support systems for prostate cancer patients.

For instance, our interviewees highlighted that as men are often the primary breadwinner of their household, a prostate cancer diagnosis usually leaves their daughters in the position of needing to become the primary earner for their family. Given the disproportionate rates at which low-income women have lost their jobs during the pandemic, this puts families already wrestling with a debilitating disease at the considerable disadvantage of losing the only source of income left to them.

Unemployment represents a significant and increasing challenge for all Mexicans. <sup>14,15</sup> It represents an economic problem, but as individuals lose their jobs, they also lose access to care via the Social Security System, thereby creating an additional healthcare crisis. Moreover, due to the economic stress of the pandemic, several indicators have considerably worsened during the period, as shown in Table 1, such as the rise of unemployment in Mexico to 4.4% in the first quarter of 2021. <sup>15</sup>

**Table 2. Macroeconomic indicators** 

Indicator	2017	2018	2019	2020	2021	2022	2023
GDP per head (US\$)	9,291.6	9,688.8	9,953.5	8,319.1	9,577.6	10,175.5	10,966.7
GDP per head (US\$ at PPP)	19,729.2	20,262.6	20,463.3	18,770.8	20,200.0	21,020.0	21,800.0
Population (million)	124.8	126.2	127.6	128.9	130.3	131.6	132.8
Labour force (million)	54.2	55.6	57.0	53.3	55.6	56.8	58.0
Unemployment rate (%)	3.4	3.3	3.5	4.4	4.0	3.5	3.4

Source: The Economist Intelligence Unit (2021)

# **Chapter Two:**The healthcare environment

The Mexican health system is composed of three main subsystems, each responsible for funding, service provision and regulation<sup>16</sup>, as shown in Table 3. Currently, the healthcare system is in a state of transformation as in 2020, the Ministry of Health replaced the primary public health insurance program, Seguro Popular, with a new program, Instituto de Salud y Bienestar Social (INSABI). In total, 73.5% of the population is affiliated with the institutions of the National Health System. The table below illustrates the percentage of the total population according to eligibility conditions.

The first two forms of public insurance, the Mexican Institute of Social Security (IMSS) and the Mexican State's Employees' Social Security and Social Services Institute (ISSSTE), insure private-industry employees and public employees, respectively. The IMSS covers nearly 51% of the population, while the ISSSTE covers 8.8% of all workers.<sup>17</sup>

The switch from Seguro Popular to INSABI is intended to benefit those without access to any other form of healthcare by eliminating any cost associated with accessing care. While

60 50 40 35.5% 30 20 8 8% 10 1.2% 0 IMSS INSABI or ISSSTE or Private PEMEX SDN Other IMSS Seguro popular ISSSTE estatal institutions or SM institutions Bienestai

Figure 1. Total population according to eligibility condition

Source: INEGI, 202017

the INSABI program is new, from 2018-2019, 37% of the population was insured by the federally-funded Seguro Popular program and a similar number of people are predicted to use the new INSABI program.<sup>17</sup> The new

program also differs in management levels. Seguro Popular was locally managed and INSABI will now be managed from the federal level. This is intended to centralize coverage and improve offered services.

Table 3. Mexican health system

Mexican health system16									
	PUBLIC HEALTHCARE						PRIVATE HEALTHCARE		
Agency/Sector	IMSS (Mexican Social Security Institute) <sup>16</sup>	ISSSTE (Insitute of Social Security and Services for State Workers) <sup>16</sup>	State ISSSTE <sup>16</sup>	PEMEX (Mexican Patroleum Company) <sup>16</sup>	SEDENA (National Defense Secretariat) / SEMAR (Secretariat of the Navy) <sup>16</sup>	Federal and state governments <sup>16</sup>	Insabi (Institute of Health for Wellbeing) <sup>16</sup>	Private	Sector <sup>16</sup>
<u>6</u> 0	Tripartite contributions	Bipartite contributions	Bipartite contributions	Budget	Budget	Taxation, out-of-pocket	Taxation	Out-of- pocket spending	Voluntary Insurance
Funding	325.507 million pesos <sup>18</sup>	64.203 milli	on pesos <sup>18,19</sup>	17.541 million pesos <sup>18</sup>	6.463 million pesos for the Army, 2.540 million pesos for the Navy <sup>19</sup>	109.501 million pesos <sup>19</sup>	198.334.10 million pesos <sup>20</sup>	28.94 billion pesos <sup>21</sup>	5.64 billion pesos <sup>21</sup>
Funding per Capita	\$4.501 pesos <sup>18</sup>	\$4.633	pesos <sup>18</sup>	\$29.803 pesos <sup>18</sup>	\$5.421 <sup>18</sup> (EIU Estimate)	\$3.119 <sup>18</sup> (EIU Estimate)	\$2.911 pesos <sup>20</sup>	\$1.106.602 <sup>21</sup> (EIU Estimate)	\$215.661 <sup>21</sup> (EIU Estimate)
_	IMSS for most	ISSSTE for most	Federal ISSSTE	PEMEX for most	Armed Forces	Federal and state providers	Federal and State Providers in 23/32 States <sup>22</sup>	Private p	roviders
Provision	MoH and private as needed	MoH and private as needed	State ISSSTE and private	Private and IMSS	Navy	MoH and private providers for speciality services; separate IMSS for rural poor		MoH for te charging	
ø	Private formal sector insured	Federal bureaucracy	State bureaucracy	PEMEX employees	Corps	Uninsured	Uninsured	Dissatisfied and self	
Coverage	51% <sup>17</sup>	7.7% <sup>17</sup>	1.1% <sup>17</sup>	1.3%17		1.2% <sup>17</sup>	35.5% <sup>17</sup>	2.8%17	
O	47.245.909 people <sup>17</sup>	7.165.164 people <sup>17</sup>	1.041.534 people <sup>17</sup>	1.192.255 people <sup>17</sup>		1.149.542 people <sup>17</sup>	32.842.765 people <sup>17</sup>	2.615.213 people <sup>17</sup>	

