



**Dementia
Innovation
Readiness
Index 2020:
30 Global Cities**



2020 is the first year of the World Health Organization's Decade of Healthy Ageing, which will bring into focus the unprecedented impact that population aging has on health, economies, and society at-large.¹ But this year will be remembered for something else: the COVID-19 pandemic. The pandemic has ravaged lives, crippled economies, and shone a light on the shortcomings in the healthcare systems of rich and poor countries around the world. Chillingly, COVID-19 has also exposed governments' lack of preparedness to support those affected by the virus, especially vulnerable older adults who face the greatest risk.

These vulnerable older adults also include a large constituency of people with dementia, and it is clear that age is the biggest risk factor for both dementia and COVID-19. The extent to which people with dementia will be affected by COVID-19 is still being calculated but one thing is certain: the virus is disproportionately impacting the elderly, and a lack of preparedness for the pandemic is a core part of the problem. The pandemic has highlighted many challenges that are especially difficult for people living with dementia, from isolation and anxiety to the withdrawal of face-to-face supports; from grave issues in care homes to the exceptionally difficult life and death decisions healthcare practitioners are forced to make, due to scarcity of resources. Dementia diagnostic pathways have been interrupted, as has research and clinical trials. We hope the pandemic serves as a lesson for global leaders about the necessity of health system readiness and that this report can be used to highlight the opportunity of innovation in preparing specifically for dementia.

Lessons from the Pandemic

As we emerge from this crisis, the lessons learned offer global leaders an opportunity to address the persistent, systemic issues that must be solved before the promise of a Decade of Healthy Ageing can be realized. The lack of innovation readiness within global health systems that COVID-19 exposed becomes starker when it comes to dementia, which remains the single greatest challenge to healthy aging around the world. Dementia continues to be underdiagnosed, under-funded, and largely overlooked by policymakers, even though global projections suggest that 75 million people will be living with the condition by the end of the decade.²

As the COVID-19 curve flattens, we must ask ourselves how it can serve as a catalyst to spark interventions and innovations that enable healthy aging, with opportunities to improve dementia treatment, prevention and risk reduction, and care. This Index does not specifically focus on COVID-19. But the once-in-a-lifetime pandemic underlines the importance of addressing dementia in times of crisis and ensuring we are better prepared to meet the surging challenge ahead.

The Role and Opportunity of Cities in Dementia Innovation Readiness

As we begin to emerge from the current crisis, we feel the *Dementia Innovation Readiness Index 2020: 30 Global Cities* is more timely than ever. This Index marks the third collaboration between Alzheimer's Disease International (ADI) and the Global Coalition on Aging (GCOA). The previous two reports measured the readiness of G7 and select G20 countries to integrate innovative dementia-related solutions,

strategies, and services into their health and care systems and policy frameworks. This report represents a new partnership with Singapore's Lien Foundation, which approached GCOA and ADI with the idea of adapting our Index framework to focus on dementia innovation readiness in global cities. Given its rapidly aging population, innovative products and programs, and dense urban center, Singapore serves as a powerful example of the challenges and opportunities all cities will face in preparing for aging.³

While global authorities and national governments must step up to the challenges presented by dementia, we must also account for the critical role of cities, which are home to 57% of the global population aged 60 or older.⁴ Indeed, rapid aging and urbanization are the two defining global trends of our time. While age-friendly city programs establish a solid framework to respond to and prepare for aging populations, more must be done to equip cities to understand, plan for, and support the specific needs of people living with dementia.

Cities are also the crucibles for innovation, which is the best hope we have for overcoming the emerging challenges in our complex, interconnected world.

In recognition of this need, this year's edition of the *Dementia Innovation Readiness Index* evaluates the readiness of 30 cities to develop and adopt innovations in dementia and aims to uncover where there are opportunities

for innovation across the global dementia community. The 30 cities represent a range of geographies, population and economy sizes, and healthcare and policy systems. They include major metropolitan centers as well as smaller municipalities that warrant investigation due to specific enablers or barriers to innovation readiness that are in place.

The Pursuit of Innovation Readiness

We define dementia innovation readiness as the level to which each city is prepared to innovate with regard to strategy and commitment, diagnosis, detection, treatment, care, and support of dementia; our research assesses how cities are faring in each of these areas.

Our scoring is based on more than a thousand hours of research as well insights and observations from over 100 global, national, and local experts across sectors, disciplines, and geographies. We are immensely grateful to the many experts who contributed their time and insights to this report.

As with our previous indices, we hope this report will inspire collaboration and action; marshal support for productive policies; and, ultimately, improve outcomes for people living with dementia, their loved ones, and communities around the world. The COVID-19 crisis must be a wake-up call alerting us to prepare for future health challenges — especially dementia — which is poised to be our next great health emergency. Let's not wait to take action.

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Index Snapshot

Dementia Innovation Readiness in Cities

The following snapshot summarizes our overall findings on dementia innovation readiness in each of the 30 cities included in *Dementia Innovation Readiness Index 2020: 30 Global Cities*. These scores capture the ability and preparedness of cities to develop or adopt innovations for dementia across a variety of categories, measured against 26 indicators, with inputs based on insights from on-the-ground experts and supported by secondary data. Indicators are grouped into five categories that enable dementia innovation: Strategy and Commitment, Early Detection and Diagnosis, Access to Care, Community Support, and Business Environment.

Cities with the top overall scores tend to have a consistently high performance across all five categories, though no city was exempt from potential areas of improvement. While each city investigated for this report has areas of clear strengths and weaknesses, in general, the cities that are most ready for dementia innovation are actively thinking about, preparing for, and addressing barriers to and enablers of innovation defined by the categories and indicators. Also included in this report are instances where cities with low- or mid-range overall scores demonstrated bright spots of activity. In several cases, cities that scored lower on overall readiness had leading and impactful dementia initiatives being implemented within the community.

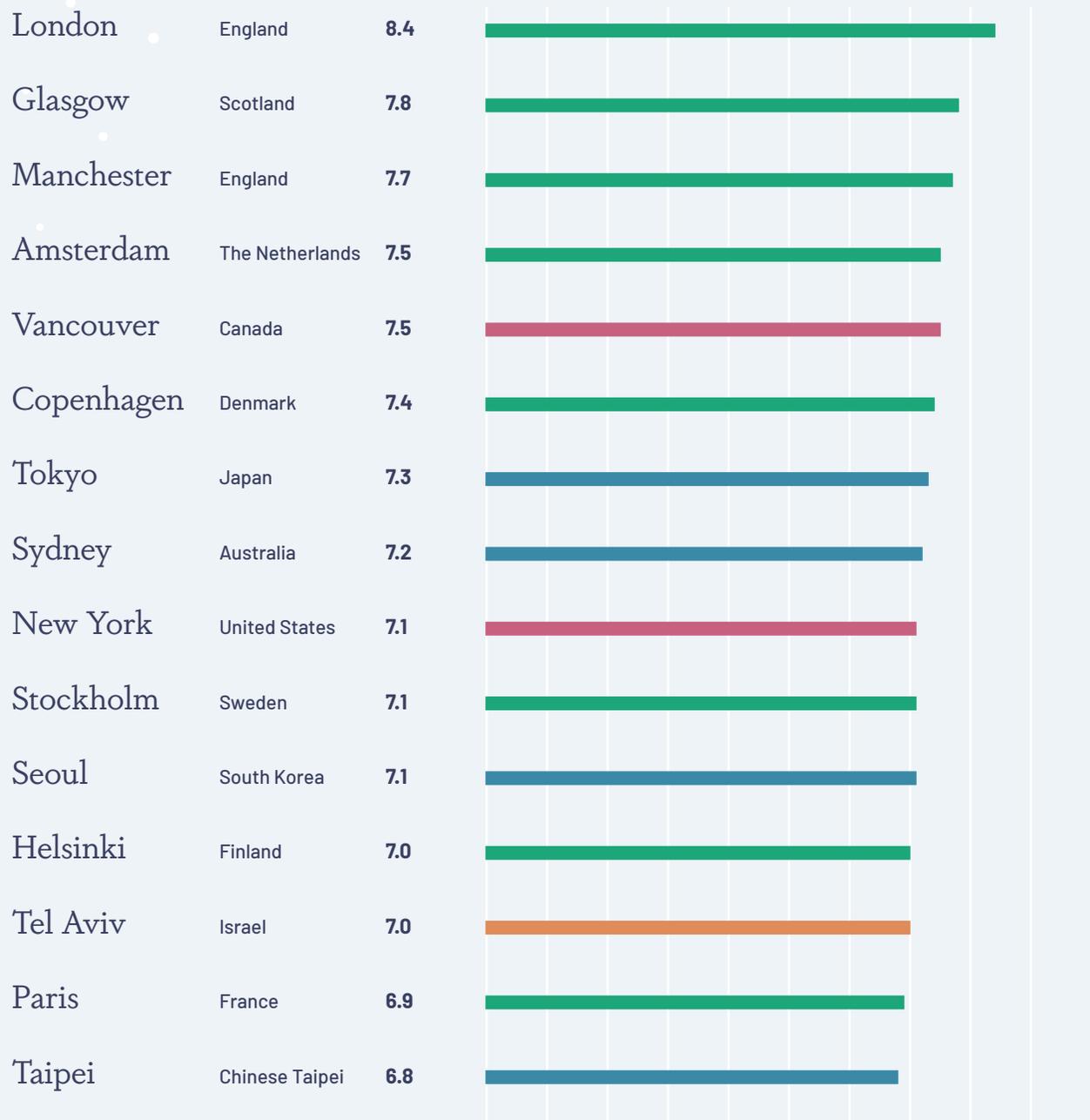


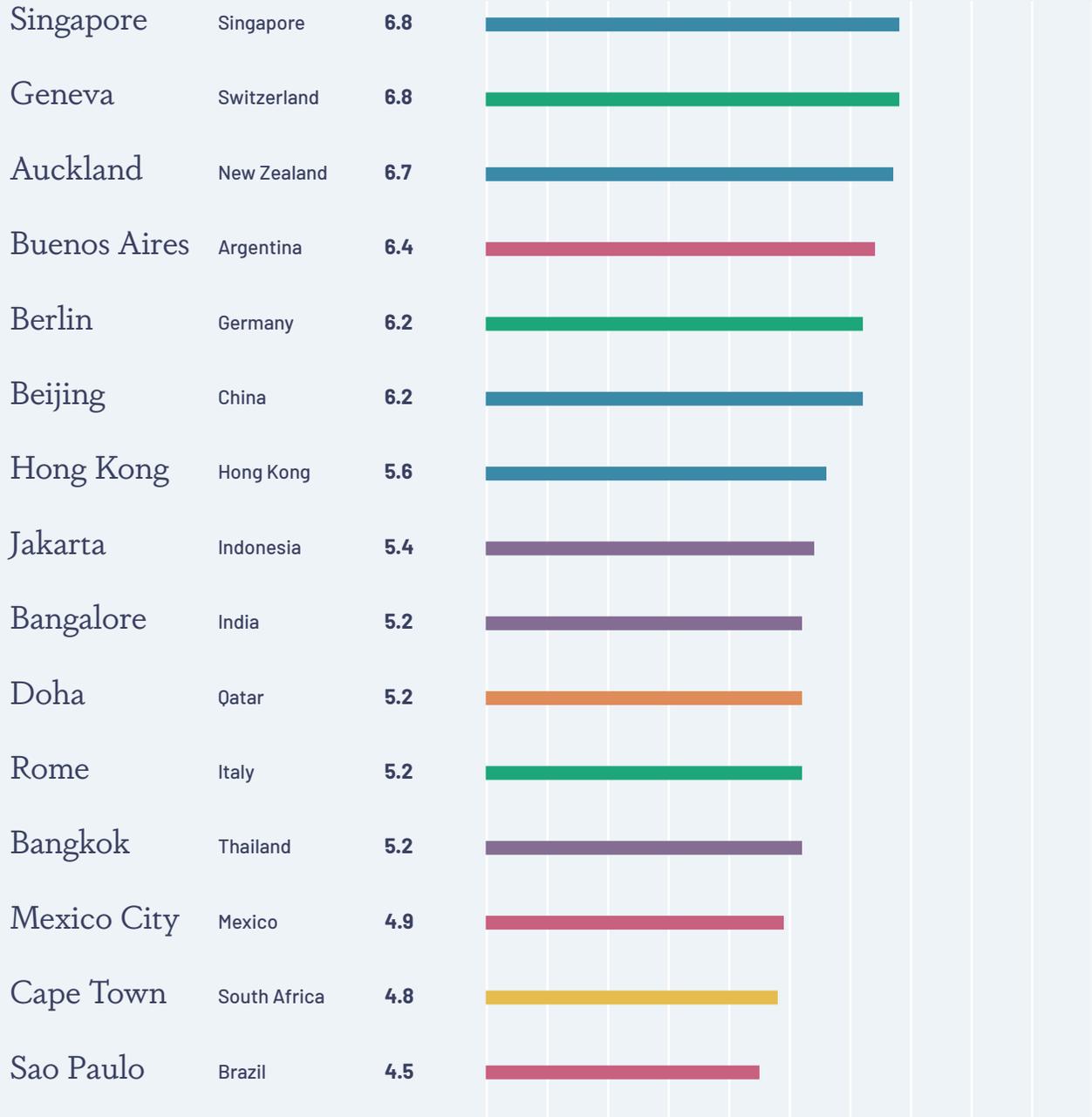
The color-coding used throughout this report is based on the World Health Organization's definition of global regions:

- Region of the Americas
- European Region
- African Region
- Eastern Mediterranean Region
- Western Pacific Region
- South-East Asia Region

Dementia Innovation Readiness in Cities

Overall Scores





Key Insights for Dementia Innovation Readiness at the City Level

The *2020 Dementia Innovation Readiness Index* evaluates the ability of 30 cities to develop and adopt innovations in the treatment, prevention and risk reduction, and care of dementia. This section summarizes the most important enablers of a city's dementia innovation readiness, as identified by experts, validated by secondary data, and demonstrated by high-performing cities.



Strategy and Commitment:

- ▶ **Cities must take charge to execute against national dementia plans.** Strong policy commitment to dementia is often indicated by a publicly accessible, fully funded and implemented national dementia plan, which cities can then execute against. National plans are important for aligning governmental and non-governmental stakeholders on how to address dementia based on local contexts, and when plans are backed by adequate funding, they are a key enabler of dementia innovation. Tasking ministries, agencies, civil servants, or other permanent policy bodies with implementing a plan can help to ensure dementia remains front-and-center, even as political leadership changes. Independent of national plans and priorities, cities can and should find ways to develop grassroots solutions to dementia based on their local contexts.
- ▶ **Cities must advocate for flexible and transparent funding models to ensure they are able to lead on dementia support in their communities.** National governments must empower effective, high-quality, tailored dementia responses at the local level. They must enact the systems-level changes that enable regions and cities to adapt national programs and frameworks to local contexts, without interfering with a city's ability to create an appropriate environment for dementia innovation. While national government can be a beacon of leadership for cities, local stakeholders will not – and must not – wait to lead in their communities.



Early Detection and Diagnosis:

- ▶ **Cities need to know where they stand with regard to the number of people in the community living with dementia.** Accurate, early diagnosis can help to ensure that people living with dementia are able to access high-quality care; that the progression of their disease is appropriately managed and monitored; and that they will be able to expediently access innovations in treatment and care as they become available.
- ▶ **Efforts to improve diagnosis rates for dementia should be aligned with the local community.** Within a single country, region, or city, there may be multiple misconceptions about dementia that have become embedded within different populations and which delay detection and diagnosis. One of the most common misconceptions about dementia is that it is simply a normal part of aging, which results in delayed detection and diagnosis, if any diagnosis is made at all. Because the myths surrounding dementia are so dependent on the specific population, cities must be ready to deploy population-specific messaging, screening tools, and other resources that are adaptable to the diverse communities residing there. Specifically, experts have called for alternative ways to screen for dementia or raise awareness with tools that are accessible and understandable to local populations. For example, in low-literacy areas, dementia screening tools should be calibrated to remove any educational biases.



Access to Care:

- ▶ **Post-diagnostic support is a highly localized but under-addressed opportunity for cities.** Dementia care is often delivered locally, enabling cities to develop post-diagnostic support programs that leverage community resources. City stakeholders can collaborate across the medical, social, and policy fields to ensure that locally tailored post-diagnostic support is in place and that healthcare professionals and other community service providers have the knowledge and training to connect people with relevant programs. While other inter-related factors, like supply of services and affordability, also impact access to care, post-diagnostic support is an under-recognized and rarely acted upon opportunity for cities to develop solutions based on local needs and assets. While cities work to solve long-term systems-level problems related to supply and affordability, establishing sufficient post-diagnostic support is a way for cities to provide for their citizens more immediately.

- ▶ **Access to community-based and in-home care relies on city-level activation.** Most experts now support bringing care into the community, rather than long-term residential care – which is often constrained by poor outcomes, inconsistent quality, and high costs. Policymakers at the national level must continue to push for people to receive care in the community and their homes as long as it is efficient in their specific case. Local governments and service providers must ensure that there is a sufficient supply of affordable and high-quality community-based care providers – including day care, respite care, and in-home care – so that people living with dementia are able to access needed resources. Consumers must be aware of the spectrum of services available and empowered to choose the appropriate level of care and care provider based on their specific needs and priorities, including the option of private-sector providers. At the same time, governments and service providers must make sure that people living with dementia and their loved ones are able to access and afford these services.

Community Support:

- ▶ **Cities should engage and fully leverage non-profit Alzheimer's and dementia associations as experts in the community.** These organizations supplement and complement the direct services provided by government, advocate for a more favorable policy environment, provide dementia trainings, and fund research. In many cities, local chapters are able to address community-specific needs, with support from a national body or in collaboration and partnership with other community support organizations.
- ▶ **Dementia-friendly principles enhance cities and improve quality of life for all citizens, not just those living with dementia.** Dementia-friendly principles are the tools and practices that make an organization, community, or society-at-large more accessible and livable for people with dementia. Principles can be adapted from city-to-city and country-to-country, based on specific needs and cultural norms. Today, many dementia-friendly principles are aimed at making businesses, the built environment, and healthcare settings easier for people with dementia to navigate. Common practices include trainings for professionals and the general public – on how to spot early signs, for instance

– and adapting the built environment to be more dementia-friendly through clearer signage and other modifications. While dementia-friendly principles can apply across businesses, the built environment, and healthcare settings, the aim should be to extend these principles so that dementia-friendly becomes the rule – not the exception – and that societies more fully recognize the contributions of people living with dementia. In line with this, dementia-friendly principles must integrate the voice and perspective of people living with dementia. When local stakeholders embrace dementia-friendly principles, cities are more likely to be livable, accessible, and sensitive to people living with dementia, their loved ones, and all citizens.

Business Environment:

- ▶ **Innovative funding mechanisms and partnerships can maximize dementia investments and results.** New funding mechanisms leverage investments in dementia from government, the private sector, the philanthropic community, and other groups to their full potential. Given slow therapeutic progress and growing investor hesitancy toward dementia, more must be done to enable new types of funding into dementia research that offset the perceived risk. Existing funding models that should be examined and potentially scaled include venture capital funding (through organizations like the Dementia Discovery Fund) and social impact bonds. At the same time, new avenues of investigation into dementia – like the ability of modifiable lifestyle factors to reduce the risk for dementia as well as investigation into new therapeutic options – must be furthered to ensure that the prevention and treatment of the disease are studied holistically.
- ▶ **The care workforce is an opportunity for local communities to grow and prosper.** Cities must help to ensure that public and private care providers are empowered to respond to the demand from people living with dementia and their caregivers. In areas where the care workforce is insufficient to adequately support people living with dementia, local stakeholders can help to build the workforce through training, increased access to educational and vocational services, as well as immigration, thus creating local jobs while solving for the impending care crisis.



Index Methodology

The *2020 Dementia Innovation Readiness Index* was created based on primary and secondary data sources collected and analyzed by the Global Coalition on Aging (GCOA) and Alzheimer's Disease International (ADI). The primary data sources consist of interviews and surveys with global key opinion leaders and subject matter experts (including scientists, advocates, researchers, clinicians, business leaders, and people living with dementia), as well as expert input from GCOA and ADI members. The secondary data sources consist of existing research gathered from global authorities including ADI, the Organisation for Economic Co-operation and Development (OECD), and the World Health Organization (WHO), as well as reports from local and national governments, non-profits, and other publicly available sources (see Appendices B and C for data sources).

Dementia innovation readiness is defined in this Index as the level to which each city is prepared to innovate in terms of novel approaches, systems, or processes that would have an impact on the prevention, treatment, or care of dementia. The categories of innovation readiness investigated in the *2020 Dementia Innovation Readiness Index* cover a broad range of issues related to living with dementia, and the indicators help to identify the mechanisms that would facilitate the development or uptake of innovations.

In order to measure innovation readiness, the Index aims to uncover and clarify the following:

- Where innovation in dementia is currently occurring;
- The enablers of innovation in prevention and risk reduction, treatment, and care; and
- The barriers to innovation in prevention and risk reduction, treatment, and care.

To that end, the Index evaluates dementia innovation across five categories:

- Strategy and Commitment
- Early Detection and Diagnosis
- Access to Care
- Community Support
- Business Environment

Categories and Indicators

The Index evaluates cities' innovation readiness based on their performance across the five categories. Each category comprises a number of qualitative and quantitative indicators, and each category's score is derived from the score assigned those indicators. The categories and indicators were developed based on insights from existing indices, such as the World Bank's

Doing Business report and Health Consumer Powerhouse's various European healthcare system indices, as well as an assessment of the current dementia landscape. Though important dementia innovations are occurring in many communities across the world, the scope of this index is 30 global cities.

A full list of indicators and criteria by which they were evaluated is included in Appendix A.

Scoring

The methodology of this Index combines qualitative and quantitative data to score 26 weighted indicators across five categories. Each category comprises several indicators, and the score for each category is calculated based on the score of that category's associated indicators. In cases where data is not available for a specific indicator, the total score is calculated based on the points assigned to the other indicators in the same category. Category scores determine each city's overall score. GCOA and ADI identified experts with city-specific expertise, as well as national and global experts on broader trends shaping dementia innovation readiness to contribute survey and interview data, and multiple responses were gathered for each city. This Index was constructed based on secondary data and approximately 100 interviews and surveys contributed by experts across 30 global cities. Scores for cities rely on the insights shared by experts and are validated with secondary data, where it can be found.

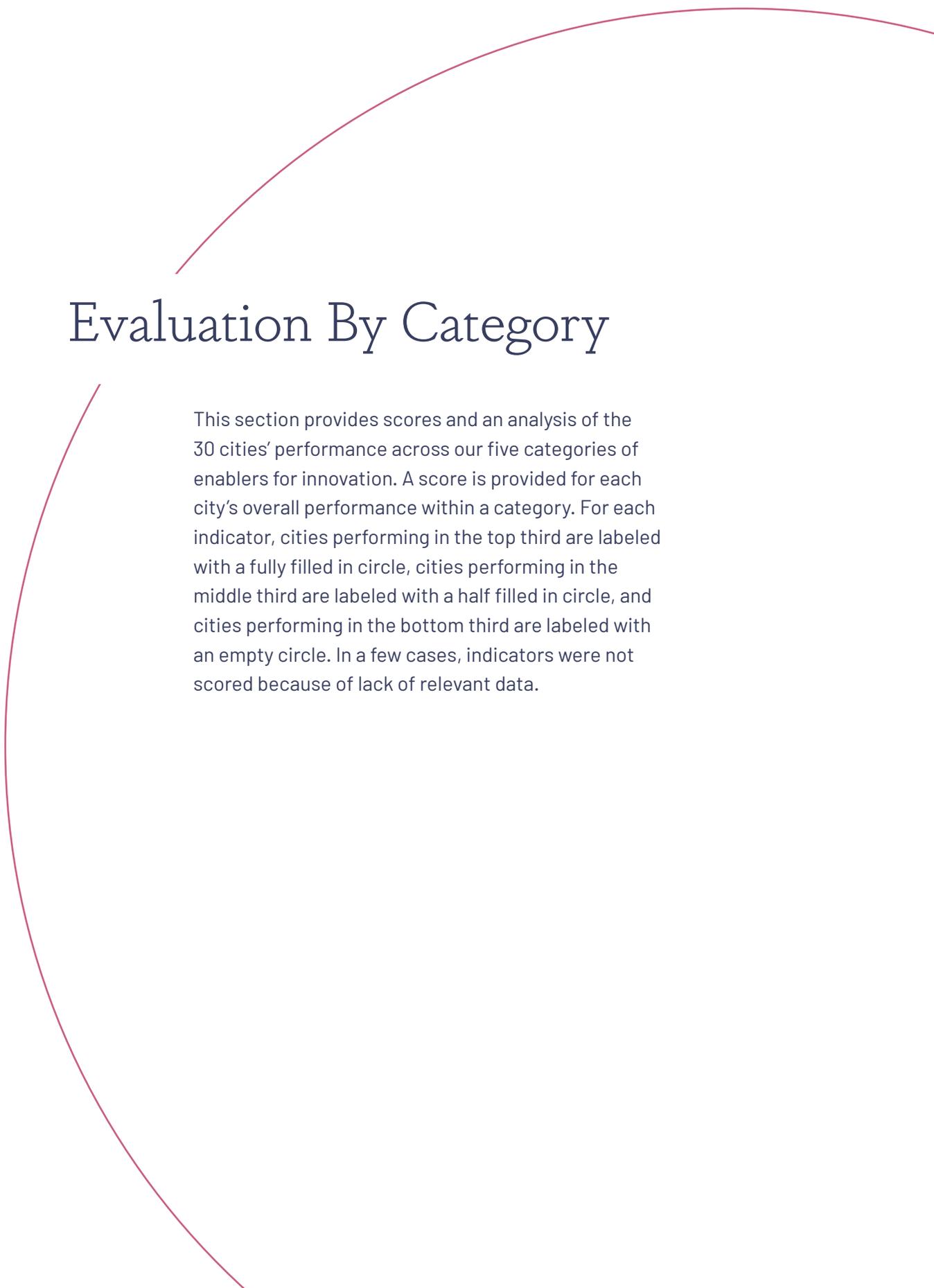
Secondary data that helped to inform this Index and relevant references are available in Appendices B and C, respectively. Indicators were scored either by a rating scale based on expert insights or secondary data (the rating scale to define each score is available

in Appendix A) or through a calculation that normalized multiple data sets to fall on a range, and weighted appropriately for each indicator, based on its overall importance to promoting dementia innovation readiness as determined by GCOA and ADI.

Assumptions and Limitations

The scope of this Index is dementia innovation readiness, as defined above, and the research is focused on identifying the barriers and enablers to innovation readiness on the city level. The goal for this Index is not to replicate existing analyses of healthcare system readiness (e.g., RAND's research reports on healthcare infrastructure for new Alzheimer's treatments), but it is rather to identify areas of opportunity for cities to prepare for innovations in the treatment, prevention and risk reduction, and care for people with dementia.

In rare cases where reliable secondary data was not accessible or did not exist, self-reported data shared by experts via survey or interview is used for scoring, and scoring assumes the reliability of these experts. Interviews and data collection were conducted from June 2019 to July 2020. As such, this Index represents a snapshot of each city's dementia innovation readiness during that period.



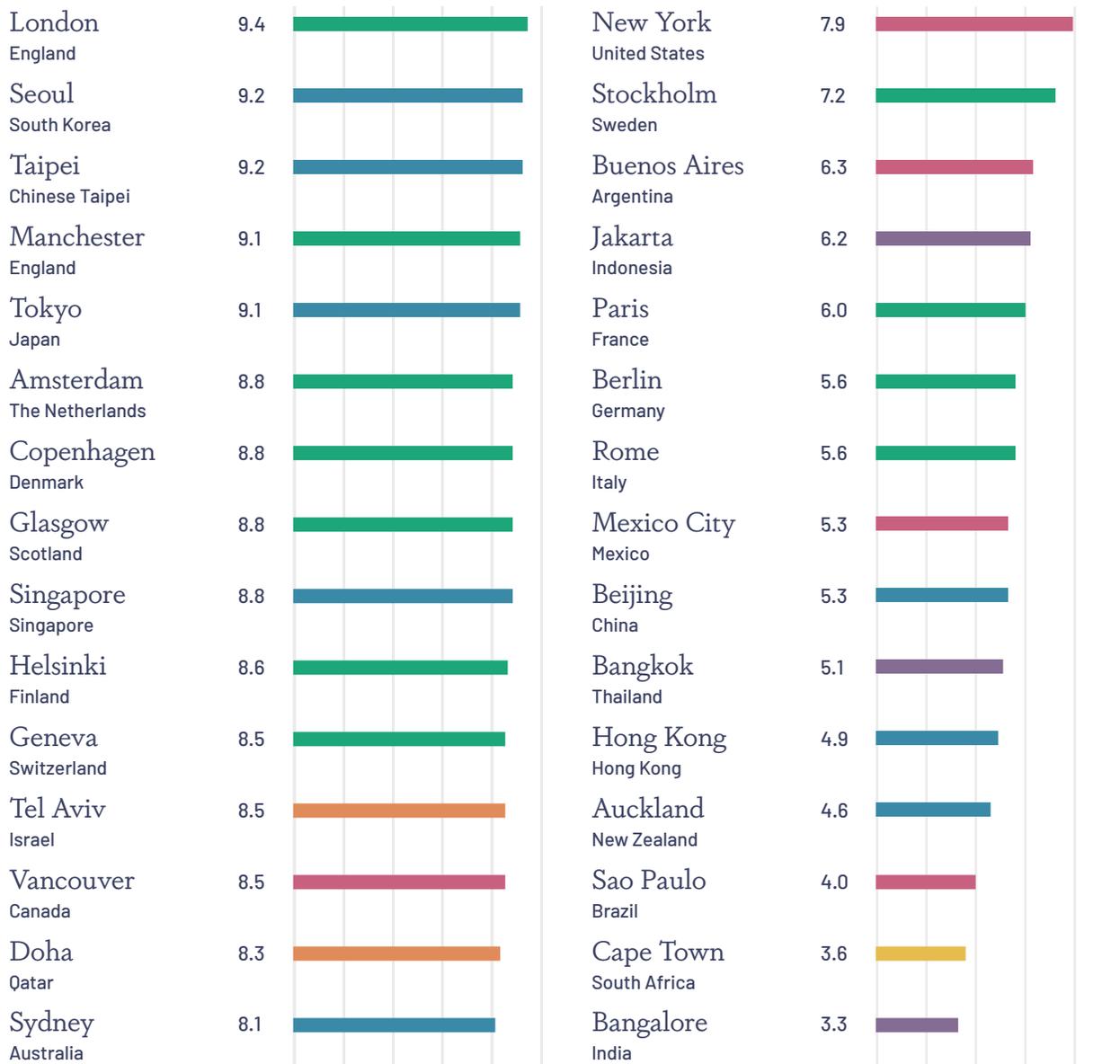
Evaluation By Category

This section provides scores and an analysis of the 30 cities' performance across our five categories of enablers for innovation. A score is provided for each city's overall performance within a category. For each indicator, cities performing in the top third are labeled with a fully filled in circle, cities performing in the middle third are labeled with a half filled in circle, and cities performing in the bottom third are labeled with an empty circle. In a few cases, indicators were not scored because of lack of relevant data.

Strategy and Commitment

Local and national governments foster innovation at the community level through dementia plans and strategies, funding of research and care, and political leadership. Governments can demonstrate their commitment to addressing dementia through innovation and catalyzing action from the private and public sectors. As populations in cities age according to global trends, local governments have an opportunity and a responsibility to tailor their responses to dementia based on the specific needs and priorities of citizens. National governments can help cities by setting in place funding mechanisms and policies that enable consistent access to high-quality treatment and care.

Strategy and Commitment Scores



Key Findings

When national governments distribute healthcare funds at the local level, it can lead to an inconsistent quality of dementia care because of competing community health needs.

There are a variety of mechanisms by which sub-national authorities – at the city, regional, or provincial level – receive funding from the national level to fund local healthcare services. These mechanisms can include block grants, funding through long-term care insurance, and other measures. This approach empowers local authorities to respond to local health needs and priorities but runs the risk of lacking transparency in funding. Further, for people with dementia, it can translate into inconsistent quality of care between cities – or even within one city. Finally, when funding is “devolved” or transferred from a national authority to a local authority, national reductions in funding passed down to local authorities can create constraints on a city’s ability to deliver high-quality care.

In Auckland, New Zealand, funding for health services is channeled through District Health Boards (DHBs), which provide services to older people, including people with dementia. Within Auckland, three DHBs exist, each with its own community needs and healthcare spending authority.⁵ While people with dementia are certain to receive some level of government-funded service from these DHBs, the type of service available can vary based on where they live. Experts note that the DHBs empower local areas to respond to their community’s unique needs – but they also contribute to a “postcode lottery,” in which people’s ability to access care is, in part, defined by a geographic region. This issue is not unique to Auckland

and New Zealand; experts report that the “postcode lottery” is commonplace across the world in a wide range of disease areas, and that, in general, wealthier individuals have a disproportionately high level of access to care.

As the trend of global aging continues and dementia’s prevalence and associated costs rise, the condition must be elevated to a political movement – equal to those that drove HIV, diabetes, and cancer to the top of the health agenda in communities around the globe.

Political leaders often draw attention to specific diseases as a rallying cry to engage the public and spur innovation. The introduction of WHO’s *Global action plan on the public health response to dementia* is a positive start to address the estimated global cost of USD \$1 trillion that dementia incurs.⁶ The per capita cost for dementia is estimated to range from USD \$20,000 in G20 countries to USD \$7,000 in non-G20 countries.⁷ With its prevalence set to double every 20 years, ultimately reaching 75 million cases in 2030, leaders must proactively recognize dementia as a serious public health concern and elevate it in policy forums to the level of other serious diseases.⁸ However, many local leaders have yet to devote this level of attention to dementia despite the impact on local communities.

Other disease areas provide models that are relevant for dementia. In Singapore, the Prime Minister has called for a War on Diabetes; across the globe, local and national leaders have called for a War on AIDS/HIV, which helped to drive private-sector innovation; and in the United States, former Vice President Joe

Biden’s Cancer Moonshot has brought renewed attention to the disease. In 2018, London Mayor Sadiq Khan launched the Healthy Early Years London program to reduce inequalities faced by children citywide. It focuses on promoting fitness, healthy eating, and social development amongst the city’s youngest residents.⁹ Other cities have implemented health and wellness initiatives. In 2017, as part of the Partnership for Healthy Cities, Cape Town implemented a campaign to reduce consumption of sugary drinks.¹⁰ Amsterdam has implemented a successful Healthy Weight Program since 2013 that has reduced childhood obesity rates citywide.¹¹

Taipei City is pioneering in this area, as city leaders have developed a local dementia action plan that follows the seven domains outlined by WHO’s Global action plan. For each domain, Taipei is setting up specific strategies and tactics. These tactics include creating a more standardized diagnostic and post-diagnostic journey, creating a “one-stop” shop for caregivers to apply for government-funded care, and setting up a task force and network for dementia care. At an event that Taipei City hosted in recognition of World Alzheimer’s Month, Mayor Ko Wen-je pointed to the city’s dementia action plan as a positive response to the city’s rapidly aging population.¹² Similarly, Glasgow City Health and Social Care Partnership and Alzheimer Scotland developed a three-year strategy from 2016 to 2019 to locally build upon Scotland’s national plan. The plan outlines a number of priority areas to tackle, including reducing stigma, improving the physical environment, increasing social engagement, and providing the resources people living with dementia may need to continue living in the community. For each priority area, the plan

shares a good practice, guiding questions, and resources for organizations to reference as they work to enact the plan.¹³

Cities can identify and leverage “outside-the-box” funding streams to expand dementia-related programs.

