INNOVATION IN PROCESSES IN A NETWORK OF CANCER

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INTRODUCTION

Malignant tumors represent a major public health problem in the world. The development of population-based cancer registries (PBCR) is necessary to help evaluate health programs related to cancer. In Mexico, there were only a couple of attempts as hospital and Pathological registries, reason why it was decided to implement a PBCR, designed as a National Network of Cancer Registries (NNCR). During the designing stage, support was received from the International Agency of Research in Cancer (IARC). The NNCR is operated through a central level located in Mexico City, and the cases in the sources of information established are thereby registered in a national registration form composed of 20 structured and standardized variables. The collection and administration of information is done through a system called RedCancerMX. To the date, the NNCR is active in 8 cities, reaching 10% coverage of the national population (Figure 1).

AIMS

The aims of the present work are to show the implementation process of the NNCR in Mexico, highlighting compliance with international standards of the IARC, and establishing quality information on the magnitude of the cancer epidemic.

METHODS

IARC supported the design process of the network through the Global Initiative for Cancer Registry Development (GICR). The registry operates at a central level, located in Mexico City, and the cases are registered in the national registration form. The collection and administration of information is done through a system, and quality validations are carried out locally and centrally by health professionals, for analysis and reporting.

RESULTS

In November 2016, the General Health Law was modified to create the National Cancer Registry, and subsequently in April 2017 it was approved, thus obtaining funding for the viability and optimal operation of the NNCR. In July 2018, the regulations of the NNCR were published, thus establishing the basis for organization, integration, and program, with the objective of creating the NNCR (Figure 2).

Structure. To the date, the NNCR is active in 8 cities, reaching 10% coverage of the national population.

The general collection process (Figure 3) covers subprocesses of collection, validation, and authorization carried out by medical specialists. RedCancerMX integrates 11 validations established by international organizations to guarantee the quality of the information and aligned to PBCR quality indicators, such as comparability, validity, timeliness, and completeness. In Mexico, the NNCR is already established, and is considered an active and continuous epidemiological surveillance system with national validity. This NNCR will allow us to determine the incidence of cancer and survival rates in the Mexican population, helping to implement new and better strategies for cancer control.

QUALITY STANDARDS

Quality validations of the NNCR system to guarantee data quality. These validations were taken from the following international standards: database manager (DO-31, 2013); IARC (IARC/ConfTools 2018); Mexican National Cancer Registries (RENC) Data Quality Checks (2019). NNCR quality indicators are aligned with the four quality indicators proposed by the IARC in the following ways:

1. Validity: through audits, specific diagnostic methods, missing information, and validations of internal consistency.
2. Completeness: through the time elapsed, standard 184. months, and publication after this period.
3. Confidentiality: the notification of cases is done ensuring the protection of personal data by adjusting national and international procedures and best practices.

CONCLUSIONS

Currently, the NNCR is established in 8 cities, and it is considered an active and continuous epidemiological surveillance system with national validity. This NNCR will allow us to determine the incidence of cancer and survival rates in the Mexican population, thus becoming a framework for the generation of a National Plan against Cancer, and the implementation of prevention and control programs in the country.

REFERENCES

1. World Health Organization. Malignant Neoplasms, High Incidence Rate. 1. Mexico is not the exception; according to estimates of the Global Initiative for Cancer Registry Development (GICR), malignant tumors have been positioned in the first places of mortality worldwide, helping to implement new and better strategies for cancer control. In Mexico, the NNCR is already established, and is considered an active and continuous epidemiological surveillance system with national validity.


8. Bray F, Znaor A, Cueva P, Korir A, Swaminathan R, Parkin DM. Planning and developing population-based cancer registries (PBCR), designed as a National Network of Cancer Registries (NNCR). The registry operates at a central level, located in Mexico City, and the cases in the sources of information established are thereby registered in a national registration form composed of 20 structured and standardized variables. The collection and administration of information is done through a system, and quality validations are carried out locally and centrally by health professionals, for analysis and reporting.

9. NNCR quality indicators are aligned with the four quality indicators proposed by the IARC in the following ways:

10. This process was performed by the medical specialists, which makes it difficult to control information on cancer cases. Until 2005, there were only hospital and Pathological registries. Due to this, it was decided to implant a NNCR that allows better planning and evaluation of prevention and control programs and contributes to the generation of public policies related to cancer.

11. Table 1. Types of cancer based on structure and coding

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<table>
<thead>
<tr>
<th>Type of cancer</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Blood cancer</td>
</tr>
<tr>
<td>2</td>
<td>Bone cancer</td>
</tr>
<tr>
<td>3</td>
<td>Brain cancer</td>
</tr>
<tr>
<td>4</td>
<td>Breast cancer</td>
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<tr>
<td>5</td>
<td>Cervical cancer</td>
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<tr>
<td>6</td>
<td>Colon cancer</td>
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<tr>
<td>7</td>
<td>Lung cancer</td>
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<tr>
<td>8</td>
<td>Lymphoma</td>
</tr>
<tr>
<td>9</td>
<td>Melanoma</td>
</tr>
<tr>
<td>10</td>
<td>Multiple primary</td>
</tr>
</tbody>
</table>

12. NNCR quality indicators are aligned with the four quality indicators proposed by the IARC in the following ways:

13. This NNCR will allow us to determine the incidence of cancer and survival rates in the Mexican population, helping to implement new and better strategies for cancer control.

14. The general collection process (Figure 3) covers subprocesses of collection, validation, and authorization carried out by medical specialists. RedCancerMX integrates 11 validations established by international organizations to guarantee the quality of the information and aligned to PBCR quality indicators, such as comparability, validity, timeliness, and completeness. In Mexico, the NNCR is already established, and is considered an active and continuous epidemiological surveillance system with national validity. This NNCR will allow us to determine the incidence of cancer and survival rates in the Mexican population, helping to implement new and better strategies for cancer control.

15. The World Health Organization has highlighted the importance of measuring and quantifying the magnitude of cancer. For this reason, it is necessary to develop population-based cancer registries (PBCR) to help plan and evaluate cancer control programs in the country. A cancer registry allows us to get an overview of cancer in the population through systematic surveillance of cases from multiple sources. Mexico has a multifragmented health system composed of public and private institutions, which makes it difficult to control information on cancer cases. Until 2005, there were only hospital and Pathological registries. Due to this, it was decided to implant a NNCR that allows better planning and evaluation of prevention and control programs and contributes to the generation of public policies related to cancer.

16. The aims of the present work are to show the implementation process of the NNCR in Mexico, highlighting compliance with international standards of the IARC, and establishing quality information on the magnitude of the cancer epidemic. In addition, implementation stage results are discussed.

17. Currently, the NNCR is established in 8 cities, and it is considered an active and continuous epidemiological surveillance system with national validity. This NNCR will allow us to determine the incidence of cancer and survival rates in the Mexican population, thus becoming a framework for the generation of a National Plan against Cancer, and the implementation of prevention and control programs in the country.