National CardioVascular Disease Database (NCVD)

CRC
Research that matters to patients

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to establish a nation wide cardiovascular disease database

polish away the 'guess estimate' attitude - morbidity & mortality of CVD in country

OBJECTIVES

1. Describe the natural history of a disease, treatment modified or otherwise
2. Monitor safety and harm of products and services used in the treatment of a disease
3. Determine effectiveness (clinical & cost) of treatments for a disease
4. Evaluating access to and quality of treatment services for a disease

REGISTRIES

- **Acute Coronary Syndrome (ACS) Registry**
  - Established in year 2006
  - Co - Chaired by
    - Dato' Dr Jeyaindran Sinnadurai (MOH)
    - Dato' Dr Hj Azhari Rosman (NHI)

- **Percutaneous Coronary Intervention (PCI) Registry**
  - Established in year 2007
  - Chaired by
    - Dato' Dr Rosli Mohd. Ali (NHI)

ORGANISATION

Governance Board

- Various stakeholders from MOH, universities, professional bodies, NGO & private healthcare providers
- Oversee progress, direct & control activities – long term direction setting

Steering Committee

- Independent experts in CVD area
- Guide future development, direct the activities of the RCC
- Communicate results locally & internationally, disseminate information
- Determine policy & procedures for the operations of database

Data Access & Publication committee

- To look for new findings
- Restrict data release
- Sub-committee: Report Writing Committee

Registry Coordinating Centre

- Manage, coordinate & monitor progress of registry
- Maintain line of communication with Source Data Providers (SDP)
- Monitor data quality

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GOVERNANCE BOARD

Co- chairmen	Prof Dr Sim Kui Hian
	Dato' Seri Dr Robaayah Zambahari
Members	Dato' Dr Omar Ismail
	Dato' Dr Jeyaindran Sinnadurai
	Prof Dr Wan Azman Wan Ahmad
	Dato' Dr K Chandran
	Dato' Dr Haji Sapari Satwi
	Dato' Dr Khoo Kah Lin
	Prof Dr Abdul Rashid Abdul Rahman
	Dr Lim Teck Onn
	Dr Hendrick M. Y. Chia
	Dato' Dr Azhari Rosman
	Dr Balachandran Satiamurti
	Dr Inderjeet Kaur Gill

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National Cardiovascular Disease Database
(NCVD)

Registry Coordinating Centre

Registry Management

Ms S Gunavathy Selvaraj

Ms Noor Amirah Muhamad

Ms Hamimatunnisa Johar

Statisticians

Dr Hoo Ling Ping

Ms Norhafizah Abd Manan

Database Administration &

Web Application Development

Ms Lim Jie Ying

Ms Amy Porle

Clinical Data Management

Ms Teo Jau Shya

ACS REGISTRY

- Sponsored by Ministry of Health (MOH), co-sponsored by National Heart Association of Malaysia (NHAM)
- Collaboration work of Medicine and Cardiology Departments (MOH, IJN & Universities)
- Case Report Form (CRF) –share the similar data fields & definitions of
  - National data elements for the clinical management of ACS by
    - National Heart Foundation of Australia
    - The Cardiac Society of Australia and New Zealand
  - Key data elements and definition for measuring the clinical management and outcomes of patients with ACS by
    - American College of Cardiology (ACC)
  - Cardiology Audit and Registration Data Standards (CARDS) for Coronary Care Unit (CCU)/ ACS admissions
- Online data capturing

  As of 18th March 2009:

  From 15 SDP: total patients=9,952   total ACS cases registered online= 10,284 cases

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STEERING COMMITTEE

Co- chairmen	Dato' Dr Hj Azhari Rosman
	Dato' Dr Jeyaindran Sinnadurai
Members	Assoc Prof Dr Chin Sze Piaw
	Dr Liew Chee Tat
	Dr Chong Wei Peng
	Dr Lu Hou Tee
	Dr Ang Choon Kiat

WHAT DATA DO WE COLLECT?

