Integrated Chronic Non-Communicable Disease Registry System (ICNCDRS)

Manual of Operations

Department of Health
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ACRONYMS USED

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<thead>
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<th>Acronym</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>BHFS</td>
<td>Bureau of Health Facilities and Services</td>
</tr>
<tr>
<td>BHS</td>
<td>Barangay Health Station</td>
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<tr>
<td>CHD</td>
<td>Central for Health Development</td>
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<tr>
<td>CO</td>
<td>Central Office</td>
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<tr>
<td>COPD</td>
<td>Chronic Obstructive Pulmonary Disease</td>
</tr>
<tr>
<td>DOH</td>
<td>Department of Health</td>
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<tr>
<td>DPRG</td>
<td>Data Processing and Report Generation</td>
</tr>
<tr>
<td>DUS</td>
<td>Data Uploading System</td>
</tr>
<tr>
<td>ER</td>
<td>Emergency Room</td>
</tr>
<tr>
<td>HIS</td>
<td>Health Information System</td>
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<tr>
<td>HOMIS</td>
<td>Hospital Management Information System</td>
</tr>
<tr>
<td>ICNCDRS</td>
<td>Integrated Chronic Non-Communicable Disease Registry System</td>
</tr>
<tr>
<td>IHOMP</td>
<td>Integrated Hospital Operations and Management Program</td>
</tr>
<tr>
<td>IMS</td>
<td>Information Management Service</td>
</tr>
<tr>
<td>LTO</td>
<td>License To Operate</td>
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<tr>
<td>MHO</td>
<td>Municipal Health Office</td>
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<tr>
<td>NCDPC</td>
<td>National Center for Disease Prevention and Control</td>
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<tr>
<td>NCHFD</td>
<td>National Center for Health Facilities Development</td>
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<td>NCHP</td>
<td>National Center for Health Promotion</td>
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<tr>
<td>NEC</td>
<td>National Epidemiology Center</td>
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<tr>
<td>OPD</td>
<td>Out Patient Department</td>
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<tr>
<td>PHO</td>
<td>Provincial Health Office</td>
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<tr>
<td>RHU</td>
<td>Rural Health Unit</td>
</tr>
<tr>
<td>SCM</td>
<td>System Configuration Management</td>
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<tr>
<td>SRAE</td>
<td>Surveys, Risk Assessment and Evaluation</td>
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</tbody>
</table>
DEFINITION OF TERMS

A reportable case for the Integrated Chronic Non-Communicable Disease Registry System is defined as a patient who was brought to the Hospital or BHS/RHU Community for consultation of a resident doctor.

**Alcohol** – refers to an excessive consumption of alcohol is a risk factor in certain cancers, such as liver cancer. Alcohol, in combination with tobacco, significantly increases the chances that an individual will develop mouth, pharynx, larynx, and esophageal cancers.

**Aneurysm** – refers to a pouchlike bulging of a blood vessel. Aneurysms can rupture, leading to stroke.

**Asthma** – refers Asthma is a chronic (long-lasting) inflammatory disease of the airways. In those susceptible to asthma, this inflammation causes the airways to narrow periodically. This, in turn, produces wheezing and breathlessness, sometimes to the point where the patient gasps for air. Obstruction to air flow either stops spontaneously or responds to a wide range of treatments, but continuing inflammation makes the airways hyper-responsive to stimuli such as cold air, exercise, dust mites, pollutants in the air, and even stress and anxiety.

**Atrial fibrillation** – refer to a disorder of the heart beat associated with a higher risk of stroke. In this disorder, the upper chambers (atria) of the heart do not completely empty when the heart beats, which can allow blood clots to form.

**Bronchitis** – refer to an inflammation of the air passages between the nose and the lungs, including the windpipe or trachea and the larger air tubes of the lung that bring air in from the trachea (bronchi). Bronchitis can either be of brief duration (acute) or have a long course (chronic). Acute bronchitis is usually caused by a viral infection, but can also be caused by a bacterial infection and can heal without complications. Chronic bronchitis is a sign of serious lung disease that may be slowed but cannot be cured.

**Cancer** - refer to not just one disease, but a large group of almost 100 diseases. Its two main characteristics are uncontrolled growth of the cells in the human body and the ability of these cells to migrate from the original site and spread to distant sites. If the spread is not controlled, cancer can result in death.

