Improving the physical health of those with Schizophrenia and serious mental health conditions: implementing the Schizophrenia Commission’s physical health recommendations

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What is the Schizophrenia Commission?

- Independent commission of 14 experts, chaired by Professor Sir Robin Murray
- Set up by Rethink Mental Illness in Nov 2011
- Aim:- to review the state of care given to those with schizophrenia and psychosis and how outcomes can be improved.
- Methodology (over a 1 year period):-
  - 6 formal evidence gathering sessions (like a parliamentary committee)
  - 80 expert testimony: presentations of their research findings/ideas/philosophical viewpoints (from those with lived experience, to geneticists and those who are anti-psychiatry)
  - Survey of 2,500 people
  - Visits to services across England
The Commissioners
www.schizophreniacommission.org

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What the Commission found…

- People with schizophrenia and psychosis (SMI) die on average 15-20 years earlier than the general population.
- Type II diabetes is 2-3 x more common in SMI than in the general population.
- People with SMI who develop cancer are more likely to die than those in the general population with cancer.
- People with SMI are twice as likely to die from heart disease than the general population.
- 61% of people with SMI smoke compared with 33% of the general population.

What we knew already…

- William Farr - The mortality of lunatics in England and Wales varies between 3 and 14 times that of the general population...some of the excess deaths may fairly be ascribed to insanity, but most resulted from the conditions in the asylums (Farr 1841).

- Kraepelin - negativism, inadequate diet and poor cooperation with treatment of concurrent medical disorders also contributed to the increased mortality (Kraepelin, 1919).

- Bleuler - calculated that schizophrenia was associated with an excess mortality of 1.4: 1. Deaths resulted from indirect consequences of psychosis: refusal of food, intentional or unintentional injuries, suicide, tuberculosis and other diseases resulting from poor conditions in the asylums (Bleuler 1950)

- SMR in asylums (1934-1942) in 3 large studies was 210-400 – higher in females and in acute stages of illness, reduced with increasing age and length of stay. Deaths due to TB, pneumonia, malnutrition (overcrowding and asylum deficiencies), (Malburg 1934, Odegaard 1936, Alstrom 1942)

- Steve Brown 1997: mortality from natural causes high in SMI

- Harris and Barraclough 1998: mortality from natural causes high in SMI
The Commission’s imperatives

- Ensure clarity of responsibility between primary and secondary care for monitoring and managing physical health in SMI
- Better and more training in physical health care and health promotion for all mental health practitioners.
- A programme of physical health monitoring and management integrated with the better prescribing and management of antipsychotic medication.
- Tailored health promotion programmes around exercise and healthy eating and helping people take more responsibility for their own health. These should start in acute care units.
- Finding a way to motivate people who access services to commit to healthier living as an essential individual priority and to maintain this in the longer term.
- Smoking cessation advice should be offered as standard and hospitals should be smokefree environments.
- Better training for GPs. We welcome the Royal College of GPs’ emphasis on improving the skills of GPs in addressing the physical health needs of people with severe mental illness.
The Commission’s Recommendations

- **Target Mortality reduction:** DoH develops indicators for measuring reductions in the excess mortality levels among people with SMI.

- **Training:** The Academy of Medical Royal Colleges, the Royal College of Nurses and the Health and Care Professions Council should place greater emphasis on physical health in SMI in the training of all doctors, nurses and MH practitioners. MH practitioners, especially nurses, should be able to demonstrate competence in providing basic physical health care and progression through training should be dependent on this.

- **Smoking:** Each Mental Health provider works with the local Director of Public Health to ensure that there is targeted smoking cessation provision for smokers with SMI, with guidance from Public Health England.

- **Objective tools to measure change:** Each MH Provider should promote the use of clinical tools to support the physical health needs of people with SMI on antipsychotic medication and ensures that these are visible in every mental health ward in the country, e.g. Lester UK Adaptation – Positive Cardiometabolic Health Resource.

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What to Do? Where to Start?