Funding for dementia care often flows downward, with national governments allocating dollars to regional or state-level entities, who then in turn subsidize care by paying private-sector providers, local institutions, and caregivers. While this model is effective in some cases, there may be opportunities to explore alternative funding models for dementia care that are more transparent in funding flows and desired outcomes. Experts have pointed to several funding mechanisms that respond to local resources – including funding of care through gambling revenue. For example, in Hong Kong, the Jockey Club Centre for Positive Ageing – a provider of day care and other services for people living with dementia and their families – received initial funding via gambling revenue from the local Jockey Club. Singapore’s equivalent of the Jockey Club, the Tote Board, also funds several community healthcare initiatives, including one focused on dementia care. There may be additional opportunities that cities could access to close the dementia care gap – without reducing the obligation of governments to provide adequate funding. These opportunities range from more aggressively soliciting donations from individuals and foundations to creating self-sustaining endowments to securing private-sector support via matching funds.

Call to Action

Local authorities must coordinate with national and regional governments to ensure a balance that respects local autonomy while delivering consistent, high-quality care to all.

The global trend in dementia policy is for governments to develop a high-level national strategy or plan that can become a framework for directing local activity by healthcare providers, advocates, academics, and the business community. This approach allows for local stakeholders to tailor their tactics to community needs and opportunities – but

experts suggest that, in some cases, there is a trade-off when national governments adopt a relatively hands-off approach. Widespread, systems-level changes are often more successfully implemented when the national government takes on a greater role and is transparent in its funding. For example, some experts have cited Scotland's national plan as being an enabler of systems-level change. Therefore, as national governments establish frameworks, programs, and sufficient funding to enable dementia innovation, local-level authorities must assert city-specific expertise to maximize the potential for their citizens.

PROMISING PRACTICE

Dementia United Maintains Consistent Quality of Care Among Disparate Funding Bodies.

In the United Kingdom, twelve local clinical commissioning groups (health groups within the National Health Service) in Greater Manchester partnered to develop a coordinated approach towards the administration of the region's £6 billion budget for health and social care.¹⁴ Dementia United was born out of this partnership.

Launched in 2015, Dementia United aims to improve social and medical care for the more than 30,000 residents living with dementia in Greater Manchester as of 2020. Its goals include improving access to care and resources that promote independent living for people living with dementia, while ensuring consistency in quality of care regardless of location.¹⁵ One core area of focus for Dementia United is to improve the fractured system of post-diagnostic support.

Dementia United's impact goes beyond improved and coordinated care. Today, it is estimated that the health and care system in Greater Manchester spends £270 million a year treating and caring for people with dementia. Research has suggested that Dementia United could save up to £49 million over five years.¹⁶ The potential savings could be driven by three factors: delayed entry into residential care, lower emergency room admission rates, and reduced length of stay in hospitals.¹⁷

Devolved funding provides an opportunity to improve quality of life for people living with dementia and their caregivers – as well as a challenge to maintain consistent, high-quality care across a region or country. Greater Manchester's Dementia United provides a model for cities around the world to reassess how health and care services can be funded, designed, and delivered.

Strategy and Commitment: Evaluation by Indicator

GROUPED BY REGION

	● Strong	◐ Moderate	○ Weak
	Presence and implementation of a national or regional dementia strategy or plan, which includes a focus on the role of cities, towns, or communities		
	Government funding for dementia or eldercare		
	City-level leadership on dementia or age-related issues		
Buenos Aires	○	◐	◐
Mexico City	◐	◐	○
New York	●	◐	◐
Sao Paulo	●	●	◐
Vancouver	●	◐	◐
Amsterdam	●	●	◐
Berlin	◐	◐	◐
Copenhagen	●	◐	●
Geneva	●	◐	◐
Glasgow	●	●	◐
Helsinki	◐	●	●
London	●	◐	●
Manchester	●	◐	●
Paris	○	●	◐
Rome	◐	◐	○
Stockholm	◐	●	●
Cape Town	◐	◐	◐
Doha	●	○	●
Tel Aviv	◐	◐	●
Auckland	○	◐	◐
Beijing	○	◐	◐
Hong Kong	○	◐	◐
Seoul	●	●	●
Singapore	●	◐	●
Sydney	●	●	◐
Taipei	●	●	●
Tokyo	●	●	●
Bangalore	○	○	○
Bangkok	○	◐	◐
Jakarta	●	○	○

Early Detection and Diagnosis

Early detection and diagnosis of dementia is essential to ensuring that people living with the condition are able to access treatment and care resources as soon as possible, as well as plan for changing care needs. Timely diagnosis will also become increasingly important to ensure that people are able to access new treatments as they become available. Promoting early detection and diagnosis relies on a number of interrelated factors, including well-trained healthcare providers across all professional levels and access to reliable and appropriate screening and diagnostic tools. Public awareness of dementia must also be raised, and stigma surrounding the condition should be reduced in order to urge the public to seek diagnosis, treatment, and care.

Early Detection and Diagnosis Scores



Key Findings

Establishing culturally appropriate messages, messengers, and tools can address the specific stigma and myths that often slow dementia diagnosis.

The stigma and myths surrounding dementia vary between and among different cultures and communities – and require culturally specific responses. However, the most common myth is that dementia is a normal part of aging – and this myth cuts across income level, ethnicity, and geography. In ADI’s *World Alzheimer Report 2019*, of 70,000 individuals surveyed, 2 out of 3 respondents said that they believe the myth that dementia is caused by normal aging.¹⁸

“If we’re going to work in Harlem, we need to partner with groups and people who represent Harlem — it’s essential to have representation from the communities you serve.”

JED A. LEVINE, MA

President and Chief Executive Officer, CaringKind,
New York City, United States

The ways in which this stigma presents itself differs from city-to-city and population-to-population, but it remains a persistent problem that dissuades those who may be in the greatest need of support from seeking it – slowing diagnosis. This is especially relevant for underserved or disempowered populations, who are often skeptical of engaging with the medical establishment generally and face higher levels of stigma surrounding dementia in their communities. As advocates and healthcare providers work in different communities to

promote awareness of dementia and urge detection and diagnosis, they must use tools and language that “meet people where they are” with culturally appropriate tools and language. For example, in areas with lower levels of literacy, screening tools should be calibrated to avoid educational bias. Similarly, in areas where the population distrusts health systems or other establishments, advocates and practitioners must make sure to partner with trusted community organizations to make in-roads.

Efforts around the globe indicate the opportunities to address stigma and promote early, accurate diagnosis. Glasgow’s dementia initiative offers a template for cities looking to improve early detection and diagnosis. Beginning in 2015, the city conducted a comprehensive survey to gather perspectives to identify challenges and barriers unique to the community. As part of its city plan, Glasgow explicitly recognizes diagnosis of dementia as a critical point for providers, people living with dementia, and their loved ones, and that diagnosis is a key enabler of resources for disease management, treatment, and care. Additionally, Glasgow’s plan argues that when people receive an early diagnosis of dementia and are met with information, support, and care, they are better supported in managing the condition throughout its progression. To develop its plan, Glasgow solicited feedback from patients, caregivers, volunteers, and healthcare providers to help craft a three-year dementia action plan.¹⁹

In Bangalore, experts have implemented community-based screening tools that are calibrated to address specific local issues, like low education rates and heterogeneous cultures and languages.²⁰ Similarly, the STRiDE project (Strengthening Responses to

“Stigma makes people avoid seeing a doctor. Most families here, their parents have this idea: ‘If I don’t see a doctor, I won’t know that I have a disease!’ But if you don’t have a diagnosis, you may not be able to get the help you need.”

PEACH WATTANAVITUKUL

Alzheimer’s and Related Disorders Association of Thailand, Bangkok, Thailand

Dementia in Developing Countries, a project led by the London School of Economics and Political Science in partnerships with the Universities of Sussex and Cape Town, Alzheimer’s Disease International, Dementia Alliance International, and funded by the UK Research and Innovation’s Global Challenges Fund) is conducting systematic reviews of what dementia interventions, including efforts to reduce stigma and systemic barriers, from high-income countries may be applicable for low- and middle-income areas. The goal is to develop a publicly available database where people can review what practices may be most impactful in a specific local setting.²¹ In New York, the organization CaringKind is working to better reach under-served groups with high rates of Alzheimer’s disease by partnering with trusted community-based organizations.

The role of General Practitioners (GPs) in the detection, diagnosis, and management of dementia varies widely across cities. In order to fully leverage the critical position of GPs, health systems need to work towards the optimal engagement of GPs.

Experts in most cities examined report that GPs are essential in detecting and diagnosing

dementia. When GPs are empowered and trained to diagnose dementia, they can reduce the strain incurred on the health system by over-reliance on specialists. Additionally, because GPs are more frequently in contact with patients, they are better situated to observe cognitive decline and initiate screening for dementia. Across cities, experts reported four common GP “models” when it comes to detection and diagnosis of dementia. These models are driven by two main factors: first, whether GPs are empowered by the national and local healthcare systems to provide a referral or diagnosis; and second, whether they have sufficient training and incentives to do so. Each GP model has differing roles, responsibilities, and attitudes towards the process:

- *Observing but not supporting diagnosis:* This is the most common type of GP described by experts in their communities. In this model, the GP may be in contact with people living with dementia and empowered by the local or national healthcare system to detect, refer, diagnose, or treat dementia. However, the GP often fails to act on dementia, due to a lack of training, misaligned financial incentives, a poor understanding of symptoms or available treatments, limitations on time spent with patients, or even a fear of providing patients with a “terminal diagnosis.” Existing research in the primary care setting shows that this GP activity corresponds to a generally low ability to recognize dementia.²²
- *Not empowered to formally diagnose:* In a few cities, GPs are not empowered to formally diagnose patients with dementia; instead, they are required to refer patients to a specialist for formal diagnosis. In fact, research shows that many countries do not require GPs to conduct a formal diagnostic assessment for people who

may be displaying symptoms of dementia.²³ The GP's ability to recognize symptoms of dementia and provide a referral in a timely manner is highly variable. These GPs may continue to manage day-to-day patient care after their patient has seen a specialist.

- *Empowered and diagnosing:* In rare cases, GPs are empowered by the local or national healthcare system to diagnose dementia and have the right training and incentives in place, as well as sufficient access to diagnostic tools, to do so. However, these GPs are usually not representative of a city's wider GP workforce.
- *Bypassed GP:* As the global population continues to age and prevalence of dementia increases, areas that enable or encourage their populations to directly access a specialist without first seeing a GP may incur increasing pressure on the healthcare system due to the generally lower number

of dementia specialists available compared to GPs. Delays due to accessing specialists directly can be a significant barrier to receiving a diagnosis early in the progression of the condition and may even lead to fewer formal diagnoses for dementia overall. Because of this, it is important to ensure that GPs are properly trained to recognize the symptoms of dementia and either provide a referral or diagnosis, so that the care pathway for people concerned about their cognitive function is not restricted.

Experts report that Scotland has been largely successful in shifting from a model dependent on specialist referrals to one that empowers GPs to diagnose and treat dementia. In 2008, experts report that the Scottish National Health Service made an effort to de-centralize the diagnostic process, after recognizing that different health boards took different approaches to detecting and diagnosing dementia. Rather than developing a standardized diagnostic procedure, the NHS encouraged health boards to empower local physicians to act within their individual competence – including GPs with appropriate training to diagnose and treat dementia. For other providers, it would mean only providing a referral. In doing so, the government was able to empower doctors to respond to their local contexts, without establishing a set of rigid, standardized expectations for GPs and other doctors.

Population-wide diagnosis rates are rarely available, and where they are available, they are generally too low or unreliable to provide insights.

Most cities studied do not have reliable local or national data available on the number of people

CALCULATED PROPORTION OF PEOPLE LIVING WITH DEMENTIA WHO HAVE A FORMAL DIAGNOSIS VERSUS THE ESTIMATED PREVALENCE.

COUNTRY	ESTIMATED DIAGNOSIS RATE
	<i>(Proportion of total number of people estimated to be living with dementia who have a formal diagnosis)</i>
England	71% ²⁹
Scotland	67% ³⁰
France	64% ³¹
South Korea	60% ³²
Netherlands	60% ³³
Italy	50% ³⁴
Brazil	30% ^{35 36}
China	10% ³⁷

with a dementia diagnosis. A study of OECD members – 19 of the cities in this report are OECD members – found that fewer than 40% of reporting countries were able to estimate the rates of dementia diagnosis at the national level.²⁴

This information is critical for understanding the medical and care needs in the population. Without them, cities are at risk of being unable to deliver consistent, high-quality treatment and care. When cities and countries understand who is living with a dementia diagnosis, they

are better able to plan, fund, and manage services for the community. Further, even when diagnosis rates are available, experts often express concern about the methods of data collection, including diagnosis being inferred from administrative, prescription, or other data that is not entirely reliable or statistically representative.

PROMISING PRACTICE

Dementia Integrated Care Centers Drive Diagnosis in Chinese Taipei.



As part of its national dementia policy, the government in Chinese Taipei has established 73 Dementia Integrated Care Centers (DICC) to help people who may have dementia receive diagnosis and care, raise awareness and destigmatize the condition, and support dementia caregivers.³⁸ Taipei City has two DICCs, both of which are reported to be easily accessible without lengthy wait times. One of the key objectives of the DICCs is to ensure that people who are living with undiagnosed dementia receive a timely diagnosis.³⁹

To drive diagnosis, DICCs conduct community outreach to identify people who are at risk of developing dementia and help them access outpatient services. Care managers may be available to provide annual follow-ups for people who have received a diagnosis.

DICCs are most frequently staffed by neurologists and psychiatrists, who are responsible for diagnosis, while geriatricians and internal medicine physicians assist with referrals and follow-up. People with potential cases of dementia are referred to DICCs by GPs.

The establishment of DICCs allows each city in Chinese Taipei to co-locate the needed diagnostic and post-diagnostic services for people living with dementia and their caregivers. Beyond their work related to diagnosis and care, DICCs are also responsible for training a large number of service providers and work with the public to increase dementia awareness.⁴⁰

Chinese Taipei's government funded the establishment of DICCs through its Ten-Year Long-Term Care Plan 2.0. Funding is generated via a universal tax-based long-term care plan. While funds are generated at the national level, local governments are responsible for managing and administering the funds within their jurisdictions.

Call to Action

Countries and cities must establish a minimum standard of dementia training for GPs.

There is widespread consensus that GPs have an important, but under-utilized, role in detecting and diagnosing dementia. This is substantiated by OECD studies that have examined the role of GPs in diagnosis and their ability to effectively provide a diagnosis.²⁵ Often, experts suggest that GP inaction is driven by a lack of understanding and training on dementia. To help address this critical issue, countries and cities should establish guidelines or standards on dementia training for GPs. At least 13 cities studied have national-level guidelines in place for dementia diagnosis and care, but not all of these guidelines apply to or are directed at the primary care setting. Areas that have in place relevant clinical guidelines directed at primary care settings include Australia, Denmark, Mexico, the Netherlands, and New Zealand.²⁶ Experts point to Scotland's Promoting Excellence Framework as a model that could be adapted and scaled across the globe. Training must not start and stop with medical school but should be integrated into continuing education as GPs advance throughout their careers, and as the medical consensus surrounding dementia evolves.

Countries and cities must work to establish more accurate and reliable diagnosis rates via dementia registries.

Very few countries track diagnosis rates, and when diagnosis rates are available, they are rarely accurate or may be based upon unreliable data. As an essential step towards dementia innovation readiness, countries and cities must establish better systems for capturing dementia

diagnosis rates to understand who is living with dementia. As diagnosis rates are established, dementia registries can be one of the best tools for collecting, tracking, and ensuring consistency of care for people living with dementia. Importantly, a registry can provide the foundation for ensuring quick delivery of innovations in treatment and care at local levels as they become available.

Some experts have pointed to Sweden's National Quality Registry for Dementia (SveDem) as one of the best models of a voluntary health registry. SveDem records who has received a dementia diagnosis in Sweden, and registrants receive an annual follow-up to track their condition. The follow-up tracks a number of indicators, including Mini-Mental State Exam (MMSE) score, any pharmacological treatment, and relevant assistance from county or local government. Karolinska University Hospital, based in Stockholm County, is responsible for managing SveDem's data in conjunction with a steering committee of healthcare providers.²⁷ Similarly, South Korea's Korean Dementia Registry and Management System (K-DReaMS) has established a large-scale registry of older adults in the country and people living with dementia. The Korean National Institute of Dementia shares that nearly 45% of people aged 65+ are included within the registry. Of the older adults included in the registry, 8% have a confirmed dementia diagnosis. K-DReaMS goes beyond tracking diagnostic data, working to standardize the services of local dementia centers and the support that is provided to people living with dementia and their families.²⁸

Early Detection and Diagnosis: Evaluation by Indicator

GROUPED BY REGION

	● Strong	◐ Moderate	○ Weak	Presence of physicians for the senior population	Presence of reliable, publicly available diagnosis rates	Implementation of dementia awareness campaign	Dementia training of doctors and other healthcare workers	Ability of GPs to diagnose and treat dementia	Presence of specialists for the senior population
Buenos Aires	◐	◐	◐	◐	◐	◐	◐	◐	◐
Mexico City	◐	○	○	◐	○	○	◐	◐	○
New York	●	◐	◐	◐	◐	◐	●	○	◐
Sao Paulo	○	◐	○	◐	◐	○	◐	◐	○
Vancouver	◐	●	●	◐	●	●	◐	●	○
Amsterdam	◐	◐	◐	◐	◐	◐	◐	●	◐
Berlin	○	◐	◐	◐	◐	◐	◐	◐	◐
Copenhagen	●	◐	◐	◐	◐	●	●	◐	◐
Geneva	○	○	○	◐	○	◐	◐	●	●
Glasgow	◐	●	●	◐	●	◐	●	●	◐
Helsinki	◐	◐	○	◐	◐	○	●	◐	◐
London	◐	●	●	◐	●	●	●	◐	◐
Manchester	◐	●	●	◐	●	●	●	◐	◐
Paris	◐	◐	◐	◐	◐	◐	◐	◐	◐
Rome	◐	◐	◐	◐	◐	◐	◐	◐	○
Stockholm	◐	●	●	◐	●	◐	●	●	●
Cape Town	○	○	○	○	○	○	◐	◐	○
Doha	◐	◐	○	◐	◐	◐	○	○	○
Tel Aviv	●	◐	○	◐	◐	◐	◐	◐	○
Auckland	●	○	○	◐	○	◐	◐	●	◐
Beijing	◐	◐	○	◐	◐	●	◐	◐	○
Hong Kong	○	○	○	◐	○	●	●	◐	○
Seoul	◐	●	●	◐	●	●	●	●	○
Singapore	◐	○	○	◐	○	●	◐	◐	○
Sydney	●	◐	○	◐	◐	◐	●	●	○
Taipei	◐	○	○	◐	○	◐	●	◐	○
Tokyo	◐	◐	○	◐	◐	◐	●	●	○
Bangalore	○	◐	○	◐	◐	●	◐	○	○
Bangkok	○	◐	○	◐	◐	●	◐	○	○
Jakarta	○	○	○	◐	○	◐	◐	◐	○

Access to Care

Current levels of care funding, trained care professionals, and community-based and long-term care facilities are insufficient for today's needs – let alone those of tomorrow – as the mega-trend of aging increases the strain on healthcare systems. Experts point to shortages in funding and facilities as major barriers to quality dementia care. People with dementia and their families, friends, and communities are increasing pressure for support for dementia care in more flexible and appropriate settings – whether at home or in a long-term care institution – with greater access to healthcare professionals, including doctors, nurses, and allied health professionals. Payers must also recognize the economic value of innovative management of the condition.

Access to Care Scores



Key Findings

Dementia care remains under-funded in cities across the globe relative to the true costs of dementia to individuals, health systems, and economies.

Care for people with dementia is generally funded through a combination of regional or national governmental support, long-term care insurance, and private payments.⁴¹ These complex systems obscure the true costs of the condition – and cost estimates may not consistently include the cost of informal or familial caregiving, which make up an estimated 40% of dementia’s USD\$1 trillion socioeconomic impact across the globe.⁴² Lack of a common understanding related to the actual costs of dementia deprioritizes it as a serious and growing burden on local and national economies and health systems, where a better understanding might support innovations that reduce costs and improve outcomes.

People with dementia, their caregivers, and healthcare providers struggle to navigate the care pathway, including the affordability of care.

In most of the cities examined, dementia care is funded through a combination of various governmental and non-governmental sources. Experts report that this can cause confusion among people living with dementia, their caregivers, and healthcare providers as to what medical and social care is funded, by whom, for whom, and to what level. The result is that people may not consistently be able to access the care they are entitled to or that they need.

At least one study found that costs incurred during the last five years of life with dementia is 57% higher than other non-communicable

diseases like cancer and heart disease because of the intensive, non-medical care needs of someone in the advanced stages of the condition.⁴³ In many of the cities evaluated, local or national government pays for some

“The needs- and means-based assessments that patients undergo to access subsidized care can be fine-tuned to consider dementia-specific issues, like cognitive deficits and behavioral issues.”

ASSOCIATE PROFESSOR PHILIP YAP

Geriatrician and Palliative Care Physician, Department of Geriatric Medicine, Khoo Teck Puat Hospital

level of care services for people living with dementia, but often these services are only available for people who fall below a certain income or asset level. Those with additional means may be required to pay out-of-pocket for care services. The high cost of dementia care, particularly non-medical care, leaves many families ineligible for government support but still struggling to afford the support they need. In England, Israel, and Switzerland, experts described adequate funding for medical care through the national health systems. However, non-medical needs fall outside of the systems and are often overlooked. In England, specifically, the under-funding of the social (non-medical) care system has forced people living with dementia and their caregivers to pay out-of-pocket approximately £100,000 annually for in-home and long-term residential care.⁴⁴ No cities studied reported having adequate levels of funding to provide treatment and care for

everyone living with the condition, and ongoing efforts to improve diagnosis rates further highlight the funding disparity.

Technological advances in robotics, telehealth, and other digital tools have the potential to improve the affordability of dementia care. Experts noted the emergence of “robot caregivers” and other technological tools for people living with dementia that could support other care mechanisms, and these have been shown to increase medication adherence and rehabilitation exercise in other disease areas.⁴⁵ A symposium held in 2018 facilitated discussion among international research teams from Europe, Asia, and the Pacific regions on how robotic caregiving assistants could help people living with dementia remain in the community, their use in cognitive stimulation, and their role in reducing loneliness.⁴⁶ However, robots and other technologies cannot replace the essential person-centered, relationship-based care that only human caregivers can provide. The future care model for those living with dementia must appropriately balance high-tech and high touch.

Needs-tested care assessments often lack flexibility or fail to provide adequate support.

Needs assessments are frequently administered to determine how much government-subsidized care will be provided. However, government funding is rarely allocated specifically to dementia care — it is instead designated for healthcare or eldercare more generally, and then applied to individual needs. For a person living with dementia, this can be a significant barrier to high-quality specialized care that takes into consideration their condition and is adequately flexible to their preferences. Experts report that these types of assessments often do not account for the

specific needs of people living with dementia, and models for service delivery that rotate caregivers and provide brief, transactional visits may be confusing, or potentially traumatic. Where these mechanisms exist and are not aligned with the needs of people with dementia, they can create a barrier to accessing high-quality care.

Policymakers and healthcare providers are beginning to recognize in-home care as a higher-value care delivery system compared to long-term residential care facilities.

Experts around the globe were concerned that cities did not have adequate facilities or care system infrastructure to ensure access to high-quality care for everyone living with dementia. In Hong Kong, there are less than 6,000 beds in nursing homes available for a population of nearly 7.5 million.⁴⁷ Experts generally call for more dementia care to be delivered at home as a way to provide better support at earlier stages and to keep people in safe, familiar surroundings for as long as possible. Of course, long-term residential care facilities can be the most appropriate care setting for some people living with dementia who need a higher-level of support delivered frequently. However, experts cited high costs, inconsistent quality of care, and uneven availability of dementia-specialized services as pitfalls to long-term residential care facilities. A 2019 study from Genworth — a U.S.-based insurer — found the median monthly cost of a private room in a nursing home was nearly double the cost of comparable home care services.⁴⁸

An increasing number of emerging programs, businesses, and strategies support this community-based care model — all based on local needs and contexts. In cities where

domestic workers are part of the social fabric — like Singapore, Hong Kong, and Cape Town — there has been interest in providing training to these workers on the basics of dementia care. In Singapore, the Agency for Integrated Care is creating a ‘Community Mental Health Ecosystem’ that takes a population health approach to dementia. The integrated ecosystem comprises Community Outreach Teams (CREST), which act as community nodes to raise awareness and provide early identification as well as service linkages. Supporting these community nodes are the Community Intervention Teams (COMIT), which are led by allied health professionals providing care, psychosocial support, and case management, as well as equipping caregivers with the support they need. These teams are linked to hospitals and clinics for dementia capability building, client referrals, follow-up, and more.

While in-home care is increasingly recognized as a preferred option for many people living with dementia, it is critical that care providers be trained for people’s specific needs, and that government-subsidized in-home care provide adequate support to meet the needs of a person living with dementia. Key issues for people with dementia and their informal caregivers are not knowing where to go for help, the often poor integration of health and care services, and the need for post-diagnostic care that helps plan for the future. Experts report that Amsterdam is working to better integrate health and care services by connecting people living with dementia to a case manager following diagnosis who can help them to access in-home care and other support services. In this Dutch system, two case management systems are commonly used. One, called the linkage model, connects a case manager to a person with dementia

“Nursing homes often have space available for people living with dementia. But the care isn’t specialized for people with dementia, so the quality is quite patchy.”

SOPHIE COURVOISIER

Director, Association Alzheimer Genève,
Geneva, Switzerland

immediately after diagnosis. The case manager links the person with dementia and their caregivers to various health and social care resources throughout the disease progression. Case managers work under the supervision and in collaboration with a specialist physician. The second model, called the intensive case management model and joint agency model, starts when a person with dementia is referred for a diagnosis. After a diagnostic assessment, the case manager works with the person with dementia and their caregiver to develop a care plan that is shared with the person’s family practitioner, and implemented by the case manager. In both models, case management is continued until the person with dementia enters a residential long-term care center or dies.⁴⁹ An evaluation of both models found them to improve quality of life for informal caregivers and reduce costs of care.⁵⁰

Call to Action

Cities should prioritize developing and coordinating post-diagnostic support programs as a way to tailor care services to the unique needs of people living with dementia.

Experts identified post-diagnostic support as one of the areas in which cities should most urgently be funded, incentivized, and

empowered to provide locally tailored care services. Post-diagnostic support services can be especially useful in helping patients and their families navigate complex funding and care systems to access benefits and reduce out-of-pocket costs. However, experts report that post-diagnostic support is not consistently available or prioritized as an area of need.

Post-diagnostic support represents an unrealized opportunity for cities to innovate, as it primarily relies on the availability of local resources. For example, in France,

the government has established a program called Maison pour l'Autonomie et l'Intégration des malades d'Alzheimer (MAIA) to provide integrated and continuous care for people living with dementia – especially those with complex conditions. In particular, MAIA connects participants with a dedicated case manager who can help them to navigate and access locally available resources. Experts in France point to MAIA as a model for how national programs can respond to city-level needs and resources.

PROMISING PRACTICE

First Link® Supports Post-Diagnostic Care in Vancouver and Across Canada.



First Link® is a program established by the Alzheimer Society of Canada that enables healthcare providers to offer more comprehensive care to people with dementia throughout the course of the disease progression.⁵¹ The primary goal of First Link® is to build and strengthen connections between healthcare providers, diagnostic and treatment services, community service providers, and the Alzheimer Society.^{52 53} First Link® is available from the Alzheimer Society across the country, but each province customizes its offerings based on specific needs. Research has shown that people who access services via First Link receive support, on average, 11 months sooner than people who learn about community support through other channels.⁵⁴

Experts report that the local Alzheimer Society in Vancouver is innovating with First Link® by embedding its referral within electronic medical records, so that people can receive an immediate referral as they enter specialist care or demonstrate cognitive impairment.

How First Link® Works^{55 56}



1. **Person is diagnosed with dementia**



2. **Physician, nurse, allied health professional, or community service provider receives consent to enroll person living with dementia in First Link®**



3. **First Link® coordinator contacts person with dementia and provides information about locally available community services, educational resources, and other support**

Access to Care: Evaluation by Indicator

GROUPED BY REGION

	Access to in-home care	Access to assisted living and nursing homes	Presence of nurses and social workforce for the senior population	Access to subsidized treatments for dementia	Presence of a major research center or hospital with an Alzheimer's or dementia unit
Buenos Aires	○	◐	○	●	●
Mexico City	○	○	○	●	◐
New York	●	◐	◐	◐	●
Sao Paulo	○	◐	○	●	◐
Vancouver	◐	◐	◐	◐	●
Amsterdam	●	●	●	●	●
Berlin	◐	◐	◐	●	●
Copenhagen	●	●	●	●	●
Geneva	●	◐	●	●	●
Glasgow	◐		○	●	◐
Helsinki	●	◐	●	●	○
London	○	◐	●	●	●
Manchester	○	◐	●	●	●
Paris	●	●	○	○	●
Rome	○	◐	◐	●	◐
Stockholm	●	●	◐	●	●
Cape Town	◐	◐	○	○	○
Doha	○	○	○	◐	○
Tel Aviv	○	◐	◐	◐	◐
Auckland	●	◐	◐	●	◐
Beijing	○	◐	○	●	●
Hong Kong	○	○	○	◐	◐
Seoul	◐	◐	○	●	●
Singapore	◐	◐	○	●	◐
Sydney	●	◐	◐	●	●
Taipei	◐	◐	○	◐	●
Tokyo	●	◐	◐	●	●
Bangalore	○	◐	○	○	◐
Bangkok	○	◐	○	◐	◐
Jakarta	◐	◐	○	○	◐

- Strong
- ◐ Moderate
- Weak

Community Support

Increasingly, community organizations, the private sector, the government, and individual advocates join together to ensure that people living with dementia and caregivers have access to support within their communities. Local leaders play a wide range of roles, from developing dementia-friendly programs to providing trainings and direct support to conducting advocacy and lobbying campaigns. There are growing opportunities for local groups, from chambers of commerce to senior centers to libraries, to support people living with dementia. As demand for dementia care services increases, these organizations will be even more important to ensure that patients, caregivers, and communities receive high-quality care and support. At the global level,

Community Support Scores



the WHO, through its age-friendly cities work, promotes practices that are beneficial for older people in general – and by extension, people living with dementia.

Key Findings

Community-based organizations, including non-profit Alzheimer’s and dementia associations as well as other service providers, provide comprehensive assistance to people living with dementia. These services include, but are not limited to offering direct services, making connections to care, and advocating for policy and legal support in their communities.

In most of the cities studied, experts identified the local chapter of a national Alzheimer’s association as the most reliable provider of direct dementia support for the local community. These groups fill gaps in service, deepen the impact of existing programs, and play a critical role in creating new service offerings. Common offerings include training for caregivers, professionals, and the public; providing or connecting consumers to care; enabling emotional support; raising awareness; and advocating for or participating in policy development.

Leading examples of Alzheimer’s organizations focus on advancing supportive policies and implementing comprehensive dementia-friendly campaigns at the local level. In London, the local organization works directly with government officials and other stakeholders as part of the city’s Dementia Implementation Group to help create dementia-friendly neighborhoods citywide.⁵⁷ Local associations can also help to shape the national response to dementia, as in Tokyo, where the local non-profit group has been closely involved

in national dementia planning as part of the Dementia Working Group. Several experts noted that in addition to strategy development, some Alzheimer’s associations support national governments in the implementation of programs at the community level. Specifically, these associations are direct recipients of national and regional funding allocations for dementia care (particularly in countries with decentralized funding models). Experts in Auckland emphasized the importance of Dementia Auckland in providing consistent, high-quality care support to people living with dementia and their caregivers.⁵⁸ With a substantial portion of its operating budget reportedly funded by the government, Dementia Auckland works with all three of the Auckland District Health Boards to implement a range of programs.

Other local non-profit organizations operate independently but are leading examples of community support. In Singapore, once-discrete dementia care services – provided by hospitals, primary care clinics and community care providers offering center-based or home-based care – are being integrated to form larger neighborhood networks providing persons with dementia with a more seamless continuum of care and support from diagnosis until death. There are at least two prominent examples of such networks. One of these is led by the non-profit community care provider Tsao Foundation and is located in Whampoa, a fast-ageing locality not far from downtown Singapore. The other is helmed by the Khoo Teck Puat Hospital in northern Singapore and is integrated with the local initiative to build a dementia-friendly community. Bangalore’s local branch of the Alzheimer’s & Related Disorders Society of India (ARDSI) – partnered with Nightingales

Medical Trust, a prominent service provider, to pioneer several dementia-friendly initiatives. “Creating a Dementia-Friendly Generation,” a dementia friends pilot program started in September 2019 to increase awareness around the disease, signed up nearly 1,500 individuals in the first day; the organizers hope to recruit an additional 10,000 new dementia friends in the first year.⁵⁹ Last year, more than 600 individuals participated in the Bengaluru race, an engaging treasure hunt aimed at reducing stigma and increasing awareness citywide.⁶⁰

Elsewhere, local non-profit groups support discrete services such as help lines, training, respite care, and support groups. In Hong Kong, the local Alzheimer’s association offers day center trainings run by specialists, who leverage non-pharmacological approaches to help improve mood and cognitive functioning.⁶¹ Geneva’s local organization runs a nurse-staffed helpline that provides information for people with dementia, their families, healthcare providers, and others.⁶²

Alzheimer’s South Africa oversees a training program in Cape Town tailored to informal caregivers and domestic workers who are employed in homes where a person with dementia resides.⁶³ People with dementia in Cape Town are additionally supported by Badisa, a social service organization that offers assistance to families to place loved ones in care facilities.⁶⁴ Singapore’s Alzheimer’s Disease Association and other social service agencies offer a similar set of training programs for informal caregivers and domestic workers.

In addition to the work being advanced by advocacy and other community support organizations, people with dementia actively work to ensure their voices are heard and

“I understand the inclination to label things as ‘dementia-friendly.’ But we must go beyond these labels to be more inclusive. We should make communities that are inclusive, and therefore accessible for all, and simply recognize that people living with dementia are part of our communities.”

KATE SWAFFER, PHD CANDIDATE

MSc, Chair, Chief Executive Officer and Co-Founder,
Dementia Alliance International, Australia

integrated in policy, healthcare, and other settings. Patient-led organizations like Dementia Alliance International and the European Working Group of People with Dementia are helping to amplify the voice of people living with dementia across the globe.

While cities are beginning to embrace dementia-friendly principles, more work must be done to ensure that cities are prepared for more people living with dementia.

