

# SMBG meeting Oxford December 2010

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Group

## SMBG – the background

- Dept of Health set up short-life working group to produce a report on SMBG
- Aberdeen HTA group commissioned to do research review
- Research review informed SLWG discussions
- SLWG produced report, issued by DH

# Aberdeen HTA Group

- One of six academic groups contracted by DH and HTA Programme to produce technology assessment reports (TARs)
- TARs usually to support NICE
- Other clients National Screening Committee, Dept of Health, HTA Programme
- TAR = review of clinical and cost-effectiveness
- Usually systematic review and economic modelling

## Past TARs

- Screening for GDM (NSC)
- Continuous subcutaneous insulin infusion (NICE)
- Newer drugs for type 2 diabetes (NICE)
- Liraglutide for type 2 (NICE)
- Ranibizumab for diabetic macular oedema (NICE)
- Insulin sensitisers for NAFLD (HTA)
- Screening for type 2 diabetes
- Prevention of type 2 diabetes
- Inhaled insulin

# The HTA questions

## *TAR team*

- Does it work?
- At what cost?
- Is it worth it?

## *Policy-makers*

- Should the NHS provide it?

# Realities

There is never enough money to provide every form of care which would do some good for some people.

If we spend scarce resources on one form of care, we have to do without another form of care – “opportunity costs”

If we spend £millions on SMBG, we have to sacrifice something else

- DSNs?
- Dietitians
- Insulin pumps?

## SMBG TAR

- Aim: review evidence on clinical and cost-effectiveness
- Methods: systematic review and meta-analysis of clinical effectiveness
- Methods: review of cost-effectiveness literature
- First draft sent to a few experts for comment
- Next draft sent to, and discussed by, SLWG
- Final draft published by HTA Programme after further (anon) peer review.