#	DOMAIN	DATA ELEMENTS
A	Identifier	Name, IC, Other identifying document #, Contact numbers
B	Demographics	Age, Sex, Ethnicity, Weight & Height, Hip & Waist circumference, Smoking status
C	Medical history	Medical history/ co-morbidities, Family history
D	ACS diagnosis	ECG abnormalities type and location, Cardiac biomarkers, ACS stratum (STEMI, NSTEMI & UA)
	ACS Severity	Killip classification, TIMI risk score, LEVF
E	Lab investigations	Lipid profile, FBS
F	Treatment	Fibrinolytic therapy, Status of aspirin use, Invasive therapeutic procedures (PCI/CABG) & Pharmacological therapy
G	Outcomes	Patient survival; death, date of death, cause of death Final diagnosis at discharge Bleeding complication
H	Economics	Resource use – hospitalization in CCU/ICU/CICU and length of stay
I	Performance measure	Door to needle time Door to balloon time

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PCI REGISTRY

- Sponsored by Ministry of Health Malaysia and co-sponsored by National Heart Association of Malaysia (NHAM)

- Collaboration work with Melbourne Intervention Group (MIG)

- Case Report Form (CRF) –shares the similar data fields & definitions with MIG

- Online data capturing

As of 18th March 2009:

From 10 SDP: total patients = 7,195

Total PCI procedures registered online=7,857 procedures

STEERING COMMITTEE

Chairman	Dato' Dr Rosli Mohd Ali
Members	Dato' Seri Dr Robaayah Zambahari
	Prof Dr Sim Kui Hian
	Prof Dr Wan Azman Wan Ahmad
	Dato' Dr Omar Ismail
	Dr Lee Chuey Yan
	Dr Liew Houng Bang (Secretary)
	Dr Tamil Selvan Muthusamy
	Dr Kannan Pasamanickam
	Dr Hendrick Chia

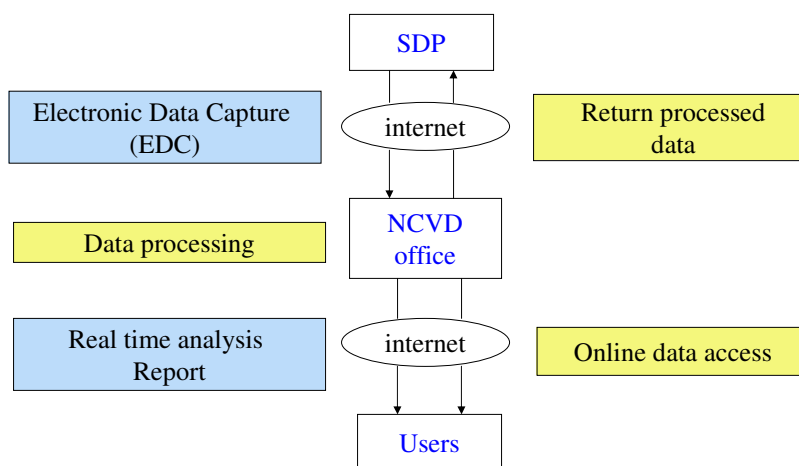National Cardiovascular Disease Database (NCVD)

WHAT DATA DO WE COLLECT?

#	DOMAIN	DATA ELEMENTS
A	**Identifier**	Name, IC, Other identifying document #, Contact numbers
B	**Demographics**	Age, Sex, nationality, ethnicity, Weight & Height, BMI, Use of alcohol/ tobacco,
C	**Medical history**	Medical history/ co-morbidities, Family history, previous intervention
D	**Coronary artery disease diagnosis**	Baseline ECG, ACS stratum (STEMI, NSTEMI & UA), Congestive heart failure, STEMI event
	Coronary artery disease Severity	Killip classification, EF status, NHYA, Cardiogenic shock, Functional ischaemia
E	**Lab investigations**	Baseline creatinine, Total Cholesterol, LDL Level
F	**Treatment**	Date of procedure, PCI status, Medication, percutaneous entry, French size, use of closure device, extent of coronary disease, fluoroscopy time and dose, contract type and volume used, details of PCI procedure like lesion code, stent type & intracoronary devices used.
G	**Outcomes**	Lesion result, in-hospital outcome, vascular complication, outcome at discharge
H	**Economics**	Type and number of stent used , Total number of lesion Resource use – hospitalization & outpatient care
J	**Performance measure**	Lesion results, Time of first balloon inflation/stent/aspiration

