

# What Health Indicators should we collect?

A/Prof Jeff Flack FRACP MM  
Diabetes Centre  
Bankstown-Lidcombe Hospital

BPDC 2014  
Sydney  
25<sup>th</sup> – 26<sup>th</sup> October 2014

# What Health Indicators should we collect?

Clues to Success: [... *if you were starting from scratch*]

- Decide how you want to use the data you collect;
- Decide Why, Who, When, Where & How;
- Look at what else is being done;
- Traditionally – 7 Areas of Diabetes Care:
  - BMI, BP, Lipids, HbA1c, Kidneys [microalbumin; eGFR], Eyes, Feet;
- Don't reinvent wheels;
- One data item, multiple uses;
- Implement as part of daily work practice;
- Feedback to users;
- Start small & build up.



- REMEMBER:

**NADC WANTS YOUR DATA**

There's a difference between SURVEY Data and DATABASE EXTRACTS  
(eg *Infarct / Amputation in the last 12 months?*)

# What Health Indicators should we collect?

[... if you were starting from scratch]

Two Options

1

Collect everything possible  
(just in case)



**KEEP  
CALM  
AND  
COLLECT  
THEM ALL**

2

Be selective



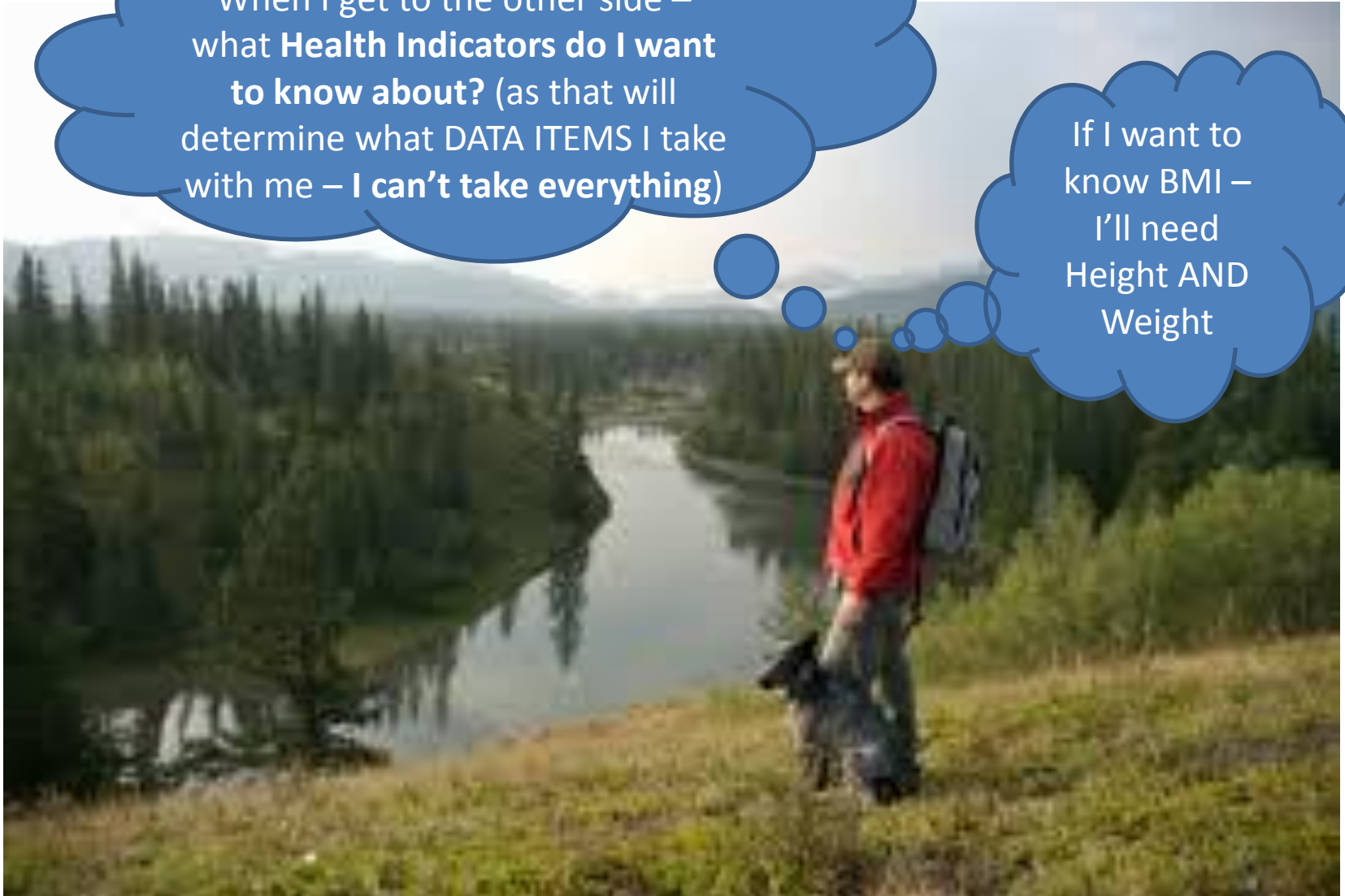
# What Health Indicators should we collect?

[... if you were starting from scratch]

Hmmm!

When I get to the other side –  
what **Health Indicators do I want  
to know about?** (as that will  
determine what DATA ITEMS I take  
with me – **I can't take everything**)

If I want to  
know BMI –  
I'll need  
Height AND  
Weight



# What Health Indicators should we collect?



# What Health Indicators should we collect?



DON'T TRY TO COLLECT TOO MUCH!

'GOLDILOCKS' [Just Right] !



PROBABLY NOT  
ENOUGH !!