Total Population <sup>17</sup>	126,014,024		
Total Affiliated Population <sup>17</sup>	92,582,812		
Share of population with some health service <sup>17</sup>	73.47%		

"In the state of Oaxaca, we realized that hospitals must be accredited to treat disease and while many are accredited for breast cancer, they are not for prostate cancer, so the hospital will not be paid for a patient's treatment. As a result, people go home to spend their last days at home with their family."

Mayra Galindo Leal, General Director of the Mexican Association for the Fight against Cancer (AMLCC)

The designated budget for INSABI for 2021 is 4.5% larger than the budget for the final year of coverage by Seguro Popular in 2019, which equates to an \$8,647 million pesos to cover an extra 14.4 million people that gained coverage through INSABI over the last two years. <sup>23</sup> However, this expansion of the budget is nominal and keeps the funding per capita at \$2,911, which is 20.4% less than in 2019 under Seguro Popular. This becomes an issue due to the plan for INSABI to expand its coverage even further. <sup>23</sup>

In 2000, 55.6 million people did not have access to healthcare in Mexico. With the introduction of Seguro Popular in 2003, coverage dropped to 22.4 million people in 2018 and the implementation of INSABI is projected to decrease coverage even further to 11.8 million by 2024.<sup>23</sup> However, continuing to increase the number of affiliated patients in the system without simultaneously increasing the budget limits the prospect of success for INSABI in the coming years.<sup>23</sup>

Moreover, INSABI has also changed its budget configuration internally. By 2021, the budget spending allocated for the treatment of highly complex diseases has decreased by 27% compared to funding under Seguro Popular.<sup>23</sup> According to the Centro de Investigación Económica y Presupuestaria (CIEP) in Mexico, this equates to eliminating care for 3,000 breast cancer patients, 6,200 neonatal care patients and 15,000 patients with HIV.<sup>23</sup> Given the lowered budget under INSABI, it is unlikely that the new program will achieve its goal of offering care to an additional 10 million

people by 2024.<sup>23</sup> Those who are covered by INSABI may receive lower quality care, since there has been a decrease in funding for complex diseases that leaves many conditions uncovered. Therefore, there seems to be an inconsistency between the projection made and the actual investment.<sup>23</sup>

The transition between programs has involved a considerable organizational restructuring that has already encountered several issues.

One example is the purchasing of medication.

Previously managed by the Administration

Office, INSABI is now in charge of acquiring medication.<sup>24</sup> However, there have already been significant delays and interruptions to the supply chain, especially for anti-cancer medications, which has created distress among the public who rely on these crucial medications.<sup>25</sup>

Mayra Galindo Leal, General Director of the Mexican Association for the Fight against Cancer (AMLCC), explains how the transition between programs has resulted in a gap in care: "To date, we have no information on how INSABI works and many medications that were previously available through Seguro Popular are no longer accessible. Many hospitals that are members of INSABI do not know if this insurance will continue to pay for the services that patients need. In the state of Oaxaca, we realized that hospitals must be accredited to treat disease and while many are accredited for breast cancer, they are not for prostate cancer, so the hospital will not be paid for a patient's treatment. As a result, people go home to spend their last days at home with their family."

Funding has been another significant challenge for INSABI, both in terms of the bureaucratic distribution process and quantity. INSABI, unlike Seguro Popular, funds hospitals and clinics directly rather than going through a state-run intermediary. However, INSABI began with no clear guidelines or operational processes, meaning that federal health entities could not create their budgets as they did not



know what funding they would receive through the program.<sup>26</sup> Available funding is distributed unequally between rural and urban facilities. This deficit in both technological and human resources creates further inequity as patients living in rural environments do not receive the same expected treatment or quality of care that patients in urban environments receive. While overall prostate cancer mortality risk in Mexico increased by 2% annually from 2000-2010, the rate in states with fewer resources and more barriers to care ranged from 4.4 to 7.7%.27 Furthermore, the budget for healthcare spending has already been cut by about 30% in 2021, making it seem unlikely that healthcare offerings will improve in the near future.<sup>28</sup>

Healthcare spending in Mexico was already low compared to its regional peers prior to 2020. In 2019, the healthcare expenditure in Mexico was 5.5% of the GDP, lower than other larger economies in Latin America.<sup>21</sup> The further reduction of this budget is mainly due to the economic stress created by the

covid-19 pandemic. The pandemic has not only affected healthcare budgets, it has also put enormous strain on the human resources within the healthcare system. With hospitals overrun with covid-19 patients, preventative care and screenings are frequently forgotten amid the ongoing crisis. As a result of the pandemic, prostate cancer patients are being diagnosed at a later stage or not receiving the needed treatment.<sup>29</sup>

#### **Prostate cancer care**

Despite being the most prevalent cancer among men in Mexico<sup>1</sup>, prostate cancer often goes undiagnosed until the advanced stages of the disease. There are several barriers to care, including geographic inequality, social stigma, and a general lack of awareness around the disease, for both the public and medical professionals. The limit of access to the Mexican healthcare system only makes these challenges more difficult to overcome, as the unequal distribution of services impacts patients' different access to the available infrastructure for prevention and treatment.