The dementia friends program is one of the most common means employed by cities to raise awareness of the unique support needs of people with dementia. Dementia Friends programs generally provide training to the general public to increase their awareness of dementia and provide a basic overview of how to be an advocate for and ally to people living with dementia. It aims to demystify dementia, address myths, and change the way people think, react to, and talk about the condition. The model for these programs was started in Japan (where there are now more than 11 million Dementia Friends) and has been adapted to

countries and cities across the world. The UK's Dementia Friends program has provided training to 3 million individuals nationwide, at a rate of 500 people a day.⁶⁵ The way Dementia Friends advocate is personalized, and the overall aim of the program is to raise awareness. Similarly, advocacy groups in some cities are working with government employees to provide dementia training specifically for public servants. In Jakarta, the local Alzheimer's association works with provincial government to oversee the "Purple Troops Campaign", which trains social workers and health care professionals to be first responders for dementia-related missing persons cases. Trained teams liaise with the Provincial Social Welfare office and use the app Qlue to connect lost persons with their families.⁶⁶

An emerging trend among some cities is to develop a city-wide or district-wide dementia-friendly effort. A notable example is in London, where the local Alzheimer's society is leading an effort – supported by the Mayor's office – to become a dementia-friendly city by 2022. To do so, it is working across a number of domains including healthcare, transportation, the private sector, and more. Goals include increasing the number of dementia-friendly organizations, dementia friends, and dementia-friendly boroughs. The work will also focus on increasing uptake of dementia-friendly planning principles, like training public transportation staff and making signage across the city clearer.⁶⁷ Similar efforts are taking place in Singapore's public housing blocks, where 22 buildings have been upgraded with clearer signage and visual cues to help people with dementia navigate their communities.⁶⁸

Experts highlighted several examples of private-sector organizations taking the lead

“Our local Alzheimer's association doesn't focus on providing services, because people in Amsterdam are generally covered by government-funded care. This is applicable to all residents in The Netherlands. Instead, our organization focuses on advocacy and awareness. And I think this works well, because it lets the NGOs and government play to their own strengths and complement one another.”

JACQUELINE HOOGENDAM

Ministry of Health, Welfare and Sport, Den Haag,
The Netherlands

on dementia-friendly initiatives, with financial services often leading the way. In 2015, Westpac Bank launched a dementia-friendly initiative in Auckland and other cities across New Zealand. The company trains its employees and also offers resources for families impacted by the condition.⁶⁹ Similarly, HSBC in Hong Kong⁷⁰ has developed dementia-friendly practices, and Bank of America is implementing training for its financial advisors and other employees to better understand and serve an aging customer base.⁷¹ Groups like Alzheimer's New Zealand are working to expand the number of dementia-friendly businesses. Its "Dementia Friendly Recognition Programme" provides a toolkit for private enterprises to self-evaluate their practices and establish a dementia-friendly model.⁷²

While some experts embrace dementia-friendly initiatives, others are more skeptical and hesitant due to two main concerns. First, some

experts suggested that the lack of evaluation and evidence behind dementia-friendly initiatives generates a risk that these programs are not consistently applied for meaningful impact. Other experts suggested that dementia-friendly principles alienate people living with the condition by being too simplistic or dehumanizing of their experience and that it would be better for these principles to simply be embedded as a way to improve the lives of everyone – not just those living with dementia.

Call to Action

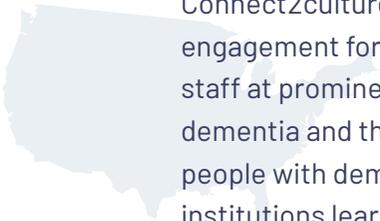
Cities must build on — and move beyond — discrete “dementia-friendly” efforts to establish dementia-friendly societies.

Dementia-friendly planning and Dementia Friends programs have sparked discussions

and raised awareness about the condition in communities across the globe. However, more must be done to prepare for the rising prevalence of dementia and to normalize living with progressive neurodegeneration, even while recognizing that it is not a normal function of aging. Cities, regions, countries, and the global community must go beyond dementia-friendly responses that focus on a specific community or business, finding new ways to value, engage, and empower people living with dementia holistically. This includes contributing to an evidence base on the effectiveness of dementia awareness programs through the application of metrics and continuous evaluation.

PROMISING PRACTICE

Promoting Social Engagement for People Living with Dementia.



Connect2culture is a program run by CaringKind in New York that helps to promote social engagement for people living with dementia. Through Connect2culture, CaringKind trains staff at prominent arts and cultural institutions on how to better serve people living with dementia and their caregivers, and helps them to create specific programming tailored for people with dementia. Through a two-hour training, public-facing staff at arts and cultural institutions learn about dementia and how to better serve people with dementia in their professional capacities. A more in-depth program is available for staff who are interested in facilitating arts and culture programs that are specifically created for people with dementia.⁷³ Participating institutions often open admission to people with dementia and their caregivers for free or reduced price as part of the program.⁷⁴ With some research pointing to social engagement as a means to reduce the risk for the onset of dementia, programs like Connect2culture can help people remain active in their communities and potentially reduce their risk for dementia.⁷⁵ Connect2culture has established such programs and partnerships with top-tier institutions, including the Metropolitan Museum of Art, the Brooklyn Museum, and the Lincoln Center for the Performing Arts.⁷⁶

Community Support: Evaluation by Indicator

GROUPED BY REGION

	Participation in WHO age-friendly cities network	Presence of dementia-friendly community and/or dementia friends program	Presence of a local Alzheimer's Society chapter that conducts advocacy and provides direct support services for people living with dementia	Presence of a local Alzheimer's Society chapter that conducts advocacy and provides direct support services for caregivers of people living with dementia	Presence of community support organizations that conduct advocacy activities for people living with dementia and their caregivers	Presence of a community organization that provides direct support services (such as respite care, 24/7 hotline services, caregiver training, post-diagnostic support) for people living with dementia	Implementation of dementia risk reduction campaign
Buenos Aires	●	●	○	○	●	●	●
Mexico City	○	●	●	●	●	○	○
New York	●	●	●	●	●	●	○
Sao Paulo	○	○	●	●	○	○	○
Vancouver	○	●	●	●	●	●	●
Amsterdam	●	●	○	●	●	●	○
Berlin	○	●	●	●	●	●	●
Copenhagen	○	●	●	○	●	●	●
Geneva	●	●	●	●	○	○	○
Glasgow	●	●	●	●	●	●	●
Helsinki	○	●	●	●	●	●	●
London	●	●	●	●	●	●	●
Manchester	●	●	●	●	●	●	●
Paris	●	●	●	●	●	●	●
Rome	○	○	●	●	●	○	●
Stockholm	●	○	●	●	●	●	○
Cape Town	○	○	○	○	○	○	○
Doha	○	○	○	○	○	○	○
Tel Aviv	○	○	○	○	○	○	○
Auckland	○	●	●	●	●	●	●
Beijing	○	●	●	●	●	●	●
Hong Kong	●	●	○	●	●	●	○
Seoul	●	●	○	○	●	●	●
Singapore	○	●	●	●	●	●	●
Sydney	○	●	●	●	●	●	●
Taipei	○	●	●	●	●	●	●
Tokyo	○	●	●	●	●	●	●
Bangalore	○	●	●	○	●	●	●
Bangkok	○	●	●	●	●	●	●
Jakarta	○	○	●	●	●	●	●

● Strong
 ● Moderate
 ○ Weak

Business Environment

A favorable business environment is critical to catalyzing innovation in dementia. Without the right incentives, policies, and protections for businesses, cities are less likely to become hubs of innovation for the treatment, prevention and risk reduction, and care of dementia. In particular, innovation depends on strong intellectual property protection, complemented by favorable financial incentives for investment, as well as a robust ecosystem of private-, public-, and third-sector actors.

Business Environment Scores



Key Findings

Research partnerships with the business community combat disinvestment from the neuroscience field.

Experts report that investors in cities around the world are increasingly uncertain of funding dementia research due to decades of disappointing dementia clinical trial results. There has not been a new drug therapy approved for Alzheimer's disease since 2003, and of the available treatments, none are disease-modifying – meaning they do not slow or halt the progression of the condition.⁷⁷ However, the potential demand for a breakthrough treatment, once it reaches the market, is enormous. Governments, the private sector, and academia are critical stakeholders in partnering in ways that share risk and spur investment in dementia treatments, as well as areas with important public health impacts such as prevention and risk reduction.

In particular, public-private partnerships can support and deploy a greater number of innovative funding models to maximize the potential impact of investments. For example, the international Healthy Brains Financing Initiative (HBFI) is an effort from the mental health advocacy group One Mind and the National Academy of Medicine in the United States to create a \$10 billion social impact bond for translational neuroscience research anchored with funding from countries. In New York, the high density of funders, research universities and academic institutions, and third-party advocacy and research groups has helped to spur local innovation. For example, the Alzheimer's Drug Discovery Foundation has established the Diagnostics Accelerator, with \$30 million in funding from national

donors. The Accelerator aims to increase the amount of research into biomarkers and diagnostic technology using a venture funding model.⁷⁸ These models, if proven effective, could be commercialized and brought to the public from the private sector. The EU's cross-sector collaboration, the Innovative Medicines Initiative, which has a budget of €3.276 billion jointly supported by the European Commission and the European Federation of Pharmaceutical Industries and Associations, funds several projects focused on dementia. These projects include the European Prevention of Alzheimer's Dementia Consortium (EPAD) aimed at better understanding prevention and treatment of dementia, the Amyloid imaging to prevent Alzheimer's disease (AMYPAD) project studying the use of PET scans for diagnosis of dementia, and the Models of Patient Engagement for Alzheimer's Disease (MOPEAD) project identifying how best to engage patients early in the disease progression.⁷⁹

“The private sector is committed to develop innovations that address dementia specifically and brain health more generally. Governments and NGOs must be partners in the solution by participating in cross-sector collaborations, supporting innovative funding mechanisms, and sharing a commitment to promoting innovation and investment.”

GEORGE VRADENBURG

Chairman and Co-Founder, UsAgainstAlzheimer's,
Convener, The Global CEO Initiative on Alzheimer's
Disease, United States

Cities have an important role in creating a favorable environment for business innovation, with the research that unlocks dementia innovation relying on a healthy city-level ecosystem of research establishments, clinicians, researchers, and private-sector leaders. For example, in Zhongguancun, in Beijing's Haidan district, the local and national government offer tax breaks and funding to support local innovators, and Beijing's

government is working to ease immigration for top foreign hires. A focused effort at promoting innovation in Zhongguancun over the last 30 years has led the area to become one of the leading hubs for technology and innovation in China, as home to over 9,000 technology firms – including nearly half of China's USD \$1 billion "unicorn" start-ups – 40 universities, and over 200 research institutes. Research borne of Zhongguancun includes investigations into

PROMISING PRACTICE

Private Sector Sees Opportunity in Developing Novel Diagnostic Tools.

While investment in neuroscience in the private sector has declined over the last decade, some companies view the potential demand for innovations in dementia as an attractive market and are willing to accept the risk. Areas such as digital tools, biomarkers, and AI have all been leveraged in attempts to solve complex issues related to dementia.

Geras Solutions, a Swedish-based software company, developed a suite of five digital tools with a particular focus on detection, diagnosis, risk reduction, and prevention.⁸⁴ This innovative app brings evidence-based cognitive screening tests and purported risk reduction methods directly to consumers. Koichi Tanaka of Shimadzu Corp. published a study last year in *Nature* indicating that a new blood test shows traces of amyloid-beta protein, which could help to gauge for the progression of dementia. The application of such a breakthrough would be in confirming diagnoses as well as potentially identifying people who may develop dementia in the future. Shimadzu Corp. hopes to roll out the service in the U.S. this year prior to global introduction.⁸⁵ Esya Labs' Dr. Yamuna Krishnan and Dhivya Venkat have created a precision diagnostic tool that identifies a different set of biomarkers, purportedly non-invasive, that could be used to help diagnose the disease that cause dementia earlier in progression.⁸⁶ The company Cognetivity created an image cognition test that can be used to identify markers of neural degeneration, a critical indicator of dementia. The test, administered on an iPad, uses artificial intelligence algorithms to cluster results by speed, accuracy, and image type to assess the severity of any degeneration.⁸⁷

These products and other novel products, which have the potential to quickly, accurately, and inexpensively solve challenges in diagnosis of Alzheimer's disease and other types of dementia, showcase the opportunity for private-sector innovations to adapt and scale existing practices and ultimately improve outcomes for patients.

innovations for dementia such as light therapy and biomarkers. Zhongguancun's success was driven by national and local efforts to foster a geographic area focused on innovation, similar to the United States' Silicon Valley.⁸⁰ As public-private partnerships develop models for funding in dementia, cities have an opportunity to be participants as well as sites for investment in the research and development of innovation.

Access to a reliable care workforce will require private-sector engagement to meet the overwhelming demand for care and support of people living with dementia and their communities.

In nearly every city studied, experts cited disparities between the care needs of people living with dementia and the types and availability of publicly funded care. In many places, the private sector is working to address this gap with the development of a suitably trained care workforce, but barriers to recruitment and retention in the field remain for policymakers to address.

In some countries, governments are working to change immigration laws to allow for more foreign caregivers to supplement the care workforce. In Japan, where the proportion of older people to younger people is the highest in the world,⁸¹ experts report that the government is working to ease immigration requirements for people with training in dementia care, and similar programs have been considered in Germany.⁸² A potential challenge of such programs is ensuring that immigrant caregivers are trained to an appropriate standard in dementia care, but the private sector, with oversight from government, is a pathway for the integration and training of this essential labor force. Alternatively, if the care workforce fails to

grow, people who are unable to access reliable, high-quality care for their loved ones living with dementia may look for caregivers on the "grey market," which may be provided by under-trained or altogether untrained workers.⁸³

Call to Action

Cities must be hubs for incubating innovations to support private-sector investments in dementia solutions.

Cities can bolster innovation in dementia through support for accelerators and incubators in the business community, promoting mentorship, growth, and shared knowledge and resources among local companies at their earliest stages. These innovators are exploring tools, technologies, and even drug therapies in Alzheimer's and dementia that could drastically change the landscape, and a city that is able to support these advances with access to established business experts may be the first area to scale new products, programs, and services that improve the lives of people with dementia.

Business Environment: Evaluation by Indicator

GROUPED BY REGION

	● Strong ◐ Moderate ○ Weak	Intellectual property protection	University-industry collaboration in R&D	# of patents granted in med tech, biotech, or pharmaceuticals	# of top 500 health institutions for research, innovation, and societal impact	Active labor market policies
Buenos Aires	○	○	○	○	○	○
Mexico City	○	○	○	○	●	○
New York	●	●	●	●	●	●
Sao Paulo	○	○	○	○	○	○
Vancouver	●	◐	◐	○	○	◐
Amsterdam	●	●	●	○	○	●
Berlin	◐	●	○	○	◐	●
Copenhagen	●	◐	○	○	○	●
Geneva	●	●	○	○	○	●
Glasgow	●	●	○	○	○	◐
Helsinki	●	●	○	○	◐	●
London	●	●	○	○	●	◐
Manchester	●	●	○	○	○	◐
Paris	●	◐	○	○	◐	◐
Rome	○	○	○	○	◐	○
Stockholm	●	●	○	○	○	●
Cape Town	◐	◐	◐	◐	◐	◐
Doha	◐	◐	○	○	○	◐
Tel Aviv	●	●	○	○	○	◐
Auckland	●	◐	○	○	○	●
Beijing	○	◐	○	●	◐	◐
Hong Kong	●	◐	○	○	○	●
Seoul	○	◐	○	○	●	◐
Singapore	●	●	○	○	◐	●
Sydney	●	◐	○	○	●	●
Taipei	◐	◐	○	○	◐	◐
Tokyo	●	◐	○	◐	◐	◐
Bangalore	○	◐	○	○	○	◐
Bangkok	○	○	○	○	○	◐
Jakarta	○	◐	○	○	○	◐

Appendix A: Performance Scale

The Index evaluates cities' innovation readiness based on qualitative and quantitative data on 26 weighted indicators across five categories: Strategy and Commitment, Early Detection and Diagnosis, Access to Care, Community Support, and Business Environment. Where reliable, consistent secondary data was available, a distance to frontier calculation was used to establish scores. This calculation identifies a top-performing city, and scores the remaining cities relative to the top performer. Where reliable secondary data was not accessible or did not exist, self-reported data shared by experts via survey or interview was used for scoring. The collection of secondary data relied upon the availability of English-language resources, or the availability of reliable translations. Interviews and data collection were conducted from June to December 2019. As such, this Index represents a snapshot of each city's dementia innovation readiness during that period.

Indicator	Rating Scale	Scoring Method
Strategy and Commitment		
Presence and implementation of a national or regional dementia strategy or plan, which includes a focus on the role of cities, towns, or communities	<p>1 = Country has no dementia plan</p> <p>2 = Country has dementia plan, but it's not being implemented</p> <p>3 = Country has dementia plan that is being implemented, but without a focus on the role of cities, towns, or communities</p> <p>4 = Country has dementia plan that is being implemented and includes a focus on the role of cities, towns, or communities or there is a city-level plan</p>	Scored based on data from Alzheimer's Disease International, publicly available national plans, and other secondary data sources
Government funding for dementia or eldercare	<p>1 = Government does not fund care for people living with dementia</p> <p>2 = Government funds care for a limited amount of people living with dementia (very few people have access to government funded care)</p> <p>3 = Government funds care for a moderate amount of people living with dementia (less than half of people who need or request support receive it)</p> <p>4 = Government funds a sufficient amount of care for people living with dementia (most people who need or request support receive it)</p>	Scored based on expert interviews and surveys
City-level leadership on dementia or age-related issues	<p>1 = There's no evident leadership from local government on dementia or age-related issues</p> <p>2 = The government has taken some action on dementia or age-related issues, but the actions appear to be "one-off" and not part of a larger strategy or commitment</p> <p>3 = The government has taken action on dementia or age-related issues as part of a larger strategy, but it is either just emerging or there are questions about its sustainability/continuation</p> <p>4 = The government has taken action on dementia or age-related issues as part of a larger strategy and the strategy appears to be enduring</p>	Scored based on expert interviews and surveys, as well as select secondary data
Early Detection and Diagnosis		
Presence of physicians for the senior population	Distance to frontier	Scored based on existing secondary data. A calculation is applied to normalize the number of doctors at the city level. The result of this calculation is used to determine distance to frontier.
Presence of reliable, publicly available diagnosis rates	<p>1 = No diagnosis rates available</p> <p>2 = Diagnosis rates are available, but generally not reliable</p> <p>3 = Diagnosis rates are available and reliable, but remain low and more people must receive a diagnosis</p> <p>4 = Diagnosis rates are available, reliable, and most people with dementia have a diagnosis</p>	Scored based on expert interviews and surveys, as well as select secondary data

Indicator	Rating Scale	Scoring Method
Implementation of dementia awareness campaign	<p>1 = There has not been a functioning dementia public awareness campaign over the past 5 years</p> <p>2 = There has been a functioning dementia public awareness campaign over the past 5 years, but it was not comprehensive in what it covered or the groups it engaged</p> <p>3 = There has been a comprehensive dementia public awareness campaign nationally in the past 5 years</p> <p>4 = There has been a comprehensive dementia public awareness campaign locally in the past 5 years</p>	Scored based on expert interviews and surveys, as well as select secondary data
Dementia training of healthcare workers	<p>1 = Basic dementia competencies are not included in training for any healthcare workers</p> <p>2 = Dementia competencies are included in trainings for doctors, but not comprehensively (e.g., trainings are primarily provided by local Alzheimer's societies or other groups).</p> <p>3 = Dementia competencies are included in training for doctors and allied health professionals, but not comprehensively (e.g., trainings are primarily provided by local Alzheimer's societies or other groups).</p> <p>4 = Dementia competencies are comprehensively included in training for doctors and allied health professionals (e.g., included in official medical training curriculum or other certification materials)</p>	Scored based on expert interviews and surveys, as well as select secondary data
Ability of GPs to diagnose and treat dementia	<p>1 = GPs may be the first point of contact for a potential dementia case, but can only provide a referral to a specialist</p> <p>2 = GPs can make an indicative diagnosis</p> <p>3 = GPs can make a formal diagnosis</p> <p>4 = GPs can initiate medications</p>	Scored based on expert interviews and surveys, as well as select secondary data
Presence of specialists for the senior population	Distance to frontier	<p>Scored based on the total number of psychiatrists, neurologists, geriatricians, and psychogeriatricians in a given country. A calculation is applied to normalize the number of specialists at the city level. The result of this calculation is used to determine distance to frontier.</p> <p>Countries were evaluated on whatever level of data about specialist availability was located through secondary data sources, and not all countries share information about each type of specialty.</p>

Access to Care

Access to in-home care	<p>1 = In-home care for people living with dementia is practically inaccessible</p> <p>2 = There is limited availability of in-home care for people living with dementia, and there are barriers to accessing the care that is available</p> <p>3 = There is a high level of availability of care, but there are concerns about quality of care</p> <p>4 = There's readily accessible high-quality in-home care</p>	Scored based on expert interviews and surveys, as well as select secondary data
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Indicator	Rating Scale	Scoring Method
Access to assisted living and nursing homes	<p>1 = Assisted living and nursing homes for people living with dementia are practically inaccessible</p> <p>2 = There is limited availability of assisted living and nursing homes for people living with dementia, and there are barriers to accessing the care that is available</p> <p>3 = There is a high level of availability of care, but there are concerns about quality of care</p> <p>4 = There's readily accessible high-quality assisted living and nursing home care</p>	Scored based on expert interviews and surveys, as well as select secondary data
Presence of nurses and social workforce for the senior population	Distance to frontier	<p>Scored based on the total number of nurses, social workers, and personal care workers in a given country. A calculation is applied to normalize the number of nurses, social workers, and personal care workers at the city level. The result of this calculation is used to determine distance to frontier.</p> <p>Countries were evaluated on whatever level of data about nurse and social workforce availability was located through secondary data sources, and not all countries share information about each type of worker.</p>
Access to subsidized treatments for dementia	<p>1 = Medication for dementia is not approved for use within the country</p> <p>2 = Medication for dementia is approved for use within the country, but not fully reimbursed or subsidized</p> <p>3 = There is at least one medication for dementia approved and reimbursed or subsidized within the country, but barriers to access exist</p> <p>4 = There is at least one medication for dementia approved and reimbursed or subsidized within the country, with negligible barriers to access</p>	Based on evidence from secondary sources, surveys, and interviews, we scored this indicator on the whether or not countries approved and reimbursed or subsidized dementia medication.
Presence of a major research center or hospital with an Alzheimer's or dementia unit	<p>1 = There is no major research center or hospital within the city</p> <p>2 = There is a major research center or hospital within the city, but it doesn't have a dementia unit</p> <p>3 = There is a major research center or hospital within the city, and it has a dementia unit, but there are concerns about access or quality</p> <p>4 = There is a major research center or hospital within the city that has a dementia unit, and there are no concerns about quality or access</p>	Based on evidence from secondary sources, surveys, and interviews, we scored this indicator on whether or not a city had a major research center or hospital with an Alzheimer's or dementia unit and if it was accessible.
Community Support		
Participation in WHO age-friendly cities network	<p>1 = The city is not participating in the WHO's age-friendly network</p> <p>2 = The city is participating in the WHO's age-friendly network, but it only completed a commitment letter</p> <p>3 = The city is participating in the WHO's age-friendly network, and it has completed a commitment letter, and a baseline assessment</p> <p>4 = The city is participating in the WHO's age-friendly network, and it has completed a commitment letter, a baseline assessment, and a strategy and action plan</p>	Scored based on each country's level of commitment to the WHO's Age-Friendly Network, via information made available from the WHO

Indicator	Rating Scale	Scoring Method
Presence of dementia-friendly community and/or dementia friends program	<p>1= There is no evidence of efforts to create a dementia-friendly community and/or dementia friends programming</p> <p>2 = The city may have a standalone dementia friends or dementia-friendly program, but it's not part of a wider strategy</p> <p>3 = The city has dementia friends or dementia-friendly programming as part of a wide-reaching strategy, but there are concerns about its efficacy</p> <p>4 = The city has what's generally accepted as an effective dementia friends or dementia-friendly program</p>	Scored based on expert interviews and surveys, as well as select secondary data
Presence of a local Alzheimer's Society chapter that conducts advocacy and provides direct support services for people living with dementia	<p>1= The city does not have a Alzheimer's society chapter</p> <p>2 = The city has an Alzheimer's society, but there are concerns about its efficacy or capacity in conducting advocacy and/or providing direct support services</p> <p>3 = The city has an Alzheimer's society that's considered effective, but not top-tier in conducting advocacy and/or providing direct support services</p> <p>4 = The city has a top-tier Alzheimer's society chapter in conducting advocacy and/or providing direct support services</p>	Scored based on expert interviews and surveys, as well as select secondary data
Presence of a local Alzheimer's Society chapter that conducts advocacy and provides direct support services for caregivers of people living with dementia	<p>1= The city does not have a Alzheimer's society chapter</p> <p>2 = The city has an Alzheimer's society, but there are concerns about its efficacy or capacity for supporting caregivers and conducting caregiver advocacy</p> <p>3 = The city has an Alzheimer's society that's considered effective for supporting caregivers, but not top-tier for supporting caregivers and conducting caregiver advocacy</p> <p>4 = The city has a top-tier Alzheimer's society chapter for supporting caregivers and conducting caregiver advocacy</p>	Scored based on expert interviews and surveys, as well as select secondary data
Presence of community support organizations that conduct advocacy activities for people living with dementia and their caregivers	<p>1= The city does not have community support/social service organizations working with people with dementia or their caregivers</p> <p>2 = The city has CSOs working with PWDs and caregivers, but they do not offer advocacy services</p> <p>3 = The city has CSOs that advocate for people living with dementia and their caregivers, but the programs need to be more effective</p> <p>4 = The city has CSOs that conduct an adequate amount of effective advocacy activities for persons with dementia and their caregivers</p>	Scored based on expert interviews and surveys, as well as select secondary data
Presence of a community organization that provides direct support services (such as respite care, 24/7 hotline services, caregiver training, post-diagnostic support) for people living with dementia	<p>1= The city does not have community organizations providing direct support for persons with dementia and their caregivers</p> <p>2 = The city has community organizations offering for people living with dementia and their caregivers, but they don't focus on providing direct support services</p> <p>3 = The city has community organizations that provide support services for people living with dementia and their caregivers, but more help is needed</p> <p>4 = The city has community organizations that provide an adequate amount of support for people with dementia and their caregivers</p>	Scored based on expert interviews and surveys, as well as select secondary data

Indicator	Rating Scale	Scoring Method
Implementation of dementia risk reduction campaign	<p>1 = There has not been a functioning dementia prevention/risk reduction campaign over the past 5 years</p> <p>2 = There has been a functioning dementia prevention/risk reduction campaign over the past 5 years, but it was not comprehensive in its scope or the groups it engaged</p> <p>3 = There has been a comprehensive dementia prevention/risk reduction campaign nationally in the past 5 years</p> <p>4 = There has been a comprehensive dementia prevention/risk reduction campaign locally in the past 5 years</p>	Scored based on expert interviews and surveys, as well as select secondary data

Business Environment

Intellectual property protection	Distance to frontier	Scores based on data from the World Economic Forum's 2018 Global Competitiveness Report. Countries are scored using distance to frontier based on their performance with the WEF report, with the top performing country in the WEF report receiving a score of 100.
University-industry collaboration in R&D	Distance to frontier	Scores based on data from the World Economic Forum's 2018 Global Competitiveness Report. Countries are scored using distance to frontier based on their performance with the WEF report, with the top performing country in the WEF report receiving a score of 100.
# of patents granted in med tech, biotech, or pharmaceuticals	Distance to frontier	Scored based on the total number of patents granted in medical technology, biotechnology, or pharmaceuticals in a country from 2014-2018, based on data made available from the World Intellectual Property Organization.
# of top 500 health institutions for research, innovation, and societal impact	Distance to frontier	Scored based on the total number of Top 500 Health Institutions for Research, Innovation, and Societal Impact as defined by Scimago Institution Rankings.
Active labor market policies	Distance to frontier	Scores based on data from the World Economic Forum's 2018 Global Competitiveness Report. Countries are scored using distance to frontier based on their performance with the WEF report, with the top performing country in the WEF report receiving a score of 100.

Appendix B: Secondary Data and Sources

The *2020 Dementia Innovation Readiness Index* was constructed through a variety of surveys, interviews, and secondary data sources. Included below is a repository of the secondary data collected for this effort. For qualitative indicators such as “City-level leadership on dementia or age-related issues,” “presence of dementia-friendly community and/or dementia friends programs,” and “implementation of a dementia awareness campaign,” we have included below representative examples of activities being conducted at the city level. This is not an exhaustive list of every example of activity that exists for a given indicator, and for indicators that relied primarily on interview or survey data, secondary data may not be provided.

Indicator	Data Finding	Sources
Amsterdam		
Presence and implementation of a national or regional dementia strategy or plan, which includes a focus on the role of cities, towns, or communities	Yes, with a focus on creating dementia friendly communities. The plan is adopted and monitored with substantial funding.	"Deltaplan Dementie 2012–2020." Alzheimer Nederland. 2012. Available at https://www.neurodegenerationresearch.eu/wp-content/uploads/2014/08/rapport-deltaplan-dementie.pdf From Plan to Impact II: The urgent need for action." Alzheimer's Disease International. 2019. Available at https://www.alz.co.uk/adi/pdf/from-plan-to-impact-2019.pdf
Government funding for dementia or eldercare	N/A	
City-level leadership on dementia or age-related issues	Yes, the Amsterdam City Council is committed to making Amsterdam an age-friendly city by organizing meetings and advisory boards at which the elderly shared their opinions and expressed their needs for services.	"Amsterdam." WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/network/amsterdam/
Access to subsidized treatments for dementia	Yes, generic anti-dementia medication is available and at least one anti-dementia medication is approved for on-label use reimbursement	"Anti-dementia medication and care availability" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia
Presence of physicians for the senior population	Normalized score: 223.4	"Global City Data." New York City Global Partners. 2013. Available at http://www.nyc.gov/html/ia/gprb/html/global/global.shtml
Ability of GPs to diagnose and treat dementia	GPs can initiate medications	"Care Needed: Improving the Lives of People with Dementia." OECD. 2018. Available at https://read.oecd-ilibrary.org/social-issues-migration-health/care-needed_9789264085107-en#page5
Presence of reliable, publicly available diagnosis rates	60%	"Netherlands- Provisional Country Profile 2017." Global Dementia Observatory- WHO. 2017. Available at https://www.who.int/mental_health/neurology/dementia/Netherlands_GDO_country_profile.pdf
Presence of specialists for the senior population (Specialists evaluated are neurologists, geriatricians, psychogeriatricians, and psychiatrists. Specialist estimates based on national level data)	Normalized score: 26.3	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia "Care Needed: Improving the Lives of People with Dementia." OECD. 2018. Available at https://read.oecd-ilibrary.org/social-issues-migration-health/care-needed_9789264085107-en#page59
Presence of nurses and social workforce for the senior population Social workforce evaluated are social workers and personal care workers. Data based on national estimates.	Normalized score: 2,072.5	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia
Presence of a major research center or hospital with an Alzheimer's or dementia unit	Alzheimer Center Amsterdam, Department of Neurology, Amsterdam Neuroscience, Vrije Universiteit Amsterdam	Rosalinde E. R. Slot, Sietske A. M. Sikkes, Johannes Berkhof, Henry Brodaty, Rachel Buckley et al. "Subjective cognitive decline and rates of incident Alzheimer's disease and non-Alzheimer's disease dementia." Alzheimer's & dementia: the journal of the Alzheimer's Association. 2019. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6465066/ .
Participation in WHO age-friendly cities network	Amsterdam is participating and they have completed a commitment letter	"Amsterdam." WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/network/amsterdam/
Access to in-home care Based on nurses and personal carers located at home according to OECD data	3.1 per 100 age 65+	"Formal long-term care workers at home." OECD Data. 2019. Available at https://stats.oecd.org/index.aspx?r=8622&errorCode=403&lastaction=login_submit

Indicator	Data Finding	Sources
Dementia training of healthcare workers	There is inclusion of some basic dementia competencies in training of physicians, specialists, nurses, and some for pharmacists, social workers, and personal care workers.(WHO GDO)	"Dementia education and training." Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia
Implementation of dementia risk reduction campaign	There is no evidence of at least one functioning dementia awareness campaign at the national level in 2017.	"Dementia awareness and risk reduction campaign" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/view/dementia.DEM_ind13-data
Intellectual property protection	Score: 6.1	"Intellectual property protection-The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ052
Venture capital availability	Score: 4.1	"Venture capital availability- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ089
University-industry collaboration in R&D	Score: 5.5	"University-industry collaboration in R&D- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ072
# of patents granted in med tech, biotech, or pharmaceuticals	TOTAL: 582	WIPO IP Statistics Data Center. WIPO statistics database. 2019. Available at https://www3.wipo.int/ipstats/index.htm
# of top 500 health institutions for research, innovation, and societal impact	# of top 500 health institutions=2	Scimago Institutions Rankings. 2018. Available at https://www.scimagoir.com/index.php?sector=Health&year=2012&top=500&display=chart&country=NLD
Active labor market policies	Score: 5.2	"Active labor market policies- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ497
Presence of dementia-friendly community and/or dementia friends program	Alzheimer's cafes, which are now commonplace, were first established in the Netherlands. There are several cafes throughout Amsterdam. Amsterdam established the model for dementia villages with De Hogeweyk, which is located nearby Amsterdam.	"Dementia Friendly Communities: Global Developments." Alzheimer's Disease International. Available at: https://www.alz.co.uk/adi/pdf/dfc-developments.pdf Center for Policy on Aging. 2016. Available at: http://www.cpa.org.uk/information/reviews/CPA-International-Case-Study-4-Housing-and-Dementia-Care-in-the-Netherlands.pdf
Implementation of dementia awareness campaign	There is at least one functioning dementia awareness campaign at the national level	Dementia awareness and risk reduction campaign. WHO Global Dementia Observatory. 2017. Available at: http://apps.who.int/gho/data/view/dementia.DEM_ind13-data
Auckland		
Presence and implementation of a national or regional dementia strategy or plan, which includes a focus on the role of cities, towns, or communities	No National Dementia Strategy, but dementia is currently incorporated in another "grouped" health plan. Dementia is mentioned as part of the 2016 Healthy Aging Strategy	"From Plan to Impact II: The urgent need for action." Alzheimer's Disease International. 2019. Available at https://www.alz.co.uk/adi/pdf/from-plan-to-impact-2019.pdf Achieving a dementia friendly New Zealand." Alzheimer's New Zealand. 2015. Available at https://www.alzheimers.org.nz/getattachment/Who-We-Are/About-us/Alz-NZ-Strategy-Achieving-a-Dementia-Friendly-NZ.pdf/
Government funding for dementia or eldercare	Dementia care in New Zealand last received a funding boost of \$100 million in 2011.	"Dementia." The University of Auckland. Available at https://www.fmhs.auckland.ac.nz/assets/fmhs/faculty/iliacs/research/docs/Dementia-Supplement-Research-Report.pdf

