

# Creation of a Nuclear Medicine Database for Developing Countries

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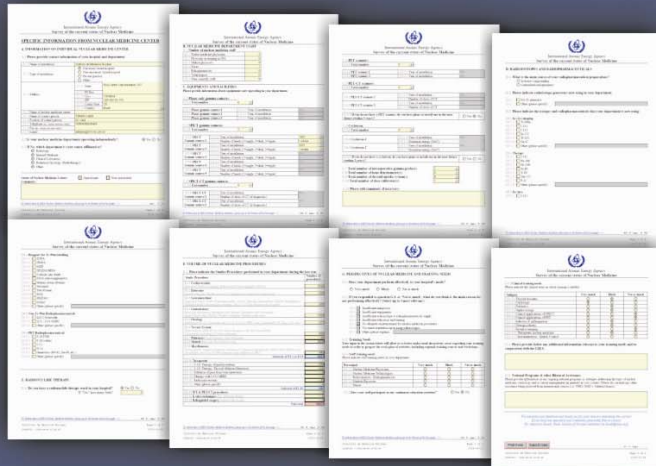
[Http://nucmedicine.iaea.org](http://nucmedicine.iaea.org)



[nuclearmedicine@iaea.org](mailto:nuclearmedicine@iaea.org)

## Objectives

The International Atomic Energy Agency (IAEA) is committed to the transfer of nuclear technologies to Member States (MS) for peaceful applications. In modern organizations, survey-guided development is viewed as mandatory for good management. The aim of creating this Nuclear Medicine Database (NUMDAB) was to gather and maintain updated information on the status of nuclear medicine (NM) practice in developing MS.

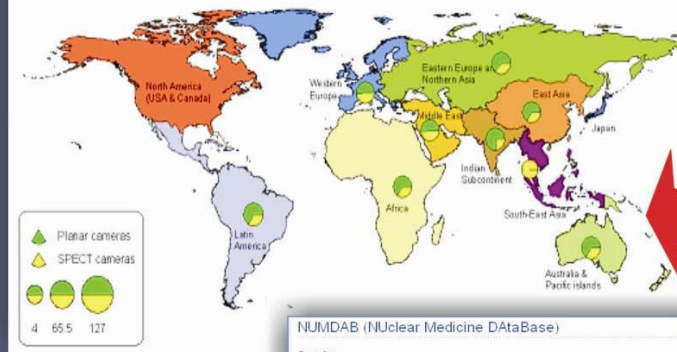


The forms used to build the database.

## Methods

NUMDAB is a web application using Microsoft SQL Server to store, process and analyse the collected data. It provides a secure environment to address privacy and compliance requirements. NUMDAB also utilizes an interactive Adobe PDF form as a user interface; built-in security features can safeguard the privacy of submitted data. The form were designed privileging brevity, simplicity and clarity to obtain high response rates, and are focused at collecting detailed information on manpower and equipment, isotopes and radiopharmaceuticals employed, type and number of procedures performed, and educational needs. The ways to participate in this process are by downloading the form, filling it up and sending it to the IAEA by e-mail, or by filling the form on-line and submitting it (<http://nucmedicine.iaea.org/>). Processed statistical data consist of tables and maps displaying the updated data by region.

### Information on equipment by region Planar vs. SPECT cameras



NUMDAB (NUclear Medicine DAtaBase)

Queries

- Maps
- Information on equipment by region: Planar vs. SPECT cameras
- Information on equipment by region: PET vs. PET-CT
- General information on personnel by region

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INSTITUTO DE MEDICINA NUCLEAR E ENDOCRINOLOGIA DE BRASILIA

HOSPITAL DAS CLÍNICAS - 2. ANDAR

MEDICINA NUCLEAR DE CAMPINAS

HOSPITAL NOSSA SENHORA DAS GRACAS

INSTITUTO DE MEDICINA NUCLEAR

**Nuclear Medicine Center Details**

Institution: Instituto de Medicina Nuclear

Type: University based hospital

Name of Center: Rua Carlos Vasconcelos, 977

Street: Rua Carlos Vasconcelos, 977

Postal/Zip Code: CEP 60115-170 City: Fortaleza

Country/State: CE Country: Brazil

Contact Person: Adriano Lopes Title: Dr. med

Phone: 5508509925460

Fax: eMail: [adriano@imn-cv.com.br](mailto:adriano@imn-cv.com.br)

Comment:

Status: Operational

## Results

In a pilot study carried out with 10 centers, it was possible for users to upload and access the collected data. The public user was able to view a list of institutions together with basic data and contact information; registered users also had access to statistical information and were also able to edit contents of own institution, necessary for updating.



NUMDAB (NUclear Medicine DAtaBase)

| Region                           | NM Centres | NM Physicians | Med Phys | Techs | THER Ward | DIAG   | PET  | THER | In vitro |
|----------------------------------|------------|---------------|----------|-------|-----------|--------|------|------|----------|
| Africa                           | 46         | 82            | 39       | 151   | 9         | 59911  | 3190 | 2200 | 78239    |
| East Asia                        | 14         | 85            | 35       | 89    | 3         | 61812  | 3190 | 8649 | 469667   |
| Eastern Europe and Northern Asia | 172        | 399           | 68       | 293   | 7         | 245893 | 143  | 8083 | 96057    |
| Latin America & Caribbean        | 62         | 186           | 41       | 220   | 12        | 95650  |      | 3221 | 2600     |
| Middle East                      | 34         | 329           | 40       | 173   | 3         | 28358  |      | 986  | 140000   |
| North America (USA & Canada)     | 1          |               |          |       |           |        |      |      |          |
| South Asia                       | 26         | 11            |          |       |           |        |      |      |          |
| Southeast Asia                   | 15         |               |          |       |           |        |      |      |          |
| Southern and Western Pacific     | 6          |               |          |       |           |        |      |      |          |
| Western Europe                   | 44         | 11            |          |       |           |        |      |      |          |
| Total                            | 420        | 143           |          |       |           |        |      |      |          |

NUMDAB (NUclear Medicine DAtaBase)

Queries

- General figures by region
- General figures by country
- Number of procedures by region
- Number of procedures by country
- General information on equipment by region
- General information on equipment by country

Maps

- Information on equipment by region: Planar vs. SPECT cameras
- Information on equipment by region: PET vs. PET-CT
- General information on personnel by region

## Why should anyone participate in NUMDAB?

Some advantages of participating in this census:

- Collaboration with an organization involved in providing aid to developing countries in the field of nuclear medicine.
- Opportunity to provide the agency with information on self developing and training needs.
- Stimulate the conformation of databases, statistics and record-keeping for own institution/department.
- Access information from countries/regions relevant for project development and activity-planning.
- Access to contact persons for information exchange, consultations, promoting educational activities, meetings, symposia, etc.

## Conclusions

NUMDAB is expected to be a useful tool for: a) Understanding the situation of MS regarding infrastructure, technology, and educational resources for implementing NM practice, training, and research; b) Planning possible approaches to emerging needs; c) Prioritizing educational and operational needs related to NM practice within the local Health Care systems, and d) Identifying regional centers capable of delivering training for NM professionals.