There is no national screening program for prostate cancer in Mexico, as these screening programs are known to be high cost, and there is a lack of evidence that they, in fact, reduce mortality. The lack of a national cancer registry, on the other hand, is a problem as registries provide key data to policymakers and providers alike. While screening programs may not decrease mortality, early detection can reduce the cost each patient represents to the healthcare system.

Currently, there are no major government initiatives to educate the public about the comorbidities and prevalence of prostate cancer, rather than the National Day of Fight Against Prostate, November 29.<sup>33</sup> Without attempts to raise awareness among the public, those at high risk rarely pursue testing. As highlighted in our expert panel, patient advocacy groups attempt to breach this gap and educate the public, but their efforts are

often not well-publicized for groups related to prostate cancer. Patients who do receive a diagnosis often get lost along the care pathway as there are insufficient human resources and systematic support to ensure they receive care.<sup>34</sup> For instance, according to OECD, in 2016, only 0.8 general practitioners were registered in the entire Mexican health system for every 1,000 people.<sup>35</sup>

Due to societal gender roles in Latin America, this issue is further exacerbated by social stigma as patients are often unwilling to do the required testing, such as rectal exams. This means that early detection is minimal and most patients only present themselves for care when the disease is so advanced their symptoms can no longer be ignored. Informational campaigns that address the importance of testing alongside a discussion of masculinity can help break down this stigma. Doctors must also be receptive to the concerns of patients to help put their fears to rest.

As discussed in our expert panel, the efforts of patient advocacy groups are necessary to address these sorts of cultural problems, and with their access to patients, these groups can exercise significant influence and work to educate the public at large. Advocacy groups often work to teach patients about their rights and treatment options. These awareness campaigns should target men and potential caregivers such as their wives, children, and younger family members who could become advocates for their care. Advocacy groups also frequently aim to integrate patients into policymaking initiatives. However, these programs tend to be underdeveloped in rural areas where they are often needed the most.

In addition, there are challenges in public health education. For example, primary care medical professionals themselves are often not aware of the prevalence of the disease, the most common symptoms, the importance of early screenings, and the available

treatments.<sup>36</sup> This challenge begins in medical school, where urology is not a focus of primary care training, nor is it a typical specialty for medical students to pursue. This results in a lack of specialists working in Mexico.

Furthermore, patients do receive equal and consistent care. Obstacles in the provision of services have led to inequitable access and treatment. To begin with, the scope of the problem is not clear as there is no single data source that traces instances of cancer within Mexico. While there has been dialogue on establishing a national registry for cancer patients, the National Cancer Registry (RNC), these efforts have never been completed. It will be challenging to collect this type of data on a national level without federal funding and system-level implementation. Regulation 048, passed into law in 2017, laid out standards for the diagnosis and care of prostate cancer. However, these standards are still not consistently implemented. This represents how challenging it is to overcome the segmentation of the provision of services in the healthcare system even with federal guidelines.

Another struggle is with geographic inequality. Depending on funding and location, patients will experience a different standard of care. There is a difference in patient care with private versus public insurance, with the former offering better quality services. Even among those privately insured, differences in quality of care arise from the type and extent of the policy.

Additionally, there is a valid concern that the healthcare system transition into the INSABI may leave patients at risk of being overlooked by the system based on education level. For example, patients with private insurance are more likely to be educated about the dangers and warning signs of prostate cancer. Officials, for example, are publicly insured by the ISSSTE and possibly have a higher educational level than those covered by the Insabi.

# Chapter Three: Success stories from Latin America

To better understand what specific practices would most benefit Mexico in its effort to address prostate cancer in a targeted and efficient way, it is helpful to examine the successes of other countries in Latin America. Below we will review the policies of three nations: Chile, Brazil, and Colombia. We surveyed the policies they have implemented to address cancer within their own countries, investigating how they have increased sustainability and reduced care segmentation in their healthcare systems. Moreover, we link these efforts to possible pathways Mexico could take in the future.

#### **Brazil**

Since 1969, The São Paulo Registro de Câncer de Base Populacional has tracked cancer data within the São Paulo municipality.<sup>37</sup> With resources being provided by the Municipal Health Secretariat and the Federal Ministry of Health to maintain the program's efforts, this pioneering initiative works in partnership with the faculty of Public Health at the University of São Paulo (USP) for its operation.<sup>38</sup> This is an example of cooperation among many stakeholders to understand the cancer landscape at the municipal level.