Indicator	Data Finding	Sources
City-level leadership on dementia or age-related issues	Yes, the Auckland Council and partners who work with older people, are developing an Auckland Age-friendly Action Plan to highlight the needs of elderly people.	"Making Auckland an age-friendly city." Auckland Council. 2019. Available at https://ourauckland.aucklandcouncil.govt.nz/articles/news/2019/05/making-auckland-an-age-friendly-city/
Access to subsidized treatments for dementia	Cholinesterase inhibitors and memantine are approved for use within New Zealand. However, only some of the cholinesterase inhibitors are funded in New Zealand.	"Medicines for dementia." Health Navigator New Zealand. 2019. Available at https://www.healthnavigator.org.nz/medicines/d/dementia-medications/
Presence of physicians for the senior population	Normalized score: 488.7 physicians	"Medical Workforce Issues." New Zealand Parliament. 2011. Available at https://www.parliament.nz/en/pb/research-papers/document/00PlibCIP021/medical-workforce-issues
Ability of GPs to diagnose and treat dementia	GPs can initiate medications	"Care Needed: Improving the Lives of People with Dementia." OECD. 2018. Available at https://read.oecd-ilibrary.org/social-issues-migration-health/care-needed_9789264085107-en#page49
Presence of reliable, publicly available diagnosis rates	N/A	
Presence of specialists for the senior population (Specialists evaluated are neurologists, geriatricians, psychogeriatricians, and psychiatrists. Specialist estimates based on national level data)	Normalized score: 26.3	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia "NZ needs 88 neurologists, it has just 36" - AUT brain expert Valery Feigin." MediaWorks. 2017. Available at https://www.newshub.co.nz/home/shows/2018/12/nz-needs-88-neurologists-it-has-just-36-aut-brain-expert-valery-feigin-calls-for-doubling-of-resources.html
Presence of nurses and social workforce for the senior population Social workforce evaluated are social workers and personal care workers. Data based on national estimates.	Normalized score: 1,156.3	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia "Working in aged care." New Zealand Government. 2019. Available at https://www.newzealandnow.govt.nz/resources/working-in-aged-care "Social Worker." Waikato Institute of Technology. Available at: https://www.wintec.ac.nz/future-you/explore/jobs/community-services/social-worker
Presence of a major research center or hospital with an Alzheimer's or dementia unit	The Auckland Dementia Prevention Research Clinic (Auckland Clinic), based at the Centre for Brain Research, at the University of Auckland, is the largest of BRNZ's Dementia Prevention Research Clinics.	"Welcome to the Auckland Dementia Prevention Research Clinic (Auckland Clinic)." Brain Research New Zealand. 2019. Available at http://www.brnz.ac.nz/clinic/auckland
Participation in WHO age-friendly cities network	Auckland is not participating	WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/who-network/
Access to in-home care Based on nurses and personal carers located at home according to OECD data	3.7 per 100 age 65+	"Formal long-term care workers at home." OECD Data. 2019. Available at https://stats.oecd.org/index.aspx?r=8622&errorCode=403&lastaction=login_submit
Dementia training of healthcare workers	There are courses provided by various universities throughout New Zealand for healthcare workers at every level. For example, the University of Auckland has a course that aims to prepare health practitioners for advanced professional practice in the specialty of dementia care.	"Courses." New Zealand Dementia Cooperative. 2018. Available at https://nzdementia.org/education
Implementation of dementia risk reduction campaign	N/A	
Intellectual property protection	Score: 6.0	"Intellectual property protection-The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ052

Indicator	Data Finding	Sources
Venture capital availability	Score: 4.2	"Venture capital availability- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ089
University-industry collaboration in R&D	Score: 4.8	"University-industry collaboration in R&D- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ072
# of patents granted in med tech, biotech, or pharmaceuticals	N/A	
# of top 500 health institutions for research, innovation, and societal impact	# of top 500 health institutions= 1	Scimago Institutions Rankings. 2018. Available at https://www.scimagoir.com/index.php?sector=Health&year=2012&top=500&display=chart&country=NZL
Active labor market policies	Score: 4.8	"Active labor market policies- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ497
Presence of dementia-friendly community and/or dementia friends program	Alzheimer's Auckland has helped a major local bank to establish dementia friendly practices	New Zealand - Dementia Friendly Communities. Alzheimer's Disease International. Available at: https://www.alz.co.uk/dementia-friendly-communities/new-zealand
Implementation of dementia awareness campaign	Alzheimer's Auckland holds an annual fundraising walk in conjunction with World Alzheimer's Month to raise awareness of dementia	Walk for Dementia to raise funds for Alzheimers Auckland. New Zealand Herald. 2016. Available at: https://www.nzherald.co.nz/aucklander/news/article.cfm?c_id=1503378&objectid=11705224

Bangalore (Bengaluru)

Presence and implementation of a national or regional dementia strategy or plan, which includes a focus on the role of cities, towns, or communities	No National Dementia Plan	"From Plan to Impact II: The urgent need for action." Alzheimer's Disease International. 2019. Available at https://www.alz.co.uk/adi/pdf/from-plan-to-impact-2019.pdf
Government funding for dementia or eldercare	N/A	
City-level leadership on dementia or age-related issues	Yes, Alzheimer's and Related Disorders Society of India (ARDSI) Bangalore Chapter, with support from the Department of Health and Family Welfare, has been working towards making Bangalore a Dementia-friendly city.	"Alzheimer's and Related Disorders Society of India (ARDSI) Bangalore Chapter." Nightingales Medical Trust. 2019. Available at https://www.nightingaleseldercare.com/about.html
Access to subsidized treatments for dementia	Antidementia drugs are available for use, however the cost of antidementia drugs is entirely borne by the patients' family.	Krishna Prasad, Himanshu Gupta, Srikala Bharath, Om Prakash, P. T. Sivakumar, C. Naveen Kumar, and Mathew Varghese. "Clinical practice with antidementia and antipsychotic drugs: Audit from a geriatric clinic in India." Indian J Psychiatry. 2009. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2802374/
Presence of physicians for the senior population	Normalized score: 81	"Physicians (per 1,000 people)". The World Bank Group. 2020. Available at https://data.worldbank.org/indicator/SH.MED.PHYS.ZS?locations=GB-AR-DK-FR-IN-MX-QA-ZA-TH
Ability of GPs to diagnose and treat dementia	Clinicians can make a clinical diagnosis of dementia	KS Shaji, PT Sivakumar, G Prasad Rao, Neelanjana Paul. "Clinical practice guidelines for management of dementia." Indian Journal of Psychiatry 2018. Available at http://www.indianjpsychiatry.org/article.asp?issn=0019-5545;year=2018;volume=60;issue=7;spage=312;epage=328;aulast=Shaji

Indicator	Data Finding	Sources
Presence of reliable, publicly available diagnosis rates	N/A	
Presence of specialists for the senior population (Specialists evaluated are neurologists, geriatricians, psychogeriatricians, and psychiatrists. Specialist estimates based on national level data)	Normalized score: 0.4	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia "Shortage of Neurologists in Country." <i>The Hindu</i> . 2019. Available at: https://www.thehindu.com/news/national/telangana/shortage-of-neurologists-in-country/article29588579.ece
Presence of nurses and social workforce for the senior population Social workforce evaluated are social workers and personal care workers. Data based on national estimates.	Normalized score: 188.5	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia
Presence of a major research center or hospital with an Alzheimer's or dementia unit	Centre for Brain Research, Indian Institute of Science. helps foster focused research programs and build capacity for inter-disciplinary neuroscience research in the country to discover therapies for dementia.	"Overview and Vision." Centre for Brain Research, Iisc Bangalore. Available at https://www.cbr.iisc.ac.in
Participation in WHO age-friendly cities network	Bangalore is not participating	WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/who-network/
Access to in-home care	Home-based care is the acceptable norm in India and is available. The vast majority of people in India feel that the responsibility of providing LTC to the elderly is primarily the responsibility of their families. However, the priority for LTC services in India is still very low and continues to be the least governmental priority.	Ilango Ponnuswami and Rangasamy Rajasekaran "Long-term care of older persons in India: Learning to deal with challenges." <i>International Journal on Ageing in Developing Countries</i> . 2017. Available at https://www.inia.org/mt/wp-content/uploads/2017/09/2.1-8-India-59-to-71-1-rev-RFB.pdf
Dementia training of healthcare workers	The Dementia India Report states that there is no special emphasis on dementia diagnosis and management in the training of healthcare professionals, as primary care doctors do not encounter many cases in their practice.	Dementia India Report 2010. Alzheimer's Disease International's Global Alzheimer's Disease Chapter. 2010. Available at: https://www.mhinnovation.net/sites/default/files/downloads/innovation/reports/Dementia-India-Report.pdf
Implementation of dementia risk reduction campaign	ARDSI Bangalore Chapter in association with Nightingales Medical Trust (NMT) and NIMHANS is organizing a campaign titled Battle to 'Remember': A Step towards Dementia friendly Bangalore as part of World Alzheimer's week. The theme of the campaign revolves around measures to minimize the risk of Alzheimer's.	"Senior citizens take the lead to make Bengaluru a dementia friendly city." <i>Times of India</i> . 2016. Available at https://timesofindia.indiatimes.com/city/bengaluru/Senior-citizens-take-the-lead-to-make-Bengaluru-dementia-friendly-city/articleshow/54515844.cms
Intellectual property protection	Score: 4.6	"Intellectual property protection-The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ052
Venture capital availability	Score: 4.3	"Venture capital availability- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ089
University-industry collaboration in R&D	Score: 4.6	"University-industry collaboration in R&D- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ072

Indicator	Data Finding	Sources
# of patents granted in med tech, biotech, or pharmaceuticals	N/A	
# of top 500 health institutions for research, innovation, and societal impact	# of top 500 health institutions= 1	Scimago Institutions Rankings. 2018. Available at https://www.scimagoir.com/index.php?sector=Health&year=2012&top=500&display=chart&country=IND
Active labor market policies	Score: 4.4	"Active labor market policies- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ497
Presence of dementia-friendly community and/or dementia friends program	Bangalore's local Alzheimer's society along with a local organization have launched a campaign to make Bangalore dementia-friendly by 2020.	Senior citizens take the lead to make Bengaluru dementia-friendly city." Times of India. 2016. Available at: https://timesofindia.indiatimes.com/city/bengaluru/Senior-citizens-take-the-lead-to-make-Bengaluru-dementia-friendly-city/articleshow/54515844.cms
Implementation of dementia awareness campaign	The local chapter of India's Alzheimer's association, the Nightingales Medical Trust, and the local Rotary Club collaborated for World Alzheimer's Day 2019 to raise awareness through a race and scavenger hunt	The Bengaluru Race. Nightingales Medical Trust. Available at: https://www.nightingaleseldercare.com/about.html

Bangkok

Presence and implementation of a national or regional dementia strategy or plan, which includes a focus on the role of cities, towns, or communities	No National Dementia Plan	"From Plan to Impact II: The urgent need for action." Alzheimer's Disease International. 2019. Available at https://www.alz.co.uk/adi/pdf/from-plan-to-impact-2019.pdf
Government funding for dementia or eldercare	The government of Thailand created a funding of USD 17.4 million for LTC facilities for the elderly	Pattaraporn Khongboon and Sathirakorn Pongpanich. "Estimating Long-Term Care Costs among Thai Elderly: A Phichit Province Case Study." Journal of Aging Research. 2018. Available at https://www.hindawi.com/journals/jar/2018/4180565/
City-level leadership on dementia or age-related issues	Normalized score: 72	"Physicians (per 1,000 people)". The World Bank Group. 2020. Available at https://data.worldbank.org/indicator/SH.MED.PHYS.ZS?locations=GB-AR-DK-FR-IN-MX-QA-ZA-TH
Access to subsidized treatments for dementia	All dementia medication are not included on the national essential drugs list. Pharmacological interventions have been viewed as futile from an economic point of view.	Alistair Burns, Philippe Robert. "Dementia Care: International Perspectives." Oxford University Press. 2019. Available at https://books.google.com/books?id=LBGIDwAAQBAJ&pg=PT122&lpg=PT122&dq=anti+dementia+medication+in+thailand&source=bl&ots=hlfXEmRk0a&sig=ACfU3U2_PvZ7-cdWSH_n70ZMV7kwGqQDXg&hl=en&sa=X&ved=2ahUKewj_oY7K-9PXjAhUftlkKHTGfBxcQ6AEwEHoECAkQAQ#v=onepage&q=anti%20dementia%20medication%20in%20thailand&f=false
Presence of physicians for the senior population	Normalized score: 72	"Physicians (per 1,000 people)". The World Bank Group. 2020. Available at https://data.worldbank.org/indicator/SH.MED.PHYS.ZS?locations=GB-AR-DK-FR-IN-MX-QA-ZA-TH
Ability of GPs to diagnose and treat dementia	N/A	
Presence of reliable, publicly available diagnosis rates	N/A	
Presence of specialists for the senior population (Specialists evaluated are neurologists, geriatricians, psychogeriatricians, and psychiatrists. Specialist estimates based on national level data)	Normalized score: 1.1	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia http://www.neurologyasia.org/articles/20071_041.pdf

Indicator	Data Finding	Sources
Presence of nurses and social workforce for the senior population Social workforce evaluated are social workers and personal care workers. Data based on national estimates.	Normalized score: 207.1	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia
Presence of a major research center or hospital with an Alzheimer's or dementia unit*	Memory Clinic at the Bangkok Hospital has specialized equipment to diagnose Alzheimer's and provide care for dementia patients. Additionally, two medical colleges that sit within Mahidol University and a college within Chulalongkorn University conduct dementia research in the Bangkok area.	"Memory Clinic." Bangkok Hospital. 2017. Available at https://www.bangkokhospital.com/en/memory_clinic_tab
Participation in WHO age-friendly cities network	Bangkok is not participating	WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/who-network/
Access to in-home care	Almost all the elderly who need LTC received informal care provided by their families and relatives. The informal care provided by family is well recognized as the main strategy of the national policy for 15 years	"Older Population and Health System: A profile of Thailand." World Health Organization. Available at https://www.who.int/ageing/projects/intra/phase_one/alc_intra1_cp_thailand.pdf
Dementia training of healthcare workers	The Alzheimer's Disease and Related Disorders Association-Thailand has had significant input into the training of the healthcare workforce in Thailand. It usually has two types of training workshops/conferences annually. One is for healthcare professionals and the other for family caregivers.	"Dementia in the Asia Pacific Region." Alzheimer's Disease International. 2014. Available at https://www.alz.co.uk/adi/pdf/Dementia-Asia-Pacific-2014.pdf
Implementation of dementia risk reduction campaign	N/A	
Intellectual property protection	Score: 3.7	"Intellectual property protection-The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ052
Venture capital availability	Score: 3.6	"Venture capital availability- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ089
University-industry collaboration in R&D	Score: 4.1	"University-industry collaboration in R&D- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ072
# of patents granted in med tech, biotech, or pharmaceuticals	N/A	
# of top 500 health institutions for research, innovation, and societal impact	# of top 500 health institutions= 3	Scimago Institutions Rankings. 2018. Available at https://www.scimagoir.com/index.php?sector=Health&year=2012&top=500&display=chart&country=THA
Active labor market policies	Score: 3.7	"Active labor market policies- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ497

* Select information shared for this indicator is based on insights from local experts

Indicator	Data Finding	Sources
Presence of dementia-friendly community and/or dementia friends program*	Ramathibodi Hospital has established itself as a dementia-friendly hospital.	Alzheimer's Association Thailand. 2018. Available at: https://www.facebook.com/azthai2013/posts/1829902483730769/
Implementation of dementia awareness campaign	National Alzheimer's association works to raise awareness through media engagement, publications, online engagement, events, and stakeholder engagement	Dementia in the Pacific Region. Alzheimer's Disease International. 2014. Available at: https://www.dementia.org.au/files/Asia-Pacific-Report-2014.pdf
Beijing		
Presence and implementation of a national or regional dementia strategy or plan, which includes a focus on the role of cities, towns, or communities	No national dementia plan, the National Five-year plan for Mental Health (2015–2020), did focus on four brain diseases, including dementia.	"From Plan to Impact II: The urgent need for action." Alzheimer's Disease International. 2019. Available at https://www.alz.co.uk/adi/pdf/from-plan-to-impact-2019.pdf
Government funding for dementia or eldercare	N/A	
City-level leadership on dementia or age-related issues	Yes, the Beijing Civil Affairs Bureau has entered partnerships with 360 companies to provide cognitively impaired seniors with free GPS-tracking devices	"Breaking down Challenges in the Chinese Market for Alzheimer's Disease." Daxue Consulting China. 2018. Available at https://daxueconsulting.com/tech-gadgets-for-chinese-market-for-alzheimers/
Access to subsidized treatments for dementia	Current antidementia medications, are available in the Chinese market. However, dementia is not in the list of special diseases, and therefore, patients have to pay for the treatment. But the out-of-pocket expenses can be reimbursed during hospitalization.	Qi Tu, Yan Zou, Man Zhang, Ying Cao, Wenxiu Yang, Weihua Yu, Yang Lü. "Application status of memantine in patients with dementia in the Chongqing area of Southwest China." Journal of Clinical Gerontology and Geriatrics. 2015. Available at https://www.sciencedirect.com/science/article/pii/S2210833515000350
Presence of physicians for the senior population	Normalized score: 324.1	"Global City Data." New York City Global Partners. 2013. Available at http://www.nyc.gov/html/ia/gprb/html/global/global.shtml
Ability of GPs to diagnose and treat dementia	AD diagnosis is usually made by primary care physicians upon examining the patient's medical history.	Xin Yu, Shengdi Chen, Xiaochun Chen, Jianjun Jia, Chunhou Li, Cong Liu, Mondher Toumi, and Dominique Milea. "Clinical management and associated costs for moderate and severe Alzheimer's disease in urban China: a Delphi panel study." Translational Neurodegeneration. 2015. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4546035/
Presence of reliable, publicly available diagnosis rates	93 percent of dementia cases in people aged 60 and over went undetected.	"Over 90 percent of dementia cases in China are undetected." King's College London. 2013. Available at https://medicalxpress.com/news/2013-07-percent-dementia-cases-china-undetected.html?utm_source=TrendMD&utm_medium=cpc&utm_campaign=MedicalXpress_TrendMD_1&origin=4e8616d074edba1a7089228fdc311d97
Presence of specialists for the senior population (Specialists evaluated are neurologists, geriatricians, psychogeriatricians, and psychiatrists. Specialist estimates based on national level data)	Normalized score: 8.6	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia Li et al. "Stroke Physician Training in China." International Stroke Early Career and Training. 2017. Available at https://www.ahajournals.org/doi/pdf/10.1161/STROKEAHA.117.019462

* Select information shared for this indicator is based on insights from local experts

Indicator	Data Finding	Sources
Presence of nurses and social workforce for the senior population Social workforce evaluated are social workers and personal care workers. Data based on national estimates.	Normalized score: 233.5	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia "China has 300,000 Social Workers, Government Reports." International Federation of Social Workers. 2013. Available at https://www.ifsw.org/china-has-300000-social-workers-government-reports/
Presence of a major research center or hospital with an Alzheimer's or dementia unit	Institute of Alzheimer Disease at the Beijing Institute for Brain Disorders has 7 major research directions including: epidemiologic study on Alzheimer disease and genomics research on Alzheimer disease.	"Institute of Alzheimer disease." Beijing Institute for Braine Disorders. 2015. Available at http://www.bibd.ac.cn/research/alzheimer_2.html
Participation in WHO age-friendly cities network	Beijing is not participating	WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/who-network/
Access to in-home care	Home care tends to be provided by informal workers, with low qualifications and who have usually migrated from rural areas. As there are no subsidies or public support for home care in most regions, this kind of service tends only to be used by those who are better off.	Zheng Chen, Xuan Yang, Yuetao Song, Binbin Song, Yi Zhang, Jiawen Liu, Qing Wang and Jia Yu. Challenges of Dementia Care in China. <i>Geriatrics</i> . 2017. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6371088/
Dementia training of healthcare workers	Dementia care is not yet integrated into the medical and nursing baccalaureate curricula in China. Although community health professionals in China are required to attend continuing professional development programs to gain re-registration, most programs rarely include dementia care.	Yao Wang, Lily Dongxia Xiao, Yang Luo, Shui-Yuan Xiao, Craig Whitehead & Owen Davies. "Community health professionals' dementia knowledge, attitudes and care approach: a cross-sectional survey in Changsha, China." <i>BMC Geriatrics</i> . 2018. Available at https://bmcgeriatr.biomedcentral.com/articles/10.1186/s12877-018-0821-4
Implementation of dementia risk reduction campaign	The campaign Memory Health in the Community was initiated in 2010, aiming to improve the knowledge, recognition and prevention of dementia in the community.	"China - Dementia Friendly Communities" Alzheimer's Disease International. 2019. Available at https://www.alz.co.uk/content/china-dementia-friendly-communities
Intellectual property protection	Score 4.5	"Intellectual property protection-The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ052
Venture capital availability	Score 4.4	"Venture capital availability- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ089
University-industry collaboration in R&D	Score 4.4	"University-industry collaboration in R&D- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ072
# of patents granted in med tech, biotech, or pharmaceuticals	TOTAL: 124, 804	WIPO IP Statistics Data Center. WIPO statistics database. 2019. Available at https://www3.wipo.int/ipstats/index.htm
# of top 500 health institutions for research, innovation, and societal impact	# of top 500 health institutions=6	Scimago Institutions Rankings. 2018. Available at https://www.scimagoir.com/index.php?sector=Health&year=2012&top=500&display=chart&country=CHN

Indicator	Data Finding	Sources
Active labor market policies	Score 4.5	"Active labor market policies- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ497
Presence of dementia-friendly community and/or dementia friends program	N/A	
Implementation of dementia awareness campaign	N/A	
Berlin		
Presence and implementation of a national or regional dementia strategy or plan, which includes a focus on the role of cities, towns, or communities	Yes. Implementation reported to begin in September 2020.	"Implementation of the National Dementia Strategy." National Dementia Strategy. 2020. Available at: https://www.nationale-demenzstrategie.de/die-strategie
Government funding for dementia or eldercare	N/A	
City-level leadership on dementia or age-related issues	Yes, the city of Berlin is aiming for 100% accessibility by 2020. The city authorities are working to make the city more accessible to both disabled and elderly residents and visitors.	"Improving with age? How city design is adapting to older populations." Guardian News & Media. 2019. Available at https://www.theguardian.com/cities/2016/apr/25/improving-with-age-how-city-design-is-adapting-to-older-populations
Access to subsidized treatments for dementia	Yes, four anti-dementia medications are approved and reimbursed within the country.	"2006: Reimbursement of anti-dementia drugs." Alzheimer Europe. 2006. Available at https://www.alzheimer-europe.org/Policy/Country-comparisons/2006-Reimbursement-of-anti-dementia-drugs
Presence of physicians for the senior population	Normalized score: 142.5	"Global City Data." New York City Global Partners. 2013. Available at http://www.nyc.gov/html/ia/gprb/html/global/global.shtml
Ability of GPs to diagnose and treat dementia	GPs can make an indicative diagnosis	"Care Needed: Improving the Lives of People with Dementia." OECD. 2018. Available at https://read.oecd-ilibrary.org/social-issues-migration-health/care-needed_9789264085107-en#page49
Presence of reliable, publicly available diagnosis rates	A series of epidemiological field studies have revealed that more than 50% of people who had dementia did not have a diagnosis in Germany.	"Germany- The prevalence of dementia in Europe." Alzheimer Europe. 2013. Available at https://www.alzheimer-europe.org/Policy-in-Practice2/Country-comparisons/2013-The-prevalence-of-dementia-in-Europe/Germany
Presence of specialists for the senior population (Specialists evaluated are neurologists, geriatricians, psychogeriatricians, and psychiatrists. Specialist estimates based on national level data)	Normalized score: 24.3	"Psychiatrists, per 100 000." WHO. 2018. Available at https://gateway.euro.who.int/en/indicators/hlthres_229-psychiatrists-per-100-000/visualizations/#id=28481 "Care Needed: Improving the Lives of People with Dementia." OECD. 2018. Available at https://read.oecd-ilibrary.org/social-issues-migration-health/care-needed_9789264085107-en#page59
Presence of nurses and social workforce for the senior population Social workforce evaluated are social workers and personal care workers. Data based on national estimates.	Normalized score: 1,522	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia Health Care Resources: Nurses" OECD Data. 2019. Available at https://stats.oecd.org/index.aspx?queryid=30183 Erika Schulz. "Ageing, Care Need and Long Care Workforce in Germany." NEUJOBS. 2013. Available at http://www.neujobs.eu/sites/default/files/publication/2014/02/NEUJOBS%20Working%20Paper-D12.2-Germany.pdf
Presence of a major research center or hospital with an Alzheimer's or dementia unit	DTZ in Berlin-Friedrichshain, it is at the cutting edge of medical research in this Alzheimer's and Dementia	"Alzheimer's and Dementia." DTZ Berlin. 2015. Available at https://www.berlin-dtz.de/en/alzheimers.html
Participation in WHO age-friendly cities network	Berlin is not participating	WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/who-network/

Indicator	Data Finding	Sources
Access to in-home care Based on nurses and personal carers located at home according to OECD data	2 Per 100 population aged 65+	"Formal long-term care workers at home." OECD Data. 2019. Available at https://stats.oecd.org/index.aspx?r=8622&errorCode=403&lastaction=login_submit
Dementia training of healthcare workers	In some universities for social work, dementia is included in training, but it is not known to what extent. The same applies to the training of allied health professionals. For medical students there are 2 optional lectures and 2 obligatory courses in dementia. For specialists training in neurology, there is 1 optional lecture and 1 optional course and for training of certified neurologists, there are optional lectures and courses.	"Germany: National policies covering the care and support of people with dementia and their carers." Alzheimer Europe. 2013. Available at https://www.alzheimer-europe.org/Policy-in-Practice2/Country-comparisons/2013-National-policies-covering-the-care-and-support-of-people-with-dementia-and-their-carers/Germany Steen G. Hasselbalch et al. "Education and training of European neurologists in dementia." European Journal of Neurology. 2007. Available at https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1468-1331.2006.01679.x
Implementation of dementia risk reduction campaign	N/A	
Intellectual property protection	Score: 5.5	"Intellectual property protection-The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ052
Venture capital availability	Score: 5.0	"Venture capital availability- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ089
University-industry collaboration in R&D	Score: 5.4	"University-industry collaboration in R&D- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ072
# of patents granted in med tech, biotech, or pharmaceuticals	TOTAL: 3,286	WIPO IP Statistics Data Center. WIPO statistics database. 2019. Available at https://www3.wipo.int/ipstats/index.htm
# of top 500 health institutions for research, innovation, and societal impact	# of top 500 health institutions= 6	Scimago Institutions Rankings. 2018. Available at https://www.scimagoir.com/index.php?sector=Health&year=2012&top=500&display=chart&country=DEU
Active labor market policies	Score: 5.2	"Active labor market policies- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ497
Presence of dementia-friendly community and/or dementia friends program	There is a dementia-friendly initiatives working group that is actively engaged with the German Alzheimer's Society. There are 19 local alliance for people with dementia active in Berlin that have collaborated with the city's Dementia-friendly initiatives working group	Alliance for People with Dementia: Report on the Implementation of the Agenda of the Alliance for People with Dementia 2014-2018. Federal Ministry for Family Affairs, Senior Citizens, Women and Youth. Available at: https://www.wegweiser-demenz.de/fileadmin/de.allianz-fuer-demenz/content.de/downloads/Report_on_the_Implementation_of_the_Agenda.pdf
Implementation of dementia awareness campaign	Alzheimer's & You, administered by Germany's Berlin-based Alzheimer's association, raised awareness of the condition through media, posters, and more, while providing educational resources for carers	Germany - Dementia Friendly Communities. Alzheimer's Disease International. Available at: https://www.alz.co.uk/dementia-friendly-communities/germany
Buenos Aires		
Presence and implementation of a national or regional dementia strategy or plan, which includes a focus on the role of cities, towns, or communities	Yes, it includes a focus on caregivers and family members in the community. However, its implementation has been discontinued due to economic reasons and funding of PAMI.	"From Plan to Impact II: The urgent need for action." Alzheimer's Disease International. 2019. Available at https://www.alz.co.uk/adi/pdf/from-plan-to-impact-2019.pdf

Indicator	Data Finding	Sources
Government funding for dementia or eldercare	N/A	
City-level leadership on dementia or age-related issues	Yes, the Secretariat of Social Integration of the Elderly in Buenos Aires supports the Friend of the Elderly is a program, which seeks to improve the quality of life of the elderly population through initiatives that promote accessibility and social integration.	"Tu vivienda amigable, consejos para lograrlo." WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/afp/tu-vivienda-amigable-consejos-para-lograrlo/
Access to subsidized treatments for dementia	Yes, PAMI provides one of the most complete prescription drug coverage in the world, and a special free of charge prescription drugs program for the most vulnerable retirees.	"Servicios." PAMI International Federation on Ageing. Available at https://www.pami.org.ar/nuevos-afiliados
Presence of physicians for the senior population	Normalized score: 312	"Physicians (per 1,000 people)". The World Bank Group. 2020. Available at https://data.worldbank.org/indicator/SH.MED.PHYS.ZS?locations=GB-AR-DK-FR-IN-MX-QA-ZA-TH
Ability of GPs to diagnose and treat dementia	The diagnosis is usually made by the GP relying on the clinical history, laboratory tests, and a CT scan.	Mario A. Parra, Sandra Baez, Ricardo Allegri et al. "Dementia in Latin America." <i>Neurology</i> . 2018. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5791795/
Presence of reliable, publicly available diagnosis rates	N/A	
Presence of specialists for the senior population (Specialists evaluated are neurologists, geriatricians, psychogeriatricians, and psychiatrists. Specialist estimates based on national level data)	Normalized score: 16.9	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia
Presence of nurses and social workforce for the senior population Social workforce evaluated are social workers and personal care workers. Data based on national estimates.	Normalized score: 327.6	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia
Presence of a major research center or hospital with an Alzheimer's or dementia unit	Institute for Neurological Research, (Fundación para la Lucha contra las Enfermedades Neurológicas de la Infancia (FLENI)) integrates the biochemical, neuroimaging, genomic, and neuropathology platforms for early diagnosis in Alzheimer's disease that is based on collaborations with the Alzheimer's Disease Neuroimaging Initiative.	"Alzheimer's and dementia in Latin America: Alzheimer's Association International Conference satellite symposium in Argentina" Alzheimer's Association. 2018. Available at https://www.alzheimersanddementia.com/article/S1552-5260(18)31526-7/fulltext
Participation in WHO age-friendly cities network	Buenos Aires is participating and has a commitment letter and baseline assessment.	"Buenos Aires." WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/network/buenos-aires/
Access to in-home care	Due to a relative lack of community based dementia care services, the majority of persons with severe dementia are institutionalized in public and private geriatric or psycho-geriatric long-term care institutions. Caregivers are usually required to assist individuals with dementia, and family members have typically fulfilled that role.	Aaliah G. Elnasseh, Michael A. Trujillo, Silvina Victoria Peralta, Miriam E. Stolfi, Eliana Morelli, Paul B. Perrin, and Juan Carlos Arango-Lasprilla. "Family Dynamics and Personal Strengths among Dementia Caregivers in Argentina." <i>International Journal of Alzheimer's Disease</i> . 2016. Available at https://www.hindawi.com/journals/ijad/2016/2386728/
Dementia training of healthcare workers	N/A	

Indicator	Data Finding	Sources
Implementation of dementia risk reduction campaign	A.L.M.A. will develop a Primary Prevention Workshop focused on knowing the risk factors, the degree to which they are modifiable, developing strategies to maintain a healthy lifestyle and thus reducing the risk of developing dementia .	"Servicios A.L.M.A." Asociacion Lucha contra el mal de Alzheimer. 2019. Available at https://www.alma-alzheimer.org.ar/es/servicios-alma/charlas-y-talleres/taller-de-prevencion
Intellectual property protection	Score 3.7	"Intellectual property protection-The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ052
Venture capital availability	Score 2.4	"Venture capital availability- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ089
University-industry collaboration in R&D	Score 3.3	"University-industry collaboration in R&D- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ072
# of patents granted in med tech, biotech, or pharmaceuticals	N/A	
# of top 500 health institutions for research, innovation, and societal impact	# of top 500 health institutions= 3	Scimago Institutions Rankings. 2018. Available at https://www.scimagoir.com/index.php?sector=Health&year=2012&top=500&display=chart&country=ARG
Active labor market policies	Score 2.8	"Active labor market policies- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ497
Presence of dementia-friendly community and/or dementia friends program	The local Alzheimer's society hosts Alzheimer's cafes that brings together volunteers, people living with dementia, and their caregivers.	Argentina - Dementia Friendly Communities. Alzheimer's Disease International. Available at: https://www.alz.co.uk/content/argentina-dementia-friendly-communities
Implementation of dementia awareness campaign	Local Alzheimer's association costs discussions and conferences open to the public to raise awareness on Alzheimer's disease	Informative Talks. ALMA Alzheimer. Available at: https://www.alma-alzheimer.org.ar/es/servicios-alma/charlas-y-talleres/charlas-informativas

Cape Town

Presence and implementation of a national or regional dementia strategy or plan, which includes a focus on the role of cities, towns, or communities	No National dementia plan, but dementia is incorporated in parts of the Mental Health, Ageing and NCD plans.	"From Plan to Impact II: The urgent need for action." Alzheimer's Disease International. 2019. Available at https://www.alz.co.uk/adi/pdf/from-plan-to-impact-2019.pdf
Government funding for dementia or eldercare	The South African government currently offers the Old-Age Pension Grant which is an income-tested, monthly payment of ZAR1,500 (\$112) for persons aged 60-75 years and ZAR1,520 (\$114) for those above 75 years.	"Older Person's Grant." International Labour Office. 2016. Available at https://www.social-protection.org/gimi/RessourcePDF.action?ressource.ressourceId=53790
City-level leadership on dementia or age-related issues	N/A	
Access to subsidized treatments for dementia	Anti-dementia medications have been approved and are prescribed. However, they are not included in the Essential Drug List for public healthcare facilities and are rarely covered by private health insurance plans.	Prince, Martin, Comas-Herrera, Adelina, Knapp, Martin, Guerchet, Maëlenn and Karagiannidou, Maria. "World Alzheimer report 2016: improving healthcare for people living with dementia: coverage, quality and costs now and in the future." Alzheimer's Disease International. 2016. Available at http://eprints.lse.ac.uk/67858/1/Comas-Herrera_World%20Alzheimer%20report_2016.pdf