**Cerebral embolism** - A blockage of blood flow through a vessel in the brain by a blood clot that formed elsewhere in the body and traveled to the brain.

**Cerebral thrombosis** - A blockage of blood flow through a vessel in the brain by a blood clot that formed in the brain itself.

**Chronic** – refers to a long duration and slow progression. Illnesses that are chronic develop slowly over time, and do not end. Symptoms may be continual or intermittent, but the patient usually has the condition for life.
**Completed stroke** - stroke syndrome reflecting the infarction of the vascular territory that is put at risk by a stenosis or occlusion of a feeding vessel.

**COPD** – Chronic Obstructive Pulmonary Disease refers to a term used to describe chronic lung diseases, like chronic bronchitis, emphysema, and asthma.

**Diabetes** – refers to a disease characterized by an inability to process sugars in the diet, due to a decrease in or total absence of insulin production. May require injections of insulin before meals to aid in the metabolism of sugars.

**Diabetes (Type 1)** – refers disease marked by an inability to use carbohydrates because of an absolute deficiency of insulin. Occurs in adults and children; symptoms include excessive thirst, frequent urination, weight loss, increased appetite, and irritability. Individuals with Type 1 diabetes depend completely on insulin.

**Diabetes (Type 2)** – is a form of diabetes not necessarily dependent on insulin but exhibits hyperglycemia and insulin resistance. Often linked to obesity, onset is usually after 40 years of age.

**Diet** – Thirty-five percent (35%) of all cancers are due to dietary causes. Excessive intake of fat leading to obesity has been associated with cancers of the breast, colon, rectum, pancreas, prostate, gall bladder, ovaries, and uterus.

**Disease** – any deviation from or interruption of the normal structure or function of any body part, organ, or system that is manifested by a characteristic set of symptoms and signs and whose etiology, pathology, and prognosis may be known or unknown.

**Embolic stroke** – refers to a stroke syndrome due to cerebral embolism.

**Emphysema** – refers to a chronic respiratory disease where there is over-inflation of the air sacs (alveoli) in the lungs, causing a decrease in lung function, and often, breathlessness.

**Environment** - radiation is believed to cause 1-2% of all cancer deaths. Ultra-violet radiation from the sun accounts for a majority of melanoma deaths. Other sources of radiation are x rays, radon gas, and ionizing radiation from nuclear material.

**Family history** – refers to a certain cancers like breast, colon, ovarian, and uterine cancer recur generation after generation in some families. A few cancers, such as the **eye cancer**, "retinoblastoma," a type of colon cancer, and a type of breast cancer known as "early-onset breast cancer," have been shown to be linked to certain genes that can be tracked within a family. It is therefore possible that inheriting particular genes makes a person susceptible to certain cancers.

**Health facility** - responsible for operating the ICNCDRS software. It can be a hospital, rural health unit or clinic.
Heat stroke - a condition due to excessive exposure to heat, with dry skin, vertigo, headache, thirst, nausea, and muscular cramps; the body temperature may be dangerously elevated.

Infectious agents - In the last 20 years, scientists have obtained evidence to show that approximately 15% of the world's cancer deaths can be traced to viruses, bacteria, or parasites. The most common cancer-causing pathogens and the cancers associated with them are shown in table form.

Intracerebral hemorrhage - A cause of some strokes in which vessels within the brain begin bleeding.

Pollution – several studies have shown that there is a well-established link between asbestos and cancer. Chlorination of water may account for a small rise in cancer risk. However, the main danger from pollution occurs when dangerous chemicals from the industries escape into the surrounding environment. It has been estimated that 1% of cancer deaths are due to air, land, and water pollution.

Pulmonary – relating to the opening leading from the right large chamber of the heart into the lung artery.

Sexual and reproductive behavior – refers to the human papillomavirus, which is sexually transmitted, has been shown to cause cancer of the cervix. Having too many sex partners and becoming sexually active early has been shown to increase one's chances of contracting this disease. In addition, it has also been shown that women who don't have children or have children late in life have an increased risk for both ovarian and breast cancer.

Stroke – refers to a sudden death of brain cells in a localized area due to inadequate blood flow.

Stroke in evolution - a preliminary, unstable stage in stroke syndrome in which the blockage is present but the syndrome has not progressed to the stage of completed stroke.

Subarachnoid hemorrhage - A cause of some strokes in which arteries on the surface of the brain begin bleeding.

