

# Adult Diabetes Control & Management (ADCM)

Progress Report

Current challenge  
&  
Future direction

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## Scope of Presentation

1. ADCM 2008/09 progress report
2. Current challenges
  - Use of data
  - Dissemination of information-Publication
3. Future direction

## INTRODUCTION

- Prevalence of diabetes has increased from 8.3% (NHMS II,1996) to 14.9% (NHMS III,2006)
- Poor diabetes controlled leads to higher rate of morbidity and mortality
- Precise estimate on the incidence and prevalence of diabetes in Malaysia is lacking

## Introduction

- The Adult Diabetes Control and Management audit (ADCM) was first established in May 2008.
- Initially, this registry was called ADCM but subsequently the plan is to change to National Diabetes Registry (NDR) as it was deemed to be more appropriate.
- CRF was initially simplified from the DICARE CRF as well as taking consideration the NCD Division, MOH QAP of Diabetes in Primary Care.
- It started off as a pilot project involving centers with health clinics and hospitals within the Ministry of Health Malaysia in Negeri Sembilan.

## Initial Steering Committee

- Dr. Mastura Ismail, Ampangan Health Clinic
- Dr. Wan Shaariah mohd Yusuf, Clinical Research Centre, Hospital Seremban
- Dr. Zanariah Hussein, Medical Department, Hospital Putrajaya
- Dr. Hjh. Fatanah Ismail, Disease Control Division, MOH, Putrajaya
- Dr. Feisul Idzwan Musthapa, Disease Control Division, MOH, Putrajaya
- Dr. Inderjeet Kaur Gill, Medical Development Department, Putrajaya
- Dr. G.R. Letchumanan a/k Ramanathan, Medical Department, Hospital Taiping
- Dr. Sri Wahyu Taher, Simpang Kuala Health Clinic

## Objectives of ADCM

1. Determine the **demographic** of the diabetic patients attending the MOH health clinics/hospital
2. Determine the **diabetic health educational and preventive program** among patients attending their regular follow-up in MOH health clinics/hospitals
3. Determine the **diabetic complications** workload in health clinics/hospitals KKM

## Objectives.. cont

4. Determine the demographic of the diabetic patients attending the MOH health clinics/hospital because of diabetes complications
5. Determine the **diabetic treatment outcome** in patients attending the MOH health clinics/hospital
6. To **facilitate service improvements** by providing robust nationally comparable data for diabetic care.
7. **Stimulate and facilitate diabetic research** activities using this database.

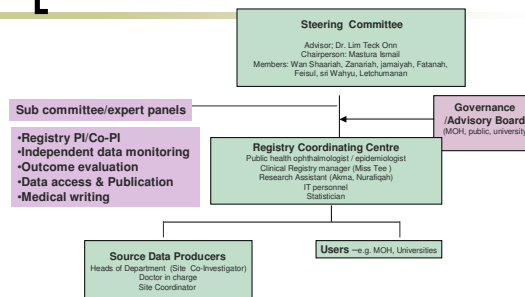
## Vision

***An Accessible Diabetes Health Information System***

ADCM Registry-[www.acrm.org.my/adcm](http://www.acrm.org.my/adcm)

Launch 1.5.2008

## Organization chart



### Activities in 2008

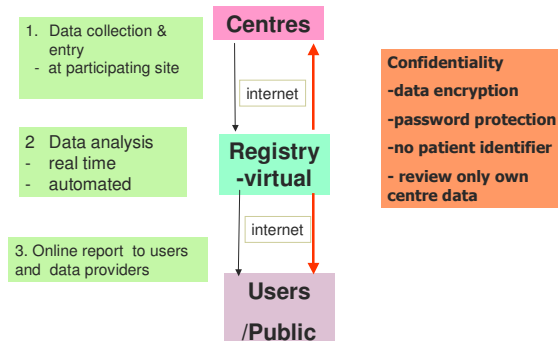
3 Steering committee meetings , 1 publication  
1 SDP management meeting-present annual reports,

## Materials and Methods

- Age 18 and above years old
- Type 1 and Type 2 Diabetes seen in any of the participating sites.
- Old and newly diagnosed cases
- Open for health clinics and hospital
- Center need to register with ADCM
- Centre Participation Self Reply Form
- Authorization Form
- Information Security Policy/User Agreement
- Upon receiving these documents, the centre shall be registered and each of the users of the ADCM shall be notified via their e-mail address.