# What Health Indicators should we collect?

*[... Since we are NOT starting from scratch ...]*

## What have we done previously?

- ANDIAB / ANDA-AQCA 2<sup>nd</sup> Yearly [since 1998]
- ANDIAB2 / ANDA AQSMA 2<sup>nd</sup> Yearly  
[2005, 2010, 2012 & 2014]
- ANDIAB Follow-up 2000-2003
- ANDIAB Collaborative 2006 [15 Centres]
- What Outcomes have we found?
- How Can We Use These Indicators?

# ANDIAB

ANDIAB was undertaken using a one page scannable Form;

Data sought include: Demographic, Clinical, Laboratory and Outcome Data on the seven identified key aspects of care:

Eye Review;  
Foot Care Assessment;  
Body Weight;  
Blood Glucose Control;  
Blood Pressure Control;  
Lipids; *and*  
Renal Assessment including Microalbumin.

The image shows a detailed, one-page scannable form for the ANDIAB 2011 project. The form is titled 'ANDIAB 2011 Australian National Diabetes Information Audit & Benchmarking Project' and includes a page number 'Page 1 of 1'. It is divided into several sections for data entry:

- Identification:** Centre ID (DC), Patient ID (optional), Sex (Male/Female), Staff ID, Date of Birth, Date of Patient Visit, Initial Visit (Yes/No), and Indigenous status (Yes/No).
- Diagnosis, Type and Management and Smoking:** Onset of Diabetes (Month & Year), Type of Diabetes (Type 1, Type 2, GDM, Don't Know, Other), Management Method (Diet Only, Metformin, Sulphonylurea, DPP4 Inhibitor, Insulin, Acarbose, GLP1 Agonist), and Smoking Status (Current, Past, Never Smoked).
- Weight/Height (latest):** Weight (Kg) and Height (m).
- Blood Pressure (most recent, measured after 5 mins sitting):** Systolic and Diastolic BP (mmHg).
- Other Therapy:** ACE Inhibitor, ACE + Thiazide, AS Artery, AZ + Thiazide, Beta Blocker, Calcium Antag, Thiazides, and Other (Yes/No).
- Diabetic Eye Disease (last 12 mths):** Saw Ophthalmologist, Visual Acuity (Right/Left Eye), Fundus examination (Normal, Diabetes Abnormality, Non Diabetes Abnormality, Not Visited), and Referral Category (Yes/No).
- Diabetic Foot Problems / Seen by Health Professionals (last 12 mths):** Peripheral Neuropathy, Past History of Ulceration, Foot Deformity, Current Foot Ulcer, Active Foot Lesion, Attended Podiatrist, Attended Educator, and Attended Dietitian (Yes/No).
- Lipids (most recent result last 12 mths):** Fasting Cholesterol, LDL, HDL, Triglycerides, On Anti-Lipid Rx, Statin Rx, Statin Side Effects / Contraindicated, Fibrate Rx, Vitorin Rx, Estrol Rx, and Fish Oil Rx (Yes/No).
- Blood Glucose Control (most recent last 12 mths):** Glycated Hb Result (%), Diabetic Neuropathy (most recent last 12 mths), Microalbumin / Proteinuria (Units: mg/L, ug/min, mg/24hr, ratio), Serum Creatinine (umol/L), and eGFR (>60, <60, Result).
- Complications/Events (Last 12 mths / Previous):** Cerebral Stroke, Lower Limb Amputation, CABG / Angioplasty, Severe Hypoglycaemia, Myocardial Infarction, End Stage Renal Disease, Blindness, and Erectile Dysfunction (Yes/No).

Copyright 2011 NACD-ANDIAB2011 V1.0-Adult



# ANDIAB

Every data item in ANDIAB had a specific definition, and all definitions are printed on the back of the ANDIAB data collection form for easy reference.

*For Example:*

**Type of Diabetes:**  
Record the Clinical Classification of Diabetes.

Record as:

**Type 1 / Type 2 / GDM / Don't Know / Other**

Data Definitions for NADC-ANDIAB		Version Def 2011 Adult.doc 10-01-2011
Australian National Diabetes Information Audit & Benchmarking Project		[V1-Adult Copyright 2011 NADC-ANDIAB]
<b>IDENTIFICATION</b>		
Patient ID	(Optional field). Enter some identifier such as record number or first 2 letters of the first name and surname and month and year of birth (e.g. FFSSMMYY).	Record as DDMMYYYY. (If unknown other than year: Record as 01/01/YYYY).
Date of Birth	Record as DDMMYYYY. (If unknown other than year: Record as 01/01/YYYY).	Mark Male <input type="checkbox"/> Female indicating phenotypic (physical) sex at birth.
Sex	Record the date the patient attended as DDMM2000.	Mark No <input type="checkbox"/> Yes indicating if this is an initial visit assessment.
Date of Patient Visit	Record the date the patient attended as DDMM2000.	Mark No <input type="checkbox"/> Yes indicating if this is an initial visit assessment.
Initial Visit	Record the date the patient attended as DDMM2000.	Mark No <input type="checkbox"/> Yes indicating if this is an initial visit assessment.
Indigenous	Mark No <input type="checkbox"/> Yes indicating Aboriginal / Torres Strait Islander background.	
<b>DIABETES TYPE &amp; MANAGEMENT &amp; SMOKING</b>		
Mth & Year of Diagnosis	Record as MM/YYYY of first diagnostic blood glucose estimation. (If date unknown other than year, record as 01/YYYY).	
Type of Diabetes	Mark Type1 [IDDM] <input type="checkbox"/> Type2 [NIDDM] <input type="checkbox"/> GDM <input type="checkbox"/> Don't Know <input type="checkbox"/> Other to indicate the clinical classification of diabetes.	
Management Method	Mark No <input type="checkbox"/> Yes to indicate if the patient's management method is Diet Only, Metformin, Sulphonylurea, Glibenclamide, Glibenclamide, DPP4 Inhibitor, Acarbose, and/or insulin or Nil. Answer all.	
If on Insulin: Since (yr)	If the patient is on insulin, record the YEAR insulin was started. Record as YYYY.	
Smoking Status	Mark Current Smoker <input type="checkbox"/> Past Smoker <input type="checkbox"/> Never Smoked to indicate a smoking of any tobacco material.	
	Current Smoker = regular smoking over the past 3mths, Past Smoker = no regular smoking for 1 month or more, Never smoked = never smoked any tobacco material.	
<b>HEIGHT, WEIGHT &amp; CURRENTLY PREGNANT</b>		
Weight	Record in kilograms the weight measurement without shoes or jacket.	
Height	Record in metres the height measurement without shoes.	
Currently Pregnant	Mark No <input type="checkbox"/> Yes to indicate if the patient is currently pregnant.	
<b>BLOOD PRESSURE &amp; ANTI-HYPERTENSIVE TREATMENT &amp; OTHER THERAPY</b>		
Blood Pressure	Record Systolic / Diastolic (mm Hg) measured after 5 minutes sitting, (1st and 5th phases).	
On anti-hypertensive Treatment & Other Therapy	Mark No <input type="checkbox"/> Yes to indicate if the patient is on treatment for hypertension and each specific medication they are taking - for ACE Inhibitors, ACE + Thiazide, A2 Antagonists, A2 + Thiazide, Beta Blockers, Calcium Antagonists, Thiazides and Other.	
<b>DIABETIC EYE DISEASE</b>		
Ophthalmologist	Mark No <input type="checkbox"/> Yes to indicate if the patient was Referred to and Attended an Ophthalmologist in the last 12mths. Answer All.	
Visual Acuity	Record actual result for both right and left eyes as 6/5, 6/6, 6/7.5, 6/9, 6/12, 6/18, 6/24, 6/36, 6/60, CF (Count fingers), HM (Hand movement), PL (Perceive Light), BL (Blind). Tested wearing glasses (or using pinhole if acuity is not normal).	
Fundus examination	Mark No <input type="checkbox"/> Yes to indicate if the patient has had an Ophthalmological Assessment (Direct or Indirect) in the last 12mths.	
Retinal Camera	Mark No <input type="checkbox"/> Yes to indicate if the Ophthalmological Assessment was using a Retinal Camera.	
If Fundus examination	Indicate the fundus examination results by marking Normal <input type="checkbox"/> Diabetes Abnormality <input type="checkbox"/> Non Diabetes Abnormality <input type="checkbox"/> or was Not Visualised. Record for both Right Retina and Left Retina. Answer one only.	
Cataract	Mark No <input type="checkbox"/> Yes to indicate if the patient currently has a cataract present or has had one removed previously. Record for Right and Left eye.	
<b>DIABETIC FOOT PROBLEMS &amp; SEEN BY HEALTH PROFESSIONALS</b>		
Peripheral Neuropathy	Mark No <input type="checkbox"/> Yes to indicate clinical judgement following assessment using pin prick and vibration (using perhaps a Biothesiometer) or Monofilament.	
Peripheral Vascular Disease	Mark No <input type="checkbox"/> Yes to indicate Peripheral Vascular Disease. Record YES as absence of both dorsalis pedis and posterior tibial pulses in either foot.	
Foot Ulcers, Deformity, Lesion	Mark No <input type="checkbox"/> Yes to indicate Past History of Foot Ulceration, Current Foot Ulceration, the presence of Foot Deformity and/or Active Foot Lesion (Ulcer, Heel) a foot ulcer). Answer all.	
Seen by Health Professionals	Mark No <input type="checkbox"/> Yes to indicate if the patient attended a Podiatrist, a Diabetes Educator, and/or a Dietitian/Nutritionist, in the last 12mths. Answer all.	
<b>LIPIDS</b>		
Fasting Lipids	Mark No <input type="checkbox"/> Yes to indicate if total, LDL & HDL cholesterol and triglycerides were measured in a fasting specimen.	
Lipid Levels	Record absolute result of most recent result of total, LDL & HDL cholesterol and triglycerides in the last 12mths.	
Lipid Rx	Mark No <input type="checkbox"/> Yes to indicate whether the patient is specifically on drug treatment for Dyslipidaemia and whether they are on Statin, Fibrate, Niasin, Ezetimibe and/or Fish Oil and whether they have Statin Side Effects / Contraindications. Answer all.	
<b>BLOOD GLUCOSE CONTROL</b>		
Glycated Hb	Record absolute result (%) of the most recent HbA1c to result in the last 12mths.	
<b>ASPIRIN &amp; CLOPIDOGREL</b>		
Aspirin & Clopidogrel	Mark No <input type="checkbox"/> Yes or Contraindicated to indicate if patient is currently on Aspirin and/or Clopidogrel. Answer all.	
<b>DIABETIC NEPHROPATHY</b>		
Microalbumin / Proteinuria	Record absolute result of total microalbumin measurement in a spot test, 24 hr or timed collection, expressed as absolute amount of albumin (mg/L) or as albumin excretion rate (AER: $\mu\text{g}/\text{min}$ or $\text{mg}/24\text{hr}$ ) or Ratio. Mark the applicable units.	
	Mark Yes if microalbumin / proteinuria collection is not applicable.	
<b>CREATININE</b>		
Creatinine	Record absolute result measurement of serum creatinine in MICROMOLS/L [ $\mu\text{mol/L}$ ].	
eGFR	Mark No <input type="checkbox"/> Yes to indicate if eGFR is $>60$ . Record absolute result in the box provided if known (eg: 45 or 87 or 101).	
<b>COMPLICATIONS EVENTS</b>		
Cerebral Stroke	Mark No <input type="checkbox"/> Yes to indicate a history of complication or an event in the last 12mths AND/OR previously. Answer all.	
Myocardial Infarction	Due to vascular disease.	
Lower Limb Amputation	Evidenced by ECG changes or plasma enzyme changes.	
End Stage Renal Dis.	Amputation of toe, forefoot or leg (above or below knee), not due to trauma or causes other than vascular disease.	
Blindness	Requiring dialysis or having undergone a kidney transplantation (due to diabetic nephropathy).	
Severe Hypoglycaemia	CABG, Angioplasty or Stent.	
Erectile Dysfunction	Severe hypoglycaemia [DCC2 definition] requiring assistance.	
	History or treatment of failure to achieve or maintain erection sufficient for penetration.	