- RAISE AWARENESS but...
  - William Farr 1841, Emil Kraepelin 1919, Malburg 1934, Odegaard 1936, Alstrom 1942, Eugen Bleuler 1950...
  - Knowing there’s a problem is a start but it isn’t enough
  - Aim – to reduce the physical health burden in SMI
To reduce physical health burden in SMI

1. Monitor everybody
2. Identify and target high risk patients
3. Prevent physical health problems by preventing exposure to known risk factors
4. Provide Health Promotion Interventions as early as possible into treatment
5. Develop an effective mechanism to ensure that patients get appropriate physical health input

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1. Monitoring – Recommendations/Guidelines

- Belgian Consensus Group, De Nayer et al 2006
- BAP, Barnett et al 2007
- European Psychiatric Association (EPA) + European Association for the Study Diabetes (EASD) + European Society of Cardiology (ESC), De Hert 2009
- Maudsley Prescribing Guidelines, Taylor et al 2009
- Sainsbury Centre for Mental Health
- National Service Framework 2004
- NICE guidelines 2005
- GMS contract
- Choosing Health 2004
- C23 standards of DoH
- American Diabetic Association 2004
- Various drug company outputs (AZ, Janssen, Eli Lilly, BMS)
- **Lester UK Adaptation of Positive Cardiometabolic Health Resource**
  - Rethink – Physical Health Check Tool (Phelan et al), [www.rethink.org.uk](http://www.rethink.org.uk)

- **60% PEOPLE WITH SMI NO EVIDENCE OF PHYSICAL HEALTH MONITORING** (Barnes et al 2008)

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1. Monitoring: The National Audit of Schizophrenia (NAS) launches a new clinical resource (Lester adaptation UK)

- Developed by the NAS led by the Royal College of Psychiatrists’ Centre for Quality Improvement
- Funded by the Healthcare Quality Improvement Partnership (HQIP)
- Involving a close collaboration with the Royal College of General Practitioners and the Royal College of Nursing.

Available to Download on: www.rcpsych.ac.uk/quality/NAS/resources
2. Prevention Strategies

- Health promotion from the start of treatment
- Make diet and exercise part of your prescription as with medication or CBT (regardless of medication being taken).
- Prescribe medications with fewer metabolic side effects
### Effects of antipsychotic medications on CVD risk
(adapted from Smith, J Psychopharm 2007)

<table>
<thead>
<tr>
<th>Antipsychotic medication</th>
<th>Weight gain</th>
<th>Dyslipidaemia</th>
<th>Diabetes risk</th>
<th>Metabolic syndrome risk*</th>
<th>CVD risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haloperidol</td>
<td>+/-0</td>
<td>+/-0 (MD)</td>
<td>+/-0 (MD)</td>
<td>+/-0 (MD)</td>
<td>+</td>
</tr>
<tr>
<td>Clozapine</td>
<td>++</td>
<td>+</td>
<td>++</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Risperidone</td>
<td>+</td>
<td>+/-0</td>
<td>+</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Olanzapine</td>
<td>++</td>
<td>+</td>
<td>++</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Quetiapine</td>
<td>+</td>
<td>+/-0 (MD)</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Ziprasidone †</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Aripiprazole</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Zotepine †</td>
<td>++/+ (MD)</td>
<td>(MD)</td>
<td>(MD)</td>
<td>+ (MD)</td>
<td>+ (MD)</td>
</tr>
<tr>
<td>Amisulpride</td>
<td>+/-0 (MD)</td>
<td>(MD)</td>
<td>0 (MD)</td>
<td>+/-0 (MD)</td>
<td>+/-0 (MD)</td>
</tr>
</tbody>
</table>

* NCEP ATP III definition
† Not approved in the UK;
++ highly-increased effect; + medium-/low-increased effect; 0 minimal effect; MD minimal controlled data
3. Identify High Risk Patients

- Females have greater cardiovascular risk than males
- Ethnicity – black African origin, South Asian
- FH of diabetes and CVS disease
- Drug-naïve patients
- High potency antipsychotics
- High dose antipsychotics
- Polypharmacy
- Substance misuse, especially cocaine/crack/stimulants