Indicator	Data Finding	Sources
Presence of physicians for the senior population	Normalized score: 84.6	"Physicians (per 1,000 people)". The World Bank Group. 2020. Available at https://data.worldbank.org/indicator/SH.MED.PHYS.ZS?locations=GB-AR-DK-FR-IN-MX-QA-ZA-TH
Ability of GPs to diagnose and treat dementia	N/A	
Presence of reliable, publicly available diagnosis rates	N/A	
Presence of specialists for the senior population (Specialists evaluated are neurologists, geriatricians, psychogeriatricians, and psychiatrists. Specialist estimates based on national level data)	Normalized score: 1.9	Cassim, B. "Formal Geriatric Medicine Training in South Africa and Beyond." <i>Innovation in aging</i> . 2017. Available at https://academic.oup.com/innovateage/article/1/suppl_1/724/3899611 Sedibe, D. "Lack of Neurologists Prevents Effective Epilepsy Treatment." <i>Health-E News</i> . 2011. Available at https://health-e.org.za/2011/06/23/lack-of-neurologists-prevents-effective-epilepsy-treatment/
Presence of nurses and social workforce for the senior population Social workforce evaluated are social workers and personal care workers. Data based on national estimates.	Normalized score: 624.9	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia "SA has a 77% social worker shortage". 2013. Politicsweb SA. Available at https://www.politicsweb.co.za/party/sa-has-a-77-social-worker-shortage-mike-waters
Presence of a major research center or hospital with an Alzheimer's or dementia unit	The University of Cape Town's Neuroscience Institute brings various fields of basic research in brain disease and disorders together with clinical practice.	"About the Neuroscience Institute." Neuroscience Institute - University of Cape Town. 2019. Available at http://www.neuroscience.uct.ac.za/neuroscience-about
Participation in WHO age-friendly cities network	Cape Town is not participating	WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/who-network/
Access to in-home care	The Older Persons Act of 2006 states that older adults have the right to receive LTC in South Africa. However there are still nowhere near enough resources to provide such care, in the form of home-based care, to all those in need. The entire LTC industry only has accommodations for about 2 percent of the population age 65 and older.	"South Africa - The Aging Readiness & Competitiveness Report." AARP International. Available at https://arc.aarpinternational.org/File%20Library/Full%20Reports/ARC-Report--South-Africa.pdf
Dementia training of healthcare workers	DementiaSA (a non-profit) trains home-based care givers, residential care facility staff, nurses and community health workers in the specialized "person-centered care" required when caring for a person with dementia.	Prince, Martin, Comas-Herrera, Adelina, Knapp, Martin, Guerchet, Maëlénn and Karagiannidou, Maria. "World Alzheimer report 2016: improving healthcare for people living with dementia: coverage, quality and costs now and in the future." <i>Alzheimer's Disease International</i> . 2016. Available at http://eprints.lse.ac.uk/67858/1/Comas-Herrera_World%20Alzheimer%20report_2016.pdf
Implementation of dementia risk reduction campaign	N/A	
Intellectual property protection	Score: 4.4	"Intellectual property protection-The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ052
Venture capital availability	Score: 3.0	"Venture capital availability- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ089
University-industry collaboration in R&D	Score: 4.2	"University-industry collaboration in R&D- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ072

Indicator	Data Finding	Sources
# of patents granted in med tech, biotech, or pharmaceuticals	TOTAL: 2,819	WIPO IP Statistics Data Center. WIPO statistics database. 2019. Available at https://www3.wipo.int/ipstats/index.htm
# of top 500 health institutions for research, innovation, and societal impact	# of top 500 health institutions= 3	Scimago Institutions Rankings. 2018. Available at https://www.scimagoir.com/index.php?sector=Health&year=2012&top=500&display=chart&country=ZAF
Active labor market policies	Score: 2.6	"Active labor market policies- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ497
Presence of dementia-friendly community and/or dementia friends program	Cape Town has established a dementia café	Qama Qukula. New Cape Town cafe spot a safe space for people living with dementia. Cape Talk. 2019. Available at: http://www.capetalk.co.za/articles/344420/new-cape-town-cafe-spot-a-safe-space-for-people-living-with-dementia
Implementation of dementia awareness campaign	In 2018, Dementia South Africa gave 23 dementia awareness presentations across Cape Town in a variety of settings.	DementiaSA rides high in 2018. Available at: https://www.dementiasa.org/media/dementiasa-rides-high-in-2018/

Copenhagen

Presence and implementation of a national or regional dementia strategy or plan, which includes a focus on the role of cities, towns, or communities	Yes, it encourages all Danish municipalities to become dementia friendly municipalities. However, the plan only has partial funding.	"From Plan to Impact II: The urgent need for action." Alzheimer's Disease International. 2019. Available at https://www.alz.co.uk/adi/pdf/from-plan-to-impact-2019.pdf
Government funding for dementia or eldercare	The Minister for Health and the Elderly launched Denmark's new national action plan on dementia with a budget of DKK 470 million (EUR 63 million)	"Denmark - National Dementia Strategies." Alzheimer Europe. 2013. Available at https://www.alzheimer-europe.org/Policy/Country-comparisons/2012-National-Dementia-Strategies-diagnosis-treatment-and-research/Denmark
City-level leadership on dementia or age-related issues	The Ørestad development in Copenhagen is age-friendly housing that caters for high levels of need. Classed as a retirement home, the living costs of Ørestad's residents are subsidized by the municipality, as the city supports the transition to becoming age-friendly.	"What would an age-friendly city look like?" Guardian News and Media 2018. Available at https://www.theguardian.com/cities/2018/oct/10/what-would-an-age-friendly-city-look-like
Access to subsidized treatments for dementia	Yes, the four anti-dementia medications are approved and reimbursed within the country.	"2006: Reimbursement of anti-dementia drugs." Alzheimer Europe. 2006. Available at https://www.alzheimer-europe.org/Policy/Country-comparisons/2006-Reimbursement-of-anti-dementia-drugs
Presence of physicians for the senior population	Normalized score: 360	"Physicians (per 1,000 people)". The World Bank Group. 2020. Available at https://data.worldbank.org/indicator/SH.MED.PHYS.ZS?locations=GB-AR-DK-FR-IN-MX-QA-ZA-TH
Ability of GPs to diagnose and treat dementia	GPs can make a formal diagnosis	"Care Needed: Improving the Lives of People with Dementia." OECD. 2018. Available at https://read.oecd-ilibrary.org/social-issues-migration-health/care-needed_9789264085107-en#page59
Presence of reliable, publicly available diagnosis rates	In 2003, a scientific study based on the dementia register found that around two thirds of the estimated number of people with dementia (85,562) had been diagnosed.	"Denmark- The prevalence of dementia in Europe." Alzheimer Europe. 2013. Available at https://www.alzheimer-europe.org/Policy/Country-comparisons/2013-The-prevalence-of-dementia-in-Europe/Denmark

Indicator	Data Finding	Sources
Presence of specialists for the senior population (Specialists evaluated are neurologists, geriatricians, psychogeriatricians, and psychiatrists. Specialist estimates based on national level data)	Normalized score: 22.3	<p>"Psychiatrists per 100,000." World Health Organization. Available at https://gateway.euro.who.int/en/indicators/hlthres_229-psychiatrists-per-100-000/visualizations/#id=28481</p> <p>"Denmark." European Geriatric Medicine Society. Available at http://www.eugms.org/our-members/national-societies/denmark.html</p> <p>"Care Needed: Improving the Lives of People with Dementia." OECD. 2018. Available at https://read.oecd-ilibrary.org/social-issues-migration-health/care-needed_9789264085107-en#page59</p>
Presence of nurses and social workforce for the senior population Social workforce evaluated are social workers and personal care workers. Data based on national estimates.	Normalized score: 3,004.2	<p>"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia</p> <p>Health Care Resources: Caring Personnel." OECD Data. 2019. Available at https://stats.oecd.org/index.aspx?queryid=30183</p>
Presence of a major research center or hospital with an Alzheimer's or dementia unit	The Danish Dementia Research Centre at the University of Copenhagen is comprised of three sections: Copenhagen Memory Clinic, Dementia and Neurogenetics Research Unit and National Info & Education Centre for Dementia.	"About DDCRC." Danish Dementia Research Centre. 2019. Available at http://uk.videnscenterfordemens.dk/about-ddrc/
Participation in WHO age-friendly cities network	Copenhagen is not participating	WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/who-network/
Access to in-home care	3.3 per 100 aged 65+	"Formal long-term care workers at home." OECD Data. 2019. Available at https://stats.oecd.org/index.aspx?r=8622&errorCode=403&lastaction=log_in_submit
Dementia training of healthcare workers	The Danish Dementia Centre, the Danish Medical Association, and other providers offer both in-person and online training to primary health physicians and other health professionals. For medical students, there are 3 obligatory lectures in dementia in their curricula. For specialists training in neurology, there is 1 optional course, and for training of certified neurologists, there is 1 optional course.	<p>"Denmark: National policies covering the care and support of people with dementia and their carers." Alzheimer Europe. 2013. Available at https://www.alzheimer-europe.org/Policy-in-Practice2/Country-comparisons/2013-National-policies-covering-the-care-and-support-of-people-with-dementia-and-their-carers/Denmark</p> <p>Steen G. Hasselbalch et al. "Education and training of European neurologists in dementia." European Journal of Neurology. 2007. Available at https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1468-1331.2006.01679.x</p>
Implementation of dementia risk reduction campaign	N/A	
Intellectual property protection	Score: 5.6	"Intellectual property protection-The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ052
Venture capital availability	Score: 3.4	"Venture capital availability- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ089
University-industry collaboration in R&D	Score: 4.8	"University-industry collaboration in R&D- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ072
# of patents granted in med tech, biotech, or pharmaceuticals	TOTAL: 115	WIPO IP Statistics Data Center. WIPO statistics database. 2019. Available at https://www3.wipo.int/ipstats/index.htm

Indicator	Data Finding	Sources
# of top 500 health institutions for research, innovation, and societal impact	# of top 500 health institutions= 3	Scimago Institutions Rankings. 2018. Available at https://www.scimagoir.com/index.php?sector=Health&year=2012&top=500&display=chart&country=DNK
Active labour market policies	Score: 5.3	"Active labour market policies- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ497
Presence of dementia-friendly community and/or dementia friends program	Denmark is aiming to become dementia-friendly at the national level by 2025. Part of this initiative is to make all of Denmark's cities dementia-friendly.	Sarantis Michalopoulos. Denmark aims to become 'dementia-friendly nation' by 2025. Euractiv. Available at: https://www.euractiv.com/section/health-consumers/news/loehde-denmark-must-become-a-dementia-friendly-nation-by-2025/
Implementation of dementia awareness campaign	In 2018, Copenhagen's municipal government ran a campaign to raise awareness of dementia, with an emphasis on recognizing early signs of the condition	Ben Hamilton. Copenhagen launches campaign to raise awareness of the early signs of dementia. CPH Post Online. 2018. Available at: http://cphpost.dk/?p=104023
Doha		
Presence and implementation of a national or regional dementia strategy or plan, which includes a focus on the role of cities, towns, or communities	Yes, with a focus on improving dementia awareness and friendliness in communities.	"Qatar National Dementia Plan 2018-2022." State of Qatar Ministry of Public Health. 2018. Available at https://www.alz.co.uk/sites/default/files/plans/Qatar-National-Dementia-Plan-Summary.pdf From Plan to Impact II: The urgent need for action." Alzheimer's Disease International. 2019. Available at https://www.alz.co.uk/adi/pdf/from-plan-to-impact-2019.pdf
Government funding for dementia or eldercare	N/A	
City-level leadership on dementia or age-related issues	Yes, Her Highness Sheikha Moza bint Nasser, under the umbrella of Qatar Foundation for Social Work, created The Centre for Elderly Empowerment & Care to promote the role of older persons, and their contribution to the social, economic, and cultural development.	"The Centre for Elderly Empowerment & Care (Ehsan)." The Global Ageing Network. 2019. Available at https://globalageing.org/new-member-profile-the-centre-for-elderly-empowerment-care-ehsan/
Access to subsidized treatments for dementia	Yes, generic anti-dementia medication is available and at least one anti-dementia medication is approved for on-label use reimbursement	"Anti-dementia medication and care availability" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia
Presence of physicians for the senior population	Normalized score: 247.2	"Physicians (per 1,000 people)". The World Bank Group. 2020. Available at https://data.worldbank.org/indicator/SH.MED.PHYS.ZS?locations=GB-AR-DK-FR-IN-MX-QA-ZA-TH
Ability of GPs to diagnose and treat dementia	N/A	
Presence of reliable, publicly available diagnosis rates	N/A	"Qatar- Provisional Country Profile 2017." Global Dementia Observatory- WHO. 2017. Available at https://www.who.int/mental_health/neurology/dementia/qatar_GDO_profile.pdf?ua=1
Presence of specialists for the senior population (Specialists evaluated are neurologists, geriatricians, psychogeriatricians, and psychiatrists. Specialist estimates based on national level data)	Normalized score: 5.6	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia

Indicator	Data Finding	Sources
Presence of nurses and social workforce for the senior population Social workforce evaluated are social workers and personal care workers. Data based on national estimates.	Normalized score: 563.8	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia
Presence of a major research center or hospital with an Alzheimer's or dementia unit	Qatar Biomedical Research Institute (QBRI) at the Hamad Bin Khalifa University in Doha. QBRI's Neurological Disorders Research Center enables various stakeholders to carry out extensive research on different aspects of Alzheimer's disease.	"Qatar Biomedical Research Institute workshop raises awareness on Alzheimer's disease." The Peninsula. 2019. Available at https://thepeninsulaqatar.com/article/10/10/2018/Qatar-Biomedical-Research-Institute-workshop-raises-awareness-on-Alzheimer's-disease
Participation in WHO age-friendly cities network	Doha is not participating	WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/who-network/
Access to in-home care	The Centre for Elderly Empowerment & Care provides Home Care services that include guidance & counseling for older persons and their families to reinforce family bonds, physiotherapy, rehabilitation, nursing, nutrition guidance, & other social services.	"The Centre for Elderly Empowerment & Care (Ehsan)." The Global Ageing Network. Available at https://globalageing.org/new-member-spotlight-the-centre-for-elderly-empowerment-care-in-qatar/
Dementia training of healthcare workers	There is no inclusion of basic dementia competencies in training of physicians, specialists, nurses, and some for pharmacists, social workers, and personal care workers.	"Dementia education and training." Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia
Implementation of dementia risk reduction campaign	There is no evidence of at least one function dementia risk reduction campaign at the subnational level in 2017.	"Dementia awareness and risk reduction campaign" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/view.xdementia.DEM_ind13-data
Intellectual property protection	Score: 5.3	"Intellectual property protection-The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ052
Venture capital availability	Score: 4.4	"Venture capital availability- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ089
University-industry collaboration in R&D	Score: 4.9	"University-industry collaboration in R&D- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ072
# of patents granted in med tech, biotech, or pharmaceuticals	N/A	
# of top 500 health institutions for research, innovation, and societal impact	# of top 500 health institutions= 1	Scimago Insitutions Rankings. 2018. Available at https://www.scimagoir.com/index.php?sector=Health&year=2012&top=500&display=chart&country=QAT
Active labour market policies	Score: 4.7	"Active labour market policies- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ497
Presence of dementia-friendly community and/or dementia friends program	Qatar aims to launch a dementia friends program in 2019	Lani Rose R Dizon. Businesses need to be dementia-friendly: Expert. The Peninsula. 2019. Available at: https://www.thepeninsulaqatar.com/article/27/05/2019/Businesses-need-to-be-dementia-friendly-Expert

Indicator	Data Finding	Sources
Implementation of dementia awareness campaign	There is at least one functioning dementia awareness campaign at the sub-national level	Dementia awareness and risk reduction campaign. WHO Global Dementia Observatory. 2017. Available at: http://apps.who.int/gho/data/view.xdementia.DEM_ind13-data
Geneva		
Presence and implementation of a national or regional dementia strategy or plan, which includes a focus on the role of cities, towns, or communities	Yes, it includes population- and community-based information and awareness-raising activities. The plan has been adopted but with inadequate or no funding	"Swiss National Dementia Strategy." Alzheimer's Disease International. Available at https://www.alz.co.uk/plans/switzerland From Plan to Impact II: The urgent need for action." Alzheimer's Disease International. 2019. Available at https://www.alz.co.uk/adi/pdf/from-plan-to-impact-2019.pdf
Government funding for dementia or eldercare	N/A	
City-level leadership on dementia or age-related issues	Yes, the City Administrative Council of Geneva engaged in the project of "Age-Friendly Cities" to improve and maintain the quality of life for seniors, with a focus on social and civic participation.	"Geneva." WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/network/geneva/
Access to subsidized treatments for dementia	Yes, all four anti-dementia drugs are available in Switzerland and are part of the reimbursement system.	"Switzerland: Reimbursement of anti-dementia drugs." Alzheimer Europe. 2013. Available at https://www.alzheimer-europe.org/Policy-in-Practice2/Country-comparisons/2006-Reimbursement-of-anti-dementia-drugs/Switzerland
Presence of physicians for the senior population	Normalized score: 4.6	"Global City Data." New York City Global Partners. 2013. Available at http://www.nyc.gov/html/ia/gprb/html/global/global.shtml
Ability of GPs to diagnose and treat dementia	GPs can initiate medications	"Care Needed: Improving the Lives of People with Dementia." OECD. 2018. Available at https://read.oecd-ilibrary.org/social-issues-migration-health/care-needed_9789264085107-en#page49
Presence of reliable, publicly available diagnosis rates	N/A	
Presence of specialists for the senior population (Specialists evaluated are neurologists, geriatricians, psychogeriatricians, and psychiatrists. Specialist estimates based on national level data)	Normalized score: 47.6	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia
Presence of nurses and social workforce for the senior population Social workforce evaluated are social workers and personal care workers. Data based on national estimates.	Normalized score: 2,049	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia Health Care Resources: Nurses" OECD Data. 2019. Available at https://stats.oecd.org/index.aspx?queryid=30183
Presence of a major research center or hospital with an Alzheimer's or dementia unit	Laboratoire de Neuroimagerie du Vieillessement, at the University of Geneva has more than 20 years of experience in clinical and translational research on Alzheimer's disease.	"University of Geneva." CoSTREAM. 2016. Available at http://www.costream.eu/partners/ch
Participation in WHO age-friendly cities network	Geneva is participating and has only completed a strategy and action plan.	"Geneva." WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/network/geneva/
Access to in-home care Based on nurses and personal carers located at home according to OECD data	2.9 Per 100 population aged 65+	"Formal long-term care workers at home." OECD Data. 2019. Available at https://stats.oecd.org/index.aspx?r=8622&errorCode=403&lastaction=login_submit

Indicator	Data Finding	Sources
Dementia training of healthcare workers	There is inclusion of some basic dementia competencies in training of physicians, specialists, pharmacists, social workers, and personal care workers	"Dementia education and training." Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia
Implementation of dementia risk reduction campaign	There is evidence of at least one function dementia risk reduction campaign at the national level in 2017.	"Dementia awareness and risk reduction campaign" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/view.xdementia.DEM_ind13-data
Intellectual property protection	Score: 6.4	"Intellectual property protection-The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ052
Venture capital availability	Score: 4.1	"Venture capital availability- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ089
University-industry collaboration in R&D	Score: 5.7	"University-industry collaboration in R&D- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ072
# of patents granted in med tech, biotech, or pharmaceuticals	TOTAL: 140	WIPO IP Statistics Data Center. WIPO statistics database. 2019. Available at https://www3.wipo.int/ipstats/index.htm
# of top 500 health institutions for research, innovation, and societal impact	# of top 500 health institutions= 2	Scimago Insitutions Rankings. 2018. Available at https://www.scimagoir.com/index.php?sector=Health&year=2012&top=500&display=chart&country=CHE
Active labour market policies	Score: 5.8	"Active labour market policies- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ497
Presence of dementia-friendly community and/or dementia friends program	N/A	
Implementation of dementia awareness campaign	There is at least one functioning dementia awareness campaign at the national level	Dementia awareness and risk reduction campaign. WHO Global Dementia Observatory. 2017. Available at: http://apps.who.int/gho/data/view.xdementia.DEM_ind13-data
Glasgow		
Presence and implementation of a national or regional dementia strategy or plan, which includes a focus on the role of cities, towns, or communities	Yes, with a focus on ensuring that communities throughout Scotland are as dementia friendly as possible. It is currently being implemented and the plan has been adopted.	"Scotland's National Dementia Strategy 2017-2020." Alzheimer Scotland. 2017. Available at https://www.alzscot.org/sites/default/files/images/0002/6035/Third_Dementia_Strategy.pdf From Plan to Impact II: The urgent need for action." Alzheimer's Disease International. 2019. Available at https://www.alz.co.uk/adi/pdf/from-plan-to-impact-2019.pdf
Government funding for dementia or eldercare	The UK Dementia Research Institute at Edinburgh University have received £160,000 from Alzheimer's Research UK.	"Alzheimer's funding boost for Scots scientists". BBC News. 2019. Available at https://www.bbc.com/news/uk-scotland-edinburgh-east-fife-48490338
City-level leadership on dementia or age-related issues	Yes, the Glasgow City Dementia Strategy is 3 year strategy and overall vision that has been developed by Glasgow City Health and Social Care Partnership in collaboration with Alzheimer Scotland to improve health and social care services for people with dementia.	"Glasgow City Dementia Strategy 2016-19." Alzheimer Scotland. 2016. Available at https://www.alzscot.org/sites/default/files/images/0002/1542/Glasgow_Dementia_Strategy_WEB.pdf
Access to subsidized treatments for dementia	Yes, cholinesterase inhibitors are available on an NHS prescription for people with mild or moderate Alzheimer's disease.	"Treatments for Dementia." Alzheimer's Research UK. 2019. Available at https://www.moorfields.nhs.uk/sites/default/files/aruk_treatments_for_dementia_0.pdf

Indicator	Data Finding	Sources
Presence of physicians for the senior population	Normalized score: 238	"Physicians (per 1,000 people)". The World Bank Group. 2020. Available at https://data.worldbank.org/indicator/SH.MED.PHYS.ZS?locations=GB-AR-DK-FR-IN-MX-QA-ZA-TH
Ability of GPs to diagnose and treat dementia	Diagnosis can be made by a GP, hospital doctor or a specialist service.	"Standards of Care for Dementia in Scotland." Scottish Government. 2011. Available at https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2011/06/standards-care-dementia-scotland-action-support-change-programme-scotlands-national-dementia-strategy/documents/0117212-pdf/0117212-pdf/govscot%253Adocument/0117212.pdf
Presence of reliable, publicly available diagnosis rates	N/A	
Presence of specialists for the senior population (Specialists evaluated are neurologists, geriatricians, psychogeriatricians, and psychiatrists. Specialist estimates based on national level data)	Normalized score: 20.2	"Psychiatrists per 100,000." World Health Organization. Available at: https://gateway.euro.who.int/en/indicators/hlthres_229-psychiatrists-per-100-000/visualizations/#id=28481 "Care Needed." OECD. Page 57. 2018. Available at: https://read.oecd-ilibrary.org/social-issues-migration-health/care-needed_9789264085107-en#page4 "Geriatric Medicine." Ireland's Health Services. 2014. Available at: https://www.hse.ie/eng/staff/leadership-education-development/met/plan/specialty-specific-reviews/geriatric-medicine-2014.pdf
Presence of nurses and social workforce for the senior population Social workforce evaluated are social workers and personal care workers. Data based on national estimates.	Normalized score: 671.5	"Nurses in the UK and Abroad." Full Fact. 2015. Available at: https://fullfact.org/health/nurses-uk-and-abroad/
Presence of a major research center or hospital with an Alzheimer's or dementia unit	Glasgow Memory Clinic: It is Scotland's leading Alzheimer's Clinical Research Centre	"Memory Clinic." Glasgow Memory Clinic. 2019. Available at https://glasgowmemoryclinic.com
Participation in WHO age-friendly cities network	Glasgow is participating and has a commitment letter.	"Glasgow." WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/network/glasgow/
Access to in-home care	In-home care is available for individuals with dementia in Scotland. Free personal care is available for everyone aged 65 and over in Scotland who have been assessed by the local authority as needing it. This includes services from the Good Care Group, which provides in-home care workers.	"About us." The Good Care Group. 2019. Available at https://www.thegoodcaregroup.com/about-us/
Dementia training of healthcare workers	The Dementia Champions program supports the implementation of the national knowledge and skills framework for staff working with people with dementia, extends the reach of workforce learning and training opportunities and supports improvements across Scotland's Dementia Strategy priority areas.	"Delivering a workforce to enhance the care for people living with dementia." NHS Education for Scotland. 2019. Available at https://www.nes.scot.nhs.uk/newsroom/media-releases/delivering-a-workforce-to-enhance-the-care-for-people-living-with-dementia.aspx
Implementation of dementia risk reduction campaign	N/A	
Intellectual property protection	N/A	"Intellectual property protection-The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ052
Venture capital availability	N/A	"Venture capital availability- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ089

Indicator	Data Finding	Sources
University-industry collaboration in R&D	N/A	"University-industry collaboration in R&D- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ072
# of patents granted in med tech, biotech, or pharmaceuticals	N/A	
# of top 500 health institutions for research, innovation, and societal impact	N/A	
Active labour market policies	N/A	"Active labour market policies- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ497
Presence of dementia-friendly community and/or dementia friends program	Glasgow's city dementia strategy includes a plan to become dementia friendly.	Glasgow City Dementia Strategy: 2016-2019. Glasgow City HSCP. Available at: https://www.alzscot.org/sites/default/files/images/0002/1542/Glasgow_Dementia_Strategy_WEB.pdf
Implementation of dementia awareness campaign	The NHS and Alzheimer Scotland have raised awareness via a memory bus that travelled around Glasgow sharing information and advice about the condition	Memory Bus drives dementia awareness. NHS Greater Glasgow and Clyde. 2016. Available at: https://www.nhsggc.org.uk/about-us/media-centre/news/2016/009/memory-bus-drives-dementia-awareness/
Helsinki		
Presence and implementation of a national or regional dementia strategy or plan, which includes a focus on the role of cities, towns, or communities	Yes, the objective of the plan is to create a "memory-friendly" Finland by promoting brain health. However, funding is insufficient and recent Governmental changes have threatened the plan.	"Creating a "memory-friendly" Finland." Finnish Ministry of Social Affairs and Health. 2013. Available at https://nordicwelfare.org/wp-content/uploads/2018/02/Reports_2013_9_Memory_verkko.pdf "From Plan to Impact II: The urgent need for action." Alzheimer's Disease International. 2019. Available at https://www.alz.co.uk/adi/pdf/from-plan-to-impact-2019.pdf
Government funding for dementia or eldercare	N/A	
City-level leadership on dementia or age-related issues	Yes, the city department of Helsinki has committed to becoming a smart city, as older people may be among those who benefit most from smart city innovations.	"Helsinki ranked fifth worldwide in terms of smart city governance." Helsinki Times. 2018. Available at https://www.helsinkitimes.fi/finland/finland-news/domestic/15676-helsinki-ranked-fifth-worldwide-in-terms-of-smart-city-governance.html
Access to subsidized treatments for dementia	Yes, the four anti-dementia medications are approved and reimbursed within the country.	"2006: Reimbursement of anti-dementia drugs." Alzheimer Europe. 2006. Available at https://www.alzheimer-europe.org/Policy/Country-comparisons/2006-Reimbursement-of-anti-dementia-drugs
Presence of physicians for the senior population	Normalized score: 263.9	"Global City Data." New York City Global Partners. 2013. Available at http://www.nyc.gov/html/ia/gprb/html/global/global.shtml
Ability of GPs to diagnose and treat dementia	GPs can make an indicative diagnosis	"Care Needed: Improving the Lives of People with Dementia." OECD. 2018. Available at https://read.oecd-ilibrary.org/social-issues-migration-health/care-needed_9789264085107-en#page49
Presence of reliable, publicly available diagnosis rates	N/A	
Presence of specialists for the senior population (Specialists evaluated are neurologists, geriatricians, psychogeriatricians, and psychiatrists. Specialist estimates based on national level data)	Normalized score: 30.6	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia "Geriatricians in Finland." UEMS Geriatrics Section. Available at https://uemsgeriatricmedicine.org/www/land/finland.asp "Care Needed: Improving the Lives of People with Dementia." OECD. 2018. Available at https://read.oecd-ilibrary.org/social-issues-migration-health/care-needed_9789264085107-en#page59

Indicator	Data Finding	Sources
Presence of nurses and social workforce for the senior population Social workforce evaluated are social workers and personal care workers. Data based on national estimates.	Normalized score: 2,883.4	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia
Presence of a major research center or hospital with an Alzheimer's or dementia unit	National Institute for Health and Welfare, Helsinki has research topics focused on dementia, including the Cardiovascular Risk Factors, Aging and Dementia study which investigates the lifestyle and cardiovascular risk factors for dementia, Alzheimer's disease (AD) and structural brain changes.	"Research projects (Neuroimmunology – ALS – Brain aging)." University of Helsinki. 2019. Available at https://www.helsinki.fi/en/researchgroups/neuro-immunology-and-degeneration/research
Participation in WHO age-friendly cities network	Helsinki is not participating	WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/who-network/
Access to in-home care	The Ministry of Social Affairs and Health in Finland is responsible for general planning, guidance and supervision of services aimed at older people. Home care services provided for the elderly by Finnish local municipalities have been cut by a third over the last decade.	"Finland." Alzheimer Europe. 2013. Available at https://www.alzheimer-europe.org/Policy-in-Practice2/Country-comparisons/2013-National-policies-covering-the-care-and-support-of-people-with-dementia-and-their-carers/Finland
Dementia training of healthcare workers	Basic information about dementia is a small or moderate part of the training of nurses and allied health professionals. For medical students, there are optional lectures and courses in dementia and for specialists training in neurology, there are also optional lectures and courses.	"Finland: National policies covering the care and support of people with dementia and their carers." Alzheimer Europe. 2013. Available at https://www.alzheimer-europe.org/Policy-in-Practice2/Country-comparisons/2013-National-policies-covering-the-care-and-support-of-people-with-dementia-and-their-carers/Finland Steen G. Hasselbalch et al. "Education and training of European neurologists in dementia." <i>European Journal of Neurology</i> . 2007. Available at https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1468-1331.2006.01679.x
Implementation of dementia risk reduction campaign	Helsingin Muistiluotsi offers Body and Brain exercise groups for people with early stage dementia to delay the progression of cognitive decline and reduce the risk of falling by maintaining balance and co-ordination skills.	"Alzheimer's Association of Helsinki" Available at https://alztki.fi/briefly-in-english/
Intellectual property protection	Score 6.5	"Intellectual property protection-The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ052
Venture capital availability	Score: 4.9	"Venture capital availability- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ089
University-industry collaboration in R&D	Score: 5.5	"University-industry collaboration in R&D- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ072
# of patents granted in med tech, biotech, or pharmaceuticals	TOTAL: 207	WIPO IP Statistics Data Center. WIPO statistics database. 2019. Available at https://www3.wipo.int/ipstats/index.htm
# of top 500 health institutions for research, innovation, and societal impact	# of top 500 health institutions=6	Scimago Institutions Rankings. 2018. Available at https://www.scimagoir.com/index.php?sector=Health&year=2012&top=500&display=chart&country=FIN

Indicator	Data Finding	Sources
Active labour market policies	Score: 4.9	"Active labour market policies- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ497
Presence of dementia-friendly community and/or dementia friends program	N/A	
Implementation of dementia awareness campaign	N/A	
Hong Kong		
Presence and implementation of a national or regional dementia strategy or plan, which includes a focus on the role of cities, towns, or communities	No National Dementia Plan	"From Plan to Impact II: The urgent need for action." Alzheimer's Disease International. 2019. Available at https://www.alz.co.uk/adi/pdf/from-plan-to-impact-2019.pdf
Government funding for dementia or eldercare	N/A	
City-level leadership on dementia or age-related issues	Yes, the Secretary for Labour & Welfare Dr Law Chi-kwong called on different sectors of society to work together with the Government to build a friendly community for people with dementia, the elderly and their carers.	"Gov't raises dementia awareness." Government of Hong Kong 2019. Available at https://www.news.gov.hk/eng/2019/01/20190126/20190126_173303_071.html
Access to subsidized treatments for dementia	Yes, Donepezil, Rivastigmine, Galantamine and Memantine are available, but unknown if it is subsidized.	"Dementia Awareness Kit." Hong Kong Social Welfare Department. 2017. Available at https://www.swd.gov.hk/dementiacampaign/en/doc/Dementia_Awareness_kit_en.pdf
Presence of physicians for the senior population	Normalized score: 151.2	"Global City Data." New York City Global Partners. 2013. Available at http://www.nyc.gov/html/ia/gprb/html/global/global.shtml
Ability of GPs to diagnose and treat dementia	GPs can diagnose early signs of dementia and help families arrange treatment	"Hong Kong families bear burden of dementia as patient numbers rise." South China Morning Post. 2016. Available at https://www.scmp.com/lifestyle/health-beauty/article/2019974/who-will-care-rising-number-hongkongs-dementia
Presence of reliable, publicly available diagnosis rates	10 percent	"Singapore, Macau, Japan: Other Asian territories are preparing for dementia 'explosion' but Hong Kong 'has ignored it.'" South China Morning Post. Available at https://www.scmp.com/news/hong-kong/health-environment/article/1859934/hong-kong-experts-complain-government-doing
Presence of specialists for the senior population (Specialists evaluated are neurologists, geriatricians, psychogeriatricians, and psychiatrists. Specialist estimates based on national level data)	Normalized score: 5.6	"Breaking point: Hong Kong's overburdened mental health care system in need of a fix." South China Morning Post. 2016. Available at https://www.scmp.com/news/hong-kong/health-environment/article/1912457/breaking-point-hong-kongs-overburdened-mental "Retired doctors step in to tackle Hong Kong's elderly care shortage." South China Morning Post. 2016. Available at https://www.scmp.com/news/hong-kong/health-environment/article/1985246/retired-doctors-step-tackle-hong-kongs-elderly
Presence of nurses and social workforce for the senior population Social workforce evaluated are social workers and personal care workers. Data based on national estimates.	Normalized score: 882.8	"Hong Kong in Figures." Census and Statistics Department – The Government of the Hong Kong Special Administrative Region. 2019. Available at https://www.censtatd.gov.hk/hkstat/hkif/index.jsp "Statistics on Registered Social Workers." Social Workers Registration Board. 2019. Available at https://www.swrb.org.hk/en/statistic_rsw.asp

Indicator	Data Finding	Sources
Presence of a major research center or hospital with an Alzheimer's or dementia unit	Hong Kong University of Science and Technology (HKUST) is joining forces with Harvard Medical School, Stanford University School of Medicine and University College London to set up the city's first international research center on dementia and other neurodegenerative diseases	"Hong Kong university joins forces with top overseas institutions to set up city's first international research centre on dementia and other neurodegenerative diseases." South China Morning Post. 2019. Available at https://www.scmp.com/news/hong-kong/health-environment/article/2182412/hong-kong-university-joins-forces-top-overseas
Participation in WHO age-friendly cities network	Hong Kong is participating and has a commitment letter, baseline assessment and strategy and action plan.	"Tuen Mun District, Hong Kong." WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/network/tuen-mun-district-hong-kong/
Access to in-home care	The Government is providing a variety of subsidized community care services and residential services within the Long Term Care system to seniors assessed to have moderate-to-severe impairment, including home care, day care, day respite, residential respite and carer support.	"Dementia in the Asia Pacific Region." Alzheimer's Disease International. 2014. Available at https://www.alz.co.uk/adi/pdf/Dementia-Asia-Pacific-2014.pdf
Dementia training of healthcare workers	The Hong Kong Alzheimer's Disease Association has been striving to raise the competency of professionals (including GP training, nurses, allied health professionals and social workers), semi-professionals (e.g. care workers, health workers, informal carers etc.), and any other people who may come in to contact with people with dementia in the community.	"Dementia in the Asia Pacific Region." Alzheimer's Disease International. 2014. Available at https://www.alz.co.uk/adi/pdf/Dementia-Asia-Pacific-2014.pdf
Implementation of dementia risk reduction campaign	N/A	
Intellectual property protection	Score 5.9	"Intellectual property protection-The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ052
Venture capital availability	Score 4.3	"Venture capital availability- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ089
University-industry collaboration in R&D	Score 5.0	"University-industry collaboration in R&D- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ072
# of patents granted in med tech, biotech, or pharmaceuticals	N/A	
# of top 500 health institutions for research, innovation, and societal impact	# of top 500 health institutions= 3	Scimago Insitutions Rankings. 2018. Available at https://www.scimagoir.com/index.php?sector=Health&year=2012&top=500&display=chart&country=HKG
Active labour market policies	Score 4.8	"Active labour market policies- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ497
Presence of dementia-friendly community and/or dementia friends program	Hong Kong's Alzheimer's Disease Association has established a dementia friends program. The bank HSBC is starting to offer dementia-friendly banking in Hong Kong.	"About Us." Hong Kong Alzheimer's Disease Association. Available at: https://dementiafriends.hk/en/about/ Simone McCarthy. "HSBC first to offer dementia-friendly banking service in Hong Kong." South China Morning Post. Available at: https://www.scmp.com/business/banking-finance/article/3010538/hssc-first-offer-dementia-friendly-banking-service-hong

