



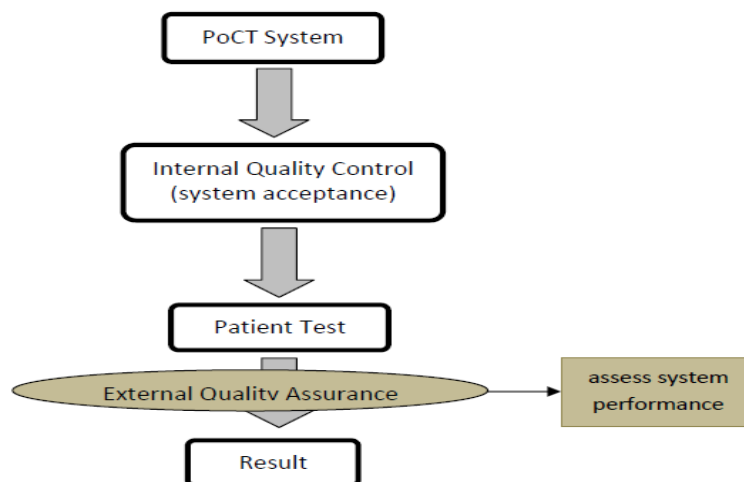
# PoCT EQA in Chemical Pathology QAP

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Program Manager  
RCPA Chemical Pathology QAP

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## The Role of EQA in PoCT





## PoCT Environment



- hospital (large →2 bed), GP, Aboriginal Medical Service, remote outback clinic, flying doctor, mine, airport, train station
- doctor, nurse, health worker, OHS&W
- not primary role



## PoCT EQA Challenges

- non-laboratory personnel
- use non- scientific language
- instrument focussed rather than test focussed
- QA samples suitable for the instrument eg whole blood vs serum
- QA samples suitable for non-laboratory environment
- reports readable by non laboratory staff
- support



## The Challenge

External Quality Assurance



Designing material

Education & training

Using the web

Reporting system

Interpreting reports

Hotline support

Think outside the square



## Chemical Pathology PoCT EQA

- QAAMS
  - HbA1c
  - Urine ACR
- Glucose Meters
  - Abbott
  - Nova
  - Roche
- On- Site Toxicology Screening
- PoCT
  - Urine ACR
  - Afinion HbA1c
  - Troponin



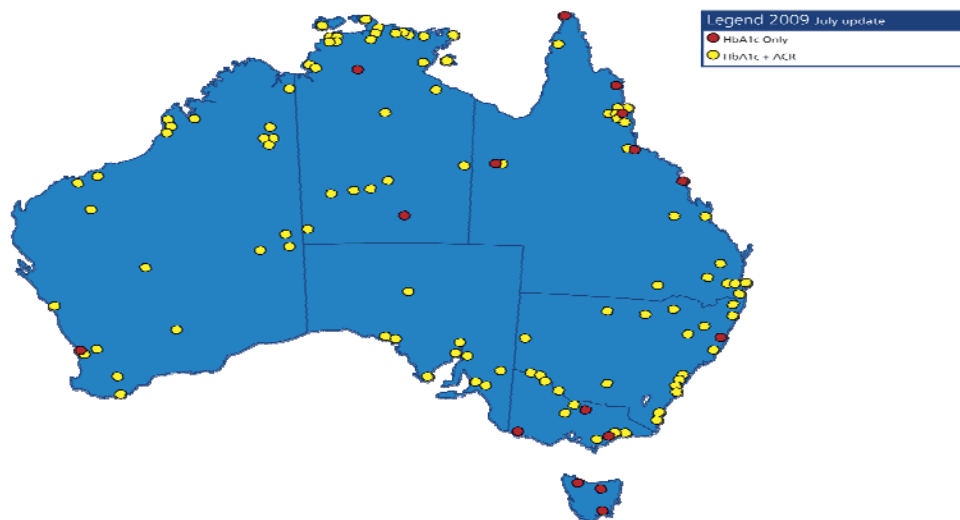
# QAAMS



- Quality Assurance for Aboriginal & Torres Strait Islander Medical Services
- PoCT service for monitoring diabetes
- funded by Australian Government DoHA
- HbA1c
- urine ACR
- use Siemens DCA 2000/Vantage
- 147 Aboriginal Medical Services