## Method- web based registry

### Online web application



## Uses of Registry data

### Conventional

- **Epidemiology**
  - Public health service planning
- **Outcome assessment**
  - Standard of care
- **Quality Assurance**
- **Research**

### Expansion

- **Trending and tracking**
  - Benchmarking
- **Quality assurance**
  - eKPI
- **Performance monitoring**
  - eCUSUM

Presentation at meetings

Apply in clinical practice or effect change in Healthcare Policy

Data → Information → Wisdom

## Progress report

Cases Reported by SDP (As of 25 March 2009)

Negeri Sembilan Darul Khusus			
Jelebu			
1	Hospital Jelebu	108	7.58%
2	KK Jelebu	532	37.33%
3	KK Pertang	182	12.77%
4	KK Simpang Durian	253	17.75%
5	KK Titi	350	24.56%
<b>Total (Jelebu)</b>		<b>1425</b>	<b>6.98%</b>
Jempol			
1	Hospital Jempol	0	0.00%
2	KK Bahau	210	9.77%
3	KK Dandar Sri Jempol	959	39.01%
4	KK Lusi Muda	153	7.12%
5	KK Palong 4,5,6	180	8.37%
6	KK Palong 7,8	309	14.37%
7	KK Palong 9,10,11	157	7.30%
8	KK Serting Hilir	285	13.26%
<b>Total (Jempol)</b>		<b>2150</b>	<b>10.63%</b>

## Cases Reported by SDP

Port Dickson			
1	Hospital Port Dickson	87	1.97%
2	KK Bukit Pelanduk	485	10.97%
3	KK Linggi	435	9.83%
4	KK Pasir Panjang	295	6.67%
5	KK Port Dickson	3121	70.56%
<b>Total (Port Dickson)</b>		<b>4423</b>	<b>21.66%</b>
Tampin			
1	Hospital Tampin	76	1.74%
2	KK Air Kuning	274	6.27%
3	KK Gemas	1035	23.68%
4	KK Gemencheh	696	15.93%
5	KK Jelai	7	0.16%
6	KK Simpang Jelai	0	0.00%
7	KK Tampin	2282	52.22%
<b>Total (Tampin)</b>		<b>4370</b>	<b>21.40%</b>

Kuala Pilah			
1	Hospital Tuanku Ampuan Najha	59	1.89%
2	KK Gunung Pagar	96	3.07%
3	KK Johal	262	8.38%
4	KK Juasseh	883	28.25%
5	KK Kuala Pilah	1511	48.34%
6	KK Padang Lebar	113	3.61%
7	KK Seri Mananti	83	2.65%
8	KK Terachi	119	3.81%
<b>Total (Kuala Pilah)</b>		<b>3126</b>	<b>16.31%</b>
Seremban			
1	Hospital Tuanku Jaafar	337	7.33%
2	Hospital Tuanku Jaafar (DMR)	268	5.83%
3	JKNNS	0	0.00%
4	KK Ampangan	741	16.13%
5	KK Desa Sikamat	231	5.03%
6	KK Kuarters KLIA	352	7.66%
7	KK Kuarters Kuala Jjan	0	0.00%
8	KK Lenggong	93	2.02%
9	KK Mantin	219	4.77%
10	KK Nilai	105	2.29%
11	KK Rantau	760	16.54%
12	KK Sendayan	221	4.81%
13	KK Seremban	1268	27.60%
<b>Total (Seremban)</b>		<b>4595</b>	<b>22.51%</b>

### Cases Reported by SDP

Rembau			
1	KK Astana Raja	62	18.96%
2	KK Pedas	204	62.39%
3	KK Rembau	61	18.65%
<b>Total (Rembau)</b>		<b>327</b>	<b>1.60%</b>
<b>Total (Negeri Sembilan Darul Khusus)</b>		<b>20416</b>	<b>88.67%</b>

### Cases Reported by SDP

Kedah Darul Aman			
Langkawi			
1	KK Air Hangat	0	NaN
2	KK Kuah	0	NaN
3	KK Padang Matsirat	0	NaN
<b>Total (Langkawi)</b>		<b>0</b>	<b>NaN</b>
Alor Setar			
1	KK Bandar Alor Setar	0	NaN
<b>Total (Alor Setar)</b>		<b>0</b>	<b>NaN</b>
Kota Star			
1	KK Bandar Alor Setar	0	NaN
2	KK Simpang Kuala	0	NaN
<b>Total (Kota Star)</b>		<b>0</b>	<b>NaN</b>
Sik			
1	KK Jemiang	0	NaN
<b>Total (Sik)</b>		<b>0</b>	<b>NaN</b>
<b>Total (Kedah Darul Aman)</b>		<b>0</b>	<b>0.00%</b>

### Cases Reported by SDP

Selangor Darul Ehsan			
Gombak			
1	KK AUJ, Keramat	0	0.00%
2	KK Batu Arang	0	0.00%
3	KK Kuang	299	11.67%
4	KK Rawang	0	0.00%
5	KK Selayang Baru	217	8.47%
6	KK Sungai Buluh	169	6.59%
7	KK Taman Ehsan	1878	73.27%
Gombak			
8	KK Taman Kenangan	0	0.00%
9	PKD Gombak	0	0.00%
<b>Total (Gombak)</b>		<b>2563</b>	<b>100.00%</b>
<b>Total (Selangor Darul Ehsan)</b>		<b>2563</b>	<b>11.13%</b>