In a further effort to centralize health data, Brazil founded the Departamento de Informática do Sistema Único de Saúde do Brasil (DATASUS).<sup>39</sup> Through the use of Electronic Health Records

(EHRs), this program has been able to collect data from primary care physicians, several national health surveys, in addition to registry data from hospital-based and regional population-based cancer registries.<sup>39</sup> While the Mexican health system is more segmented than the Brazilian health system, it is necessary to move towards data unification. A comprehensive database is not only informative for future policymaking but also enables monitoring of the policies already in place.

In particular, the Barretos Cancer Hospital in São Paulo has worked to fight cancer since 2003 by offering free breast cancer screenings.<sup>40</sup> This non-profit hospital is one of the most important cancer treatment and research centers in the country. In addition to free screening, this hospital also provides complete treatment programs, medical education for clinicians and conducts independent research.<sup>40</sup> The Barretos Cancer Hospital can serve as an example of how other countries can develop cancer-focused healthcare centers.<sup>40</sup>

There are also efforts to create a space for patients to advocate for themselves and their care through the Instituto Oncoguia. Founded in 2009, the institute runs programs designed to educate the general population on disease prevention and patient rights, offer support services to patients, and help them advocate for themselves. Currently in Mexico, cancer civil societies play a similar role in advocating for patients.

Another noteworthy initiative is the Novembro Azul campaign, a series of public awareness campaigns about prostate cancer focused on the month of November to inform and conscientize the population about treatment, diagnosis and general care about the condition. <sup>42</sup> Aside from awareness efforts, most health institutions offer prostate exams free of charge or at a discounted rate. <sup>42</sup> Other than the National Day of Fight Against Prostate Cancer, Mexico can implement other public awareness initiatives that focus on the prevention and diagnosis of prostate cancer.

#### Colombia

One of Colombia's national cancer registries, Cali's Registro Poblacional de Cáncer de Cali, has collected data on cancer patients since 1962. This registry collects data from both a population-based cancer registry (PBCR) and a hospital-based cancer registry (HBCR).<sup>43</sup> The PBCR tracks new instances of cancer to provide data on the impact of cancer within a community. The HBCR documents all cancer cases on patient care and hospital administration, regardless of geography.<sup>43</sup> Having a comprehensive perspective on cancer rates is helpful to avoid the problems caused by noise in statistics, and hence should be contemplated in Mexico's scenario.

The Cuenta de Alto Costo (CAC) is an effective tool to cover high health expenses on treatment in the country, functioning as a self-managed fund. <sup>44</sup> Differently from Mexico's Fondo de Salud para el Bienestar (FSB), this initiative also aims to link the various stakeholders along the care pathway, including patient advocacy groups, insurance companies, social organizations, medical providers and political representatives. <sup>44</sup>

In an effort to support cancer patients, Fundacion SIMMON was established in 2010. As a patient advocacy group, they work with cancer patients to support high-quality care and early diagnosis. They offer a number of services, including support from psychologists, nurses, nutritionists, educators, and offerings such as workshops, wig loans, and support groups. They also work as advocates within the political system to work toward a comprehensive healthcare system.<sup>45</sup>

#### Chile

A national cancer registry is key to a country's ability to effectively diagnose and treat cancer patients. To that end, Chile has created The Registro Nacional de Cáncer (RNC).<sup>46</sup> As a part of their National Cancer Law, physicians are required to report incidences of cancer to the registry, a policy that should be in full effect within all national institutions this year.<sup>46</sup> This sort of registry is a prime example of successful data collection, which can later be used to inform policy decisions.

In 2011, Chile introduced Acceso Universal con Garantías Explícitas (AUGE), a program designed to improve access to cancer care. This universal health plan began by offering advanced radiotherapy coverage and palliative care to patients and has since offered 17 other cancer-related interventions.<sup>39</sup> This is analogous to Catálogos de Intervenciones de Alto Costo (CIAC), which lists the high-cost treatments the Mexican social security system covers.

To reduce inequality in care, Chile created Programa Adulto Nacional de Drogas Antineoplásicas (PANDA). This program provides clinical guidelines for care to ensure that all patients receive the same high-quality care. <sup>47</sup> Guidelines are linked to reimbursement for healthcare providers. This incentivizes providers to comply with the guidelines as only treatments that are outlined within the guidelines are eligible for reimbursement. <sup>47</sup> With the creation of Insabi, standards of care across Mexican health institutes are also expected to converge, and this case could be used as a benchmark.

Patient advocacy is a crucial perspective to include in the discussion around cancer treatment. For example, MaxiVida, a Chilean patient advocacy group, was officially founded in 2006. Initially exclusively focused on patients with leukemia and gastrointestinal cancers, it has since expanded to represent patients with 12 different types of cancer. 48 4 Groups like this exist in Mexico and advocate for patients to their government, provide support for patients and families, and work to educate the public.

# **Chapter Four: The way forward**

It is evident that the Mexican healthcare system must find a way to improve the access and care of patients with prostate cancer. A multipronged approach involving all key stakeholders is essential to be successful in this endeavor. Therefore, we recommend that efforts should be focused on four main areas: public awareness, education of medical professionals, resource allocation improvement, and policy changes.