# What Health Indicators should we collect?

## What have we done previously?

- ANDIAB / ANDA-AQCA 2<sup>nd</sup> Yearly
- ANDIAB2 / ANDA AQSMA 2<sup>nd</sup> Yearly
- **ANDIAB Follow-up 2000-2003**  
[Longitudinal Data]
- ANDIAB Collaborative 2006 [15 Centres]
- What Outcomes have we found?
- How Can We Use These Indicators?

# *ANDIAB Follow-up 2000-2003*

- Sites were chosen from the ANDIAB 2000 database that had complete data for Blood Pressure[BP], Height/Weight, Cholesterol, HbA1c, Urinary Microalbumin and Serum Creatinine on 30 or more individuals.
- A total of 23 of the 49 sites met this criterion.
- Data on a random sample of 25 of these individuals [575 in total], were printed out for each site on a 2 side A4 data collection form, and were sent to each site through the NADC Secretariat [keeping their identity unknown to us].
- We requested that original demographic data be rechecked and verified, and sought information on whether the individuals were deceased or lost to follow-up, and if not, on endpoints, and the most recent clinical data available for them in the previous year.

# *ANDIAB Follow-up 2000-2003*

- Of the 23 sites, fifteen sites' responded [13 Diabetes Centres and 2 Endocrinologists in private practice; max 375 patients] are available for analysis, one doctor has retired, and seven sites did not reply.
- We compared biometric, clinical and health outcomes data between the two visits. Prior to analysis and reporting, every effort was made to ensure data were valid and it was only necessary to approach one site to confirm and subsequently correct some questionable data.
- The data have been analysed in total, and several subgroup analyses have been undertaken.

# *ANDIAB Follow-up 2000-2003*

- Data are available for 233 patients, with 20 deaths [5.3%] and 122 lost to follow-up [32.5%]. Endpoint data in the previous year [and 2000] were similar [apart from fewer CABG procedures and new blindness], with 8[9] strokes, 8[10] myocardial infarcts, 4[13] CABG procedures, 4[3] amputations, 2[1] new ESRD and 1[4] new blindness reported.

# *ANDIAB Follow-up 2000-2003*

- In this small cohort, as well as statistically significant improvements in Total and HDL Cholesterol and Triglycerides, and *improvements* in diastolic Blood Pressure in Type 2 individuals, and a *reduction* in poor blood glucose control in Type 1 individuals, there were non-significant improvements in mean HbA1c and systolic Blood Pressure, worse BMI and at least 5.3% mortality.
- Further data are needed to assess whether improved outcomes are consistently being achieved. We believe the process was suitable and could be more widely applied to obtain information on a larger group of individuals.

# What Health Indicators should we collect?

## What have we done previously?

- ANDIAB / ANDA-AQCA 2<sup>nd</sup> Yearly
- ANDIAB2 / ANDA AQSMA 2<sup>nd</sup> Yearly
- ANDIAB Follow-up 2000-2003
- ANDIAB Collaborative 2006 [15 Centres]  
[Targeted Assessment]
- What Outcomes have we found?
- How Can We Use These Indicators?





# What Health Indicators should we collect?

## What have we done previously?

- ANDIAB / ANDA-AQCA 2<sup>nd</sup> Yearly
- ANDIAB2 / ANDA AQSMA 2<sup>nd</sup> Yearly
- ANDIAB Follow-up 2000-2003
- ANDIAB Collaborative 2006 [15 Centres]
- **What Outcomes have we found?**
- How Can We Use These Indicators?