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4. Health Promotion Interventions

- Behavioural studies
  - Well-being programmes (combine diet with exercise and mental well-being)
  - CBT based approaches to weight management
  - Diet and nutrition
  - MI focused

- Pharmacological studies (designed to attenuate AP-induced weight gain)
  - Metformin > d-fenfluramine > sibutramine > topiramate > reboxetine > amantadine > nizatidine > orlistat > metformin+sibutramine > famotidine > dextroamphetamine > fluoxetine > rosiglitazone. (Maayan et al., 2010)

- Mixed behavioural/pharmacological interventions
## Physical Health Interventions

<table>
<thead>
<tr>
<th>Author</th>
<th>Design</th>
<th>No. of pts</th>
<th>Control group</th>
<th>Duration</th>
<th>Place</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Menza et al 2004</td>
<td>Naturalistic multimodal design</td>
<td>31 (67%)</td>
<td>20 TAU</td>
<td>52 weeks</td>
<td>US</td>
<td>Sig ↓BMI, ↓wgt, ↓BP, ↓HbA1c cf TAU</td>
</tr>
<tr>
<td>Kwon et al 2006</td>
<td>RCT</td>
<td>48 (75%)</td>
<td>15 TAU</td>
<td>12 weeks</td>
<td>Korea</td>
<td>↓wgt noticed by 8/52</td>
</tr>
<tr>
<td>Pendlebury et al 2007</td>
<td>Naturalistic wgt mx group</td>
<td>93 (77%)</td>
<td>No</td>
<td>4 years</td>
<td>UK</td>
<td>Mean ↓wgt 6.2kg (sessions attended p&lt;0.0001)</td>
</tr>
<tr>
<td>Poulin et al 2007</td>
<td>Controlled study</td>
<td>59 (85%)</td>
<td>51 TAU</td>
<td>18 months</td>
<td>Canada</td>
<td>Sig improvements cf baseline cf TAU (BMI, lipids, WC, FgIc)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>42% ↓wgt, sig improve in diet, activity, smoking and alcohol intake</td>
</tr>
<tr>
<td>Smith et al 2007</td>
<td>Naturalistic</td>
<td>957 (80%)</td>
<td>No</td>
<td>2 years</td>
<td>UK</td>
<td>BMI ↓ 0.98 p&lt;0.001</td>
</tr>
<tr>
<td>Lee et al 2008</td>
<td>Naturalistic (33 centres)</td>
<td>232</td>
<td>No</td>
<td>12 weeks</td>
<td>Korea</td>
<td>BMI ↓ 0.18, 1.5, 1.1 (wks 10, 24, 48)</td>
</tr>
<tr>
<td>Chen et al 2009</td>
<td>Naturalistic</td>
<td>33</td>
<td>No</td>
<td>10 weeks</td>
<td>Taiwan</td>
<td>↓BMI ↓wgt (4.8lbs), ↓Msyn (25.5% to 19.6%)</td>
</tr>
<tr>
<td>Lindenmayer et al 2009</td>
<td>Naturalistic Modular manualised</td>
<td>275 inpts (50% 5m, 5.1% 11m)</td>
<td>No</td>
<td>36 weeks</td>
<td>US</td>
<td>↓BMI ↓wgt (4.8lbs), ↓Msyn (25.5% to 19.6%)</td>
</tr>
</tbody>
</table>
Well-being Support Program (WSP)

**WSP**
- 966 patients enrolled
- 48.4% female, 51.6% male
- 7 sites across UK
- General adult population, 18-65
- Chronic mental illness ie >2 years
- Only 31% had physical health check in the previous year

**Baseline Physical risk factors**
- 75% overweight/obese (22% severely obese)
- 35% hypertensive
- 44% smokers
- 63% teetotal, 10% drank >21 units alc/week
- glucose (2% diagnosed in programme)
- 10% raised cholesterol
- 24% hyperprolactinaemic
- 13% abnormal LFTs