### **Public Awareness**

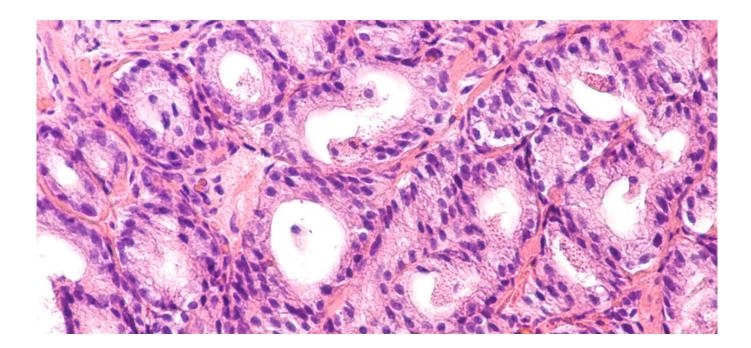
Public awareness is key to improving the early detection of prostate cancer. Patient advocacy groups are perhaps the best situated to facilitate this as they have the pre-existing networks and experience necessary to connect with patients directly. These groups focus on supporting and empowering patients, an essential role if patients are to be able to advocate for their care. They can also work to educate the public at large as to the symptoms of prostate cancer and the importance of screening, thereby increasing the odds of early detection. As the experts in our panel emphasized, it is important to address the social stigma around prostate cancer testing, an issue that advocacy groups are well-positioned to address. As long as this cultural barrier exists, men will continue to resist being tested, even if they are aware of the consequences.

Advocacy groups can only be successful if they are a known resource to patients; therefore,

these groups must continue to increase engagement with those in need. Breast cancer awareness campaigns run by advocacy groups have previously been successful, such as the social media campaigns created by the Mexican Association for the Fight against Cancer (AMLCC)<sup>49</sup>, and can serve as guideposts for improving patient awareness of prostate cancer.

If a patient comes in for testing and is diagnosed at an early stage, they often face an additional economic barrier-they cannot afford to stop working to focus on treatment. Thus, education efforts must also work to educate patients on the resources available to them to help alleviate financial pressure, thereby fighting inequality.

One of the many consequences of the pandemic was a loss of preventative care opportunities, which in turn meant that prostate cancer patients went undiagnosed and untreated while their disease advanced. According to Dr Hugo Arturo Manzanilla Garcia, Urologist, Urology Department, Hospital General de México, "Prostate cancer patients will continue to be ill even with a pandemic. In Mexico, this pandemic generated a situation in which there is no attention to the disease, there is no followup. The patient faces an even greater delay in diagnosis, a lack of necessary medications, and no opportunity to have an appointment with a specialist in a 3rd level institution because there are still cases of covid-19." The covid-19



crisis made clear that patients must be able to advocate for themselves or risk having crucial care delayed. While these circumstances were unprecedented, care simply cannot be delayed.

## **Medical Education**

General practitioners may require further information to successfully detect and diagnose prostate cancer patients.<sup>50</sup> A greater focus on urology and oncology in medical schools' curricula is necessary to provide medical practitioners with the information and experience required to detect early-stage prostate cancer. For example, while Prostatic Specific Antigen is effective, the results are often misinterpreted by general practitioners who have not had sufficient practice administering the test.<sup>51</sup>

One example raised during our expert panel is the work done by the Centro Medico Occidente to teach clinicians about the detection and treatment of renal disease. Primary care physicians were trained in community centers on identifying the early symptoms of renal disease, which then led to earlier referrals to nephrologists. A similar program focused on prostate cancer diagnosis and treatment could be beneficial.

Given that there are insufficient resources<sup>31</sup> to screen all patients for prostate cancer, it is up to the medical professional to develop a strong understanding of the risk factors and symptoms

to strategically screen patients where they deem appropriate.<sup>52</sup>

### **Resource Allocation**

To address inequality, patients must be able to access high-quality care no matter their geographic location or socioeconomic situation. Resources must be distributed equitably and efforts must be made to lift barriers to care to achieve this goal.

Currently, vast differences exist in the quality of care a patient may receive in an urban versus rural area. As of 2020, Mexico had 4,341 hospitals, of which only 46 (3.3%) were located in rural areas. 16 48% of the largest private hospitals in the nation are located in Mexico City, Nuevo León, or Jalisco-the three states with the largest urban populations.<sup>16</sup> Due to the risk of violence to healthcare providers in rural, underprivileged communities, healthcare professionals often avoid working in such areas, as explained by experts. In this case, the population is deprived of high-quality care available to patients in more urban areas. Efforts to improve the security in these areas would directly and indirectly benefit local residents by encouraging medical professionals to seek employment in those areas.

These discrepancies in care are not limited to the difference between rural and urban institutions. Most institutions in Mexico have their own source of funding and rules. For

example, there is no integrated care pathway for prostate cancer patients in Mexico. Challenges range from infrastructure to limited human resources that make consistent care difficult.

In addition, patients must move between healthcare providers due to relocation or changes in insurers. Unfortunately, few resources help smooth this transition for patients, and many experience interruption in care and are left to cope with these challenges.

The lack of funding delays both diagnosis and treatment – an issue imposed by the replacement of Seguro Popular with INSABI. Patients who are already reliant on public insurance are often without any other resources, and therefore, they must wait and hope to receive the care they require.

During the covid-19 crisis, the public, private and social security systems worked together to fight the pandemic. Though these circumstances were both exceptional and tragic, this collaboration provided a model showing how a less compartmentalized system can benefit patients. Resources must be distributed more equitably and care offered more consistently if the health system is to move away from segmentation.