Thrombotic stroke - stroke syndrome due to cerebral thrombosis, most often superimposed on a plaque of atherosclerosis.

Tissue plasminogen activator (tPA) - A substance that is sometimes given to patients within three hours of a stroke to dissolve blood clots within the brain.

Tobacco – Eighty to 90% of lung cancer cases occur in smokers. Smoking has also been shown to be a contributory factor in cancers of upper respiratory tract, esophagus, larynx, bladder, pancreas, and probably liver, stomach, breast, and kidney as well. Recently, scientists have also shown that second-hand smoke (or passive smoking) can increase one's risk of developing cancer.
I. INTRODUCTION

The Department of Health (DOH) has exerted determined effort to assess the existing disease registries in attempts to provide policy makers and program managers with essential data. The project on the Assessment of Existing Chronic Non-Communicable Disease Registry Systems did just this. The result of that effort together with the outcome of the Design for Potential Linkage and Accessibility by the DOH for Effective Policy Directions determined that the appropriate platform and network can facilitate the design of an integrated system solution that can establish and operate the linkages that can produce meaningful information.

To rally the concomitant appeal generated by such effort, the DOH further presented a proof-of-principle prototype or model to showcase the design of an information management network that will benefit health managers, policy makers and workers. The prototype demonstrated that their existing resources can be maximized so that data and information can be sourced, generated, disseminated and used optimally. Present in that demonstration were various stakeholders involved in the renal disease registry, cancer disease registries, the Philippine Heart Center, Lung Center of the Philippines, Diabetes Philippines, Jose R. Reyes Memorial Medical Center, National Telehealth Center, Tondo Medical Center, Philippine Children's Medical Center, Philippine Health Insurance Corporation, World Health Organization, Rizal Medical Center, East Avenue Medical Center and the DOH (represented by DOH CHD 4A, National Epidemiology Center, National Center for Disease Prevention and Control, Bureau of Health Facilities and Services, Health Policy Planning Development Bureau, and Information Management Service).

The Integrated Chronic Non-Communicable Disease Registry System software was based on the previous integrated design concept and model thus presented. Policy makers and program managers will have access and linkage to these registry systems, and the DOH can generate the consolidated reports that can guide them in prioritizing health resource investments and program interventions.
II. Organizational Structure and Functions

A. Integrated Chronic Non-Communicable Disease Registry System (ICNCDRS) in the Organizational Structure of Department of Health

The Department of Health (DOH) has designed the disease registry system mainly to coordinate and integrate activities, plans and programs of various stakeholders into an effective and efficient system.

CONCEPTUAL DIAGRAM

![Conceptual Diagram of ICNCDRS]

Figure 1: Conceptual Diagram of ICNCDRS

The NCDPC is the overall implementing body of the Integrated Chronic Non-Communicable Disease Registry System in the country. It has the following functions: Registry of Cancer Data, COPD Data, Diabetes Data and Stroke Data. Five (5) DOH offices work closely with the NCDPC – the National Epidemiology Center, Information Management Service, Bureau of Health Facilities and Services, National Center for Health Facility and Development, and Health Promotion.

As a nationwide undertaking, the NCDPC requires health facilities to adhere to all national policies and guidelines on chronic disease reporting. The NCDPC is the central
coordinating body for the evaluation, processing, monitoring, and dissemination of data or information. Each health facility is required to report on a daily basis all chronic disease-related cases through the Integrated Chronic Non-Communicable Disease Registry System. While the NCDPC has no regulatory power over the health facilities, it does have indirect power thru the Bureau of Health Facilities and Services. The NCDPC as the highest policy making body can make recommendations to the BHFS for appropriate actions on erring health facilities.

**B. Operational Structure**

The ICNCDRS operates under direct supervision of the NCDPC, and in coordination with NCHFD, BHFS, and IMS will provide the guidelines, instructions and/or protocols for the ICNCDRS.

![Figure 2: ICNCDRS Operational Structure](image_url)
C. Duties and Responsibilities

1. National Center for Disease Prevention and Control
   a. Manage and supervise the smooth implementation of the system.
   b. Resolve issues, concerns, and/or problems.
   c. Monitor the implementation of the system.
   d. Provide overall direction and guidance.
   e. Oversee and supervise day to day operations and ensure efficient and effective implementation of the system.