HOW e-NCVD WORKS

National Cardiovascular Disease Database
(NCVD)

HOW TO GET INTO e-NCVD?

WEB APPLICATION

National Cardiovascular Disease Database
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BENEFITS

- Having OWN CENTRE DATA at FINGER TIPS

- Able to COMPARE own CENTRE STATISTICS with NATIONAL STATISTICS

- Able to DOWNLOAD own CENTRE DATA
  - For further analysis
  - For own research use

- Accessible to REAL TIME REPORT a*nytime, anywhere*

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OTHER ACTIVITIES

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CENTRE SURVEY STUDY (CSS)

- Will cover the following part of general objectives of Patient Registry:

  3. Determine effectiveness (clinical & cost) of treatments for a disease
  4. Evaluating access to and quality of treatment services for a disease

- Conduct on annual basis

- Findings will be reported in "**Chapter 1: Provision of the services in the country"** of **Registry Annual Report**

Centre level data is needed to meet three critical specific objectives:

1. Disease treatment: Level & equity of access to Rx
2. Resource inputs to support treatment: Physical facility, Human, Availability of Drug and Medical technology (devices)
3. Healthcare economics: Level and equity of Financing for Rx

To evaluate:

1. Level & equity of access to Treatment (Access to healthcare research)
2. Level and equity of financing for Treatment (Economics of Healthcare research)

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Current involvement (for year 2008 data):
      1. CSS for Coronary Care Unit (CCU) service
      2. CSS for Interventional Cath. Lab (ICL) service

FINDINGS FROM THE 1st CCU CENTRE SURVEY 2006
      *downloadable online at http://www.acrm.org.my/ncvd/documents/1stAnnualReport/chapter1.pdf

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Chapter 1:
Provision of Acute Coronary Care Services in Malaysia

In 2006, there were a total of 31186 admissions to the 73 coronary care units (CCU) in Malaysia, of which 12534 admissions were due to Acute Coronary Syndrome (ACS) (Table 1). The incidence of ACS admission was therefore 47.1 per 100,000 population in 2006. Assuming half of all coronary heart disease (CHD) first presented with ACS and only half were admitted to CCU with a third who died before being admitted into hospital, a rough estimate of the incidence of CHD in Malaysia is 141 per 100,000 population.

ACHIEVEMENTS

Report:
NCVD-ACS Registry Annual report year 2006
*downloadable online at http://www.acrm.org.my/ncvd/publications.htm

Articles:
Acute Coronary Syndrome (ACS) Registry - Leading the Charge for National Cardiovascular Disease (NCVD) Database (MJM)
*downloadable online at http://www.acrm.org.my/ncvd/publications.htm

The Foundation of NCVD PCI Registry: The Malaysia's First Multi-Centre Interventional Cardiology Project (MJM)
*downloadable online at http://www.acrm.org.my/ncvd/publications.htm

Presentations:
Various presentations on our country's data in local conferences as well as international

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THOUGHTS FOR FUTURE

NCVD – SUB REGISTRIES

- Acute Coronary Syndrome (ACS)*
- Percutaneous Coronary Intervention (PCI)*
- Cardiac Surgery (*known as MyCARE*)*
- Heart Failure
- CV Risk factors
- Implanted Cardiac Devices
- CV Drug Usage
- Paediatric Cardiology (2009)

currently existing registries

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THANK YOU ❤️

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