# ANDIAB Report Output Examples - Process & Outcomes

Blood Glucose Control	1998 n = 4535	1999 n = 7110	2000 n = 5680	2002 * n = 3154	2004 n = 3108	2006 n = 1624	2009 n = 8563	2011 n = 4629
≤1% above ULN	34.1%	32.7%	31.4%	35.8%	38.0%	34.3%	25.6%	30.2%
1-2% above ULN	24.9%	25.8%	22.9%	26.3%	26.6%	30.4%	27.8%	27.2%
>2% above ULN	41.0%	41.5%	45.7%	37.8%	35.5%	35.3%	46.6%	42.6%
Mean HbA1c Type 1	8.4 ± 1.7	8.3 ± 1.6	8.6 ± 1.8	8.5 ± 1.8	8.3 ± 1.8	8.1 ± 1.6	8.4 ± 1.5	8.5 ± 1.8
Mean HbA1c Type 2	7.9 ± 1.8	8.0 ± 1.7	8.1 ± 1.8	7.8 ± 1.6	7.6 ± 1.6	7.8 ± 1.6	7.9 ± 1.7	8.0 ± 1.7
Mean HbA1c Type 2 Diet Only	6.6 ± 1.4	6.9 ± 1.4	6.8 ± 1.3	6.4 ± 1.2	6.4 ± 1.3	6.3 ± 0.8	6.7 ± 1.1	6.6 ± 1.2
Mean HbA1c Type 2 Tablets	7.9 ± 1.7	7.9 ± 1.7	8.1 ± 1.8	7.7 ± 1.6	7.5 ± 1.5	7.4 ± 1.3	7.6 ± 1.5	7.5 ± 1.5
Mean HbA1c Type 2 Insulin	8.3 ± 1.7	8.4 ± 1.8	8.4 ± 1.7	8.2 ± 1.7	7.9 ± 1.8	8.2 ± 1.9	8.0 ± 1.6	8.2 ± 1.8
Mean HbA1c Type 2 Ins&Tabs	8.7 ± 1.7	8.6 ± 1.6	8.8 ± 1.7	8.2 ± 1.4	8.2 ± 1.6	8.4 ± 1.6	8.4 ± 1.7	8.5 ± 1.6
<b>BMI &amp; Age &amp; Duration</b> <i>Esp for Type 2 By DM Type</i>								
Mean BMI Type 1	24.0 ± 4.8	23.8 ± 4.9	23.9 ± 5.3	24.0 ± 5.3	26.4 ± 5.4	26.2 ± 4.5	23.3 ± 5.4	26.6 ± 6.2
Mean BMI Type 2	30.0 ± 5.9	30.5 ± 6.1	30.7 ± 6.2	31.5 ± 6.5	31.5 ± 6.9	31.3 ± 6.5	32.5 ± 7.2	32.8 ± 7.4
Mean BMI Type 2 Diet Only	29.3 ± 5.9	30.4 ± 6.2	30.2 ± 6.1	30.6 ± 6.5	29.7 ± 6.2	29.9 ± 6.5	31.5 ± 7.7	30.8 ± 7.8
Mean BMI Type 2 Tablets	29.8 ± 5.9	30.3 ± 6.1	30.6 ± 6.2	31.2 ± 6.6	30.9 ± 6.5	30.2 ± 6.1	31.6 ± 6.8	32.3 ± 7.5
Mean BMI Type 2 Insulin	29.5 ± 5.6	29.8 ± 5.9	29.7 ± 6.0	30.6 ± 5.9	30.8 ± 6.8	31.0 ± 7.0	32.1 ± 7.1	32.5 ± 7.4
Mean BMI Type 2 Ins&Tabs	32.3 ± 5.9	32.5 ± 6.2	32.3 ± 6.3	33.4 ± 6.4	33.5 ± 7.1	33.4 ± 6.3	33.8 ± 7.2	33.6 ± 7.0
Mean Age Type 1	33.2 ± 20.4	31.8 ± 19.9	32.1 ± 19.8	29.1 ± 19.6	40.2 ± 17.5	43.9 ± 15.8	21.8 ± 15.7	39.3 ± 17.0
Mean Age Type 2	62.3 ± 12.2	62.3 ± 12.1	62.2 ± 12.2	62.3 ± 12.8	63.2 ± 12.3	63.2 ± 13.0	62.7 ± 13.3	63.5 ± 12.4
Mean Age Type 2 Diet Only	59.9 ± 14.4	60.3 ± 13.0	61.4 ± 12.4	59.4 ± 15.3	63.6 ± 12.7	60.8 ± 16.1	61.4 ± 13.7	63.2 ± 13.9
Mean Age Type 2 Tablets	62.6 ± 11.6	62.0 ± 12.2	61.6 ± 12.3	62.1 ± 12.8	63.3 ± 12.4	63.4 ± 13.0	62.0 ± 13.3	62.5 ± 12.6
Mean Age Type 2 Insulin	63.7 ± 12.3	64.2 ± 12.0	64.2 ± 12.6	64.3 ± 13.8	64.2 ± 13.6	65.0 ± 14.3	64.5 ± 15.2	66.4 ± 13.4
Mean Age Type 2 Ins&Tabs	61.8 ± 10.3	62.6 ± 10.4	62.3 ± 10.4	62.1 ± 10.5	62.6 ± 11.1	62.9 ± 11.3	63.0 ± 11.6	63.1 ± 11.0
Mean Duration Type 1	12.0 ± 11.8	12.1 ± 12.1	12.2 ± 12.4	10.7 ± 11.8	15.9 ± 12.4	17.3 ± 12.2	9.5 ± 10.0	17.8 ± 13.4
Mean Duration Type 2	8.7 ± 8.2	8.7 ± 8.6	8.7 ± 8.4	9.7 ± 8.4	9.7 ± 8.2	11.2 ± 8.4	12.3 ± 9.1	13.1 ± 9.1
Mean Duration Type 2 Diet Only	2.5 ± 4.2	2.1 ± 4.5	2.0 ± 4.2	2.2 ± 3.8	2.5 ± 3.7	4.2 ± 5.3	4.3 ± 4.8	4.6 ± 5.4
Mean Duration Type 2 Tablets	7.2 ± 6.6	7.1 ± 7.0	7.3 ± 7.0	7.7 ± 6.8	7.6 ± 6.9	8.9 ± 7.1	9.3 ± 7.4	10.0 ± 7.6
Mean Duration Type 2 Insulin	14.7 ± 9.4	14.5 ± 9.8	14.4 ± 9.2	14.5 ± 9.6	14.1 ± 9.8	15.6 ± 10.2	17.0 ± 10.4	17.5 ± 10.2
Mean Duration Type 2 Ins&Tabs	12.7 ± 8.0	12.9 ± 7.8	13.2 ± 8.1	13.8 ± 8.0	12.8 ± 7.8	14.4 ± 7.7	15.3 ± 8.5	15.6 ± 8.5

\*NOTE 2002 data recalculated- includes extra data from one site that was not included in the released ANDIAB 2002 Report

<b>Demographic Data 1999 - 2011</b>	1999 n = 7110	2000 n = 5680	2002 * n = 3154	2004 n = 3108	2006 n = 1624	2009 n = 8563	2009 ** n = 6029	2011 n = 4629
Mean Age [Yrs]	53.2 ± 20.1	54.8 ± 19.1	53.6 ± 20.5	58.6 ± 16.2	60.1 ± 15.3	43.9 ± 24.8	56.8 ± 17.3	<b>57.2 ± 17.3</b>
Mean Diabetes	9.5	9.2	9.6	10.6	11.9	10.9	13.3 ±	<b>13.9 ± 10.6</b>
								<b>3.8%</b>
Diabetes								<b>2.7%</b>
								<b>2.5%</b>
								<b>.9%</b>
								<b>0.3%</b>
								<b>1.3%</b>
								<b>1.3%</b>