# QAAMS Sites





## Designing Material

### HbA1c



Add 5 drops of water to lyophilised material from yellow dropper bottle



## Designing Material

### Urine ACR



Add the water from the plastic pipette to the lyophilised material



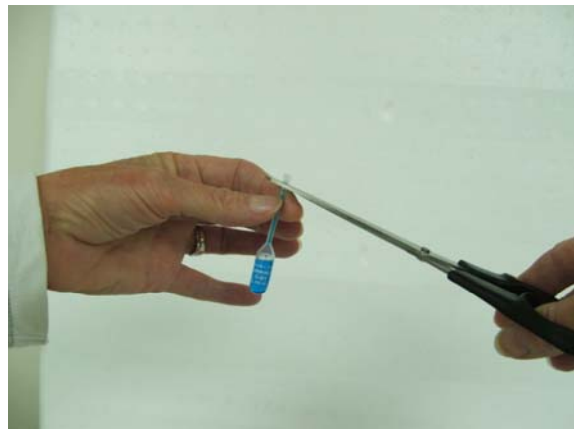
# Glucose Meter QA



- QAP sub contracted by Abbott Diabetes Care, Roche Solutions and Nova to provide data management for their glucose meter QAPs
- covers glucose meters in hospitals
- range from 3 to 220 meters per hospital site
- site co-ordinator for each hospital



# Glucose Meters



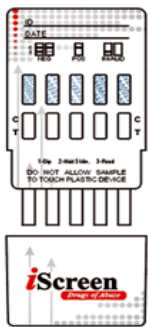


# On-Site Toxicology Screening

- OUTS
- On-site (workplace) or laboratory qualitative screening of drugs of abuse



# OUTS Program



**iScreen One**  
step drug card

**Inverness Medical Sure**  
Step6 Panel cassette



**Thermo Fisher Scientific**  
Micro Tox Multi Drug  
Screening Test

**Bio-Rad Tox/See**



**Branan**  
QuickTox





## Designing OUTS Material

- Selecting drugs
  - Amphetamine Type Substances Amphetamine and Methamphetamine
  - Cocaine metabolites
  - Opiates
  - Cannabis metabolites
  - Benzodiazepines
- Volume 1mL or 10ml



## PoCT Afinion HbA1c

- Axis Shield Afinion instrument
- Requires intact red blood cell membrane
- Glycohaemoglobin Program
  - haemolysate
- Unable to source a suitable manufactured material
- Using patient material collected and sent each month



## Poster

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### EXPERIENCE USING A WHOLE BLOOD SAMPLE FOR A HBA1C EXTERNAL QUALITY ASSURANCE PROGRAM

K Barancek<sup>1</sup>, JP Gill<sup>1</sup>, PD Merilees<sup>2</sup>

<sup>1</sup>RCPA Chemical Pathology Quality Assurance Programs,  
Adelaide, Australia, <sup>2</sup>Point of Care Diagnostics, Sydney,  
Australia.