2. National Epidemiology Center
   a. Manage and oversee the implementation or operations of the system.
   b. Manage the development of the operational policies, practices, standards and protocols to ensure the effective and efficient implementation of ICNCDRS.
   c. Provide leadership/expertise in the enhancement and maintenance of ICNCDRS.
   d. Learn current processes, procedures, policies and guidelines related to the implementation or operations of the ICNCDRS.
   e. Resolve issues, concerns, and/or problems.
   f. Monitor the implementation of the system.
   g. Provide overall direction and guidance.
   h. Answer queries about the forms, reports and standard operating procedures or processes.
   i. Check and/or validate the data being reported or uploaded.
   j. Conduct analysis of the data.
   k. Provide report on non-complying health facilities and those with erroneous or questionable data.
   l. Process and/or generate the required reports.
   m. Analyze and interpret data/information.
   n. Prepare official reports for public viewing and announcement.
   o. Publish the official report on chronic disease.
p. Provide customer support by responding to questions or queries related to the chronic disease being reported (e.g. meaning or interpretation of the data).
q. Provide orientation and updates to management.
r. Conduct on-site system monitoring.

3. **Information Management Service**

a. Ensure that system is updated and that all software related problems are properly addressed.
b. Enhance, debug, and maintain the software.
c. Conduct orientation and training.
d. Resolve or troubleshoot issues, concerns, and/or problems.
e. Elevate issues, concerns and/or problems to concerned personnel or office.
f. Maintain network and database operations 24 hours a day, and 7 days a week.
g. Learn current software operations of the ICNCDRS and further updates on the system.
h. Evaluate, install, configure, fine tune, document, back-up, protect, manage, and troubleshoot server, operating system, hardware, and database.
i. Establish, maintain, and regularly update backup and restore procedures for servers, application system, and database.
j. Assist in disaster recovery planning and testing.
k. Conduct growth analysis and capacity planning.
l. Troubleshoot problems that may impede successful implementation or operations of the system.
m. Maintain records, prepare and submit required reports.
n. Provide help desk support.

4. **National Center for Health Promotion**

The National Center for Health Promotion will translate the salient findings into messages and materials that are appropriate for specific population segments. Communication activities through various media channels will also be conducted to elicit public opinion and generate public discussion favorable to disease prevention and control.
5. National Center for Health Facility Development
   a. Provide implementation support for hospitals to comply with the reporting of data.
   b. Set/Establish data standards.
   c. Conduct system monitoring and evaluation.

6. Bureau of Health Facilities and Services
   a. Act on the recommendations of ICNCDRS for appropriate actions.
   b. Set/Establish data standards.
   c. Conduct system monitoring and evaluation.

III. The Integrated Chronic Non-Communicable Disease Registry System (ICNCDRS)

A. System Objectives

   The general objective of the Integrated Chronic Non-Communicable Disease Registry System (ICNCDRS) is to make efficient and effective to the current systems and procedures of reporting disease-related data. Specifically, ICNCDRS aims to:

1. Provide accurate, complete and timely reporting of disease related data for decision making and for developing program interventions.
2. Improve the collection, processing and generation of statistical reports for decision making, program management and monitoring.
3. Achieve integration of chronic non-communicable disease data from different sources.
4. Strengthen coordination, communication, collaboration among the different health facilities and the DOH through the reporting system.
5. Provide an effective and efficient tool for monitoring disease related data or information.
B. Scope and Limitations

1. Centralized Issuance and Verification of Patient Identification Code or Number.
2. Web-based recording of data for the Cancer, Diabetes, COPD and Stroke Registries.
3. Web-based Uploading of Cancer, Diabetes, COPD, Stroke, and Renal Disease Registries (Hemodialysis and Peritoneal Dialysis).
4. Search/Query/Report System for searching a specific data and/or generating customized reports.
5. Reference Maintenance to manage the system in terms of library or references.
6. User Account Maintenance to manage the system in terms of setting up user accounts, access rights/levels/permissions.

C. System Environment

1. The nerve center of the ICNCDRS shall be set up at the Information Management Service operating 24 hours, 7 days a week. It is expected that the integrated registry is appropriately staffed and with the right working environment.

2. Its basic equipment for its operations are a server and various PCs and laptops/notebooks accessed only by authorized users of the system and are hooked 24/7 to an internet connection maintained by an internet service provider.