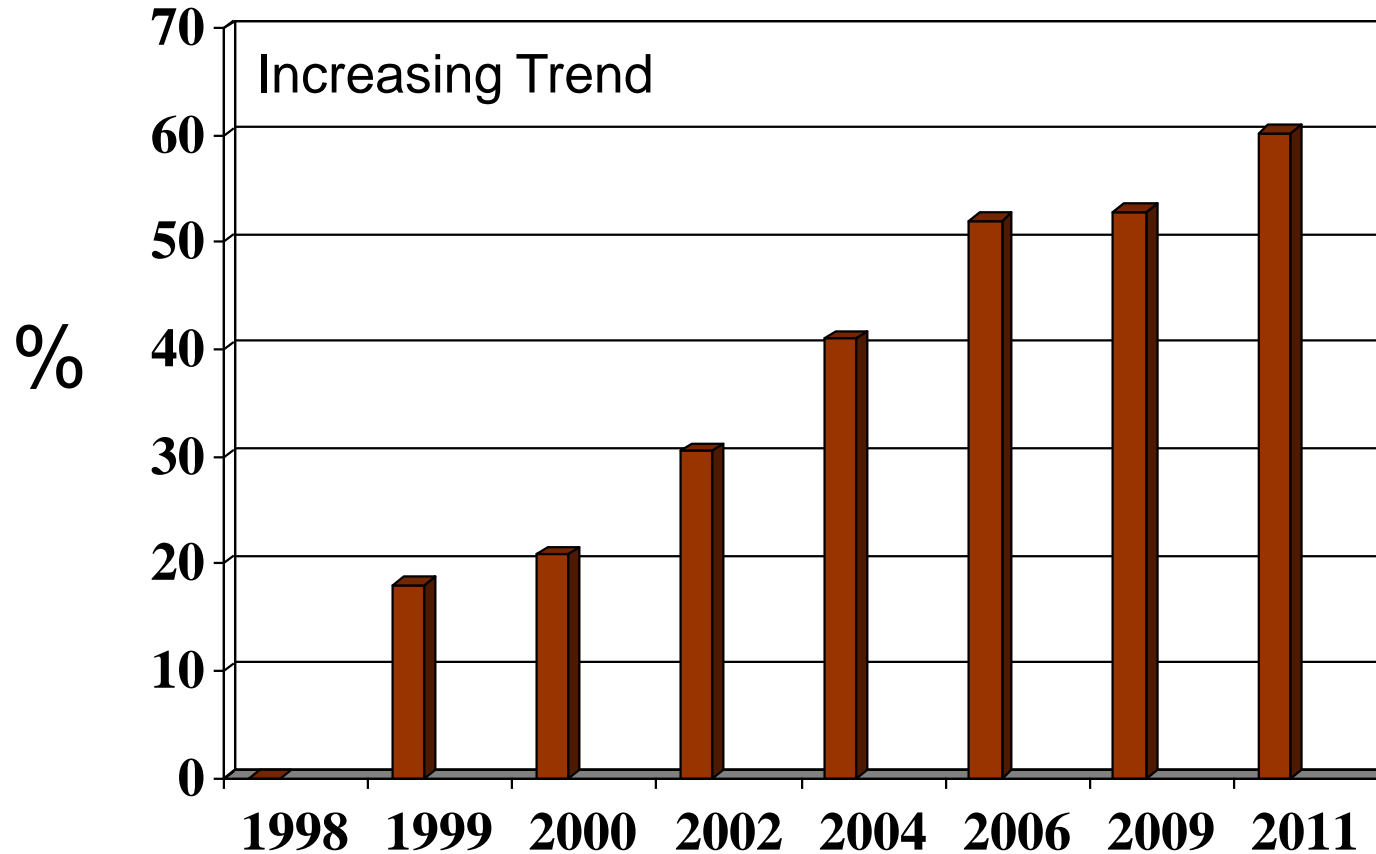
**Relative consistency of findings across the years suggests we WERE getting a true picture of the Clinical Status of patients managed in Specialist Diabetes Services...**

1998 &  
Ag  
and Du  
we  
recalc  
in line  
with the 2000  
onwards  
methodology

**DK = Don't Know; ? = Unstated** \*NOTE 2002 data recalculated- includes extra data from one site that was not included in the released ANDIAB 2002 Report \*\*2009 Adult Data