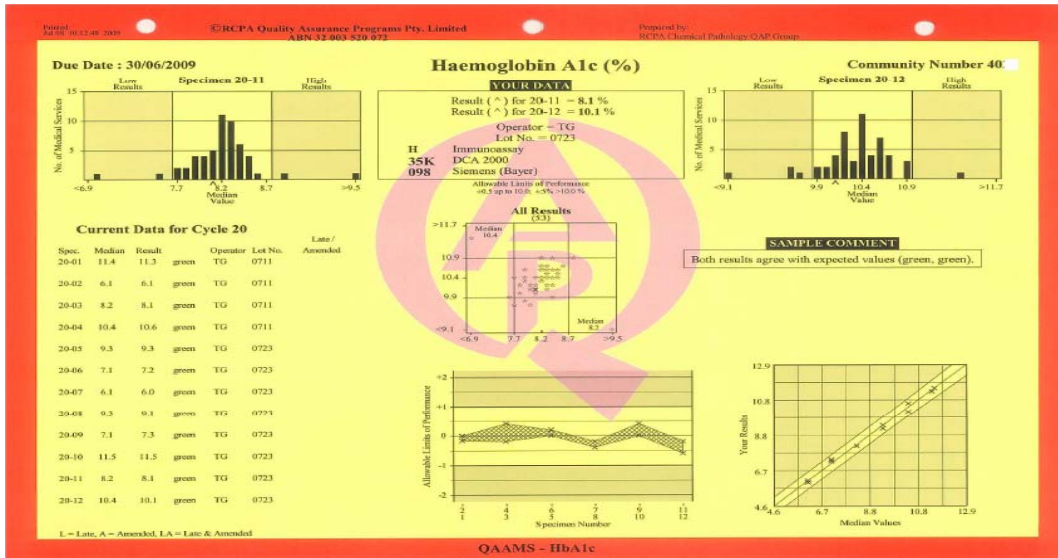
## PoCT Reporting System

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- design reports suitable for non-laboratory personnel
- how to read report
- how to review a report and take appropriate action

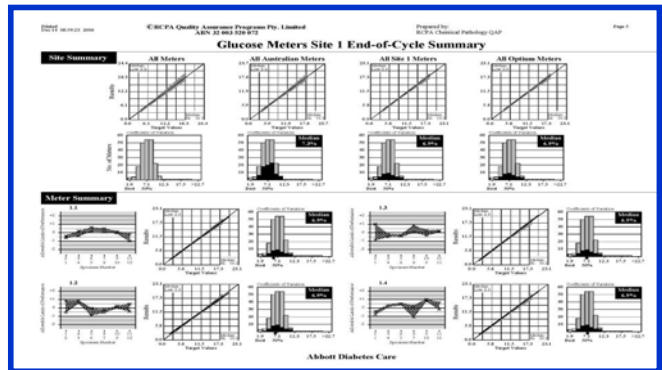
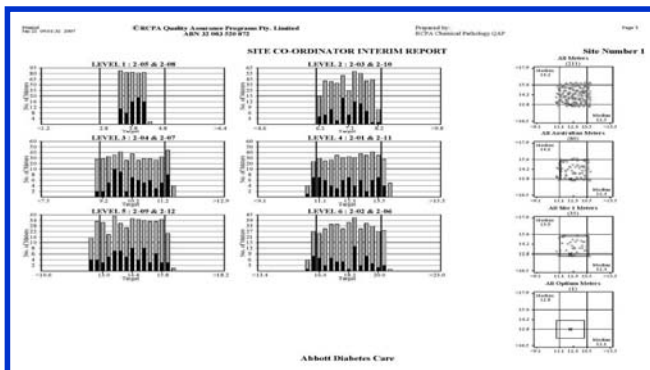


# QAAMS Report



# Glucose Meter Reports

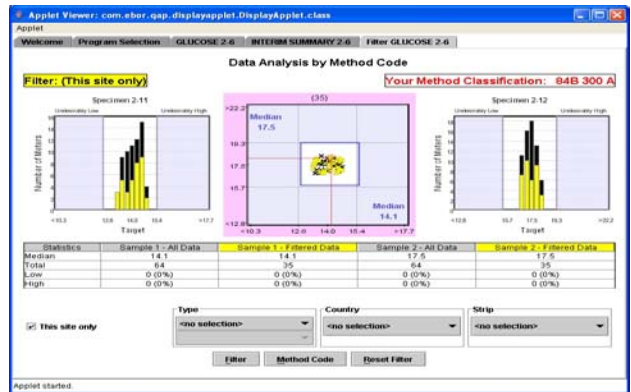
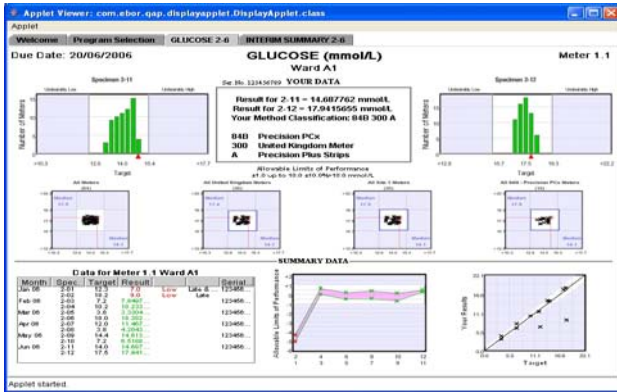
- Site Co-ordinator receives summary report
  - interim
  - end-of-cycle