3. Reporting Health Facilities: Desktop Computers with internet connection. All users will need at least one printer per office. Recommended hardware or computer/equipment specifications for users are as follows:

<table>
<thead>
<tr>
<th>a. Workstation</th>
<th></th>
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<tbody>
<tr>
<td></td>
<td>Pentium 4 Core Duo</td>
</tr>
<tr>
<td></td>
<td>1 Gb Memory</td>
</tr>
<tr>
<td></td>
<td>80 Gb Hard Disk</td>
</tr>
<tr>
<td></td>
<td>Can connect to the Internet</td>
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<tr>
<td>b. Printer</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inkjet, Laser or Dot Matrix</td>
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<tr>
<td>c. Monitor</td>
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<tr>
<td></td>
<td>LCD/CRT Monitor</td>
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<tr>
<td>d. Operating System</td>
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<td></td>
<td>Windows 98 or higher</td>
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<tr>
<td>e. Internet Access</td>
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<td></td>
<td>ISP/DSL</td>
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</tbody>
</table>

13
D. System Architecture

**DEPARTMENT OF HEALTH**

**Integrated Chronic Non-Communicable Disease Registry System**

**D. System Architecture**

**DEPARTMENT OF HEALTH**

1. **DATA CONSOLIDATION & AGGREGATION**
2. **WEB PORTAL**
3. **ONLINE REGISTRIES**
4. **DATA UPLOADING**
5. **HEALTH FACILITIES**

**OUTPUTS**

- National Government
- Department of Health
- CHDs
- LGUs
- NGOs
- PHIC
- Academe, Research Institutions
- Agency Data Beneficiaries

**HARDWARE CONNECTIVITY**

- Department of Health
- Reporting Health Facilities
- Internet
- Reporting Health Facilities
- Reporting Health Facilities

**With Existing Registries**

**Without Registries**

**CNCDRS Unified Patient Identifier**

1. Verification
2. If Existing, Get/Use the Patient Identifier
3. If none, assign Patient Identifier
E. System Components

1. The Integrated Chronic Non-Communicable Disease Registry System or ICNCDRS is a web-based recording of data for the Cancer, Diabetes, COPD and Stroke Registries. Health facilities can directly encode or enter data into the system using the Internet. Data goes into the DOH central repository or database and can be validated and consolidated and then presented in the appropriate statistical, graphical and other management reports. Reports can be viewed depending on access rights given to health facilities.

2. The system requires a web-based uploading of Cancer, Diabetes, COPD, Stroke, and Renal Disease Registries (Hemodialysis and Peritoneal Dialysis). Health facilities with existing software or automated information system can electronically submit data using the DOH standard data format. The electronic submission is channeled through a Data Uploading System which also makes use of the Internet. Data goes into the DOH central repository or database and can be validated and consolidated and then presented in the appropriate statistical, graphical and management reports. Reports can be viewed depending on access rights given to health facilities.

3. The system provides a Centralized Patient Identification Process. The identity of the patient consists of a set of personal characters by which that person can be identified. Identification is the proof of one’s identity. The patient identification number or code is the value to be assigned to a patient to facilitate positive identification for healthcare purposes. The uniqueness of the patient identity shall be based on the following: Last Name, First Name, Middle Name, Date of Birth, and Sex.

4. The coding scheme for national patient identification is sequential coding.
   a) Patient whose master data -- first name, last name, middle name, date of birth, and sex which already exist in the registry shall not be given a new patient identification code or number.
   b) Duplicate patient master data will not be accepted. Key indicators of uniqueness are the patient’s last name, first name, middle name, date of birth, and sex.
c) Confirmation messages appear to validate if a new patient will be added.

d) With simple and advanced search facility to enable users to locate or find a specific data.

IV. Policies and Procedural Guidelines

A. Statement of Policies

1. It shall be a national policy that disease reporting is mandatory to all health facilities.

2. The ICNCDRS shall regularly review the data that may affect the reporting of disease related cases.

3. The NCDPC shall oversee the management and implementation of the ICNCDRS.

B. Procedure for Reporting

PROCESS FLOW
C. Enlistment of Health Facilities to Integrated Chronic Non-Communicable Disease Registry System

New Registrants: During the release of the License to Operate, the health facility will be given a username and password to access the ICNCDRS.