# **Policy Changes**

Policy change is key to fighting segmentation and inequality within the healthcare system. Change must come from a high level to support the other actions outlined above. Otherwise, individual medical institutions cannot act on the required changes to give prostate cancer patients the care they need without the necessary resources and structural support.

It will be challenging to address the problem of prostate cancer without full knowledge of the scope of the issue. To this end, a national registry of cancer instances within the country is essential to collect data. Mexico may look to countries such as Chile, Brazil, and Colombia, which have successfully implemented such registries. Stakeholders will be able to use this information

to guide policy development once they have data on the extent of prostate cancer in Mexico.

Healthcare institutions who participate in the social security system are not subject to requirements for re-accreditation of their facilities. This creates yet another circumstance where the quality of care that a patient with private insurance can receive at a fully accredited institution will vary widely from the care a patient will receive through their public insurance. Without policies in place to guarantee consistent standards across all healthcare institutions and end this segmentation, equitable care will remain impossible.

When the government implements a significant policy change, such as the shift from the Seguro Popular program to the new INSABI program, it is essential that the transition be carefully managed not to create a lapse in care. As it currently stands, the transition between the two systems has been turbulent, leaving some patients unprotected. The disarticulation of this process has correlated with inconsistent guidelines for clinicians, interrupted medication supply chains and disrupted care for some patients.

For a new program to succeed, it must be cost-effective, sustainable and receive appropriate support. Without an increase in funds, clear regulations for clinicians, and administrative oversight, the care of all patients in a free universal healthcare system is at risk. While segmentation cannot be easily solved, it is crucial to make this a central goal of policy development. As recommended by our expert panel, current institutions can align their goals and increase the efficacy of their efforts through the support of civil organizations.

Prostate cancer is an urgent health concern in Mexico, one that can only be solved through a multi-disciplinary effort that tackles all issues facing cancer patients. The recommendations laid out in this report represent the critical steps necessary to implement these crucial changes to create a more equitable and effective care system for patients with prostate cancer.