## ANDIAB Report Output Analysis

# % On Lipid Therapy



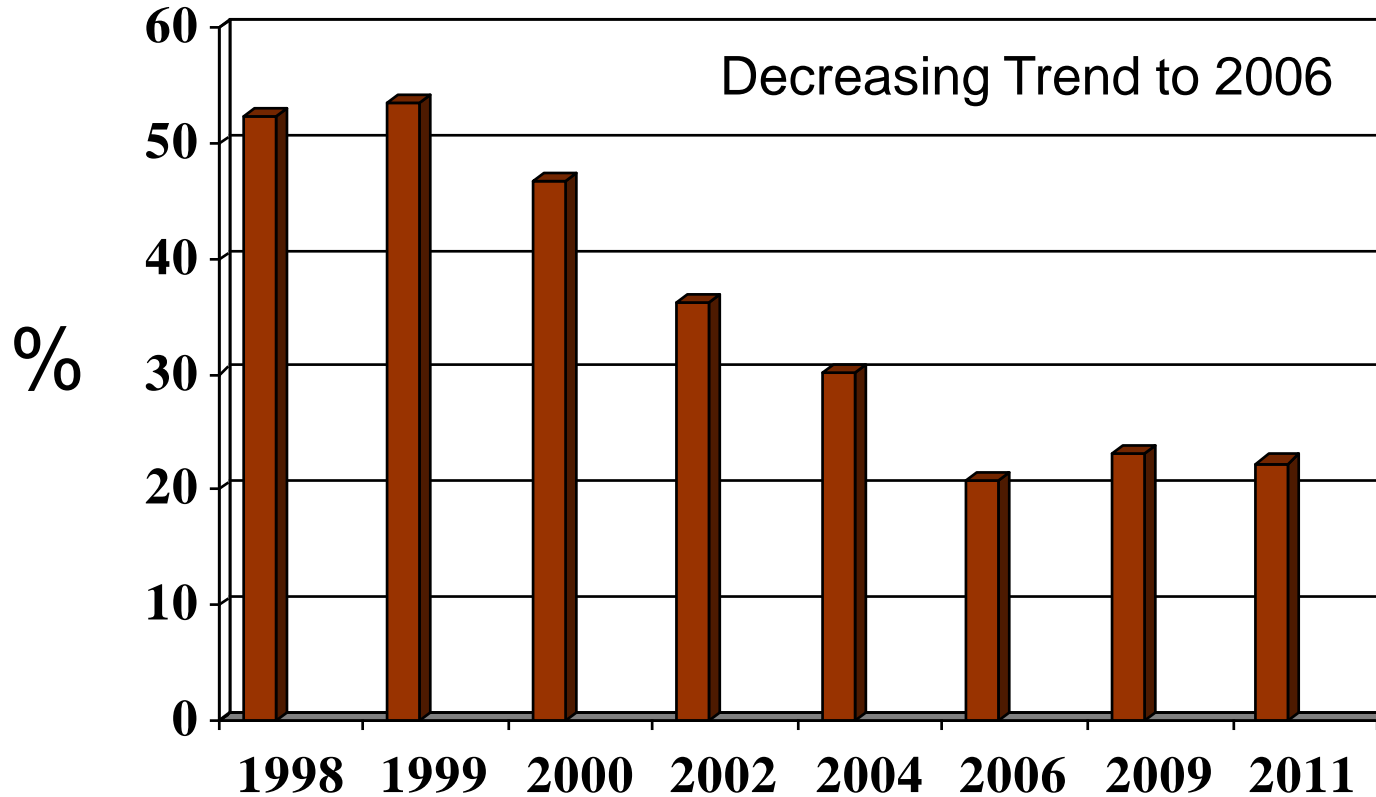
Data Not Collected in 1998

Year of ANDIAB Collection

ANDIAB Report Output Analysis

% Total Cholesterol Above Target [ $> 5.0$ ]

ALL ADULT FORMS



Year of ANDIAB Collection

# What Health Indicators should we collect?

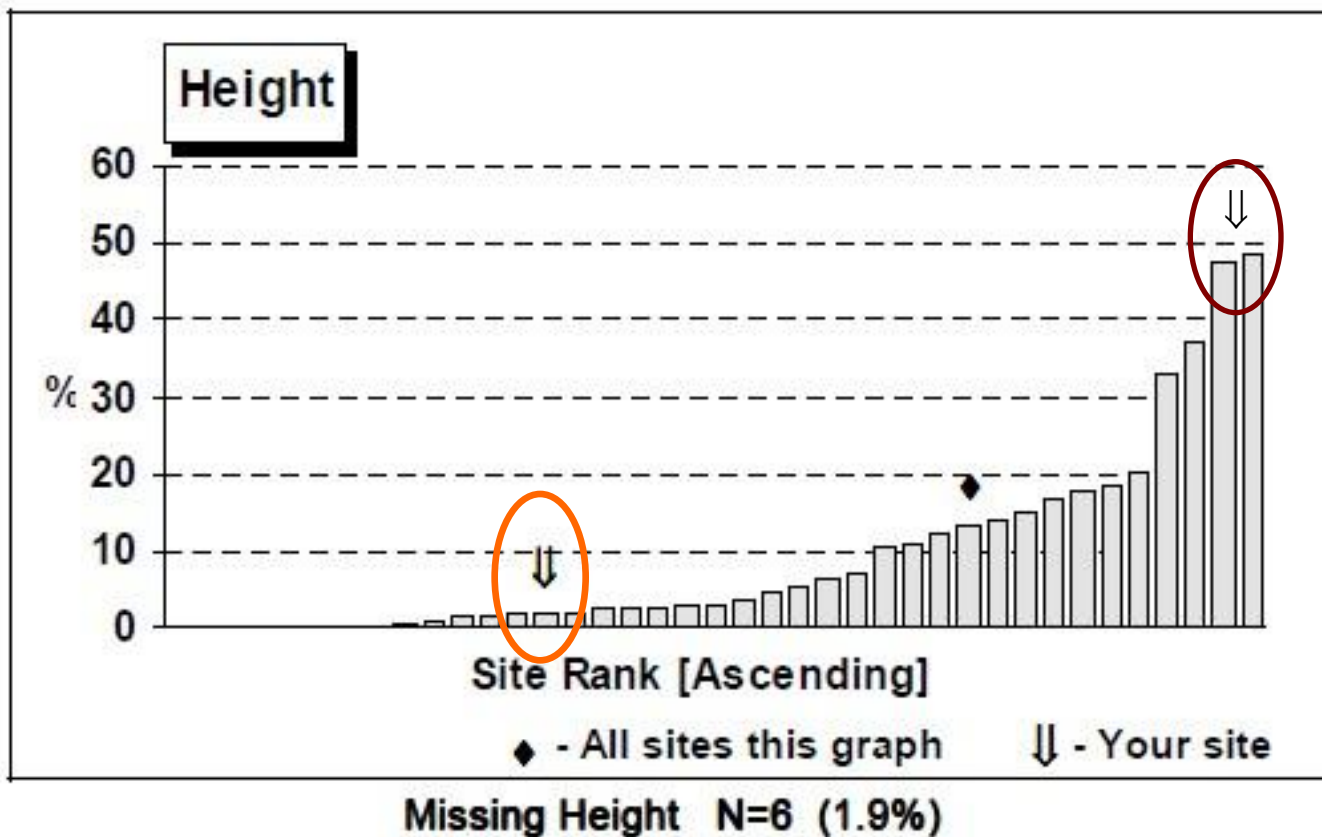
## What have we done previously?