1. Since ICNCDRS is a web-based system, each health facility needs to register to NCDPC to be recognized.
2. As basic requirement, health facilities must have a computer system (a desktop or laptop; suggested minimum specs are: Pentium Core Duo, 1Gb RAM, 80 Gb HD) and must have access to the internet.
3. A health facility may register via mail, phone, or email. The information and procedure for registration will be disseminated officially by the DOH through proper issuance.
4. When registering, the health facility shall identify a unique user (usually the system administrator) at its facility who shall provide NCDPC with his/her user ID and password.
5. ICNCDRS will recognize only this user using the submitted ID and password as the official representative of the health facility.
6. Because of the sensitivity and confidentiality of the information being moved in the system, the IMS shall see to it that access to the system is highly secured at its end.
7. To deter abuse, such Username and Password will have an expiry date to be determined by IMS from time to time.

There are some inherent limitations to access the ICNCDRS. Health facilities shall have access to data it submits and all statistical reports produced by the system. The DOH will provide System Training to all registered facilities. Should there be instances when the facilities should find it necessary to rectify some of its submissions, there will be Incident Reporting where the health facility will officially notify NCDPC of the nature of its request and what spectrum of data it wants to amend.
DEPARTMENT OF HEALTH
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The NEC shall have a process by which to analyze and investigate the issues related to the request, and if found warranted will provide the facility to make the corrections. Use of ICNCDRS implies strict adherence to the foregoing policies and procedural guidelines.

D. Security and Confidentiality

1. Database is password-protected.
2. With Access Control Function to control the access to the integrated system. Individual user has User Name and Password to his/her function or role.
3. For control and monitoring purposes, only one (1) user account is given to each reporting health facility.
4. Users can only add data according to their role and level of access to the system. Edit and Delete are not allowed. Users must officially report to the NCDPC any updates (editing or deleting) in data. The DOH System Administrator shall be responsible for updating the data once approved by the NCDPC designated officer through a process of verification and approval.
5. Users can generate the reports of their patients only. They cannot view the reports of other health facilities.
6. An audit trail or transaction log records users who have accessed the system.

E. Integrated Chronic Non-Communicable Disease Registry System Implementation Requirements

To put into successful operation, the ICNCDRS in a health facility, the following must be available:
1. Availability of 24-hour electricity.
2. Procurement of the recommended hardware and operating system, and ensure internet connection prior to the implementation of the system.
3. Provision for annual continuing budget for the following:
   a. Computer supplies like ink/ribbon, compact discs, and other related computer supplies.
   b. Hardware Maintenance.
c. Local information technology training updates.

4. Provision for full time and backup personnel who shall be responsible for encoding the data into the system.

5. Issuance and implementation of policies related to the following:
   a. Placement of processing and support activities
   b. Responsibilities and extent of involvement of the users
   c. Responsibilities for information system security and administration
   d. Responsibilities for monitoring and compliance with policies and standards

F. **System Configuration Maintenance**

System Configuration Management (SCM) provides direction on identifying change, controlling change and assuring that change is properly implemented and maintained. This establishes mechanisms for evaluating, controlling and making modifications to the software. There are three (3) major activities included in SCM, namely:

   a. **CORRECTIVE MAINTENANCE.** Diagnose and correct errors that were not identified or resulted to some changes or modifications in the manual procedures.

   b. **PERFECTIVE MAINTENANCE.** Add new capabilities, modify existing functions and make general enhancements if necessary.

   c. **PREVENTIVE MAINTENANCE.** Update the software to improve future maintainability or reliability or to provide a better basis for future enhancements.

Regular personnel training must be done to ensure that knowledge and skills of users in computers as well as in Information Technology are updated. Continuous management commitment and support in terms of budget, full time involvement and participation of users, and continuing updates to policies and guidelines are relative to system implementation. The DOH personnel shall respond to the issues, concerns and/or problems related to the implementation of the system.
G. System Monitoring and Evaluation

To protect the integrity of the DOH Integrated Chronic Non-Communicable Disease Registry System or ICNCDRS, as well as the health and welfare of beneficiaries served by the program, the ICNCDRS shall undergo semi-annual audit and inspection. The objectives of System Audit are to establish, by unbiased means, factual information on some aspect of performance, safeguard against deterioration in standards, and establish facts rather than faults. Included in the system audit is the software review in which an independent examination of the ICNCDRS software product, processes and/or components are reviewed to assess compliance with specifications, standards and other criteria.
ANNEX A

Administrative Issuances

Cancer Registry

<table>
<thead>
<tr>
<th>Republic Act</th>
<th>Reference</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>RA 4921</td>
<td>An act extending the scope of the cancer detection and diagnostic center of the Dr. Jose R. Reyes Memorial Hospital to include also cancer treatment and research, and appropriating funds therefore...</td>
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</tbody>
</table>

Section 1: To operate a cancer registry within the center and to regularly submit its statistical data to the Office of the Department of Health, which is in charge of compiling the Official Cancer Registry in the Philippines...