# Glucose Meter Reports

- individual report for each meter
- available on QAP website



Printed Mar 31 09:22:36 2010 © RCPA Quality Assurance Programs Pty. Limited ABN 32 003 520 072 Prepared by: RCPA Chemical Pathology QAP Group

**Due Date : 28/02/2010** **Specimen Number 1-02** **Laboratory Number**

**Your Result**

Amphetamine:	D	Your Method: J 80A 083 A. Thermo Fisher Scientific MicroScreen Drug Screen Cup
Methamphetamine:	D	Your Method: J 80A 083 A. Thermo Fisher Scientific MicroScreen Drug Screen Cup
Benzodiazepines:	ND	Your Method: J 80A 083 A. Thermo Fisher Scientific MicroScreen Drug Screen Cup
Cannabis:	ND	Your Method: J 80A 083 A. Thermo Fisher Scientific MicroScreen Drug Screen Cup
Cocaine:	D	Your Method: J 80A 083 A. Thermo Fisher Scientific MicroScreen Drug Screen Cup
Opiates:	D	Your Method: J 80A 083 A. Thermo Fisher Scientific MicroScreen Drug Screen Cup

**Sample 1-02 Concentrations**

Amphetamine	570 ug/L
Methamphetamine	474 ug/L
Benzodiazepines	0 ug/L
Cannabis	0 ug/L
Cocaine	667 ug/L
Opiates	516 ug/L

**Results**

**Review**

Evaluate your result according to the drug cut-offs for your device.

Amphetamine	_____
Methamphetamine	_____
Benzodiazepines	_____
Cannabis	_____
Cocaine	_____
Opiates	_____

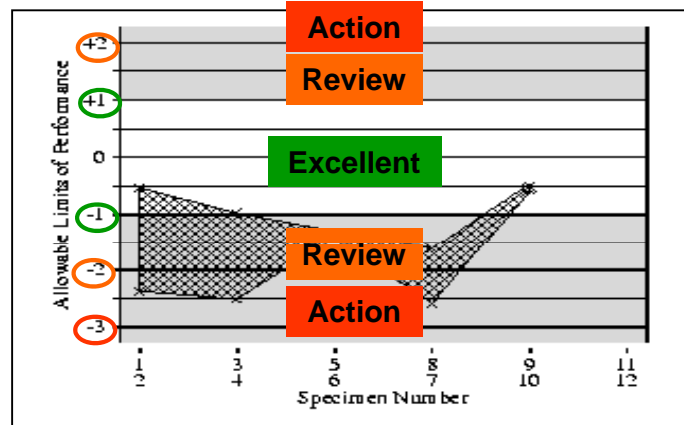
◆ Your Result ■ Your Method □ All Results ND Not Detected D Detected

**On-Site Urine Toxicology Screening**





# Traffic Lights



# Education & Training

- Workshops





# QAAMS Posters

**QAAMS**

**HbA1c QUALITY CHECKS USING QUALITY ASSURANCE SAMPLES**

**Making up the Quality Assurance Samples (2 per month)**

- From the HbA1c Quality Assurance Kit, take out the 2 samples required for the month (as coding to the Quality Testing Schedule) and 1 bottle of water. You will also need 2 plastic pipettes.
- For each sample:
  - Tip the bottle gently on the bench and remove the rubber stopper. Place the rubber stopper upside down on the bench.
  - Unscrew the cap on the bottle of water and hold at a 45 degree angle. Add 5ml of water to the sample.
  - Replace the rubber stopper, gently swirl the sample three times and let it stand for 30 minutes. Return the bottle of water to its box in the fridge. Swirl the sample in a circular motion, 10 times and swirl again.