- ANDIAB / ANDA-AQCA 2<sup>nd</sup> Yearly
- ANDIAB2 / ANDA AQSMA 2<sup>nd</sup> Yearly
- ANDIAB Follow-up 2000-2003
- ANDIAB Collaborative 2006 [15 Centres]
- What Outcomes have we found?
- How Can We Use These Indicators?

# Australian National Diabetes Information Audit and Benchmarking : ANDIAB

ANDIAB SITE Report Output Examples **PROCESS**

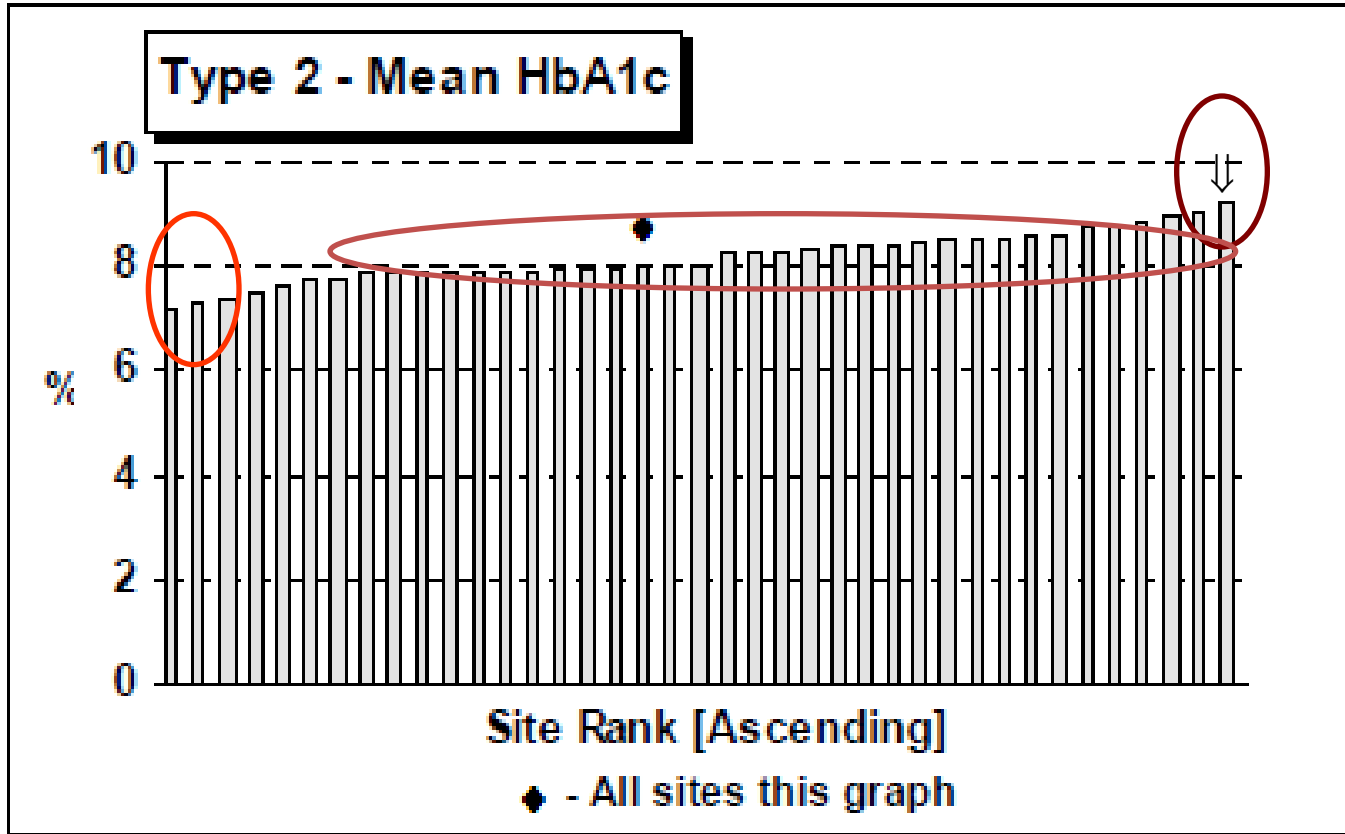
## Height - MISSING 2011



# Australian National Diabetes Information Audit and Benchmarking : ANDIAB

ANDIAB SITE Report Output Examples **OUTCOMES**

HbA1c [Mean] 2011 – Type 2





What Health Indicators should we collect?

How Often Should We Collect Them?

How do we use these Indicators to effect change?

So –

Over to you –

What should we collect?



Breakout Sessions x2 ....



What Health Indicators should we collect?  
How Often Should We Collect Them?  
How do we use these Indicators to effect change?

So –

Over to you –

What should we collect?

[BROAD CATEGORIES 1<sup>st</sup>]

...Demographics

... ???

Traditionally – 7 Areas of Diabetes Care:

BMI, BP, Lipids, HbA1c, Kidneys [microalbumin; eGFR], Eyes, Feet;

How Often Should We Collect Them?

Currently 2<sup>nd</sup> Yearly

How do we use these Indicators to effect change?

How do you use your Reports?