<table>
<thead>
<tr>
<th>Administrative Order</th>
<th>Reference</th>
<th>Description</th>
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<tr>
<td>1</td>
<td>AO 89-A s. 1990</td>
<td>The Philippine Cancer Control Program Background .... This order provides for guidelines on the Philippine Cancer Control Program to be organized and managed by the Non-Communicable Disease Control Service.</td>
</tr>
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#4 Components of the Program,

4.5 Hospital Tumor Boards and Hospital Cancer Registries: To monitor and validate the incidence and prevalence of cancer and, to serve as a data base for Cancer Control planning, hospital shall establish Tumor Boards and Cancer Registries.

2 | AO 19 s. 1987 | Implementation of the pertinent provisions of EO No. 119 dated January 30, 1987, reorganizing the DOH and its attached agencies, transferring the functions of the Cancer Control Center to the Jose Reyes Memorial Medical Center and to the Non Communicable Disease Control Service under the Office for Public Health Services

“Section 22(e) – The Cancer Control Center shall be converted into a Department of Radiotherapy in the JRMMC. Its functions related to the
planning of cancer control programs shall be transferred to the NCDCS under the Office for Public Health Services. Its functions related to direct patient care and its corresponding research functions, and its existing equipment and related facilities shall be transferred to the Department of Radiotherapy hereby created in JRMMC "

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<tr>
<th>#</th>
<th>Reference</th>
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<tbody>
<tr>
<td>3</td>
<td>AO 188-A s. 1973</td>
<td>Authority and Functions of the National Cancer Control Center of the DOH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>#7. To be responsible for cancer epidemiology in the Philippines and to collect data and statistics in order to establish a reliable cancer registry of nationwide scope which is essential to better understanding of cancer as a disease and to improve care and treatment of cancer patients.</td>
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### Diabetes Registry

#### Republic Act

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<th>#</th>
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<tbody>
<tr>
<td>1</td>
<td>RA 8191 – National Diabetes Act of 1996</td>
<td>AN ACT PRESCRIBING MEASURES FOR THE PREVENTION AND CONTROL OF DIABETES MELLITUS IN THE PHILIPPINES, PROVIDING FOR THE CREATION OF A NATIONAL COMMISSION ON DIABETES, APPROPRIATING FUNDS THEREFOR AND FOR OTHER PURPOSES.</td>
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<td>Sec. 3. ... The Commission shall be attached to the Department of Health (DOH) for administrative, technical and budgetary purposes.</td>
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#### Administrative Order

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<tbody>
<tr>
<td>1</td>
<td>AO 16-A s. 1995</td>
<td>The Diabetes Mellitus Prevention and Control Program in the Philippines 4.4 Monitoring and Evaluation. To monitor/assess and evaluate program implementation, its processes and adequacy. Baseline data will be established ...</td>
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<td>7.4 Establish baseline data, conduct a national prevalence study as a basis of implementation of strategic intervention measures for the prevention and control of diabetes mellitus in the country.</td>
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## Administrative Order

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<tbody>
<tr>
<td>1</td>
<td>AO 2009-0012</td>
<td>Guidelines Institutionalizing and Strengthening the Philippine Renal Disease Registry under the DOH; in line with this, the PRDR is being institutionalized within the DOH under the National Epidemiology Center.</td>
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<td>4. Budget Allocation – The DOH shall release funds for the PRDR yearly operations, in accordance with the budget proposed by NKTI-REDCOP and approved by NEC.</td>
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## Department Memorandum

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<tbody>
<tr>
<td>1</td>
<td>DM 2008-0204</td>
<td>Collection and Submission of Philippine Renal Disease Registry Forms; the CHD through the REDCOP CHD Coordinators are hereby directed to continue the collection of registry forms from all dialysis units in your region...</td>
</tr>
</tbody>
</table>