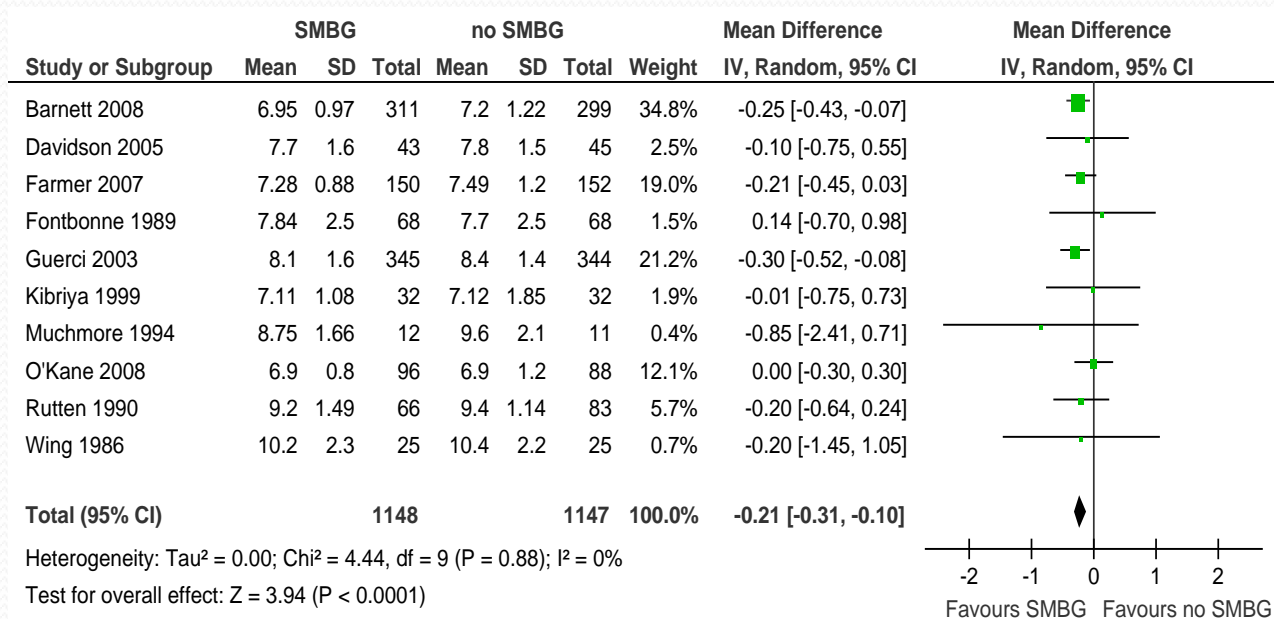
# TAR team

- Christine Clar
- Kath Barnard
- Ewen Cummins
- Pam Royle
- Norman Waugh

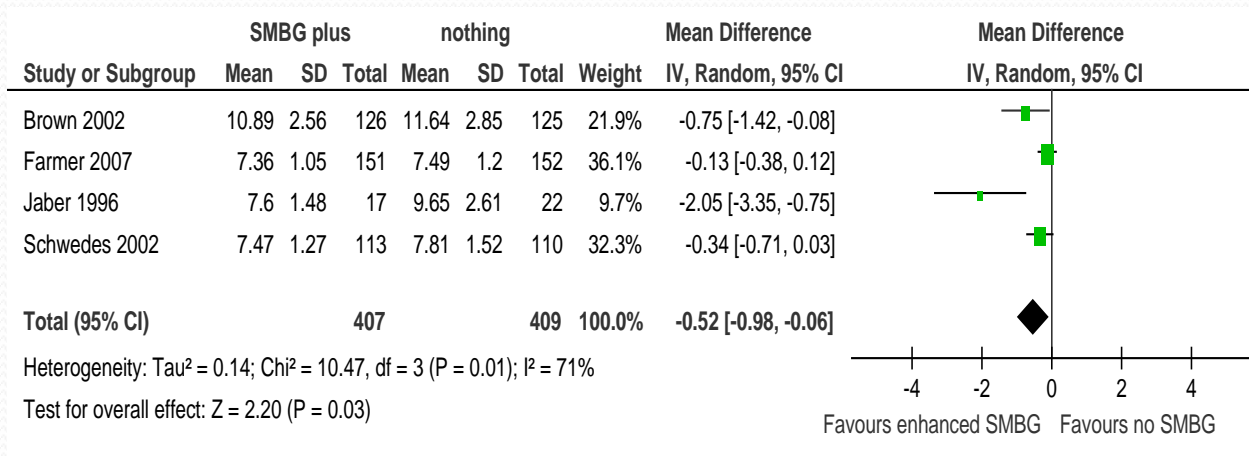
## SMBG TAR: results 1

- 10 RCTs SMBG vs no SMBG
- 4 RCTs of enhanced SMBG vs no SMBG  
(*more education and feedback*)
- 3 RCTs blood testing vs urine testing

