



Situation analysis for the city of Leon, Mexico.

Cancer Burden in Mexico.

131,448,916

Mexico population.

2022, based on the Worldometer elaboration of the latest United Nations data.

1,700,000

Leon population.

2021, based on the Municipal Government Programme of Leon, Guanajuato 2021-2024.

New cancer cases, males and females, all ages (1):

195,499

Cancer deaths, males and females, all ages (1):

90,222

Five most common cancers, males (1):

- Prostate
- Colorectum
- Stomach
- Lung
- Non-Hodgkin lymphoma

Cancer incidence rate, males and females (2):

140.4

Per 100,00

Cancer mortality rate, males and females (3):

86.3

Per 100,00

Five most common cancers, females (1):

- Breast
- Cervix uter
- Thyroid
- Colorectum
- Corpus uteri

References: (1) 2020, Globocan. (2) Specific Programme of Action for Cancer Prevention and Control 2021 - 2024. (3) Global Burden of Disease 2017.

Highlights of the Main Needs and Challenges Identified for the City of Leon.

This high-level summary is based on the results of the full situation analysis report and the priorities set by the city.

Contributions to the Needs Assessment:

56

healthcare professionals from 11 institutions.

72

patients.

The largest city in the central Mexican state of Guanajuato, Leon joined the C/Can global network in August 2019, after answering C/Can’s global call for applications and demonstrating its commitment and interest. Since then, supported by C/Can’s network of local, regional and global partners and experts, Leon has embarked on a process to identify, design and develop sustainable cancer care solutions that respond to local needs.

The first step in this process, was the convening of a multi-sectoral group of diverse cancer stakeholders, which formed the City Executive Committee (CEC), bringing together representatives from the main public and private institutions providing cancer care in Leon, along with local and national government, academia, scientific societies and civil society to guide, support and oversee the C/Can process.

One of the foundational steps after joining C/Can is a city-wide needs assessment to identify the key gaps and opportunities for improving access to quality cancer care. The needs assessment is guided by a question-

naire designed to systematically collect local data on the quality and capacity of cancer care services that also addresses the extent to which patients are placed at the centre of care by assessing community access and integration of treatment within the city.

The CEC’s first task was to appoint four members to act as technical leaders, who in turn called for the composition of the Technical Committee, composed of 19 specialists from different institutions and/or health centres in the city. These were organised into four main areas: Management and Quality of Cancer Services, Cancer Diagnostic Services, Cancer Treatment Services and Community Access and Patient Navigation. The Technical Committee also convened a wider network of local experts who would collaborate as part of 19 inter-institutional, topic-specific working groups to collect data, analyse and interpret the findings during the needs assessment phase to develop the Situation Analysis report.

4.1 Management and Quality of Cancer Services.

Local Health System.

Main Challenges	Proposed Actions
Lack of standardisation, homogeneous regulations, unifying criteria or protocols and siloed care models and programmes/ efforts.	Develop a unified platform for all cancer care providers so information is easily accessible.
	Define a way to achieve inter-institutional referral systems between institutions from the public and private sector.
	Develop a strategy that allows standardised dissemination of city-wide early diagnosis programmes.

Multidisciplinary Teams and Work Safety.

Main Challenges	Proposed Actions
Limited multidisciplinary cancer care in the city (surgery, palliative care, radiotherapy, chemotherapy, nuclear medicine) for multiple reasons including lack of regulation, limited human resources and poor coordination.	<p>Establish the regulation of multidisciplinary teams and the necessary measures for the coordination of comprehensive and standardised cancer care.</p> <p>Create units with multidisciplinary working groups to discuss cases, with support from diagnostic and all other support specialties in all oncology care centres.</p>

Management and Information System and Database.

Main Challenges	Proposed Actions
<p>Constraints due to centralised decision making.</p> <p>Decisions and contracts for healthcare needs are made annually at the Ministry of Health and Finance of the state with limited participation by local stakeholders.</p>	<p>Review and develop a feasible proposal to include local teams in the contracting and bidding processes.</p> <p>Develop standardised cancer management guidelines to guide decision making related to contracts and requirements for quality cancer care.</p>
<p>Drug shortages.</p> <p>Reimbursement mechanisms and purchasing policies (particularly after the pandemic) increase shortages of some cancer drugs.</p>	Create a multi-institutional and multisectoral committee to work on the shortage of oncology drugs, supply management and reimbursement mechanisms.
<p>Cancer registries.</p> <p>Unspecific, fragmented and federally dependent health care registries, of limited use for decision making.</p>	Development of internal digital platforms based on the needs defined in an inter-institutional manner.
<p>Late detection due to lack of training in early diagnosis and an inefficient referral system from the primary level.</p>	<p>Create a working group to generate efficiencies in communication between primary and specialised care through agreed strategies.</p> <p>Implement virtual training models for primary care professionals with most frequent signs and symptoms (most common cancers, paediatric cancer, management of treatment side effects, how to avoid infections and what is necessary for follow-up).</p>

