Weight Gain and Severe Mental Illness: a Double Blow.

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Declaration of Interest:

Member of two Guideline Development Groups (GDG) for NICE:

a) NICE guidance for children and young people affected by psychosis and schizophrenia

b) NICE guidance for adults with psychosis and schizophrenia

The views expressed are not those of either GDG, NCCMH or NICE.

Carer and GP
Difference between general population and those with schizophrenia

Acknowledgment to sculptor Keld Moseholm

To be or not to be (Sculpture By The Sea 2009, Bondi)
Effectiveness of antipsychotic drugs in first-episode schizophrenia and schizophreniform disorder: an open randomised clinical trial.

<table>
<thead>
<tr>
<th>Weight gain with antipsychotics: EUFEST results</th>
<th>Haloperidol</th>
<th>Olanzapine</th>
<th>Quetiapine</th>
<th>Ziprasidone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean weight gain 12m on from baseline</td>
<td>7.3 kg (16 lbs)</td>
<td>13.9 kg (30.5 lbs)</td>
<td>10.5 kg (23.1 lbs)</td>
<td>4.8 kg (10.5 lbs)</td>
</tr>
<tr>
<td>% of patients gaining ≥7% weight after 12m compared to baseline</td>
<td>53%</td>
<td>86%</td>
<td>65%</td>
<td>37%</td>
</tr>
<tr>
<td>Overweight (BMI ≥25) at baseline</td>
<td>21%</td>
<td>16%</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>Overweight at study end (1 year) (BMI ≥25)</td>
<td>37%</td>
<td>54%</td>
<td>45%</td>
<td>33%</td>
</tr>
</tbody>
</table>

BMI = body mass index

Antipsychotic-Induced Weight Gain in Chronic and First-Episode Psychotic Disorders: a Systematic Critical Reappraisal

First episode of psychosis RCTs

Chronic psychosis RCTs

Alvarez-Jimenez et al; CNS Drugs, 2008
Systematic Review of Early Cardio-metabolic Outcomes of the First Treated Episode of Psychosis

Foley DL & Morley KI

Arch Gen Psychiatry. Published online February 7, 2011. doi:10.1001/archgenpsychiatry.2011.2

Conclusion:

1. No difference in cardiovascular risk assessed by weight or metabolic indices between individuals with an untreated first episode of psychosis and healthy controls

2. Cardiovascular risk increases after first exposure to any antipsychotic drug
Social determinants?

- Excluded
- Poverty
- Diet
- More sedentary
- Smoking

"Genes load the gun. Lifestyle pulls the trigger"

Dr. Elliot Joslin
Methods
1493 patients with schizophrenia were recruited at 57 U.S. sites and randomly assigned to receive olanzapine, perphenazine, quetiapine, or risperidone for up to 18 months.

Results
Overall, 74 percent of patients discontinued the study medication before 18 months.

Conclusions
The majority of patients in each group discontinued their assigned treatment owing to inefficacy or intolerable side effects or for other reasons.
On a path to CVD, type 2 diabetes and premature death

Acknowledgement to sculptor Keld Moeholm

Rolling pin (Sculpture By the Sea, 2011, Bondi)
Little pride and a lot of prejudice
“The provision of good medical care tends to vary inversely with the need for it in the population served.”

Julian Tudor Hart 1971
National Audit of Schizophrenia

Figure 1: Monitoring of cardiometabolic health parameters, excluding family history and weight, once in the past 12 months
National Audit of Schizophrenia

Figure 2: Monitoring of weight and BMI in the past 12 months
Who is Responsible?
Conclusions

Early weight gain and its potential cardiac and metabolic consequences amplify worrying UK public health trends in general.

If clinicians dismiss these changes as of secondary concern in psychiatric treatment for their young patients, they may be inadvertently condoning a first critical step on a path towards physical health inequalities.
How long should we leave it?

First episode of psychosis

Start HERE

NOW!

STOP natural history

Chronic psychosis RCTs

Chronic psychosis RCTs

20

15

0

12

24

36

48

10

5

20

15

3 kg

4 kg

3 kg
An intervention framework for patients with psychosis on antipsychotic medication

Positive Cardiometabolic Health Resource

- Smoking
  - Current Smoker
    - Poor diet AND/OR Sedentary lifestyle
      - BMI > 25 kg/m² (≥22.5 kg/m² if South Asian or Chinese)
        - AND/OR Weight gain >5kg over 3 month period

- Lifestyle
  - Blood Pressure
    - Systolic: >140 mmHg
      - AND/OR Diastolic: >90 mmHg

- Body Mass Index (BMI) Weight

- Blood Pressure
  - Glucose Regulation
    - Assay by fasting plasma glucose; random plasma glucose (Hba1c)

- Blood Lipids
  - Total cholesterol ≥ 4.0 mmol/L
    - OR High (>20%) risk of CVD (using available risk equations e.g. QRISK)

Lifestyle advice to include diet and physical activity.

Refer for investigation, diagnosis and treatment by appropriate clinician if necessary.

Medication review.

Brief individual intervention

- Consider referral to NHS Smoking cessation programme
  - http://www.nhs.uk/Smoking/
- Consider nicotine replacement therapy

Target

- Smoking cessation
  - Target
  - Improve quality of diet
  - Contain energy intake
  - Daily exercise of 30 mins/day

Follow NICE guidelines for blood pressure

Follow NICE guidelines for diabetes

Follow NICE guidelines for lipid modification

At High Risk of Diabetes

- Hba1c ≥ 42 mmol/mol

Follow NICE hypertension guidelines

Follow NICE diabetes guidelines

Follow NICE guidelines for lipid modification

Download Lester UK Adaptation: www.rcpsych.ac.uk/quality/NAS/resources

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10% shift in body weight

- 20-25% more premature mortality
- 50% more type 2 DM
- 10% higher total cholesterol / 30% higher triglycerides
-10mmHg higher systolic / 20mmHg higher diastolic blood pressure


An ounce of prevention is worth a pound of cure.
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Dr David Shiers

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