**Testing the Quality Assurance Samples (monthly)**

- Test the QA samples exactly as if you were testing a patient's sample.
  - Using a plastic pipette carefully draw up a small amount of the sample. Keep separating the bulb of the pipette to keep the sample in place.
  - Touch the tip of the pipette to the tip of the sample holder until the capillary tubes is completely filled with no air bubbles.
  - Using the edge of a blotting tissue, wipe away any excess liquid on the outside of the tube.
  - Complete the test as you would for a patient blood sample (starting from HbA1c Step by Step Guide: Step 7).
  - Record the Coding Date, Sample Number, QA test results, your initials and the reagent lot number on your Quality Assurance Program's Result Sheet. The result sheet should sit next to the RCPA QA Kit box before or on the testing date.

Post or fax your QA Result Sheet to the RCPA QA Office on 08 8374 0695, or enter your results directly into the RCPA Quality Assurance Programs web site at [www.rupaqa.com.au/thermapath](http://www.rupaqa.com.au/thermapath).

Phone the QA Help Desk on 0883 31 0767 if you have any problems.

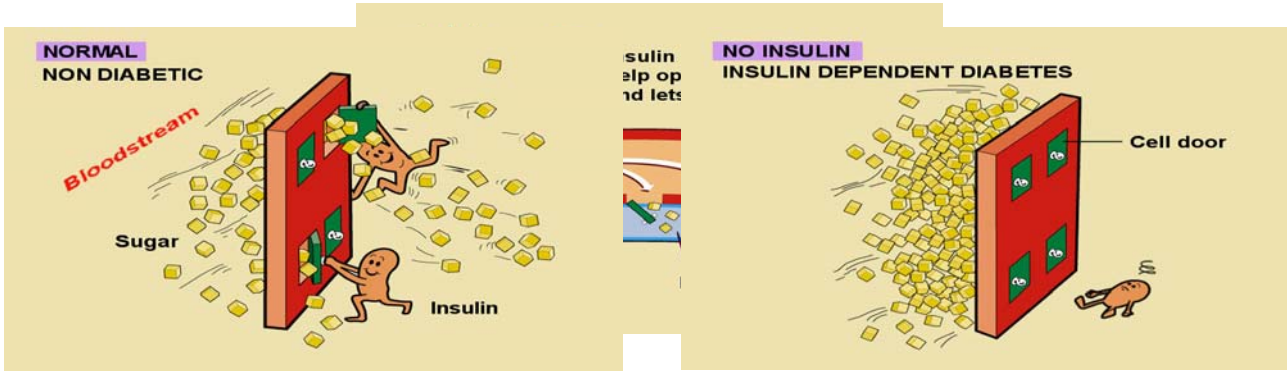
Australian Government  
Department of Health and Ageing



# QAAMS Education

- explaining concepts in relevant language

## Diabetes mellitus



Mark Shephard – QAAMS Program Manager



# QUALITY ASSURANCE FOR ABORIGINAL MEDICAL SERVICES

## How to Interpret Your Interim Report

All results
Test
Your Results

©RCQA Quality Assurance Programs Pty. Limited  
ABN 32 063 420 072
Prepared by:  
RCQA-AACB Clinical Pathology QAP Group

Due Date : 14/11/2005
Haemoglobin A1c (%)
Community Number

**Your result compared to expected result and other practices' results**

**All results sent to the QAP and the expected results for those samples**

**Colour code of your result**

**YOUR DATA**

Result ( ^ ) for 1-11 = 6.3 %  
Result ( ^ ) for 1-12 = 13.5 %

Operator = LW  
Lot No. = 0232055

Immunosay  
Bayer Diagnostics DCA 2000  
Bayer Diagnostics

II  
35K  
098

Allowable Limits of Performance  
at 3 up to 10.0, 4 up to 10.0 %

**Current Data for Cycle 1**

Spec.	Median	Result	Operator	Lot No.	Latex / Amended
1-01	13.4	13.5	green	CC	0232055
1-02	5.4	5.7	green	CC	0232055
1-03	9.6	9.2	green	LW	0232055
1-04	8.2	8.1	green	LW	0232055
1-05	6.8	6.6	green	LW	0232055
1-06	10.9	10.5	green	LW	0232055
1-07	8.3	8.1	green	LW	0232055
1-08	10.9	10.2	orange	LW	0232055
1-09	9.5	9.2	green	LW	0232055
1-10	5.4	5.1	green	LW	0232055
1-11	6.9	6.3	orange	LW	0232055
1-12	13.6	13.5	green	LW	0232055