4.1 Management and Quality of Cancer Services.

Quality Assurance.

Main Challenges	Proposed Actions
Limited compliance with standardised treatment protocols in surgical oncology, chemotherapy, radiotherapy and pathology.	Create a city-wide political agreement for the inter-institutional standardisation of protocols and criteria for cancer care.
Lack of standardised guidelines for the management of specific cancers.	Develop homogeneous and updated care guidelines by type of cancer, to unify standards of care in order to ensure quality treatment from all providers.

Financing and affordability.

Main Challenges	Proposed Actions
Limited decision-making and resource allocation capabilities at city level for cancer.	Work with state-level representatives to develop a plan to increase financial resources for cancer care investment in the public sector (blended financing mechanism at the state or regional level). Develop recommendations for a policy environment that provides access to insurance coverages and/or other types of financing mechanisms.
Scarce financial resources, leading to insufficient financial coverage for patients, out of pocket expenses or treatment discontinuation.	Conduct a study to determine the frequency of out of pocket payments and develop a special model considering the potential contribution of the private sector.

Human Resources.

Main Challenges	Proposed Actions
Long lead times between the request for personnel and the effective assignment of personnel.	Develop an aligned cancer human resources plan for the city and ensure all stakeholders agree to adhere to it.
Lack of professionalisation in some cancer support areas. Pathology labs require highly specialised techniques and ongoing training. Lack of medical physicists and technicians, as well as support staff in recovery areas for complex surgeries and oncology nurses.	Develop a human resources plan, including training and continuing education programmes for technicians and physicians, certificated by regulatory agencies. Develop specific courses to improve the specialisation of oncology personnel based on needs.
Few continuous training programmes.	Develop human resources manuals in cancer to standardise roles and evaluate personnel on a regular basis. Develop and implement a training plan for technicians and other professionals on clinical concepts and maintain continuous training in the use of equipment, technologies and processes. Implement an early diagnosis training programme for primary and secondary health personnel.
Non-competitive salaries and lack of incentives for specialised professionals.	Design and implement recognition programmes for oncology personnel to provide incentives to health personnel.

4.2 Cancer Diagnostic Services.

Pathology.

Main Challenges	Proposed Actions
Inadequate infrastructure and facilities that do not meet required standards.	Design a Pathology Development Plan for the city/region (infrastructure, technology and human resources).
Low-quality assurance in the pre-analytical and post-analytical processes.	Review and standardise quality control manuals and minimum standard operating procedures for city laboratories.
Lack of homogenisation of pathology reports.	Establish the use of city-wide standardised reporting (review those currently in use).
Not all centres have the supplies for immunohistochemistry tests required for oncologic-hematologic cases.	Improve the immunohistochemistry purchasing process currently used in public institutions.

Clinical Laboratory.

Main Challenges	Proposed Actions
Public laboratories provide services to all specialties besides cancer. Demand is higher than capacity and oncology patients often face delays in diagnosis.	Develop a special model for oncology patients to ensure timely access to the necessary diagnostic and follow-up tests.

Radiology.

Main Challenges	Proposed Actions
Quality control protocols exist, however, as a result of high workloads, these may not be fully carried out.	Design a medical imaging quality assurance programme for the city.
Image storage systems are not available, which hinders quality control for mammography.	Design and implement a mammography quality control programme, including access to image storage systems.
Slow development of interventional radiology for cancer care.	Design a programme for training and development of interventional radiology.

Nuclear Medicine.

Main Challenges	Proposed Actions
Not all oncology care specialists are up to date on the availability of nuclear medicine resources that could benefit their cancer patients.	Promote available nuclear medicine tests among the city's oncology community.

4.3 Cancer Treatment Services.

Systemic Treatment.