# References

- 1 GCO. Cancer Today [Internet]. France Global Cancer Observatory Available from: https://gco.iarc.fr/today/.
- 2 IMSS. Cáncer de Próstata [Internet]. Gobierno de Mexico. Available from: http://www.imss.gob.mx/salud-en-linea/cancer-prostata.
- 3 Forbes Staff. Cáncer de próstata cuesta hasta 120,000 pesos mensuales [Internet]. Forbes. Available from: https://www.forbes.com.mx/noticias-cancer-de-prostata-en-etapas-avanzadas-genera-gastos-de-6000-dolares-al-mes/.
- 4 Bank W, Corporation IF. External Assessment of Quality of Care in the Health Sector in Colombia: World Bank; 2019.
- 5 Brau-Figueroa H, Palafox-Parrilla A, Mohar-Betancourt A. El Registro Nacional de Cáncer en México, una realidad. Gaceta mexicana de oncología. 2020;19(3):107-11.
- 6 WB. Mexico Overview. Mexico: The World Bank, 2021. Available from: https://www.worldbank.org/en/country/mexico/overview.
- 7 Salvador C. Por qué ataca AMLO a la prensa? [Internet]. Mexico: El Financeiro; [updated updated 23 October 2020]. Available from: https://www.elfinanciero.com.mx/opinion/salvador-camarena/por-que-ataca-amlo-a-la-prensa/.
- 8 EIU. One-click: Mexico. The Economist Intelligence Unit., 2021.
- 9 García AK. 5 gráficos sobre la desigualdad en México [Internet]. México: El Economista; [updated 23/02/2020]. Available from: https://www.eleconomista.com.mx/economia/5-graficos-sobre-la-desigualdad-en-Mexico-20200223-0001.html.
- 10 Alejandro Werner TK, and Carlo Pizzinelli. Short-term Shot and Long-term Healing for Latin America and the Caribbean [Internet]. IMFBlog. Available from: https://blogs.imf.org/2021/04/15/short-term-shot-and-long-term-healing-for-latin-america-and-the-caribbean/
- 11 EIU. Healthcare report: Disease trends. The Economist Intelligence Unit., 2021.
- 12 EIU. Business Environment And The Long Term Forecast: Mexico. The Economist Intelligence Unit., 2020. Available from: https://viewpoint.eiu.com/analysis/geography/XC/MX/reports/business-environment-and-the-long-term-forecast.
- 13 Regidor C, Iber P, Beck H. El primer año del México de AMLO [Internet]. Buenos Aires, Argentina: Nueva Sociedad; [updated 01/06/2020]. Available from: https://www.nuso.org/articulo/Lopez\_obrador-mexico-izquierda/.
- 14 Santander. Economia do México. Brazil: Santander Trade Markets. Available from: https://santandertrade.com/pt/portal/analise-os-mercados/mexico/economia?url\_de\_la\_page=%2Fpt%2Fportal%2Fanalise-os-mercados%2Fmexico%2Feconomia&actualiser\_id\_banque=oui&id\_banque=7&memoriser\_choix=memoriser.
- 15 La tasa de desempleo en México sube a 4.4% en el primer trimestre [Internet]. Mexico: Expansión; [updated 17/05/2021]. Available from: https://expansion.mx/economia/2021/05/17/la-tasa-de-desempleo-en-mexico-sube-a-4-4-en-el-primer-trimestre.
- 16 Block M, Morales H, Hurtado L, et al. Mexico: health system review. Copenhagen: World Health Organization. Regional Office for Europe; 2020.
- 17 INEGI. Derechohabiencia [Internet]. Instituto Nacional de Estadística, Geografía e Informática. Available from: https://inegi.org.mx/temas/derechohabiencia/#Informacion\_general.
- 18 Méndez J, Guerrero A. Presupuesto para salud 2021: Prioridad en la creación de plazas médicas [Internet]. Centro de Investigación Económica y Presupuestaria, A. C. Available from: https://ciep.mx/presupuesto-para-salud-2021-prioridad-en-la-creacion-de-plazas-medicas/.
- 19 Derecho a la salud. Presupuesto público para salud 2021 [Internet]. Mexico: Código F. Available from: https://codigof.mx/presupuesto-publico-para-salud-2021/.
- 20 Méndez J, Guerrero A. De Seguro Popular a INSABI: Mayor población con menor atención [Internet]. Centro de Investigación Económica y Presupuestaria, A. C. Available from: https://ciep.mx/de-seguro-popular-a-insabi-mayor-poblacion-con-menor-atencion/.
- 21 EIU. Industry Report: Healthcare Mexico. The Economist Intelligence Unit, 2021. Available from: http://country.eiu.com/filehandler.ashx?issue\_id=1261199109&mode=pdf.
- 22 Jiménez G. Son 23 estados adheridos al Insabi; nueve se negaron: SSa [Internet]. El Sol de México. Available from: https://www.elsoldemexico.com.mx/mexico/sociedad/noticias-amlo-andres-manuel-lopez-obrador-hoy-conferencia-mananera-son-23-estados-adheridos-al-insabi-nueve-se-negaron-ssa-hugo-lopez-gatell-4788829.html.
- 23 Senyacen J, Guerrero A. De Seguro Popular a INSABI: Mayor población con menor atención [Internet]. Available from: https://ciep.mx/de-seguro-popular-a-insabi-mayor-poblacion-con-menor-atencion/.
- 24 Hogewoning J. Inconsistent Medication Purchases Hurting National Sector [Internet]. Mexico Business News; [updated updated 07 August 2020]. Available from: https://mexicobusiness.news/health/news/inconsistent-medication-purchases-hurting-national-sector.
- 25 Reich M. Restructuring Health Reform, Mexican Style. Health Systems & Reform. 2020;6(1):e1763114.
- 26 Frenk J, Chertorivsky S. Ex secretarios de Salud exhiben deficiencias del Insabi La Otra Opinión [Internet]. La Otra Opinión; [updated updated 01 january 2021]. Available from: https://laotraopinion.com.mx/ex-secretarios-de-salud-senalan-deficiencias-del-insabi/.
- 27 Torres-Sanchez LE, Espinoza-Giacinto R, Rojas-Martinez R, et al. Prostate cancer mortality according to marginalization status in Mexican states from 1980 to 2013. Salud Publica Mex. 2016;58(2):179-86.
- 28 EIU. Healthcare report: Spending. The Economist Intelligence Unit, 2021.
- 29 Flamand L, Jaimes C, Carrasco R. Cáncer y desigualdades sociales en México 2020. Ciudad de México, México: 2021. Available from: https://desigualdades.colmex.mx/cancer/informe-cancer-desigualdades-2020.pdf.
- 30 Verastegui E, Mohar A. Colorectal cancer in Mexico: should a middle income country invest in screening or in treatment? Eur J Health Econ. 2010;10 Suppl 1:S107-14.