**Community Number**

Specimen 1-12

Median Value: 13.6

**ALL RESULTS (23)**

Median: 13.6

Median: 6.9

**SAMPLE COMMENT**

One result is outside the expected value (orange, review).  
One result agrees with expected value (green).

**Acceptable results are in the unshaded areas**

**Your pair of results compared to all other pairs**

**A plot of the spread of each pair of results**

**Confidential Community Number**

**Summary of your results and colour codes**

**Your results compared to expected result**

L = Latex, A = Amended, LA = Latex & Amended

QAAMS



## QAAMS QA Education

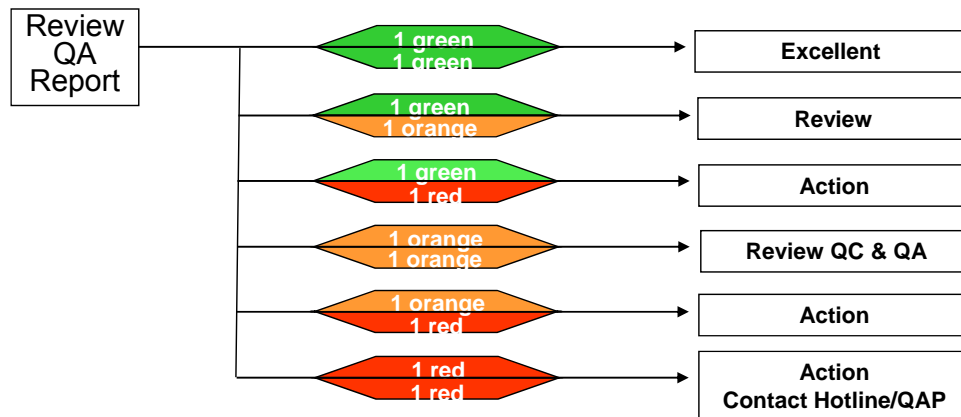
**Accurate and Precise**

**Accurate but not Precise**

**Precise but not Accurate**



## Action Sheets



QAAMS Support  
08 8442 4400



## Review/Action

- check for clerical error
- check correct samples run
- check previous QA results
- check QC
- check operator initials
- check cartridges – lot number, expiry
- check instrument
- ring QAP

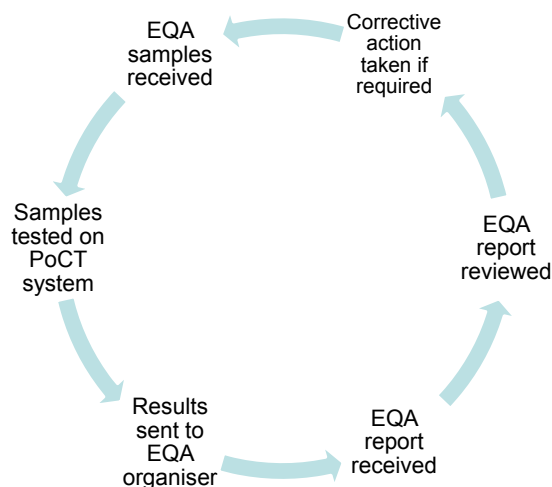


# Help!

- Contact the QAP Office
- 08 8113 1100
- Ask for Jan, Kristina or Lisa
- [jan.gill@rcpaqap.com.au](mailto:jan.gill@rcpaqap.com.au)
- [kristina.barancek@rcpaqap.com.au](mailto:kristina.barancek@rcpaqap.com.au)
- [lisa.jolly@rcpaqap.com.au](mailto:lisa.jolly@rcpaqap.com.au)



## Quality Improvement Cycle of EQA





# It's All About the Patient!