Indicator	Data Finding	Sources
Implementation of dementia awareness campaign	Government's Social Welfare Department launched the Dementia Friendly Community Campaign and the Support for Carers Project in 2018 to raise awareness among the general public	Gov't raises dementia awareness. Hong Kong Government News. 2019. Available at: https://www.news.gov.hk/eng/2019/01/20190126/20190126_173303_071.html
Jakarta		
Presence and implementation of a national or regional dementia strategy or plan, which includes a focus on the role of cities, towns, or communities	Yes, with a focus on the creation of public awareness campaigns in communities. The plan is adopted, funded and monitored.	"Plan maladies neuro-dégénératives 2014-2019." Strategie Nationale de Sante. Available at https://www.alz.co.uk/sites/default/files/plans/France-dementia-plan-2014-2019.pdf
Government funding for dementia or eldercare	The Indonesian government committed a budget of \$105,000 towards dementia services.	"From Plan to Impact II: The urgent need for action." Alzheimer's Disease International. 2019. Available at https://www.alz.co.uk/adi/pdf/from-plan-to-impact-2019.pdf
City-level leadership on dementia or age-related issues	Yes, Alzheimer's Indonesia has been fostering collaboration and partnerships with DKI Jakarta Provincial Government, Ministry of Social Affairs and the Ministry of Health to proceed in declaring Jakarta as an Age and Dementia Friendly City in 2014.	Dementia in the Asia Pacific Region." Alzheimer's Disease International. 2014. Available at https://www.alz.co.uk/adi/pdf/Dementia-Asia-Pacific-2014.pdf From Plan to Impact II: The urgent need for action." Alzheimer's Disease International. 2019. Available at https://www.alz.co.uk/adi/pdf/from-plan-to-impact-2019.pdf
Access to subsidized treatments for dementia	N/A	
Presence of physicians for the senior population	Normalized score: 29.1	"Global City Data." New York City Global Partners. 2013. Available at http://www.nyc.gov/html/ia/gprb/html/global/global.shtml
Ability of GPs to diagnose and treat dementia	Many GPs are unable to provide diagnostic services for dementia due to lack of training.	Prince, Martin, Comas-Herrera, Adelina, Knapp, Martin, Guerchet, Maëlenn and Karagiannidou, Maria. "World Alzheimer report 2016: improving healthcare for people living with dementia: coverage, quality and costs now and in the future." Alzheimer's Disease International. 2016. Available at http://eprints.lse.ac.uk/67858/1/Comas-Herrera_World%20Alzheimer%20report_2016.pdf
Presence of reliable, publicly available diagnosis rates	N/A	
Presence of specialists for the senior population (Specialists evaluated are neurologists, geriatricians, psychogeriatricians, and psychiatrists. Specialist estimates based on national level data)	Normalized score: 0.6	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia Niphon Pongvarin "Resources and organization of Neurology care in South East Asia." Neurology Asia. 2007. Available at http://www.neurologyasia.org/articles/20071_041.pdf
Presence of nurses and social workforce for the senior population Social workforce evaluated are social workers and personal care workers. Data based on national estimates.	Normalized score: 126.1	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia
Presence of a major research center or hospital with an Alzheimer's or dementia unit	National Neurology Center Hospital or Rumah Sakit Pusat Otak Nasional (RS PON) at Jalan M.T Haryono, Jakarta provides high quality treatment and services on brain and neurology that is accessible to all layers of society.	"President opens Indonesia's first National Neurology Center Hospital in Jakarta." Embassy of Indonesia Washington, DC. 2017. Available at https://www.embassyofindonesia.org/index.php/2014/07/15/president-opens-indonesias-first-national-neurology-center-hospital-in-jakarta/

Indicator	Data Finding	Sources
Participation in WHO age-friendly cities network	Jakarta is not participating	WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/who-network/
Access to in-home care	Home- based care is available for people living with dementia, as family members have a large role in caring for patients at home. The government of Indonesia has played a key role in the availability of services, as funds have been set aside for home-based workers.	Rudi Putranto, Endjad Mudjaddid, Hamzah Shatri, Mizanul Adli, and Diah Martina. "Development and challenges of palliative care in Indonesia: role of psychosomatic medicine." <i>Biopsychosocial Medicine</i> . 2017. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5697086/
Dementia training of healthcare workers	<p>There are several dementia care training programs for domestic workers, family caregivers and health professionals in Indonesia. ADI Dementia Care Skills (DCS) training is regularly held in collaboration with the local government, university and health care service providers. This training program is delivered by Alzheimer's Indonesia and focuses solely on giving skills on dementia care.</p> <p>However, there are very low levels of awareness of dementia among healthcare staff, particularly in primary care health services and in rural areas, which limits their ability to diagnose and care for people affected by dementia. Training health professionals on dementia is needed, as is funding the development of dementia services.</p>	<p>"From Plan to Impact II: The urgent need for action." <i>Alzheimer's Disease International</i>. 2019. Available at https://www.alz.co.uk/adi/pdf/from-plan-to-impact-2019.pdf</p> <p>Prince, Martin, Comas-Herrera, Adelina, Knapp, Martin, Guerchet, Maëlenn and Karagiannidou, Maria. "World Alzheimer report 2016: improving healthcare for people living with dementia: coverage, quality and costs now and in the future." <i>Alzheimer's Disease International</i>. 2016. Available at http://eprints.lse.ac.uk/67858/1/Comas-Herrera_World%20Alzheimer%20report_2016.pdf</p>
Implementation of dementia risk reduction campaign	N/A	
Intellectual property protection	Score: 4.6	"Intellectual property protection-The Global Competitiveness Report 2018." <i>World Economic Forum</i> . 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ052
Venture capital availability	Score: 3.8	"Venture capital availability- The Global Competitiveness Report 2018." <i>World Economic Forum</i> . 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ089
University-industry collaboration in R&D	Score: 4.2	"University-industry collaboration in R&D- The Global Competitiveness Report 2018." <i>World Economic Forum</i> . 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ072
# of patents granted in med tech, biotech, or pharmaceuticals	N/A	
# of top 500 health institutions for research, innovation, and societal impact	N/A	Scimago Insitutions Rankings. 2018. Available at https://www.scimagoir.com/index.php?sector=Health&year=2012&top=500&display=chart&country=IDN
Active labour market policies	Score: 4.1	"Active labour market policies- The Global Competitiveness Report 2018." <i>World Economic Forum</i> . 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ497

Indicator	Data Finding	Sources
Presence of dementia-friendly community and/or dementia friends program	<p>Alzheimer's Indonesia is working to make Jakarta dementia-friendly through a series of trainings for the public, government officials, police, private sector, and others.</p> <p>Jakarta has trained health and social professionals called "Purple Troops" who volunteer to be first responders when there are missing people who have dementia. The local government has been supportive of this initiative.</p>	<p>"Dementia Friendly Communities: Global Developments." Alzheimer's Disease International. Available at: https://www.alz.co.uk/adi/pdf/dfc-developments.pdf</p> <p>Ahok Declares Jakarta as Age and Dementia Friendly City." Tempo. 2015. Available at: https://en.tempo.co/read/699793/ahok-declares-jakarta-as-age-and-dementia-friendly-city</p>
Implementation of dementia awareness campaign	Jakarta has conducted awareness campaigns in conjunction with World Alzheimer Month, including lighting up local buildings and coordinating events	Ahok Declares Jakarta as Age and Dementia Friendly City. Tempo. 2015. Available at: https://en.tempo.co/read/699793/ahok-declares-jakarta-as-age-and-dementia-friendly-city
London		
Presence and implementation of a national or regional dementia strategy or plan, which includes a focus on the role of cities, towns, or communities	Yes, with a focus on community awareness programs for people with dementia. The plan is adopted.	<p>"England's National Dementia Strategy." Alzheimer's Disease International. Available at https://www.alz.co.uk/plans/england</p> <p>"From Plan to Impact II: The urgent need for action." Alzheimer's Disease International. 2019. Available at https://www.alz.co.uk/adi/pdf/from-plan-to-impact-2019.pdf</p>
Government funding for dementia or eldercare	The Government invests in dementia through the National Institute for Health Research (NIHR) and the Medical Research Council (MRC). The NIHR funded £43.0m, the MRC spent £36.3m and the ESRC spent £3.2m on dementia research.	"UK Government investment." Alzheimer's Research UK. 2019. Available at https://www.dementiastatistics.org/statistics/uk-government-investment/
City-level leadership on dementia or age-related issues	Yes, the Mayor of London has pledged to make the city a 'dementia-friendly' capital and the London Health Board and other partners are working towards becoming a dementia friendly community, and meaningful involvement of people affected by dementia.	"Alzheimer's Society: Mayor of London pledges 'dementia-friendly' capital." Alzheimer's Society. 2018. Available at https://www.politicshome.com/news/uk/health-and-care/illnesstreatments/press-release/alzheimers-society/95355/alzheimers-society
Access to subsidized treatments for dementia	Yes, three anti-dementia medications are approved and reimbursed within the country.	"2006: Reimbursement of anti-dementia drugs." Alzheimer Europe. 2006. Available at https://www.alzheimer-europe.org/Policy/Country-comparisons/2006-Reimbursement-of-anti-dementia-drugs
Presence of physicians for the senior population	Normalized score: 246.4	"Physicians (per 1,000 people)". The World Bank Group. 2020. Available at https://data.worldbank.org/indicator/SH.MED.PHYS.ZS?locations=GB-AR-DK-FR-IN-MX-QA-ZA-TH
Ability of GPs to diagnose and treat dementia	GPs can make an indicative diagnosis and (in some rare cases) a formal diagnosis	"Care Needed: Improving the Lives of People with Dementia." OECD. 2018. Available at https://read.oecd-ilibrary.org/social-issues-migration-health/care-needed_9789264085107-en#page49
Presence of reliable, publicly available diagnosis rates	N/A	
Presence of specialists for the senior population (Specialists evaluated are neurologists, geriatricians, psychogeriatricians, and psychiatrists. Specialist estimates based on national level data)	Normalized score: 20.6	<p>https://gateway.euro.who.int/en/indicators/hlthres_229-psychiatrists-per-100-000/visualizations/#id=28481 https://bmcomeduc.biomedcentral.com/articles/10.1186/s12909-019-1650-7</p> <p>https://www.hse.ie/eng/staff/leadership-education-development/met/plan/specialty-specific-reviews/geriatric-medicine-2014.pdf</p> <p>https://www.statista.com/statistics/270370/age-distribution-in-the-united-kingdom/</p> <p>"Care Needed: Improving the Lives of People with Dementia." OECD. 2018. Available at https://read.oecd-ilibrary.org/social-issues-migration-health/care-needed_9789264085107-en#page59</p>

Indicator	Data Finding	Sources
<p>Presence of nurses and social workforce for the senior population</p> <p>Social workforce evaluated are social workers and personal care workers. Data based on national estimates.</p>	Normalized score: 2,188.5	<p>"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia</p> <p>Health Care Resources: Nurses" OECD Data. 2019. Available at https://stats.oecd.org/index.aspx?queryid=30183</p>
Presence of a major research center or hospital with an Alzheimer's or dementia unit	King's College of London and the Imperial College of London are home to two of the centers that make up the UK Dementia Research Institute. University College, London is the host of the UK Dementia Research Institute.	"UK Dementia Research Institute." Alzheimer's Research UK. Available at https://www.alzheimersresearchuk.org/our-research/what-we-do/big-initiatives/uk-dementia-research-institute/
Participation in WHO age-friendly cities network	London is participating and has completed a commitment letter and a baseline assessment	"London." WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/network/london-uk/
Access to in-home care	Home care, which can provide practical assistance with personal care, medication management or domestic activities, is the main type of community care service supporting people at home including those with dementia. Over recent years despite a steady increase in the number of hours of home care provision to older people, there has been a marked reduction in the number of households being supported.	Caroline L Sutcliffe, Rowan Jasper, Brenda Roe, David Jolley, Anthony Crook, David J Challis. "Inter-professional perspectives of dementia services and care in England: Outcomes of a focus group study." <i>Dementia</i> . 2016. Available at https://pdfs.semanticscholar.org/9798/84dcdce153597e610492777f4b7d1dd45d1d.pdf
Dementia training of healthcare workers	Access to training in dementia care varies considerably across the caring professions. There is no mandatory dementia training for staff providing care in the home or working in residential homes. For med students, there is 1 obligatory lecture and 1 obligatory course. For specialists training in neurology, there is 1 obligatory lecture and 1 obligatory course. And for training of certified neurologists, there are optional lectures and courses.	<p>"Developing the dementia workforce." NHS Health Education England. 2019. Available at https://www.hee.nhs.uk/our-work/dementia</p> <p>Steen G. Hasselbalch et al. "Education and training of European neurologists in dementia." <i>European Journal of Neurology</i>. 2007. Available at https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1468-1331.2006.01679.x</p>
Implementation of dementia risk reduction campaign	The 'PREVENT' Study based at Imperial College London focuses on identifying the very earliest signs of dementia, Alzheimer's disease, and other neurodegenerative diseases, so that meaningful interventions can be put in place to try and stop the disease progressing to the point where dementia develops.	"The 'PREVENT' Study." National Institute for Health Research. Available at https://news.joindementiaresearch.nihr.ac.uk/prevent-study/
Intellectual property protection	Score: 6.1	"Intellectual property protection-The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ052
Venture capital availability	Score: 4.4	"Venture capital availability- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ089
University-industry collaboration in R&D	Score: 5.4	"University-industry collaboration in R&D- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ072

Indicator	Data Finding	Sources
# of patents granted in med tech, biotech, or pharmaceuticals	TOTAL: 1,674	WIPO IP Statistics Data Center. WIPO statistics database. 2019. Available at https://www3.wipo.int/ipstats/index.htm
# of top 500 health institutions for research, innovation, and societal impact	# of top 500 health institutions= 18	Scimago Insitutions Rankings. 2018. Available at https://www.scimagoir.com/index.php?sector=Health&year=2012&top=500&display=chart&country=GBR
Active labour market policies	Score: 4.2	"Active labour market policies- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ497
Presence of dementia-friendly community and/or dementia friends program	The Alzheimer's Society is working to establish London as a dementia-friendly city	Dementia Friendly London. Alzheimer's Society. Available at: https://www.alzheimers.org.uk/get-involved/dementia-friendly-communities/dementia-friendly-london
Implementation of dementia awareness campaign	Alzheimer's Society and Alzheimer's Research UK have developed campaigns aimed at raising awareness and address specific issues within the dementia care sectors.	"Campaign With Us." Alzheimer's Society. Available at: https://www.alzheimers.org.uk/get-involved/our-campaigns Alzheimer's Research UK. Available at: https://www.alzheimersresearchuk.org/orange/

Manchester

Presence and implementation of a national or regional dementia strategy or plan, which includes a focus on the role of cities, towns, or communities	Yes, with a focus on community awareness programs for people with dementia. The plan is adopted.	"England's National Dementia Strategy." Alzheimer's Disease International. Available at https://www.alz.co.uk/plans/england "From Plan to Impact II: The urgent need for action." Alzheimer's Disease International. 2019. https://www.alz.co.uk/adi/pdf/from-plan-to-impact-2019.pdf
Government funding for dementia or eldercare	The Government invests in dementia through the National Institute for Health Research (NIHR) and the Medical Research Council (MRC). The NIHR funded £43.0m, the MRC spent £36.3m and the ESRC spent £3.2m on dementia research.	"UK Government investment." Alzheimer's Research UK. 2019. Available at https://www.dementiastatistics.org/statistics/uk-government-investment/
City-level leadership on dementia or age-related issues	Yes, the Manchester City Council joined the Dementia Action Alliance and similar organizations to further improve health, care and service for elderly citizens and, importantly, their carers.	"Manchester Dementia Action Alliance." Dementia Action Alliance. 2019. Available at https://www.dementiaaction.org.uk/local_alliances/2654_manchester_dementia_action_alliance
Access to subsidized treatments for dementia	Yes, three anti-dementia medications are approved and reimbursed within the country.	"2006: Reimbursement of anti-dementia drugs." Alzheimer Europe. 2006. Available at https://www.alzheimer-europe.org/Policy/Country-comparisons/2006-Reimbursement-of-anti-dementia-drugs
Presence of physicians for the senior population	Normalized score: 254.8	"Physicians (per 1,000 people)". The World Bank Group. 2020. Available at https://data.worldbank.org/indicator/SH.MED.PHYS.ZS?locations=GB-AR-DK-FR-IN-MX-QA-ZA-TH
Ability of GPs to diagnose and treat dementia	GPs can make an indicative diagnosis and (in some rare cases) a formal diagnosis	"Care Needed: Improving the Lives of People with Dementia." OECD. 2018. Available at https://read.oecd-ilibrary.org/social-issues-migration-health/care-needed_9789264085107-en#page49
Presence of reliable, publicly available diagnosis rates	N/A	

Indicator	Data Finding	Sources
Presence of specialists for the senior population (Specialists evaluated are neurologists, geriatricians, psychogeriatricians, and psychiatrists. Specialist estimates based on national level data)	Normalized score: 21.3	<p>https://gateway.euro.who.int/en/indicators/hlthres_229-psychiatrists-per-100-000/visualizations/#id=28481</p> <p>https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-019-1650-7</p> <p>https://www.hse.ie/eng/staff/leadership-education-development/met/plan/specialty-specific-reviews/geriatric-medicine-2014.pdf</p> <p>https://www.statista.com/statistics/270370/age-distribution-in-the-united-kingdom/</p> <p>"Care Needed: Improving the Lives of People with Dementia." OECD. 2018. Available at https://read.oecd-ilibrary.org/social-issues-migration-health/care-needed_9789264085107-en#page59</p>
Presence of nurses and social workforce for the senior population Social workforce evaluated are social workers and personal care workers. Data based on national estimates.	Normalized score: 2,263.1	<p>"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia</p> <p>Health Care Resources: Nurses" OECD Data. 2019. Available at https://stats.oecd.org/index.aspx?queryid=30183</p>
Presence of a major research center or hospital with an Alzheimer's or dementia unit	Manchester University's Institute for Collaborative Research in Ageing collaborates across multiple disciplines to address the issue of dementia care and research.	"Manchester Institute for Collaborative Research on Ageing." The University of Manchester. Available at https://www.micra.manchester.ac.uk
Participation in WHO age-friendly cities network	Manchester is participating and has completed a commitment letter, a baseline assessment, and a strategy and action plan	"Manchester." WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/network/manchester/
Access to in-home care	Home care, which can provide practical assistance with personal care, medication management or domestic activities, is the main type of community care service supporting people at home including those with dementia. Over recent years despite a steady increase in the number of hours of home care provision to older people, there has been a marked reduction in the number of households being supported.	Caroline L Sutcliffe, Rowan Jasper, Brenda Roe, David Jolley, Anthony Crook, David J Challis. "Inter-professional perspectives of dementia services and care in England: Outcomes of a focus group study." <i>Dementia</i> . 2016. Available at https://pdfs.semanticscholar.org/9798/84dcdce153597e610492777f4b7d1dd45d1d.pdf
Dementia training of healthcare workers	Access to training in dementia care varies considerably across the caring professions. There is no mandatory dementia training for staff providing care in the home or working in residential homes. For med students, there is 1 obligatory lecture and 1 obligatory course. For specialists training in neurology, there is 1 obligatory lecture and 1 obligatory course. And for training of certified neurologists, there are optional lectures and courses.	<p>"Developing the dementia workforce." NHS Health Education England. 2019. Available at https://www.hee.nhs.uk/our-work/dementia</p> <p>Steen G. Hasselbalch et al. "Education and training of European neurologists in dementia." <i>European Journal of Neurology</i>. 2007. Available at https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1468-1331.2006.01679.x</p>
Implementation of dementia risk reduction campaign	Following a successful pilot project in Manchester (2016/17), dementia risk reduction messaging is now recommended and offered to everyone attending an NHS Health Check.	"NHS Health Check 40-64 Dementia Pilot." Solutions Strategy Research Facilitation Ltd and Cornish and Grey Ltd. Available at https://www.alzheimersresearchuk.org/wp-content/uploads/2017/08/Solutions-Dementia-Pilot-Summary-Report-Final-24.7.17-1.pdf
Intellectual property protection	Score: 6.1	"Intellectual property protection-The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ052

Indicator	Data Finding	Sources
Venture capital availability	Score: 4.4	"Venture capital availability- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ089
University-industry collaboration in R&D	Score: 5.4	"University-industry collaboration in R&D- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ072
# of patents granted in med tech, biotech, or pharmaceuticals	TOTAL: 1,674	WIPO IP Statistics Data Center. WIPO statistics database. 2019. Available at https://www3.wipo.int/ipstats/index.htm
# of top 500 health institutions for research, innovation, and societal impact	# of top 500 health institutions= 3	Scimago Insitutions Rankings. 2018. Available at https://www.scimagoir.com/index.php?sector=Health&year=2012&top=500&display=chart&country=GBR
Active labour market policies		"Active labour market policies- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ497
Presence of dementia-friendly community and/or dementia friends program	Manchester Dementia Action Alliance is working to establish Manchester as a dementia-friendly city	Dementia-friendly Manchester. Pharmaceutical Services Negotiating Committee. Available at: https://psnc.org.uk/greater-manchester-lpc/service-information/dementia-friendly-pharmacy-framework/dementia-friendly-manchester/
Implementation of dementia awareness campaign	Local Alzheimer's association launched awareness campaign called Bring Dementia Out focused on raising awareness about people from the LGBTQ community who are living with dementia	Bring Dementia Out. Alzheimer's Society. Available at: https://www.alzheimers.org.uk/get-involved/bring-dementia-out#:~:text=Bring%20Dementia%20Out%20is%20an,who%20may%20not%20feel%20supported.
Mexico City		
Presence and implementation of a national or regional dementia strategy or plan, which includes a focus on the role of cities, towns, or communities	Yes, with a focus on promoting a friendlier society to dementia. The plan includes funding for some activities, but not adequate for the whole plan	"From Plan to Impact II: The urgent need for action." Alzheimer's Disease International. 2019. Available at https://www.alz.co.uk/adi/pdf/from-plan-to-impact-2019.pdf Plan Alzheimer's and other dementias action." National Institute of Geriatrics. 2014. Available at https://www.alz.co.uk/sites/default/files/plans/mexico-english.pdf
Government funding for dementia or eldercare	N/A	
City-level leadership on dementia or age-related issues	Yes, Mexico City's government is preparing to open two facilities to create a friendlier city for the elderly. The city is already offering free training for those who have to take care of seniors, and more than a thousand have already taken the sessions.	"2019 October Report Alzheimer Mexico, I.A.P." GlobalGiving. 2019. Available at https://www.globalgiving.org/donate/28061/alzheimer-mexico-iap/reports/
Access to subsidized treatments for dementia	According to the National Medicines List, anti-dementia medication is available in Mexico, however it is unknown if they are reimbursed or subsidized.	"Cuadro Básico y Catálogo de Medicamentos." D.R.Consejo de Salubridad General. 2009. Available at https://www.who.int/selection_medicines/country_lists/Mexico_medicamentos2009.pdf?ua=1
Presence of physicians for the senior population	Normalized score: 216	"Physicians (per 1,000 people)". The World Bank Group. 2020. Available at https://data.worldbank.org/indicator/SH.MED.PHYS.ZS?locations=GB-AR-DK-FR-IN-MX-QA-ZA-TH
Ability of GPs to diagnose and treat dementia	GPs can make an indicative diagnosis	"Care Needed: Improving the Lives of People with Dementia." OECD. 2018. Available at https://read.oecd-ilibrary.org/social-issues-migration-health/care-needed_9789264085107-en#page49

Indicator	Data Finding	Sources
Presence of reliable, publicly available diagnosis rates	N/A	
Presence of specialists for the senior population (Specialists evaluated are neurologists, geriatricians, psychogeriatricians, and psychiatrists. Specialist estimates based on national level data)	Normalized score: 1.1	"Care Needed: Improving the Lives of People with Dementia." OECD. 2018. Available at https://read.oecd-ilibrary.org/social-issues-migration-health/care-needed_9789264085107-en#page59 Luis Miguel Gutiérrez, Robledo Mariana, López Ortega. "The State of Elder Care in Mexico." Current Geriatrics Reports. 2012. Available at https://link.springer.com/article/10.1007/s13670-012-0028-z
Presence of nurses and social workforce for the senior population Social workforce evaluated are social workers and personal care workers. Data based on national estimates.	Normalized score: 239.3	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia
Presence of a major research center or hospital with an Alzheimer's or dementia unit	The National Institute of Geriatrics, Mexico (Instituto Nacional de Geriátria, INGER) aims to become the regional leading research and education institution on aging and address the medical, scientific, and social challenged posed by Alzheimer's Disease and other related illnesses.	"The National Institute of Geriatrics, Mexico." Instituto Nacional De Geriatria, INGER. Available at http://www.cdi.salud.gob.mx/contenidos/menu1/english.html
Participation in WHO age-friendly cities network	Mexico City is not participating	WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/who-network/
Access to in-home care	Most care for people with dementia is provided by family members within the household who have little or no training or knowledge of Alzheimer's disease and other dementias. In addition, there are no special benefits such as tax incentives, monetary support or respite care to support family caregivers.	Luis Miguel Gutiérrez Robledo, Mariana López Ortega. "The State of Elder Care in Mexico." Current Geriatrics Reports. 2012. Available at https://link.springer.com/article/10.1007/s13670-012-0028-z
Dementia training of healthcare workers	In 2010, seven universities from Mexico had begun offering the geriatric specialization, with less than 70 % of the specialty slots taken. This track of medical practice includes subspecialties in cardiogeriatrics, dementia, neurogeriatrics and rehabilitation.	Luis Miguel Gutiérrez, Robledo Mariana, López Ortega. "The State of Elder Care in Mexico." Current Geriatrics Reports. 2012. Available at https://link.springer.com/article/10.1007/s13670-012-0028-z Prince, Martin, Comas-Herrera, Adelina, Knapp, Martin, Guerchet, Maëllenn and Karagiannidou, Maria. "World Alzheimer report 2016: improving healthcare for people living with dementia: coverage, quality and costs now and in the future." Alzheimer's Disease International. 2016. Available at http://eprints.lse.ac.uk/67858/1/Comas-Herrera_World%20Alzheimer%20report_2016.pdf
Implementation of dementia risk reduction campaign	N/A	
Intellectual property protection	Score: 4.1	"Intellectual property protection-The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ052
Venture capital availability	Score: 3.2	"Venture capital availability- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ089
University-industry collaboration in R&D	Score: 3.6	"University-industry collaboration in R&D- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ072

Indicator	Data Finding	Sources
# of patents granted in med tech, biotech, or pharmaceuticals	TOTAL: 3,818	WIPO IP Statistics Data Center. WIPO statistics database. 2019. Available at https://www3.wipo.int/ipstats/index.htm
# of top 500 health institutions for research, innovation, and societal impact	# of top 500 health institutions= 13	Scimago Insitutions Rankings. 2018. Available at https://www.scimagoir.com/index.php?sector=Health&year=2012&top=500&display=chart&country=MEX
Active labour market policies	Score: 2.5	"Active labour market policies- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ497
Presence of dementia-friendly community and/or dementia friends program	N/A	
Implementation of dementia awareness campaign	N/A	

New York

Presence and implementation of a national or regional dementia strategy or plan, which includes a focus on the role of cities, towns, or communities	Yes, with a focus on improving home and community-based long-term services. The plan is currently being implemented and has been adopted.	"From Plan to Impact II: The urgent need for action." Alzheimer's Disease International. 2019. Available at https://www.alz.co.uk/adi/pdf/from-plan-to-impact-2019.pdf
Government funding for dementia or eldercare	The United States received 156 million USD from the Obama administration (prior to 2017) for their National Dementia Strategy.	Selina Chow, Ronald Chow, Angela Wan, Helen R. Lam et al. "National Dementia Strategies: What Should Canada Learn?" Canadian Geriatrics Journal. 2018. Available at https://pdfs.semanticscholar.org/fe3b/d67b034593cc88b96c771aa992396ddc9396.pdf
City-level leadership on dementia or age-related issues	Yes, the Office of the Mayor and the New York City Council, in consultation with city agencies, announced 59 initiatives to improve the quality of life of older adults.	"New York City." WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/network/new-york-city/
Access to subsidized treatments for dementia	Yes, the U.S. Food and Drug Administration has approved three types of antidementia medications. Medicare Part D covers many prescription drugs, however the type of medication you can get subsidized greatly depends on which Medicare national prescription drug plan you are on.	"Medications for Memory." Alzheimer's Association. 2019. Available at https://www.alz.org/alzheimers-dementia/treatments/medications-for-memory Medicare National Plans Coverage of Alzheimer's Drugs for 2018." Alzheimer's Association. 2018. Available at https://www.alz.org/care/downloads/medicarenationalplanscoverage2018.pdf
Presence of physicians for the senior population	Normalized score: 345.8	"Global City Data." New York City Global Partners. 2013. Available at http://www.nyc.gov/html/ia/gprb/html/global/global.shtml
Ability of GPs to diagnose and treat dementia	GPs can make an indicative diagnosis	"Care Needed: Improving the Lives of People with Dementia." OECD. 2018. Available at https://read.oecd-ilibrary.org/social-issues-migration-health/care-needed_9789264085107-en#page49
Presence of reliable, publicly available diagnosis rates	N/A	
Presence of specialists for the senior population (Specialists evaluated are neurologists, geriatricians, psychogeriatricians, and psychiatrists. Specialist estimates based on national level data)	Normalized score: 19.4	"The 2018 Open Minds State-By-State Guide To Estimating The Number Of Psychiatrists." Open Minds. 2018. Available at https://www.openminds.com/store/the-2018-open-minds-state-by-state-guide-to-estimating-the-number-of-psychiatrists-an-open-minds-market-intelligence-report/ https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-019-1650-7 https://www.americangeriatrics.org/sites/default/files/inline-files/Current%20Number%20of%20Board%20Certified%20Geriatricians%20by%20State_3%206%2018.pdf

Indicator	Data Finding	Sources
<p>Presence of nurses and social workforce for the senior population</p> <p>Social workforce evaluated are social workers and personal care workers. Data based on national estimates.</p>	Normalized score: 1,466	<p>"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia</p> <p>Health Care Resources: Nurses" OECD Data. 2019. Available at https://stats.oecd.org/index.aspx?queryid=30183</p> <p>"Nursing and midwifery personnel (per 10,000)." WHO. 2020. Available at https://www.who.int/data/gho/data/indicators/indicator-details/GHO/nursing-and-midwifery-personnel-(per-10-000-population)</p>
Presence of a major research center or hospital with an Alzheimer's or dementia unit	The Alzheimer's Disease Center, part of NYU Langone's Center for Cognitive Neurology is one of 30 Alzheimer's disease research centers in the United States supported by the National Institute on Aging.	"Alzheimer's Disease Center." NYU Grossman School of Medicine. 2019. Available at https://med.nyu.edu/departments-institutes/neurology/divisions-centers/center-cognitive-neurology/alzheimers-disease-center
Participation in WHO age-friendly cities network	New York is participating and has completed a commitment letter, a baseline assessment, and a strategy and action plan	"New York City." WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/network/new-york-city/
<p>Access to in-home care</p> <p>Based on nurses and personal carers located at home according to OECD data</p>	2.6 Per 100 population aged 65+	"Formal long-term care workers at home." OECD Data. 2019. Available at https://stats.oecd.org/index.aspx?r=8622&errorCode=403&lastaction=login_submit
Dementia training of healthcare workers	<p>In 2007, the Association of American Medical Colleges and the Hartford Foundation established a minimum number of topics in Geriatrics, including dementia, to be mandatory during doctors' medical training.</p> <p>According to an Alzheimer's Association survey, they found that 44 states had some dementia training requirements, but 14 of the 44 only cover Alzheimer's special care units and don't have dementia training requirements for the rest of their staff.</p>	<p>"National Plan to Address Alzheimer's Disease: 2018 Update." U.S. Department of Health and Human Services. 2018. Available at https://aspe.hhs.gov/system/files/pdf/259581/NatPlan2018.pdf</p> <p>Training Curriculum: Alzheimer's Disease and Related Dementias." HRSA Health Workforce. 2019. Available at https://bhw.hrsa.gov/grants/geriatrics/alzheimers-curriculum</p>
Implementation of dementia risk reduction campaign	N/A	
Intellectual property protection	Score: 5.9	"Intellectual property protection-The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ052
Venture capital availability	Score: 5.6	"Venture capital availability- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ089
University-industry collaboration in R&D	Score: 5.9	"University-industry collaboration in R&D- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ072
# of patents granted in med tech, biotech, or pharmaceuticals	TOTAL: 145,357	WIPO IP Statistics Data Center. WIPO statistics database. 2019. Available at https://www3.wipo.int/ipstats/index.htm
# of top 500 health institutions for research, innovation, and societal impact	# of top 500 health institutions= 16	Scimago Insitutions Rankings. 2018. Available at https://www.scimagoir.com/index.php?sector=Health&year=2012&top=500&display=chart&country=USA
Active labour market policies	Score: 5.7	"Active labour market policies- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ497

