

**Challenging physical healthcare conditions.**  
**DIABETES, TRENDS, AND THE TUCK**  
**SHOP**

Professor Geoff Gill

Aintree University Hospital and University  
of Liverpool



# Ashworth Hospital – diabetes services

- Visiting consultant diabetologist (from Aintree Hospital)
- Monthly consultant-led clinic
- Annual retinal photography
- Full dietetic and podiatry service
- GP and nurse support

# Diabetes-related problems

- High levels of inactivity and over-eating. The “tuck-shop” problem.
- High clinic attendance refusals.
- Many patients on clozapine (high risk of metabolic and glycaemic dysregulation).
- Difficult problems of compliance, autonomy and capacity.

# Ashworth diabetes population 2014

- Total patients 197
- With diabetes 39
- Prevalence 19.8%
- GP care 6 (15%)
- Consultant care 33 (85%)

# Ashworth DOPD

- Number 33
- Sex All male
- Age 44 (10), range 22-60
- Duration DM 9 (13), range 1-15
- Diabetes type 2 (5%) T1  
37 (95%) T2

# Ashworth DOPD (2)

*psychiatric conditions*

- Schizophrenia 84%
- Personality disorder 19%
- Depression 10%
- Bipolar 6%

**Note** – all with schizophrenia on clozapine

# Ashworth DOPD (3)

## *HbA1c and BMI*

- HbA1c  
6.7 (1.0)%  
range 5.0 to 9.6%  
50 (6) mmol/mol
- BMI  
34.1 (6.1)  
range 23.4 to 51.3

**Note** – HbA1c excludes 2 “flyers”



# Case history – glycaemic flyer 1

- 47yo male
- T2DM for 5 y, BMI 32.0
- Schizo-affective disorder, personality disorder, organic brain syndrome (post-encephalitis)
- H/L, H/T, M/Alb
- Consistently refused all medication
- Deemed to have capacity
- HbA1c 15.0%

# Case history – glycaemic flyer 2

- 33yo male
- T1DM for 11y, BMI 29.6
- Schizophrenia (well controlled)
- H/T, H/L, M/Alb
- On bd Novomix 30 (previously 4 times daily insulin)
- Eats 6 large bars of chocolate daily
- Mostly in evening (“bored”)
- HbA1c 11.6%

# Ashworth DOPD (4)

## *HbA1c and BMI stratification*

• <b>HbA1c</b>	<7.0%	52%
	7.1-8.0%	35%
	8.1-9.0%	3%
	>9.0%	10%
• <b>BMI</b>	<25.0	7%
	25.1-30.0	21%
	30.1-40.0	64%
	>40.0	7%

# Ashworth DOPD (5)

## *risk factors*

- Hyperlipidaemia 97%
- Hypertension 61%
- Smoking 0%

**Note** – 82% H/L at target  
73% H/T at target

# Ashworth DOPD (6)

*complications (n=31)*

- Retinopathy 2 (6%)
- M/albuminuria 4 (12%)
- Neuropathy 2 (6%)
- CVD 1 (3%)
- IHD 1 (3%)

# Ashworth DOPD (7)

## *treatments*

- Insulin 13%
- Metformin alone 45%
- Metformin + others 45%
- GLP agonists 19%
- Statins 93%
- Anti H/T 60%

# Ashworth DOPD (8)

- Refusal to attend rate 45%
- Discharges from Ashworth – 27% loss from DOPD per year, rapidly made up from new diabetes cases.

# Diabetes trends over 14 years

- Audits done 2001, 2010 and 2014
- Diabetes prevalence 8.6%, 18.8% and 19.8%
- HbA1c 8.6%, 8.1% and 7.1%



# More on the Tuck Shop.....

- Recent patient with poorly controlled recently diagnosed T2DM. HbA1c 11.4% (101 mmol/mol).
- Refused dietitian and consultant appointments.
- Record of purchases at the Tuck Shop in one week.....

# What was bought .....

- 10 Bounties
- 4 Minstrel bars
- 3 Galaxies
- 2 Mars bars
- 5 Packets of maltesers
- 11 Packets of crisps
- 2 Lion bars
- 6 Mint Aeros
- 2 Packets of choc-chip biscuits
- 1 Tube Hall's Soothers
- 2 Crunch Creams
- 5 Cartons of orange juice

# Conclusions (1)

- Diabetes very common in secure hospitals
- Mainly type 2, usually obese
- Problem with clozapine - highly effective in paranoid schizophrenia, but strongly associated with weight gain and glucose intolerance.

# Conclusions (2)

- High clinic refusal rate
- Smoking ban useful, but ironically -
- Free access to tuck shop problematic. Privately run, contents not ideal.
- Evening boredom and overeating major problem

# Future directions?

- Close links with medical centre staff, but not a true “diabetes team” – no specialist nurses
- This makes for example insulin starts and titrations difficult
- Modern diabetes is holistic and patient centred, but here operates apart from psychiatric care

# Other possibilities?

- Prescribing metformin with clozapine regardless of glycaemic status?
- Dedicated weight management service – including access to bariatric surgery?