Main Challenges	Proposed Actions
Lack of centres with full cancer services accessible to the city population (only by coverage).	Review collaboration agreements to establish the feasibility of outsourcing services from a centralised unit to all providers throughout the city.
Barriers in the referral system for bone marrow transplantation.	Review referral mechanisms in the region and organise a network of care for bone marrow transplantation and other highly specialised paediatric oncology services.
Lack of safety training for staff administering cancer medicines.	Create a city-wide safety programme to improve skills for staff administering cancer medicines.

Paediatric Cancer.

Main Challenges	Proposed Actions
Sociodemographic factors of the population affect paediatric cancer outcomes.	Collaborate with paediatric associations and foundations on joint activities they are leading for already successful programmes. Develop a social vulnerability scale model including diagnosis and the potential risk factors. Implement an education centre for parents and caregivers.
Lack of specialised services for some less common paediatric cancer services.	Reorganise the network of paediatric cancer services to ensure collaboration between units that have integrated services with regional scope (HITO, HRAEB).

Radiotherapy.

Main Challenges	Proposed Actions
Misalignment between supply and demand for radiotherapy services. Limited equipment (particularly brachytherapy) and qualified human resources (especially medical physicists and technicians).	Create a radiotherapy development plan for the city and the region (personnel, equipment and short, medium and long term projections).
Not all institutions have a quality assurance programme in radiotherapy. No culture of process safety in radiotherapy.	Develop a radiotherapy quality assurance programme in the city.



4.3 Cancer Treatment Services.

Oncology Surgery.

Main Challenges	Proposed Actions
Lack of quality assurance programme for oncological surgery.	Design a surgical care development plan for oncology patients and a quality assurance programme for cancer surgery.
High proportion of new cancer cases arrive at a very late stage, which reduces surgical options.	Discuss a project with other technical groups to train primary and secondary health personnel in early diagnosis of the most common cancers.

Palliative Care.

Main Challenges	Proposed Actions
Not all hospitals have palliative care services, trained personnel or infrastructure.	Consolidation of palliative care units. Create and implement a palliative care development plan.
Lack of availability of appropriate medicines for adequate symptom control.	Preparation of an integral project for access to essential oncological medicines, to be presented to local authorities (in collaboration with other specialties).



4.4 Community and Patient Access to Cancer Services.

Patient Navigation and Community Access.

Main Challenges	Proposed Actions
Barriers to timely diagnosis and adequate treatment include misinformation, lack of awareness and lack of education about treatment.	<p>Develop a training and education plan at different levels:</p> <ul style="list-style-type: none">• Health professionals, especially at the primary level of care• Other non-health professional groups, such as teachers in schools and colleges <p>Develop a strategy for a patient and family navigation system by the community for the community (i.e., civic associations, patient associations).</p>
Insufficient information for patients regarding their rights and available services/ treatment.	<p>Collaborate in the creation of a referral and counter-referral programme for cancer patients in Leon.</p> <p>Support strengthening and improving the current patient navigation plan in the city.</p>



Translating Needs into Action.

Following the Needs Assessment, C/Can is supporting the prioritisation of challenges and the development of a medium- and long-term roadmap to improve access to quality cancer care in the city. This city-led plan guides the prioritisation and development of approximately 10 city projects, as well as identification of resource mobilisation, capacity development and technical cooperation needs.

This phase also includes assistance in evaluating innovative financing solutions and/or mechanisms for the creation of alternatives that can financially support the current needs of the local health system in terms of cancer care. In this regard, C/Can is working with international experts who have implemented public-private financing mechanisms and exploring with local professionals the opportunities that exist in Mexico to implement any of these tools.

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The launch of the C/Can initiative in Leon has provided an opportunity to transform the way in which the different parts of the local and state health care system addressing cancer work together by communicating and coordinating efforts towards the same goal. The leadership shown by the CEC and the commitment of the city's cancer professionals is generating greater confidence in the city's ability to play a role in this process, where local empowerment is needed to bring about changes in the regional and national cancer care landscape.

It should be noted that while the aim of the initiative is to increase access to quality cancer care in the city, this is not limited to the city's population (1.72 million). As in most cities, Leon is entrusted with cancer care for a population that exceeds the number of inhabitants of the municipality, extending to the population of Guanajuato (6.2 million) and the wider Bajío region (18.3 million). It is essential to think about the next steps and projects within the vision of a reference city that serves the population of the state and the region.

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