Indicator	Data Finding	Sources
Presence of dementia-friendly community and/or dementia friends program	Presbyterian Senior Services administers a dementia friendly community in specific neighborhoods within each of New York City's five boroughs	Dementia Friendly America Network. Available at: https://www.dfa-america.org/dfa-communities
Implementation of dementia awareness campaign		
Paris		
Presence and implementation of a national or regional dementia strategy or plan, which includes a focus on the role of cities, towns, or communities	No National Dementia Plan, but there is a Neuro-Degenerative Diseases Plan 2014-2019.	"Plan maladies neuro-dégénératives 2014-2019." Strategie Nationale de Sante. Available at https://www.alz.co.uk/sites/default/files/plans/France-dementia-plan-2014-2019.pdf "From Plan to Impact II: The urgent need for action." Alzheimer's Disease International. 2019. Available at https://www.alz.co.uk/adi/pdf/from-plan-to-impact-2019.pdf
Government funding for dementia or eldercare	Over 1.2 billion Euros has been allocated for dementia by the government	Selina Chow, Ronald Chow, Angela Wan, Helen R. Lam et al. "National Dementia Strategies: What Should Canada Learn?" Canadian Geriatrics Journal. 2018. Available at https://pdfs.semanticscholar.org/fe3b/d67b034593cc88b96c771aa992396ddc9396.pdf
City-level leadership on dementia or age-related issues	Yes, the Mayor of Paris, and her deputy formalized their commitment to become an age-friendly city in the plan "2017-2021 Seniors in Paris".	"Le nouveau schéma parisien en direction des seniors 2017-2021." Paris. 2019. Available at https://www.paris.fr/pages/le-nouveau-schema-parisien-en-direction-des-seniors-2017-2021-4857/
Access to subsidized treatments for dementia	Generic anti-dementia medication is available, however France recently decided to discontinue reimbursement of four Alzheimer's drugs	"Anti-dementia medication and care availability" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia "Global Perspective." Alzheimer's Disease International. 20018. Available at https://www.alz.co.uk/sites/default/files/pdfs/global-perspective-july-2018.pdf
Presence of physicians for the senior population	Normalized score: 345.8	"Physicians (per 1,000 people)". The World Bank Group. 2020. Available at https://data.worldbank.org/indicator/SH.MED.PHYS.ZS?locations=GB-AR-DK-FR-IN-MX-QA-ZA-TH
Ability of GPs to diagnose and treat dementia	GPs can make an indicative diagnosis	"Care Needed: Improving the Lives of People with Dementia." OECD. 2018. Available at https://read.oecd-ilibrary.org/social-issues-migration-health/care-needed_9789264085107-en#page49
Presence of reliable, publicly available diagnosis rates	64%	"France- Provisional Country Profile 2017." Global Dementia Observatory- WHO. 2017. Available at https://www.who.int/mental_health/neurology/dementia/france_GDO_profile.pdf?ua=1
Presence of specialists for the senior population (Specialists evaluated are neurologists, geriatricians, psychogeriatricians, and psychiatrists. Specialist estimates based on national level data)	Normalized score: 19.4	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia "Care Needed: Improving the Lives of People with Dementia." OECD. 2018. Available at https://read.oecd-ilibrary.org/social-issues-migration-health/care-needed_9789264085107-en#page59 "Psychiatrists, per 100 000." WHO. 2018. Available at https://gateway.euro.who.int/en/indicators/hlthres_229-psychiatrists-per-100-000/visualizations/#id=28481
Presence of nurses and social workforce for the senior population Social workforce evaluated are social workers and personal care workers. Data based on national estimates.	Normalized score: 1,466	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia

Indicator	Data Finding	Sources
Presence of a major research center or hospital with an Alzheimer's or dementia unit	Pasteur Institute, Paris. The Neuroscience Department is a basic research department with a diverse portfolio of research programs and specific research topics spanning multiple brain regions, including Alzheimer's disease	"About- Department of Neuroscience." Institut Pasteur. 2019. Available at https://research.pasteur.fr/en/department/neuroscience/
Participation in WHO age-friendly cities network	Paris is participating and has completed a commitment letter, a baseline assessment, and a strategy and action plan	"Paris." WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/network/paris/
Access to in-home care	Informal care and assistance provided to people with dementia is available for those afflicted with dementia in France. When people with dementia live at home, they receive a personalized autonomy allowance that covers costs related to the employment of auxiliary staff, home improvements, day care centers etc.	"France." Alzheimer Europe. 2013. Available at https://www.alzheimer-europe.org/Policy-in-Practice2/Country-comparisons/2013-National-policies-covering-the-care-and-support-of-people-with-dementia-and-their-carers/France France - Home care." Alzheimer Europe. 2013. Available at https://www.alzheimer-europe.org/Policy-in-Practice2/Country-comparisons/2005-Home-care/France
Dementia training of healthcare workers	There is inclusion of all basic dementia competencies in training of physicians, specialists, nurses, and some for pharmacists, social workers, and personal care workers.	"Dementia education and training." Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia
Implementation of dementia risk reduction campaign	There is no evidence of at least one functioning dementia awareness campaign at the national level in 2017.	"Dementia awareness and risk reduction campaign" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/view.dementia.DEM_ind13-data
Intellectual property protection	Score: 5.9	"Intellectual property protection-The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ052
Venture capital availability	Score: 3.7	"Venture capital availability- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ089
University-industry collaboration in R&D	Score: 4.3	"University-industry collaboration in R&D- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ072
# of patents granted in med tech, biotech, or pharmaceuticals	TOTAL: 3,075	WIPO IP Statistics Data Center. WIPO statistics database. 2019. Available at https://www3.wipo.int/ipstats/index.htm
# of top 500 health institutions for research, innovation, and societal impact	# of top 500 health institutions= 6	Scimago Institutions Rankings. 2018. Available at https://www.scimagoir.com/index.php?sector=Health&year=2012&top=500&display=chart&country=FRA
Active labour market policies	Score: 4.5	"Active labour market policies- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ497
Presence of dementia-friendly community and/or dementia friends program	There are two dementia cafes run in the greater Paris area.	Union Bistrot Memoire. Available at: https://bistrot-memoire.com/
Implementation of dementia awareness campaign	There is at least one function dementia awareness campaign at the national level	Dementia awareness and risk reduction campaign. WHO Global Dementia Observatory. 2017. Available at: http://apps.who.int/gho/data/view.dementia.DEM_ind13-data

Indicator	Data Finding	Sources
Rome		
Presence and implementation of a national or regional dementia strategy or plan, which includes a focus on the role of cities, towns, or communities	Yes, it involves empowering persons and communities involving families and associations in dementia service planning. The plan is adopted but with little or no funding	"From Plan to Impact II: The urgent need for action." Alzheimer's Disease International. 2019. Available at https://www.alz.co.uk/adi/pdf/from-plan-to-impact-2019.pdf Teresa Di Fiandra, Marco Canevelli, Alessandra Di Pucchio, Nicola Vanacore and the Italian Dementia National Plan Working Group. "The Italian Dementia National Plan." Ann Ist Super Sanità. 2015. Available at https://www.ncbi.nlm.nih.gov/pubmed/26783209
Government funding for dementia or eldercare	N/A	
City-level leadership on dementia or age-related issues	Yes, Rome is taking part in the Mobility Scouts project to involve older men and women in decision-making processes and enable and empower them to contribute to the creation of age-friendly environments.	"Mobility Scouts: Engaging older people." WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/afp/mobility-scouts-engaging-older-people/
Access to subsidized treatments for dementia	Yes, generic anti-dementia medication is available and at least one anti-dementia medication is approved for on-label use reimbursement	"Anti-dementia medication and care availability" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia
Presence of physicians for the senior population	Normalized score: 268.3	"Global City Data." New York City Global Partners. 2013. Available at http://www.nyc.gov/html/ia/gprb/html/global/global.shtml
Ability of GPs to diagnose and treat dementia	GPs can diagnose dementia privately but not officially, they send the person to an Alzheimer's Evaluation Unit.	"Italy- National Dementia Strategies (diagnosis, treatment and research)." Alzheimer Europe. 2012. Available at https://www.alzheimer-europe.org/Policy-in-Practice2/Country-comparisons/2012-National-Dementia-Strategies-diagnosis-treatment-and-research/Italy
Presence of reliable, publicly available diagnosis rates	50%	"Italy- Provisional Country Profile 2017." Global Dementia Observatory- WHO. 2017. Available at https://www.who.int/mental_health/neurology/dementia/Italy_GDO_profile.pdf?ua=1
Presence of specialists for the senior population (Specialists evaluated are neurologists, geriatricians, psychogeriatricians, and psychiatrists. Specialist estimates based on national level data)	Normalized score: 4.6	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia
Presence of nurses and social workforce for the senior population Social workforce evaluated are social workers and personal care workers. Data based on national estimates.	Normalized score: 1,251.1	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementiaHealth Care Resources: Nurses OECD Data. 2019. Available at https://stats.oecd.org/index.aspx?queryid=30183
Presence of a major research center or hospital with an Alzheimer's or dementia unit	IRCCS Foundation S. Lucia collaborates with the IRCCS Institute San Giovanni Di Dio Center Fatebenefratelli of Brescia, which is a leading center in the research and treatment of psychiatric diseases and Alzheimer's disease	Research Lines." Santa Lucia Neuroscienze E Riabilitazione. Available at https://www.hsantalucia.it/en/useful-numbers
Participation in WHO age-friendly cities network	Rome is not participating	WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/who-network/

Indicator	Data Finding	Sources
Access to in-home care	The demand for elderly homecare services has increased to a great extent; yet, the supply remains fairly limited. A large part of caregiving is still provided by informal carers, especially in regions where public services are less advanced and in families that cannot afford the cost of private service.	"The Long-term Care System for the Elderly in Italy." ENEPRI Research Report. 2010. Available at http://www.ancien-longtermcare.eu/sites/default/files/ENEPRI%20-ANCIEN_%20RR%20No%2080%20Italy%20edited%20final.pdf "Italy - Home Care." Alzheimer Europe. 2013. Available at https://www.alzheimer-europe.org/Policy-in-Practice2/Country-comparisons/2005-Home-care/Italy
Dementia training of healthcare workers	There is inclusion of all basic dementia competencies in training of physicians, specialists, nurses, and some for pharmacists, social workers, and personal care workers.	"Dementia education and training." Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia
Implementation of dementia risk reduction campaign	There is evidence of at least one functioning dementia risk reduction campaign at the national level in 2017.	"Dementia awareness and risk reduction campaign" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/view.xdementia.DEM_ind13-data
Intellectual property protection	Score: 4.6	"Intellectual property protection-The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ052
Venture capital availability	Score: 2.3	"Venture capital availability- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ089
University-industry collaboration in R&D	Score: 4.0	"University-industry collaboration in R&D- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ072
# of patents granted in med tech, biotech, or pharmaceuticals	TOTAL: 273	WIPO IP Statistics Data Center. WIPO statistics database. 2019. Available at https://www3.wipo.int/ipstats/index.htm
# of top 500 health institutions for research, innovation, and societal impact	# of top 500 health institutions= 8	Scimago Insitutions Rankings. 2018. Available at https://www.scimagoir.com/index.php?sector=Health&year=2012&top=500&display=chart&country=ITA
Active labour market policies	Score: 2.8	"Active labour market policies- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ497
Presence of dementia-friendly community and/or dementia friends program	The local Rome Foundation has created a dementia village in the Bufalotta neighborhood of Rome	The Alzheimer's Village in the Bufalotta neighborhood has finally become a reality. Fodazione Rome. Available at: https://www.fondazioneroma.it/en/notiziario-en/villaggio-alzheimer-bufalotta-diventa-finalmente-realta/
Implementation of dementia awareness campaign	There is at least one functioning dementia awareness campaign at the national level	Dementia awareness and risk reduction campaign. WHO Global Dementia Observatory. 2017. Available at: http://apps.who.int/gho/data/view.xdementia.DEM_ind13-data
Sao Paulo		
Presence and implementation of a national or regional dementia strategy or plan, which includes a focus on the role of cities, towns, or communities	No National Dementia Plan	"From Plan to Impact II: The urgent need for action." Alzheimer's Disease International. 2019. Available at https://www.alz.co.uk/adi/pdf/from-plan-to-impact-2019.pdf
Government funding for dementia or eldercare	N/A	
City-level leadership on dementia or age-related issues	The state of São Paulo created the Elder- Friendly Cities Seal to encourage cities and public and private entities that are concerned with the older population.	"Brazil - The Aging Readiness & Competitiveness Report." AARP International. 2019. Available at https://arc.aarpinternational.org/File%20Library/Full%20Reports/ARC-Report---Brazil.pdf

Indicator	Data Finding	Sources
Access to subsidized treatments for dementia	Yes, The Brazilian public health system (SUS) provides donepezil, rivastigmine and galantamine for all individuals with Alzheimer's disease.	R.E. Schneiders, L.C. Xavier, M. Mosca, R.F. Alexandre, J.M. Nascimento Junior, C.A.G. Gadelha "Drug Expenses For Alzheimer's Disease In Brazil: A Descriptive Analysis." Value in Health. 2014. Available at https://www.valueinhealthjournal.com/article/S1098-3015(14)00435-5/abstract
Presence of physicians for the senior population	Normalized score: 15.1	"Global City Data." New York City Global Partners. 2013. Available at http://www.nyc.gov/html/ia/gprb/html/global/global.shtml
Ability of GPs to diagnose and treat dementia	GPs play an important role in the diagnosis and treatment of diseases prevalent in this population, but are later referred to a specialist	Alessandro Ferrari Jacinto, Paulo José Fortes Villas Boas, Vânia Ferreira de Sá Mayoral, and Vanessa de Albuquerque Citero. "Knowledge and attitudes towards dementia in a sample of medical residents from a university-hospital in Sao Paulo, Brazil." Dementia and Neuropsychologia. 2016. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5674912/
Presence of reliable, publicly available diagnosis rates	In Brazil it is estimated that 70% of people with dementia are not diagnosed	Davi T.C. Opaleye, Davi T.C. Opaleye, Danusa de Almeida Machado, Tatiani Piedade de Campos, Cleusa Pinheiro Ferri. "Dementia in Brazil: Preferences on Diagnosis Disclosure in Primary Care." Alzheimer's Association. 2018. Available at https://alzheimersanddementiajournal.com/article/S1552-5260(18)31410-9/fulltext
Presence of specialists for the senior population (Specialists evaluated are neurologists, geriatricians, psychogeriatricians, and psychiatrists. Specialist estimates based on national level data)	Normalized score: 4.8	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia Henrique A. Amorim, Carla A. Scorza, Esper A. Cavalheiro, Marly de Albuquerque, and Fulvio A. Scorza. "Profile of neurologists in Brazil: a glimpse into the future of epilepsy and sudden unexpected death in epilepsy." Clinics (Sao Paulo). 2013. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3714776/ Brazil: number of geriatric medical specialists 2013-2018." Statista. 2019. Available at https://www.statista.com/statistics/962596/number-licensed-geriatric-medicine-specialists-brazil/
Presence of nurses and social workforce for the senior population Social workforce evaluated are social workers and personal care workers. Data based on national estimates.	Normalized score: 12.8	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia "Migrant nurses in Brazil: demographic characteristics, migration flow and relationship with the training process." Rev Lat Am Enfermagem. 2016. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4809177/
Presence of a major research center or hospital with an Alzheimer's or dementia unit	Department of Neurology and Neurosurgery, Fedearal University of Sao Paulo (Universidade Federal de São Paulo)	Universidade Federal De São Paulo. 2019. Available at https://www.unifesp.br
Participation in WHO age-friendly cities network	Sao Paulo is not Participating	WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/who-network/
Access to in-home care	While home-based care is the most prominent component of the LTC provided to older adults, the government's support for older adults and their families is very limited. Often, only middle- or upper-class households can afford formal caregivers, and for those who cannot, family members have to assume the responsibility of caring for their older relatives.	"Brazil - The Aging Readiness & Competitiveness Report." AARP International. 2019. Available at https://arc.aarpinternational.org/File%20Library/Full%20Reports/ARC-Report---Brazil.pdf
Dementia training of healthcare workers	There is little information on the education given to medical students about dementia in Brazilian medical schools. One report from a survey applied in a public medical school in the State of Minas Gerais showed that 61.7% of its medical students did not receive any education in Geriatrics.	Alessandro Ferrari Jacinto, Ananda Ghelfi Raza Leite, José Luiz de Lima Neto, Edison Iglesias de Oliveira Vidal, and Paulo José Fortes Villas Bôas. "Teaching medical students about dementia: A brief review." Dementia Neuropsychologia. 2015. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5619346/#r16

Indicator	Data Finding	Sources
Implementation of dementia risk reduction campaign	N/A	
Intellectual property protection	Score: 4.0	"Intellectual property protection-The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ052
Venture capital availability	Score: 2.5	"Venture capital availability- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ089
University-industry collaboration in R&D	Score: 3.6	"University-industry collaboration in R&D- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ072
# of patents granted in med tech, biotech, or pharmaceuticals	TOTAL: 2,013	WIPO IP Statistics Data Center. WIPO statistics database. 2019. Available at https://www3.wipo.int/ipstats/index.htm
# of top 500 health institutions for research, innovation, and societal impact	# of top 500 health institutions= 5	Scimago Insitutions Rankings. 2018. Available at https://www.scimagoir.com/index.php?sector=Health&top=500&display=chart&country=BRA
Active labour market policies	Score: 2.7	"Active labour market policies- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ497
Presence of dementia-friendly community and/or dementia friends program	State of São Paulo created the Elder-Friendly Cities Seal to recognize cities that have committed to being age friendly. To receive the Seal, cities must complete a number of steps including creating local councils, completing policy assessments, and more.	Aging Readiness and & Competitiveness Report: Brazil. AARP. Available at: https://arc.aarpinternational.org/File%20Library/Full%20Reports/ARC-Report--Brazil.pdf
Implementation of dementia awareness campaign	Local Alzheimer's associations claims to have executed several campaigns aimed at raising awareness and sharing information about the condition	Story. ABRAZ. Available at: http://abraz.org.br/web/aabraz/

Seoul

Presence and implementation of a national or regional dementia strategy or plan, which includes a focus on the role of cities, towns, or communities	Yes, with a focus on strengthening relationships with community-based organizations and implementation dementia friendly communities. The plan is adopted and it is currently being implemented.	"The 3rd National Dementia Plan." South Korea Ministry of Health and Welfare. 2016. Available at https://www.nid.or.kr/info/dataroom_view.aspx?bid=144 From Plan to Impact II: The urgent need for action." Alzheimer's Disease International. 2019. Available at https://www.alz.co.uk/adi/pdf/from-plan-to-impact-2019.pdf
Government funding for dementia or eldercare	In Korea, the government promised to spend 1 trillion won (\$920 million) budget for dementia last year after President Moon Jae-in emphasized putting more responsibility on the state in taking care of dementia patients.	"US expert sees need for new treatment models for Alzheimer's disease." Korean Biomedical Review. 2019. Available at http://www.koreabiomed.com/news/articleView.html?idxno=5905
City-level leadership on dementia or age-related issues	Yes, Seoul government has an Age-Friendly Master Plan that focuses on support for baby boomers, community care, age- friendly environment, leisure and culture, respect and integration, and customized employment.	"Seoul Dementia Management Project." Seoul Metropolitan Center for Dementia. Available at http://www.seouldementia.or.kr/eng/dementia/details.asp WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/network/seoul/

Indicator	Data Finding	Sources
Access to subsidized treatments for dementia	People with dementia may be prescribed one of four suggested medications and can claim up to \$26 USD per month towards its cost, but reimbursement is subject to strict criteria which require Mini Mental State Exam or Clinical Dementia Rating scores to reach a certain level in order to receive insurance coverage.	Prince, Martin, Comas-Herrera, Adelina, Knapp, Martin, Guerchet, Maëlenn and Karagiannidou, Maria. "World Alzheimer report 2016: improving healthcare for people living with dementia: coverage, quality and costs now and in the future." Alzheimer's Disease International. 2016. Available at http://eprints.lse.ac.uk/67858/1/Comas-Herrera_World%20Alzheimer%20report_2016.pdf
Presence of physicians for the senior population	Normalized score: 226.2	"Global City Data." New York City Global Partners. 2013. Available at http://www.nyc.gov/html/ia/gprb/html/global/global.shtml
Ability of GPs to diagnose and treat dementia	N/A	
Presence of reliable, publicly available diagnosis rates	N/A	
Presence of specialists for the senior population (Specialists evaluated are neurologists, geriatricians, psychogeriatricians, and psychiatrists. Specialist estimates based on national level data)	Normalized score: 4.9	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia
Presence of nurses and social workforce for the senior population Social workforce evaluated are social workers and personal care workers. Data based on national estimates.	Normalized score: 600.4	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia
Presence of a major research center or hospital with an Alzheimer's or dementia unit	Dementia & Memory Disorder Clinic at Seoul National University Hospital	"Research & Experiment." Seoul National University Hospital Biomedical Research Institute. 2010. Available at http://en.bri.snuh.org/org/clab/_/multicont/0/view.do
Participation in WHO age-friendly cities network	Seoul is participating, but it does not say if they completed a commitment letter, a baseline assessment, or a strategy and action plan	"Seoul." WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/network/seoul/
Access to in-home care Based on nurses and personal carers located at home according to OECD data	2.8 Per 100 population aged 65 years +	"Formal long-term care workers at home." OECD Data. 2019. Available at https://stats.oecd.org/index.aspx?r=8622&errorCode=403&lastaction=log_in_submit
Dementia training of healthcare workers	Dementia-care related education in South Korean nursing universities has been limited to short-term courses or modules instead of detailed coursework in the continuing education system for professional training. Alzheimer's Association Korea offerings for training cover a wide group of stakeholder groups.	"Dementia in the Asia Pacific Region." Alzheimer's Disease International. 2014. Available at https://www.alz.co.uk/adi/pdf/Dementia-Asia-Pacific-2014.pdf
Implementation of dementia risk reduction campaign	The Seoul Dementia Management Project has an early examination focus on the prevention of serious dementia by means of effectively diagnosing and managing the disease at its early stages.	"Dementia Management Project." Seoul Metropolitan Center for Dementia. Available at http://www.seouldementia.or.kr/eng/dementia/details.asp
Intellectual property protection	Score: 4.6	"Intellectual property protection-The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ052

Indicator	Data Finding	Sources
Venture capital availability	Score: 3.2	"Venture capital availability- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ089
University-industry collaboration in R&D	Score: 4.4	"University-industry collaboration in R&D- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ072
# of patents granted in med tech, biotech, or pharmaceuticals	TOTAL: 41,663	WIPO IP Statistics Data Center. WIPO statistics database. 2019. Available at https://www3.wipo.int/ipstats/index.htm
# of top 500 health institutions for research, innovation, and societal impact	# of top 500 health institutions= 13	Scimago Insitutions Rankings. 2018. Available at https://www.scimagoir.com/index.php?sector=Health&year=2012&top=500&display=chart&country=KOR
Active labour market policies	Score: 4.5	"Active labour market policies- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ497
Presence of dementia-friendly community and/or dementia friends program	Part of South Korea's dementia plan includes creating at least one dementia friendly community per metropolitan area	3rd National Dementia Plan. Ministry of Health and Welfare. 2016. Available at: https://www.nid.or.kr/info/dataroom_view.aspx?bid=144
Implementation of dementia awareness campaign		

Singapore

Presence and implementation of a national or regional dementia strategy or plan, which includes a focus on the role of cities, towns, or communities	There is a plan in place, but it is not made available publicly.	"From Plan to Impact II: The urgent need for action." Alzheimer's Disease International. 2019. Available at https://www.alz.co.uk/adi/pdf/from-plan-to-impact-2019.pdf
Government funding for dementia or eldercare	<p>The Government will contribute a \$300m top-up to the CST, a \$100 million boost to the Senior's Mobility and Enabling Fund (SMF), and an additional \$150 million will be spent to subsidize transport costs for elderly on their trips to and from eldercare and dialysis centers over the next five years.</p> <p>The government also subsidizes a range of services for dementia and eldercare including nursing home, daycare services, and home-based care. There are more than 13 funding schemes for seniors for long-term care, but as of 2016, only about 8% of the Ministry of Health's budget was spent on long-term care.</p>	<p>"Budget 2018: Boosting Community Support For Elderly Care." Government of Singapore. 2019. Available at https://www.singaporebudget.gov.sg/budget_2019/about-budget/budget-features/boosting-community-support-for-elderly-care</p> <p>"Home & centre-based care services outstrip nursing homes as the main form of long-term care in Singapore, shows Lien Foundation-NUS study." Lien Foundation. 2018. Available at: http://www.lienfoundation.org/sites/default/files/CWYA%20Presser%20Combined%20FINAL.pdf</p> <p>"INTERMEDIATE AND LONG-TERM CARE (ILTC) SERVICES." Ministry of Health, Singapore. Available at: https://www.moh.gov.sg/our-healthcare-system/healthcare-services-and-facilities/intermediate-and-long-term-care-(iltc)-services</p> <p>"Home Caregiving Grant." Agency for Integrated Care. Available at: https://www.aic.sg/financial-assistance/Home%20Caregiving%20Grant%20(HCG)</p>
City-level leadership on dementia or age-related issues	Yes, the Ministerial Committee on Ageing in Singapore launched the S\$3 billion Action Plan for Successful Ageing, which serves as Singapore's blueprint to prepare for population ageing.	"Age-Friendly Cities: Lessons from Seoul and Singapore." Seoul Institute & Ministry of Health, Singapore. 2019. Available at https://www.clc.gov.sg/docs/default-source/books/book-age-friendly-cities.pdf

Indicator	Data Finding	Sources
Access to subsidized treatments for dementia	Yes, persons with dementia receive subsidies and assistance for treatment through the government, where eligible.	Zheng Kang Lum, Ma Serrie P Suministrado, N Venketasubramanian, M Kamran Ikram, and Christopher Chen, "Medication compliance in Singaporean patients with Alzheimer's disease." <i>Singapore Med J</i> . 2019. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6441685/ "Drug Subsidies & Schemes." Ministry of Health Singapore. 2019. Available at https://www.moh.gov.sg/cost-financing/healthcare-schemes-subsidies/drug-subsidies-schemes
Presence of physicians for the senior population	Normalized score: 303.4	"Health Manpower." Singapore Ministry of Health. 2019. Available at: https://www.moh.gov.sg/resources-statistics/singapore-health-facts/health-manpower
Ability of GPs to diagnose and treat dementia	There are schemes for GPs to be geriatrics trained, so they can make an indicative diagnosis.	"Education for Better Eldercare." Agency for Integrated Care. 2015. Available at: http://www.cfps.org.sg/publications/the-college-mirror/article/956
Presence of reliable, publicly available diagnosis rates	N/A	
Presence of specialists for the senior population (Specialists evaluated are neurologists, geriatricians, psychogeriatricians, and psychiatrists. Specialist estimates based on national level data)	Normalized score: 9.8	"Annual Report 2018." Singapore Medical Council. 2018. Available at: https://www.healthprofessionals.gov.sg/docs/librariesprovider2/publications-newsroom/smc-annual-reports/2018-smc-annual-report.pdf
Presence of nurses and social workforce for the senior population Social workforce evaluated are social workers and personal care workers. Data based on national estimates.	Normalized score: 956.4 Foreign domestic workers are also commonly hired and provide personal care in the household. There are at least 62,000 of such workers as of March 2018. Training for these workers for dementia care is available and subsidized in the form of the Caregiver Training Grant.	"Health Manpower." Singapore Ministry of Health. 2019. Available at: https://www.moh.gov.sg/resources-statistics/singapore-health-facts/health-manpower "Annual Report 2019." Singapore Social Work Accreditation and Advisory Board. 2019. Available at: https://www.sasw.org.sg/documents/accreditation/Report_2019.pdf "Long Term Care Manpower Study." Lien Foundation. 2018. Available at: http://lienfoundation.org/uploads/Eldercare/LTC%20Manpower%20Study/lcmanpowerstudy_final.pdf
Presence of a major research center or hospital with an Alzheimer's or dementia unit	The Alzheimer's Disease and Dementia Clinic at the National Neuroscience Institute (NNI) manages a wide range of patients with cognitive impairment. The majority of public hospitals in Singapore have a dementia unit.	"Alzheimer's Disease and Dementia." National Neuroscience Institute (NNI) - SingHealth Group. 2019. Available at https://www.nni.com.sg/patient-care/specialties-services/clinical-specialties/alzheimers-disease-and-dementia
Participation in WHO age-friendly cities network	Singapore is not participating	WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/who-network/
Access to in-home care	In-home care is available for dementia patients. The Singapore government's philosophy on care for the elderly is that the family should be the first line of support, and it has relied on voluntary welfare organizations or charities for the bulk of LTC service provision.	"For people with advanced dementia, staying at home helps them to live, and die, better." Singapore Press Holdings. 2019. Available at https://www.straitstimes.com/singapore/health/for-people-with-advanced-dementia-staying-at-home-helps-them-to-live-and-die-better
Dementia training of healthcare workers	Nursing staff and allied health professionals are trained in dementia care. The MOH provides clinical practice guidelines to provide doctors and patients in Singapore with evidence-based treatment for dementia.	Gwen Li Sin, Donald Yeo, Hwan Jing Koh, Jimmy Lee, and Li Ling Ng. "Training eldercare workers in mental healthcare." <i>Singapore Med J</i> . 2018. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5778254/
Implementation of dementia risk reduction campaign	Singapore has a dementia program that emphasizes preventive medicine in the community, with early psychosocial interventions that can reduce the incidence of dementia, improve elderly people's quality of life, and reduce the disease burden on families and society	Da-Xing, WuLei Feng, Shu-Qiao Yao, Xian-Feng Tian, Rathi Mahendran, Ee-Heok Kua. "The early dementia prevention programme in Singapore" <i>The Lancet</i> . 2014. Available at https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366(14)70233-0/fulltext

Indicator	Data Finding	Sources
Intellectual property protection	Score 6.3	"Intellectual property protection-The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ052
Venture capital availability	Score 4.7	"Venture capital availability- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ089
University-industry collaboration in R&D	Score 5.2	"University-industry collaboration in R&D- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ072
# of patents granted in med tech, biotech, or pharmaceuticals	N/A	
# of top 500 health institutions for research, innovation, and societal impact	# of top 500 health institutions= 9	Scimago Insitutions Rankings. 2018. Available at https://www.scimagoir.com/index.php?sector=Health&year=2012&top=500&display=chart&country=SGP
Active labour market policies	Score 5.6	"Active labour market policies- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ497
Presence of dementia-friendly community and/or dementia friends program	Singapore's government has dedicated over SGD \$160 million towards enabling dementia-friendly communities. There are at least 3 dementia-friendly neighborhoods in Singapore. The \$160 million is not just for dementia alone, but includes other mental conditions as well.	Dementia Friendly Communities: Global Developments. Alzheimer's Disease International. Available at: https://www.alz.co.uk/adi/pdf/dfc-developments.pdf "Ministry of Health Unveils 5-Year Plan to Improve Mental Health Care." Adelphi Psych Medicine Clinic. 2017. Available at https://adelphipsych.sg/ministry-of-health-unveils-5-year-plan-to-improve-mental-health-care/
Implementation of dementia awareness campaign	Singapore's Health Promotion Board has commissioned a film that raises awareness of dementia. It has also launched a series of dementia awareness initiatives on social media and TV in different languages. Lien Foundation, Khoo Teck Puat Hospital, and the local Alzheimer's association have collaborated on the Forget Us Not campaign that trains the public to recognize and help people with dementia	"The Health Promotion Board commissions new film to raise awareness of dementia." Health Promotion Board. Available at: https://www.hpb.gov.sg/article/film-on-remembering-loving-and-understanding-your-loved-ones-despite-dementia Jason Foo. "Creating a dementia-inclusive society in Singapore." Today Online. 2019 Available at: https://www.todayonline.com/commentary/creating-dementia-inclusive-society-singapore
Stockholm		
Presence and implementation of a national or regional dementia strategy or plan, which includes a focus on the role of cities, towns, or communities	Yes, with a focus on achieving a dementia-friendly society. The Dementia Strategy is said to be a 'work in progress' by the Swedish National Board of Health and Welfare until 2022.	"Dementia strategy focusing on care." Government Offices of Sweden. 2018. Available at https://www.government.se/articles/2018/07/dementia-strategy-focusing-on-care/ From Plan to Impact II: The urgent need for action." Alzheimer's Disease International. 2019. Available at https://www.alz.co.uk/adi/pdf/from-plan-to-impact-2019.pdf
Government funding for dementia or eldercare	The government recently invested SEK 4.3 billion in measures to improve health and social care for the most infirm members of the 65+ age group.	"From Plan to Impact II: The urgent need for action." Alzheimer's Disease International. 2019. Available at https://www.alz.co.uk/adi/pdf/from-plan-to-impact-2019.pdf A challenge for our future." Swedish Institute. 2019. Available at https://sweden.se/society/elderly-care-in-sweden/

Indicator	Data Finding	Sources
City-level leadership on dementia or age-related issues	Yes, the City of Stockholm has a joint long-term vision of a city for everyone. the City's elderly care administration is currently in the process of developing a long-term strategy that will build on the model advocated by the WHO-affiliated European Covenant on Demographic Change.	"Stockholm." WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/network/stockholm/
Access to subsidized treatments for dementia	Yes, generic anti-dementia medication is available and at least one anti-dementia medication is approved for on-label use reimbursement	"Anti-dementia medication and care availability" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia
Presence of physicians for the senior population	Normalized score: 311.9	"Global City Data." New York City Global Partners. 2013. Available at http://www.nyc.gov/html/ia/gprb/html/global/global.shtml
Ability of GPs to diagnose and treat dementia	GPs can initiate medications	"Care Needed: Improving the Lives of People with Dementia." OECD. 2018. Available at https://read.oecd-ilibrary.org/social-issues-migration-health/care-needed_9789264085107-en#page49
Presence of reliable, publicly available diagnosis rates	N/A	
Presence of specialists for the senior population (Specialists evaluated are neurologists, geriatricians, psychogeriatricians, and psychiatrists. Specialist estimates based on national level data)	Normalized score: 35	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia "Care Needed: Improving the Lives of People with Dementia." OECD. 2018. Available at https://read.oecd-ilibrary.org/social-issues-migration-health/care-needed_9789264085107-en#page59
Presence of nurses and social workforce for the senior population Social workforce evaluated are social workers and personal care workers. Data based on national estimates.	Normalized score: 1,008.6	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia
Presence of a major research center or hospital with an Alzheimer's or dementia unit	The division of Aging Research Center is a part of the larger Aging Research Center (ARC), which is a collaboration between Karolinska Institutet and Stockholm University. ARC's researchers collaborate across sectors in nearly 30 projects within four research areas, including dementia.	"Division of Aging Research Center (ARC)." Karolinska Institutet. Available at https://ki.se/en/nvs/division-of-aging-research-center-arc
Participation in WHO age-friendly cities network	Stockholm is participating and has completed a commitment letter and a strategy and action plan.	"Stockholm." WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/network/stockholm/
Access to in-home care	When an elderly person is no longer able to cope with the demands of everyday life, he or she can apply for assistance from municipally funded home-help services. Elderly people with disabilities can receive assistance around the clock, which means that many are able to remain at home throughout their lives.	"Sweden - Home Care." Alzheimer Europe. 2013. Available at https://www.alzheimer-europe.org/Policy-in-Practice2/Country-comparisons/2005-Home-care/Sweden
Dementia training of healthcare workers	There is inclusion of basic dementia competencies in training of specialists, nurses, pharmacists. Data is N/A for social workers, and personal care workers.	"Dementia education and training." Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia

Indicator	Data Finding	Sources
Implementation of dementia risk reduction campaign	There is no evidence of at least one functioning dementia risk reduction campaign at the national or subnational level in 2017.	"Dementia awareness and risk reduction campaign" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/view.xdementia.DEM_ind13-data
Intellectual property protection	Score: 5.8	"Intellectual property protection-The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ052
Venture capital availability	Score: 4.5	"Venture capital availability- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ089
University-industry collaboration in R&D	Score: 5.3	"University-industry collaboration in R&D- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ072
# of patents granted in med tech, biotech, or pharmaceuticals	TOTAL: 230	WIPO IP Statistics Data Center. WIPO statistics database. 2019. Available at https://www3.wipo.int/ipstats/index.htm
# of top 500 health institutions for research, innovation, and societal impact	# of top 500 health institutions= 2	Scimago Insitutions Rankings. 2018. Available at https://www.scimagoir.com/index.php?sector=Health&year=2012&top=500&display=chart&country=SWE
Active labour market policies	Score: 4.8	"Active labour market policies- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ497
Presence of dementia-friendly community and/or dementia friends program	N/A	
Implementation of dementia awareness campaign	There is at least one functioning dementia awareness campaign at the national level	Dementia awareness and risk reduction campaign. WHO Global Dementia Observatory. 2017. Available at: http://apps.who.int/gho/data/view.xdementia.DEM_ind13-data
Sydney		
Presence and implementation of a national or regional dementia strategy or plan, which includes a focus on the role of cities, towns, or communities	Yes, it has a focus on creating communities which are more inclusive and accepting of people with dementia. The plan is adopted, but with inadequate or no funding	"National Framework for Action on Dementia 2015 – 2019." Government of Australia. Available at https://www.health.gov.au/resources/publications/national-framework-for-action-on-dementia-2015-2019 From Plan to Impact II: The urgent need for action." Alzheimer's Disease International. 2019. Available at https://www.alz.co.uk/adi/pdf/from-plan-to-impact-2019.pdf
Government funding for dementia or eldercare	Dementia Australia has welcomed the Federal Government's \$5 billion dollar commitment to the aged care sector in its budget	"Dementia Australia welcomes \$5 billion Federal Government funding for aged care." Dementia Australia. Available at https://www.dementia.org.au/media-releases/2018/dementia-australia-welcomes-5-billion-federal-government-funding-for-aged-care
City-level leadership on dementia or age-related issues	Yes, the government in Sydney supports the New South Wales Ageing Strategy 2016 – 2020, which has committed to challenging the perceptions of ageing and of older people and inspire a positive vision of ageing.	"The Art of Ageing exhibition launch." WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/afp/the-art-of-ageing-exhibition-launch/
Access to subsidized treatments for dementia	Yes, Generic anti-dementia medication is available and at least one anti-dementia medication is approved for on-label use reimbursement	"Anti-dementia medication and care availability" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia
Presence of physicians for the senior population	Normalized score: 329.3	"Global City Data." New York City Global Partners. 2013. Available at http://www.nyc.gov/html/ia/gprb/html/global/global.shtml
Ability of GPs to diagnose and treat dementia	GPs can initiate medications	"Care Needed: Improving the Lives of People with Dementia." OECD. 2018. Available at https://read.oecd-ilibrary.org/social-issues-migration-health/care-needed_9789264085107-en#page49

Indicator	Data Finding	Sources
Presence of reliable, publicly available diagnosis rates	N/A	
Presence of specialists for the senior population (Specialists evaluated are neurologists, geriatricians, psychogeriatricians, and psychiatrists. Specialist estimates based on national level data)	Normalized score: 15.3	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia
Presence of nurses and social workforce for the senior population Social workforce evaluated are social workers and personal care workers. Data based on national estimates.	Normalized score: 1,257	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia
Presence of a major research center or hospital with an Alzheimer's or dementia unit	The Brain and Mind Centre at the University of Sydney has a Healthy Ageing and Neurodegeneration department with multidisciplinary research teams that are leading the way in developing preventative and diagnostic tools and treatments for Dementia and Alzheimer's.	"Healthy ageing and neurodegeneration." The University of Sydney. 2018. Available at https://sydney.edu.au/brain-mind/our-research/healthy-ageing-and-neurodegeneration.html
Participation in WHO age-friendly cities network	Sydney is not participating	WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/who-network/
Access to in-home care Based on nurses and personal carers located at home according to OECD data	2.2 Per 100 population aged 65+	"Formal long-term care workers at home." OECD Data. 2019. Available at https://stats.oecd.org/index.aspx?r=8622&errorCode=403&lastaction=login_submit
Dementia training of healthcare workers	N/A	
Implementation of dementia risk reduction campaign	There is existence of at least one functioning dementia risk reduction campaign that is implemented at the subnational level in 2017	"Dementia awareness and risk reduction campaign" Global Dementia Observatory. WHO. 2019. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ052
Intellectual property protection	Score 5.8	"Intellectual property protection-The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ052
Venture capital availability	Score 3.6	"Venture capital availability- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ089
University-industry collaboration in R&D	Score 4.2	"University-industry collaboration in R&D- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ072
# of patents granted in med tech, biotech, or pharmaceuticals	TOTAL: 30, 351	WIPO IP Statistics Data Center. WIPO statistics database. 2019. Available at https://www3.wipo.int/ipstats/index.htm
# of top 500 health institutions for research, innovation, and societal impact	# of top 500 health institutions= 13	Scimago Insitutions Rankings. 2018. Available at https://www.scimagoir.com/index.php?sector=Health&top=500&display=chart&country=AUS
Active labour market policies	Score 4.8	"Active labour market policies- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ497

Indicator	Data Finding	Sources
Presence of dementia-friendly community and/or dementia friends program	There are ongoing efforts to make Western Sydney's public transportation system more dementia friendly. There are also several organizations recognized as being dementia-friendly by Dementia Australia	"Making Western Sydney transport dementia-friendly." Dementia Australia. Available at: https://www.dementiafriendly.org.au/communities-in-action/making-western-sydney-transport-dementia-friendly Dementia Australia. Available at: https://www.dementiafriendly.org.au/community-map
Implementation of dementia awareness campaign	There is at least one function dementia awareness campaign at the national level	Dementia awareness and risk reduction campaign. WHO Global Dementia Observatory. 2017. Available at: http://apps.who.int/gho/data/view.xdementia.DEM_ind13-data
Taipei		
Presence and implementation of a national or regional dementia strategy or plan, which includes a focus on the role of cities, towns, or communities	Yes, with a focus on conducting dementia awareness-raising campaigns that promote dementia friendliness in the communities. According to ADI, the plan is adopted, funded and monitored.	"Dementia Prevention and Care Policy and Action Plan 2.0 2018-2025." Ministry of Health and Welfare. 2018. Available at https://www.mohw.gov.tw/cp-139-541-2.html From Plan to Impact II: The urgent need for action." Alzheimer's Disease International. 2019. Available at https://www.alz.co.uk/adi/pdf/from-plan-to-impact-2019.pdf
Government funding for dementia or eldercare	Government committed \$134.5 million for the Dementia Plan 2018 -2025.	"Dementia Action Plan 2.0." Ministry of Health and Welfare. 2020. Available at: https://www.mohw.gov.tw/dl-59781-fedf2fba-1730-4a9a-a9ba-e50e029bd5a6.html
City-level leadership on dementia or age-related issues	Health Promotion Administration under Ministry of Health and Welfare launched 4 dementia-friendly community pilot projects in 2018, of which one district in Taipei City was involved. Considerable effort is also being spent on changing the society's attitude towards the elderly.	"Taiwan experience shows how we can build an age-friendly HK." Hong Kong Economic Journal. 2016. Available at http://www.ejinsight.com/20160202-taiwan-experience-shows-how-we-can-build-an-age-friendly-hk/ "Create a dementia-friendly community care network." Ministry of Health and Welfare. 2015. Available at: https://1966.gov.tw/LTC/cp-4108-46811-201.html
Access to subsidized treatments for dementia	Under the health insurance policy in Taiwan, patients are reimbursed for anti-dementia medication, i.e., donepezil, rivastigmine, galantamine, or memantine, only if they are undergoing treatment for Alzheimer disease (AD) but not vascular dementia (VaD)	Chen-Yi Wu, Hsiao-Yun Hu, Lok-Hi Chow, Yiing-Jenq Chou, Nicole Huang, Pei-Ning Wang, and Chung-Pin Li. "The Effects of Anti-Dementia and Nootropic Treatments on the Mortality of Patients with Dementia: A Population-Based Cohort Study in Taiwan." PLoS One. 2015. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4476616/
Presence of physicians for the senior population	Normalized score: 279.9	"Global City Data." New York City Global Partners. 2013. Available at http://www.nyc.gov/html/ia/gprb/html/global/global.shtml
Ability of GPs to diagnose and treat dementia	All diagnoses of dementia are made by board-certified psychiatrists or neurologists.	Tzeng, Nian-Sheng et al. "Headaches and Risk of Dementia." The American Journal of the Medical Sciences. ,Available at https://www.amjmedsci.com/article/S0002-9629(16)30668-1/abstract
Presence of reliable, publicly available diagnosis rates	N/A	
Presence of specialists for the senior population (Specialists evaluated are neurologists, geriatricians, psychogeriatricians, and psychiatrists. Specialist estimates based on national level data)	Normalized score: 11.9	"Geriatrics in Taiwan: What's the Solution?" <i>Journal of Clinical Gerontology & Geriatrics</i> . 2011. Available at: https://core.ac.uk/reader/82539522 Michael Su, Chih-Chao Yang, Bhavesh Trikamji. "History of Neurology in Taiwan." <i>Neurology</i> . 2015. Available at: https://n.neurology.org/content/84/17/1803 Wei-Tse Hsu, Hui-Ching Wu, Frank Huan-Chih Chou. "A History of Mental Health Laws in Taiwan." <i>Taiwanese Journal of Psychiatry</i> . 2017. Available at: http://www.sop.org.tw/sop_journal/Upload_files/31_3/002.pdf#:~:text=In%20Taiwan%2C%20psychiatry%20has%20developed,one%20psychiatrist%20per%2017%2C597%20individuals.

Indicator	Data Finding	Sources
Presence of nurses and social workforce for the senior population Social workforce evaluated are social workers and personal care workers. Data based on national estimates.	Normalized score: 96.9	"The number of people with a license as a social worker." Ministry of Health and Welfare. 2019. Available at: https://dep.mohw.gov.tw/DOS/cp-2980-14050-113.html
Presence of a major research center or hospital with an Alzheimer's or dementia unit	The Taipei Veterans General Hospital. The Center of Geriatrics and Gerontology promotes "healthy aging" through conducting several pilot projects with liaisons with other hospitals and national research institutions in Taiwan.	"The Center of Geriatrics and Gerontology." Taipei Veterans General Hospital. 2019. Available at https://www.vghtpe.gov.tw/vghtpe/Fpage.action?muid=3269&fid=2424
Participation in WHO age-friendly cities network	Taipei is not participating.	WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/who-network/
Access to in-home care	The Taiwan government devised the Ten-Year Long-Term Care Project 2.0 (TLTCP) at the community level to provide home-based long-term care services to people with disabilities to decrease the burden of family caregivers. This investment in home-based care has increased availability of services.	Li-Fan Liu, Wei-Ming Wang and Yi-Jung Chen. "The Effectiveness of Home Services in Taiwan: A People-Centered Approach." International Journal of Environmental Research and Public Health. 2018. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6266699/
Dementia training of healthcare workers	The Taiwan government implemented an 8-hour dementia training program for healthcare professionals and a 20-hour dementia training program for long term care workers. All hospitals also have access to advanced training programs.	"Dementia Care Service Plan." Ministry of Health and Welfare. Available at: https://1966.gov.tw/LTC/lp-4758-201.html
Implementation of dementia risk reduction campaign	The Taiwan government devised the disability prevention and dementia risk reduction program and enforced it to all cities of Taiwan.	"Prevention and Delay of Disability Care Plan." Ministry of Health and Welfare. Available at: https://1966.gov.tw/LTC/np-4025-201.html
Intellectual property protection	Score: 5.0	"Intellectual property protection-The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ052
Venture capital availability	Score: 3.9	"Venture capital availability- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ089
University-industry collaboration in R&D	Score: 4.7	"University-industry collaboration in R&D- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ072
# of patents granted in med tech, biotech, or pharmaceuticals	N/A	
# of top 500 health institutions for research, innovation, and societal impact	# of top 500 health institutions= 11	Scimago Insitutions Rankings. 2018. Available at https://www.scimagoir.com/index.php?sector=Health&year=2012&top=500&display=chart&country=TWN
Active labour market policies	Score: 4.3	"Active labour market policies- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ497

Indicator	Data Finding	Sources
Presence of dementia-friendly community and/or dementia friends program	According to the Taiwan Alzheimer's Disease Association, there are 2,800 dementia-friendly communities, businesses, and organizations in Taiwan. According to the Health Promotion Administration, Ministry of Health and Welfare, there are 5,551 dementia friends in Taipei.	Dementia Friendly Communities in Taiwan. Available at: https://www.google.com/maps/d/u/0/viewer?mid=1aYNUop-KEk3JvFlvgC0aaC20hRA&ll=25.070287604600985%2C121.721897203124&97&z=11 "Dementia-friendly community information management system." Ministry of Health and Welfare. Available at: http://afc.hpa.gov.tw/Dementia/Page/AngelPage.aspx
Implementation of dementia awareness campaign	The Health Promotion Administration collaborated with NGOs and local cities to hold World Alzheimer's Month Events every year, to dispel the myth of dementia and create a dementia-friendly Taiwan.	"Break the myths and labels! Talking about 'remembering' dementia." Ministry of Health and Welfare. Available at: https://www.mohw.gov.tw/fp-4253-49442-1.html
Tel Aviv		
Presence and implementation of a national or regional dementia strategy or plan, which includes a focus on the role of cities, towns, or communities	Yes, with a focus on creating dementia awareness campaigns in communities. It is adopted, but with inadequate funding	"From Plan to Impact II: The urgent need for action." Alzheimer's Disease International. 2019. Available at https://www.alz.co.uk/adi/pdf/from-plan-to-impact-2019.pdf Israel Dementia Plan for Alzheimer's Disease and Other Types of Dementia." State of Israel Ministry of Health. Available at https://www.health.gov.il/English/Topics/SeniorHealth/DEMENTIA/Pages/National_program.aspx
Government funding for dementia or eldercare	The annual budget for the National Dementia Program is 10 million NIS.	Netta Bentur, Shelley A. Sternberg. "Dementia care in Israel: top down and bottom up processes." Israel Journal of Health Policy Research. 2019. Available at https://ijhpr.biomedcentral.com/articles/10.1186/s13584-019-0290-z
City-level leadership on dementia or age-related issues	Yes, Age-Friendly Tel Aviv-Yafo is a policy in Tel-Aviv to provide senior citizens with a better quality of life, enabling them active lifestyles and healthy aging with community-based, safe and accessible environment.	"Tel Aviv Yafo." WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/network/tel-aviv-yafo/
Access to subsidized treatments for dementia	Yes, dementia medication is included in the basic health basket provided under the provisions of the National Health Insurance Law.	"Treatment of Dementia Patients." Ministry of Health, State of Israel. 2019. Available at https://www.health.gov.il/English/Topics/SeniorHealth/DEMENTIA/Pages/treatment.aspx
Presence of physicians for the senior population	Normalized score: 374	"Health Systems in Transition (HiT) profile of Israel." The Health Systems and Policy Monitor. 2019. Available at https://www.hspm.org/countries/israel25062012/livinghit.aspx?Section=4.2%20Human%20resources&Type=Section
Ability of GPs to diagnose and treat dementia	GPs can make an indicative diagnosis	"Care Needed: Improving the Lives of People with Dementia." OECD. 2018. Available at https://read.oecd-ilibrary.org/social-issues-migration-health/care-needed_9789264085107-en#page49
Presence of reliable, publicly available diagnosis rates	N/A	
Presence of specialists for the senior population (Specialists evaluated are neurologists, geriatricians, psychogeriatricians, and psychiatrists. Specialist estimates based on national level data)	Normalized score: 8.3	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia
Presence of nurses and social workforce for the senior population Social workforce evaluated are social workers and personal care workers. Data based on national estimates.	Normalized score: 1,468.9	"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia

Indicator	Data Finding	Sources
Presence of a major research center or hospital with an Alzheimer's or dementia unit	Sagol School of Neuroscience, Tel Aviv University is a recognized world leader in the study of brain science and neurodegenerative disease, with more drug candidates in the pipeline for Alzheimer's disease than any other university in the world.	"Sagol School of Neuroscience." Tel Aviv University. 2017. Available at https://english.tau.ac.il/neuroscience
Participation in WHO age-friendly cities network	Tel-aviv is participating and has completed a commitment letter, a baseline assessment, and a strategy and action plan	"Tel Aviv Yafo." WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/network/tel-aviv-yafo/
Access to in-home care Based on nurses and personal carers located at home according to OECD data	9.3 Per 100 population aged 65+	"Formal long-term care workers at home." OECD Data. 2019. Available at https://stats.oecd.org/index.aspx?r=8622&errorCode=403&lastaction=log_in_submit
Dementia training of healthcare workers	The Israel National Strategy focuses on expanding the scope of studies and clinical training experience in geriatrics and dementia, in particular, for physicians, nurses, other health professions, and social workers Melabev, a nonprofit organization, established a geriatric institute in partnership with Shaare Zedek Medical Center to offer the first in-service courses in Israel for eldercare professionals.	"Addressing Alzheimer's and other Types of Dementia: Israeli National Strategy." Ministry of Health Israel. 2013. Available at https://www.health.gov.il/PublicationsFiles/Dementia_strategy-Eng.pdf Netta Bentur, Shelley A. Sternberg. "Dementia care in Israel: top down and bottom up processes." Israel Journal of Health Policy Research. 2019. Available at https://ijhpr.biomedcentral.com/articles/10.1186/s13584-019-0290-z
Implementation of dementia risk reduction campaign	N/A	
Intellectual property protection	Score: 5.6	"Intellectual property protection-The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ052
Venture capital availability	Score: 5.2	"Venture capital availability- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ089
University-industry collaboration in R&D	Score: 5.8	"University-industry collaboration in R&D- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ072
# of patents granted in med tech, biotech, or pharmaceuticals	N/A	
# of top 500 health institutions for research, innovation, and societal impact	# of top 500 health institutions= 2	Scimago Insitutions Rankings. 2018. Available at https://www.scimagoir.com/index.php?sector=Health&year=2012&top=500&display=chart&country=ISR
Active labour market policies	Score: 4.4	"Active labour market policies- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ497
Presence of dementia-friendly community and/or dementia friends program	Israel's Alzheimer's society, which is based in Tel Aviv, runs a dementia friends program	Netta Bentur, Shelley A. Sternberg. Dementia care in Israel: top down and bottom up processes Israel Journal of Health Policy Research. Available at: https://ijhpr.biomedcentral.com/articles/10.1186/s13584-019-0290-z
Implementation of dementia awareness campaign	As part of its dementia plan, Israel's government has created videos that raise awareness of dementia	Israel Dementia Plan for Alzheimer's Disease and Other Types of Dementia. State of Israel: Ministry of Health. Available at: https://www.health.gov.il/English/Topics/SeniorHealth/DEMENTIA/Pages/National_program.aspx

Indicator	Data Finding	Sources
Tokyo		
Presence and implementation of a national or regional dementia strategy or plan, which includes a focus on the role of cities, towns, or communities*	<p>Yes, with a focus on creating age and dementia-friendly communities. The plan is adopted.</p> <p>Additionally, the government enacted in June 2019 the “Fundamental Principle for Dementia Policy.” This policy prioritizes improving dementia care in place and risk reduction as important targets for all ministries and local governments to work towards achieving.</p>	“The New Orange Plan.” Japan Health Policy Now. Available at http://japanhpn.org/en/1-2/
Government funding for dementia or eldercare	The Ministry of Health, Labour and Welfare allocated ¥16.1 billion (HK\$1.03 billion) for the implementation of the National Dementia Strategy.	“Care services for elderly people.” The Legislative Council Commission. Available at https://www.legco.gov.hk/research-publications/english/essentials-1617ise10-care-services-for-elderly-persons-with-dementia.htm
City-level leadership on dementia or age-related issues	Yes, the Tokyo Metropolitan Government conducts training sessions to the community to provide comprehensive information on dementia and consultation services. They also created an official website of the Tokyo Metropolitan Government, which has been designed to create a community where people with dementia and their family members can live in peace and comfort.	“Tokyo Dementia Navi.” Tokyo Metropolitan Government. 2017. Available at http://www.fukushihoken.metro.tokyo.jp/zaishien/ninchishou_navi/en/index.html
Access to subsidized treatments for dementia	Yes, generic anti-dementia medication is available and at least one anti-dementia medication is approved for on-label use reimbursement	“Anti-dementia medication and care availability” Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia
Presence of physicians for the senior population	Normalized score: 225.2	“Global City Data.” New York City Global Partners. 2013. Available at http://www.nyc.gov/html/ia/gprb/html/global/global.shtml
Ability of GPs to diagnose and treat dementia*	The GPs play an important gatekeeper role in referring people for diagnosis by a specialist. The majority of GPs have completed a course on diagnosis, treatment, and care of dementia which is taught by dementia experts. Additionally, GPs are allowed to prescribe treatment for Alzheimer’s disease.	“Care Needed: Improving the Lives of People with Dementia.” OECD. 2018. Available at https://read.oecd-ilibrary.org/social-issues-migration-health/care-needed_9789264085107-en#page49
Presence of reliable, publicly available diagnosis rates*	Data from long-term care insurance indicates that 2/3 of people living with dementia have a confirmed diagnosis.	“Japan- Provisional Country Profile 2017.” Global Dementia Observatory- WHO. 2017. Available at https://www.who.int/mental_health/neurology/dementia/Japan_GDO_country_profile.pdf?ua=1
Presence of specialists for the senior population (Specialists evaluated are neurologists, geriatricians, psychogeriatricians, and psychiatrists. Specialist estimates based on national level data)	Normalized score: 14.4	“Dementia health and social workforce” Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia
Presence of nurses and social workforce for the senior population Social workforce evaluated are social workers and personal care workers. Data based on national estimates.	Normalized score: 1,043.2	“Dementia health and social workforce” Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia Health Care Resources: Nurses” OECD Data. 2019. Available at https://stats.oecd.org/index.aspx?queryid=30183

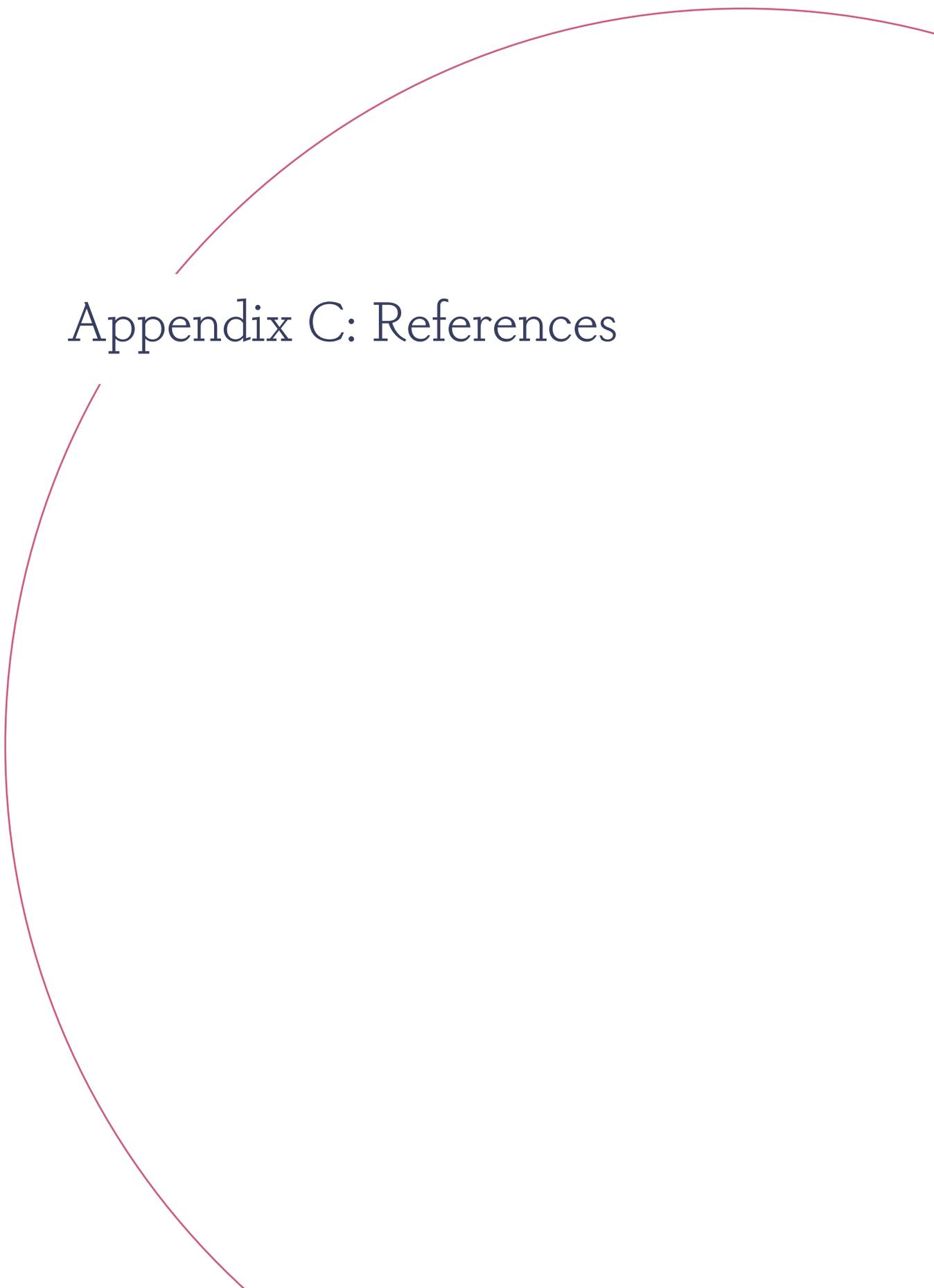
* Select information shared for this indicator is based on insights from local experts

Indicator	Data Finding	Sources
Presence of a major research center or hospital with an Alzheimer's or dementia unit*	The University of Tokyo Hospital specializes in geriatric medicine and has a Memory Loss Clinic for outpatients, where Alzheimer's disease and other dementia disorders are studied from various perspectives to provide the best treatment plan for individual patients. Dementia is also one their target diseases of focus. More broadly, 42 hospitals in Tokyo can provide a dementia/differential diagnosis by using MRI or SPECT/PET scanning. More than 1,000 cases of dementia are diagnosed annually among five of these local hospitals.	"Geriatric Medicine." The University of Tokyo Hospital. 2014. Available at https://www.h.u-tokyo.ac.jp/english/centers-services/clinical-divisions/geriatric-medicine/index.html
Participation in WHO age-friendly cities network	Tokyo is not participating	WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/who-network/
Access to in-home care Based on nurses and personal carers located at home according to OECD data	4.5 per 100 age 65+	"Formal long-term care workers at home." OECD Data. 2019. Available at https://stats.oecd.org/index.aspx?r=8622&errorCode=403&lastaction=login_submit
Dementia training of healthcare workers	There is inclusion of all basic dementia competencies in training of physicians, specialists, nurses, and some for pharmacists, social workers, and personal care workers.	"Dementia education and training." Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia
Implementation of dementia risk reduction campaign	There is evidence of at least one functioning dementia risk reduction campaign at the national level in 2017.	"Dementia awareness and risk reduction campaign" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/view.dementia.DEM_ind13-data
Intellectual property protection	Score 5.9	"Intellectual property protection-The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ052
Venture capital availability	Score 4.1	"Venture capital availability- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ089
University-industry collaboration in R&D	Score 4.9	"University-industry collaboration in R&D- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ072
# of patents granted in med tech, biotech, or pharmaceuticals	TOTAL: 86,511	WIPO IP Statistics Data Center. WIPO statistics database. 2019. Available at https://www3.wipo.int/ipstats/index.htm
# of top 500 health institutions for research, innovation, and societal impact	# of top 500 health institutions= 11	Scimago Insitutions Rankings. 2018. Available at https://www.scimagoir.com/index.php?sector=Health&year=2012&top=500&display=chart&country=JPN
Active labour market policies	Score 4.7	"Active labour market policies- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ497
Presence of dementia-friendly community and/or dementia friends program	Japan has an extensive dementia friends programs with over 100,000 trained dementia friends across the country	Dementia Friends. Alzheimer's Disease International. Available at: https://www.alz.co.uk/dementia-friendly-communities/dementia-friends

* Select information shared for this indicator is based on insights from local experts

Indicator	Data Finding	Sources
Implementation of dementia awareness campaign	<p>There is at least one function dementia awareness campaign at the national level</p> <p>The Heart Ring Movement, which is based in Tokyo, is an awareness effort aimed at changing the perception of dementia among the general public</p>	<p>"Dementia awareness and risk reduction campaign." WHO Global Dementia Observatory. 2017. Available at: http://apps.who.int/gho/data/view.xdementia.DEM_ind13-data</p> <p>Japan - Dementia Friendly Communities." Alzheimer's Disease International. Available at: https://www.alz.co.uk/dementia-friendly-communities/japan</p>
Vancouver		
Presence and implementation of a national or regional dementia strategy or plan, which includes a focus on the role of cities, towns, or communities	Yes, with a focus on creating safe and inclusive communities across Canada for people living with dementia.	"A Dementia Strategy for Canada: Together We Aspire." Government of Canada. Available at https://www.canada.ca/en/public-health/services/publications/diseases-conditions/dementia-strategy.html
Government funding for dementia or eldercare	The government budget 2019 proposed funding of \$50 million over five years to support the implementation of the Dementia Strategy.	"The Government of Canada Releases Canada's First Dementia Strategy." CNW Group Ltd. 2019. Available at https://www.newswire.ca/news-releases/the-government-of-canada-releases-canada-s-first-dementia-strategy-802007727.html
City-level leadership on dementia or age-related issues	Yes, the Vancouver City Council approved the first four-year action plan for the Healthy City Strategy, which includes the vision of the Age Friendly Action Plan.	"The Age-friendly Action Plan: A safe, inclusive, and engaging city for seniors." City of Vancouver. 2019. Available at https://vancouver.ca/people-programs/age-friendly-action-plan.aspx
Access to subsidized treatments for dementia	Yes, Health Canada has approved four drugs to treat the cognitive symptoms of Alzheimer's disease:: donepezil, rivastigmine, galantamine, and memantine. However, public and private health insurers limit coverage to persons who meet certain conditions.	"Drugs approved for Alzheimer's disease." Alzheimer Society of Canada. 2019. Available at https://alzheimer.ca/en/bc/Living-with-dementia/Treatment-options/Drugs-approved-for-Alzheimers-disease
Presence of physicians for the senior population	Normalized score: 191.4	"Global City Data." New York City Global Partners. 2013. Available at http://www.nyc.gov/html/ia/gprb/html/global/global.shtml
Ability of GPs to diagnose and treat dementia	GPs can initiate medications	"Care Needed: Improving the Lives of People with Dementia." OECD. 2018. Available at https://read.oecd-ilibrary.org/social-issues-migration-health/care-needed_9789264085107-en#page49
Presence of reliable, publicly available diagnosis rates	Estimates suggest that only 50% of dementia cases in the community have been diagnosed	Suzy L. Wong, Heather Gilmour and Pamela L. Ramage-Morin. "Alzheimer's disease and other dementias in Canada." Government of Canada. 2016. Available at https://www150.statcan.gc.ca/n1/pub/82-003-x/2016005/article/14613-eng.htm
Presence of specialists for the senior population (Specialists evaluated are neurologists, geriatricians, psychogeriatricians, and psychiatrists. Specialist estimates based on national level data)	Normalized score:15.5	<p>"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia</p> <p>T. Jock Murray, Garth Bray, Morris Freedman, and A. Jon Stoessl, "Neurology in Canada: History of the Canadian Neurological Society." Neurology. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3589243/</p> <p>"Geriatric Medicine Profile." Canada Medical Association. 2017. Available at https://www.cma.ca/sites/default/files/2019-01/geriatric-e.pdf</p>
Presence of nurses and social workforce for the senior population Social workforce evaluated are social workers and personal care workers. Data based on national estimates.	Normalized score:1,495.5	<p>"Dementia health and social workforce" Global Dementia Observatory. WHO. 2019. Available at http://apps.who.int/gho/data/node.dementia</p> <p>"Healthcare Resources: Caring Personnel." OECD. 2018. Available at https://stats.oecd.org/index.aspx?queryid=30183</p>

Indicator	Data Finding	Sources
Presence of a major research center or hospital with an Alzheimer's or dementia unit	The UBC Hospital Clinic for Alzheimer Disease and Related Disorders at the Djavad Mowafaghian Centre for Brain Health provides assessment and diagnosis for patients, including care and support for the affected individual and their family by experts	"UBC Hospital Clinic for Alzheimer Disease and Related Disorders." Djavad Mowafaghian Centre for Brain Health. 2019. Available at https://www.centreforbrainhealth.ca/clinics/ubc-hospital-clinic-alzheimer-disease-and-related-disorders
Participation in WHO age-friendly cities network	Vancouver is not participating.	WHO Global Network. 2019. Available at https://extranet.who.int/agefriendlyworld/who-network/
Access to in-home care Based on nurses and personal carers located at home according to OECD data	0.5 Per 100 population aged 65+	"Formal long-term care workers at home." OECD Data. 2019. Available at https://stats.oecd.org/index.aspx?r=8622&errorCode=403&lastaction=login_submit
Dementia training of healthcare workers	With respect to physician training, there is little focus in medical curricula about geriatric medicine in general or dementia in particular. For nurses, the first clinical rotation for student nurses is usually with the aging population, the majority of which suffers from dementia. Alzheimer's Society chapters in Canada, such as the one in Ottawa, also provides Online Dementia Care Training Programs that are for personal support workers and other front-line health care workers.	"Dementia in Canada: A National Strategy for Dementia-friendly Communities." Standing Senate Committee on Social Affairs, Science and Technology. 2016. Available at https://sencanada.ca/content/sen/committee/421/SOCI/Reports/SOCI_6thReport_DementiaInCanada-WEB_e.pdf
Implementation of dementia risk reduction campaign	N/A	
Intellectual property protection	Score: 5.6	"Intellectual property protection-The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ052
Venture capital availability	Score: 3.7	"Venture capital availability- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ089
University-industry collaboration in R&D	Score: 4.8	"University-industry collaboration in R&D- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ072
# of patents granted in med tech, biotech, or pharmaceuticals	TOTAL: 23, 489	WIPO IP Statistics Data Center. WIPO statistics database. 2019. Available at https://www3.wipo.int/ipstats/index.htm
# of top 500 health institutions for research, innovation, and societal impact	# of top 500 health institutions= 5	Scimago Insitutions Rankings. 2018. Available at https://www.scimagoir.com/index.php?sector=Health&year=2012&top=500&display=chart&country=CAN
Active labour market policies	Score: 4.7	"Active labour market policies- The Global Competitiveness Report 2018." World Economic Forum. 2018. Available at https://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=EOSQ497
Presence of dementia-friendly community and/or dementia friends program	The City of Vancouver and the Alzheimer's Society of British Columbia are actively partnering to make the city more dementia-friendly. The Alzheimer's Society offers a toolkit for local governments.	Canada – Dementia Friendly Communities. Alzheimer's Disease International. Available at: https://www.alz.co.uk/dementia-friendly-communities/canada
Implementation of dementia awareness campaign	City of Vancouver has proclaimed January as Alzheimer's Awareness Month, during which is holds public workshops to raise awareness	Training and awareness. City of Vancouver. Available at: https://vancouver.ca/people-programs/training-and-awareness.aspx



Appendix C: References

Endnotes

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ADI is the international federation of 102 Alzheimer associations around the world, in official relations with the World Health Organization. ADI's vision is prevention, care and inclusion today, and cure tomorrow. ADI believes that the key to winning the fight against dementia lies in a unique combination of global solutions and local knowledge. As such, it works locally, by empowering Alzheimer associations to promote and offer care and support for persons with dementia and their care partners, while working globally to focus attention on dementia and campaign for policy change from governments. For more information, please visit www.alz.co.uk.



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The Lien Foundation is a private philanthropic organisation that pioneers solutions to improve lives and tackle the root of problems in early childhood development and eldercare in Singapore. It also works to improve access to clean water, sanitation and palliative care among diverse communities in south and southeast Asia. Dementia care is a key pillar of its work. The Foundation's research publications, multimedia advocacy and design projects aim to seed public discourse in the hope that these can lead to better policies and practices in its various fields of work. For more information, visit www.lienfoundation.org