# SMBG versus no SMBG: HbA1c



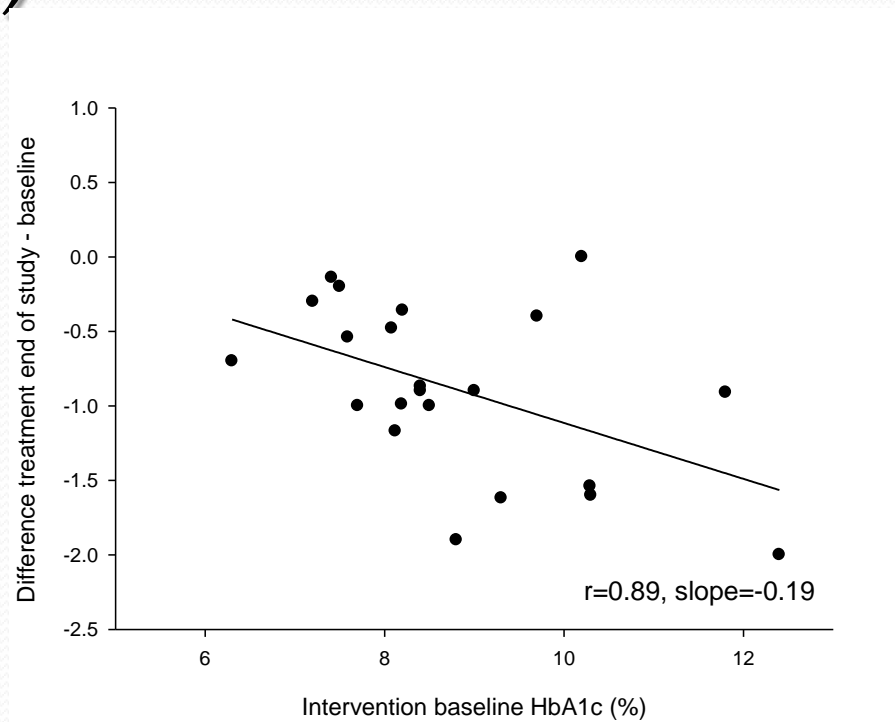
# Enhanced SMBG versus no SMBG: HbA<sub>1c</sub>



## Results 2 – HbA1c

- Simple SMBG vs no SMBG – slight difference of 0.2%
- Enhanced SMBG vs no SMBG – 0.5%
- SMUG vs SMBG – no difference
- Improvement in HbA<sub>1c</sub> was greater in those with higher initial HbA<sub>1c</sub>

# Change from baseline as a function of baseline HbA1c (intervention group)



## Observational studies: HbA1c

- Beware bias due to confounding variables
- 36 studies found
  - 18 no difference
  - 12 small reduction
  - in 6, HbA<sub>1c</sub> rose

# Qualitative studies

*Not what happens, but why it happens*

## Findings

- Results of SMBG did not affect management by patients
- Results little used by health care professionals
- Lack of specific instructions and education
- Depression and anxiety

# HTA: assessing a diagnostic test

## *Hierarchy of questions*

- Does it measure what it says it measures?
- Does it change management?
- Does it change outcomes?

## TAR conclusions

- Evidence mixed
- Recurring theme that SMBG data not used
- Hence not good use of funds
  
- Case for expenditure “not proven”.

# Survey of Diabetes UK members 1

- Strong view from D UK that some people find SMB helpful
- Why?
- What did they do with the results?

*Barnard et al. BMC Research Notes 2010,3:318*

## Survey 2: methods

- Questionnaire on D UK website
- Pre-decided cut-off at 500 respondents
- Non-insulin treated people only
- Set of questions
- Free text option
- Aim to get a “biased sample” of confirmed users of SMBG

## Survey 3: results

- 554 respondents
- Frequency range – 43% used 1-4 times/week
- 22% less than once a month
- 86% highly satisfied (as expected)
- Feelings of “being in control”
- Harms – guilty, anxiety (*mostly women*)

## Survey 4: uses

- Monitor control
- Adjust diet
- physical activity
- hyperglycaemia
- Check hypos
- Assess effect of new drugs (16%)
- Alter medication (6%)

## Research needs

- “package of education”
- “Polonsky’s package” – BMC Family Pract 2010, 11:37
- Who benefits most?
- Timing and frequency
- Resolving the anxiety and depression

## The “Polonsky package”

“SMBG is only one component of a larger diabetes management regimen. The potential value of SMBG lies in the subsequent actions which may result from its use, including actions which the patient makes directly...and/or indirectly, e.g. sharing the results with health care professionals...”

BMC Family Practice 2010,11:37

# Research and the HTA Programme

- A programme of research to meet the needs of the NHS
- Commissioned stream: suggestions sought, or topics identified by HTA Prog
- Then prioritised and commissioned
- Researcher-led stream: topics chosen by researchers
- Suggestions welcome: [www.hta.ac.uk](http://www.hta.ac.uk)
- Results published and free to download