- 31 Gomez-Guerra LS, Martinez-Fierro ML, Alcantara-Aragon V, et al. Population based prostate cancer screening in north Mexico reveals a high prevalence of aggressive tumors in detected cases. BMC Cancer. 2009;9(1):91.
- 32 Reynoso-Noverón N, Meneses-García A, Erazo-Valle A, et al. Challenges in the development and implementation of the National Comprehensive Cancer Control Program in Mexico. Salud Publica Mex. 2016;58(2):325-33.
- 33 Senado. Avala Comisión declarar el 29 de noviembre como "Día Nacional de la Lucha contra el Cáncer de Próstata" [Internet]. Senado de la República. Available from: http://comunicacion.senado.gob.mx/index.php/informacion/boletines/34491-avala-comision-declarar-el-29-de-noviembre-como-dia-nacional-de-la-lucha-contra-el-cancer-de-prostata.html.
- 34 Gutierrez-Juarez RR, Alvarez-Banuelos MT, Morales-Romero J, et al. Place of residence and social marginalization as prognostic factors for prostate cancer survival in Veracruz, Mexico. Rev Peru Med Exp Salud Publica. 2020;37(3):423-30.
- 35 OECD. Estudios de la OCDE sobre los Sistemas de Salud: México 20162016.
- 36 Sade JP, Báez CAV, Greco M, et al. Optimizing the treatment of metastatic castration-resistant prostate cancer: a Latin America perspective. Med Oncol. 2018;35(4):56.
- 37 EIU. Cancer preparedness in Latin America: The need to build on recent progress. The Economist Intelligence Unit, 2019. Available from: https://worldcancerinitiative.economist.com/pdf/Roche-cancer-preparedness-in-latin-america/CANCER%20PREPAREDNESS%20IN%20 LATAM.pdf.
- 38 RCBP-SP. Quem Somos [Internet]. Registro de Câncer de Base Populacional de São Paulo. Available from: https://www.fsp.usp.br/rgcsp/.
- 39 EIU. Decision-making for cancer care: A review of current practice and opportunities for improvement in Latin America. London: The Economist Intelligence Unit, 2019. Available from: http://www.eiu.com/graphics/marketing/pdf/VarianEIUCancerCareReport.pdf.
- 40 EIU. Breast cancer in São Paulo city, Brazil: An assessment of the economic impact and insights from benchmarks. London: The Economist Intelligence Unit 2018. Available from: http://www.eiu.com/graphics/marketing/pdf/eiu-healthcare-avon-breast-cancer-report-final.pdf.
- 41 Barros L. Patient Advocacy in Brazil Instituto Oncoguia [Internet]. São Paulo, Brasil: The Life Raft Group; [updated updated 02 February 2021]. Available from: https://liferaftgroup.org/2021/02/patient-advocacy-brazil-instituto-oncoguia/.
- 42 Redação Minuto Saudável. Novembro Azul: conheça a campanha e qual a sua importância [Internet]. Minuto Saudável. Available from: https://minutosaudavel.com.br/novembro-azul/.
- 43 García LS, Bravo LE, Collazos P, et al. Cali cancer registry methods. Colombia Médica. 2018;49(1):109-20.
- 44 Valencia O, Lopes G, Sánchez P, et al. Incidence and prevalence of cancer in Colombia: The methodology used matters. Journal of global oncology. 2017;4:1-7.
- 45 Fundación Simmon. Nosotros [Internet]. Bogotá, Colombia: Fundación Simmon. Available from: https://www.simmoncancer.org/
- 46 Biancani Á. Registro Nacional de Cáncer: en qué consiste la nueva plataforma para registrar a pacientes con la enfermedad a nivel nacional [Internet]. México: El Mostrador; [updated updated 18 October 2021]. Available from: https://www.elmostrador.cl/agenda-pais/2020/11/18/registro-nacional-de-cancer-en-que-consiste-la-nueva-plataforma-para-registrar-a-pacientes-con-la-enfermedad-a-nivel-nacional/.
- 47 OCDE. OECD Reviews of Public Health: Chile: A Healthier Tomorrow. Paris: Organisation for Economic Cooperation and Development 2019. Available from: https://www.oecd-ilibrary.org/content/publication/9789264309593-en.
- 48 Nacional MC. Nosotros [Internet]. Colombia: MaxiVida. Available from: https://maxivida.cl/nosotros/.
- 49 Rojas R. "Tu momento de lucha", la nueva campaña de concientización sobre el cáncer de mama en México [Internet]. Saludiario. Available from: https://www.saludiario.com/surge-la-campana-tu-momento-de-lucha-para-concientizar-sobre-el-cancer-de-mama-en-mexico/.
- 50 Basulto-Martinez M, Ojeda-Perez JE, Velueta-Martinez IA, et al. Prostate cancer early detection among primary care physicians in Mexico: A cross-sectional study Deteccion oportuna de cancer de prostata en los medicos de primer contacto en Mexico: Estudio transversal. Cirugia y Cirujanos (English Edition). 2021;89(2):163-9.
- 51 Tourinho-Barbosa RR, Pompeo ACL, Glina S. Prostate cancer in Brazil and Latin America: epidemiology and screening. International braz j urol. 2016;42:1081-90.
- 52 Lajous M, Cooperberg MR, Rider J, et al. Prostate cancer screening in low- and middle-income countries: the Mexican case. Salud Publica Mex 2019;61(4):542-4.

While every effort has been taken to verify the accuracy of this information, Economist Impact 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. The findings and views expressed in the report do not necessarily reflect the views of the sponsor.



## **LONDON**

The Adelphi 1-11 John Adam Street London WC2N 6HT United Kingdom Tel: (44) 20 7830 7000 Email: london@economist.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 Email: americas@economist.com

## **HONG KONG**

1301 12 Taikoo Wan Road Taikoo Shing Hong Kong Tel: (852) 2585 3888 Fax: (852) 2802 7638 Email: asia@economist.com

## **GENEVA**

Rue de l'Athénée 32 1206 Geneva Switzerland Tel: (41) 22 566 2470 Fax: (41) 22 346 93 47 Email: geneva@economist.com

# **DUBAI**Office 1301a

Aurora Tower Dubai Media City Dubai Tel: (971) 4 433 4202 Fax: (971) 4 438 0224 Email: dubai@economist.com

## **SINGAPORE**

8 Cross Street #23-01 Manulife Tower Singapore 048424 Tel: (65) 6534 5177 Fax: (65) 6534 5077 Email: asia@economist.com

# **SÃO PAULO**

Rua Joaquim Floriano, 1052, Conjunto 81 Itaim Bibi, São Paulo - SP 04534-004 Brasil Tel: +5511 3073-1186

Email: americas@economist.com