### Cases Reported by SDP

Terengganu Darul Iman			
Setiu			
1	KK Pemaisun	4	100.00%
<b>Total (Setiu)</b>		<b>4</b>	<b>100.00%</b>
<b>Total (Terengganu Darul Iman)</b>		<b>4</b>	<b>0.02%</b>
Perak Darul Ridzuan			
Tapah			
1	KK Tapah	42	100.00%
<b>Total (Tapah)</b>		<b>42</b>	<b>100.00%</b>
<b>Total (Perak Darul Ridzuan)</b>		<b>42</b>	<b>0.18%</b>
<b>Grand Total</b>		<b>23025</b>	<b>100.00%</b>

## Current Challenges / Ways to overcome

- Participation – MOH only, not national data
  - Data ascertainment – not 100%
  - Data Quality
    - missing values
    - wrong values
    - as it is web based with real time report, data cleaning at RCC is difficult
  - Use of data on NDR web – not yet widely used and present or published
  - Change of staff lead to problem in data collection.
  - Funding – special registry grant – stop by 2011
- Invite private centre as SDP
  - Data collection -Need to incorporate into routine work flow and need to maintain alertness of staff
  - Data quality
    - At system – must fill, accuracy check, range check ,pop up message
    - At SDP sites :
      - Training /awareness-doctor
      - Eyeball CRF before data entry - site coordinator
  - HOD- encourage use of data at
    - CME/CNE
    - Dept audit
    - Publication/ presentation at scientific meetings
  - Seek other means – e-KPI/e-CUSUM

## Publication !

### Reasons to publish

1. **Unethical** to conduct study and do not report (accountable to study subjects (patients) and sponsors ( public \$))
2. **Sharing of information** to wider medical practitioners
3. Want to **progress** scientific thoughts and **improve** health outcomes ( saving life)
4. Give **credibility to research team**
5. **Sense of achievement and pride**
6. Add credibility to your reputation
7. **Improve chance of promotion**
8. More likely to obtain research grants

## Activities.....

1. SC meeting: 20th February 2008 and 5th June 2008
2. Protocol development: The final version was released on 30Oct 2008 (Protocol Number: NMRR ID: 08-12-1167)
3. MREC submission: The ADCM obtained its approval from MREC on Dec 2008
4. CRF development: Latest version is version 1.2 which was released on 1<sup>st</sup> Apr 2008
5. Web application for ADCM was released in May 2008
6. User training :
  - 3hb Julai 2008 (Hospital Seremban),
  - 25th July 2008 (PKD Gombak),
  - 19th August 2008 (KK Teluk Datok),
  - 13th November 2008 (JKNNS K.Terengganu)

## Publications and Presentations

1. **One paper (special registry issue, MJM, volume 63 Supplement September 2008)**
2. **One Poster presentations at CREATE meeting 20-23 Oct 2008**

## Future Direction

- Recruiting more SDPs: Participation of all diabetes care providers
- Promotional activities, more training and website design
- Establish medical writing committee- publish more papers
- Cohort (systematic random sampling) – too many pts
- Expansion of NDR
  - Link Tele Diab. retinopathy screening data
  - Link with National Nephropathy Screening data
  - Pulling data from TPC
  - Link To Hypertension Registry
- On-line registration
- NDR widen its scope
  - e-KPI
- Sponsorship/Funding

## Critical Success factors

- Commitment
- Endurance
- Team work
- Appreciation

“Research is sacred.”

“It is a sin if we do not use applicable research findings in improving health care practice.”

- Quote:Dr.Mariam Ismail

## Discussion

1. ADCM provides sound evidence for Public Health Actions – Service & training
2. Users can then put effort to meet the unmet needs
3. Use of ADCM data for Healthcare Provider
  - Plan for diabetes services
  - Outcome of treatment
  - Economic burden of treatment
  - Research databases
  - e-KPI
4. Use of ADCM data by policy makers to ensure good health is
  - Accessible
  - Affordable
  - Provided with equity

## Conclusion

**R**egistry provides information essential for public health advocacy

**e**-registry- Make it easy

**R**esearch into action - improve public diabetes care

**F**uture direction –NDR to widen scope  
– evaluating quality, cost effectiveness and accessibility of health care

## Acknowledgement

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- SDP Doctors in charge
- SDP Site coordinators
- All the staff of Hospital and health clinics, MOH
- Registry Coordinating Unit :Miss Tee, Akma
- Manager CRC H. Tuanku Jaafar :