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<table>
<thead>
<tr>
<th></th>
<th>Baseline Mean (s.d/range)</th>
<th>Consultation 6 Mean (s.d), range, mean difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMI</td>
<td>31.2 (6.7)</td>
<td>29.4 (9.7)**</td>
</tr>
<tr>
<td></td>
<td>Range 18-77</td>
<td>Range 17-55</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.8 (CI 0.6-3.0)</td>
</tr>
<tr>
<td>Cigarettes</td>
<td>13.5 (15.0)</td>
<td>9.9 (13.0)**</td>
</tr>
<tr>
<td></td>
<td>Range 0-60</td>
<td>Range 0-60</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.6 (CI 1.6-5.6)</td>
</tr>
<tr>
<td>Alcohol (units)</td>
<td>7.2 (16.8)</td>
<td>4.5 (10.8)*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>range 0-168</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.7 (CI 0.7-4.7)</td>
</tr>
<tr>
<td>Activity (mins)</td>
<td>57 (60)</td>
<td>91 (64)**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>34.3 (CI 25-43)</td>
</tr>
<tr>
<td>Diet</td>
<td>41.4 (34)</td>
<td>62 (30)**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20.5 (CI 16-25)</td>
</tr>
<tr>
<td>Self esteem</td>
<td>36.4(25.1)</td>
<td>52.1(20.4)**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15.8 (CI 12.5-19.0)</td>
</tr>
<tr>
<td>BP</td>
<td>123/76</td>
<td>121/75 NS</td>
</tr>
</tbody>
</table>
WSP Limitations

• One of the most widely adopted health promotion interventions yet no robust RCT evidence to confirm effectiveness
• Service evaluation/audit
• Add-On
• External non-NHS funding
• Translation to “real world” psychiatry (cf. Elldridge et al 2011) –
  • No longer an additional dedicated nurse adviser, instead part of the team duties…
  • Only 20% completed
  • But those who did cherished it!

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IMPaCT - RCT

• two-arm RCT comparing the cost-effectiveness of combining treatment as usual (TAU) with a 1-year intensive Health Promotion Intervention (HPI) versus treatment as usual (TAU) in improving health at one-year follow-up
• 84 Care co-ordinators, 454 participants with SMI
• Half randomised to intervention (IMPACT THERAPY) – 4 days training in
  – physical health awareness
  – Physical health competence
  – Basic MI and MI for substance misuse
  – Basic CBT
  – Running healthy living groups

IMPaCT Therapy

• ~6 months
• MI and CBT (8 basic modules: CBT for depression, anxiety and psychosis, Alcohol, Cannabis, Smoking, Class A drugs, Diabetes, Exercise, Healthy eating) : PICK AND MIX
• Individual and Group options

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Body Mass Index (BMI) and Weight

- Mean BMI 31 (Range 15-58)
  - 51% have a BMI \( \geq 30 \) (Obese)
  - 47% of men
  - 56% of women
  - 13.3% have a BMI \( \geq 40 \)
  - 13% of men
  - 8% of women

- Weight
  - Males (N=218): mean 89.7 kg (SD 20.7; range 45-152)
  - Females (N=172): mean 91.9 kg (SD 21.9; range 45-165)

Funded by NIHR
IMPACT - Preliminary baseline findings to date

- Mean age 44.8, SD (10); range 21-68,
- 250 male, 227 Caucasian
- Mean BP 122/82
- 28% systolic BP > 130
- 35% diastolic BP > 85
- 98% of females had waist circumference > 80 cm
- 73% of males had waist circumference > 94 cm
- 55.5% overall have MetS
- 42.1% of males with MetS
- 73.5% of females with MetS
- 62% are smokers.
Other health promotion interventions

- John Pendlebury et al 2007 - Weight management group
- Ball et al 2001 – Weight watchers group
- McKibbin et al 2006 – DART (Diabetes Awareness and Rehabilitation Training)
- See Rethink Physical Health resources page http://archive.rethink.org/how_we_can_help/physical_health/physical_health_resources

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5. Develop an Effective Mechanism to deliver physical health care

- Local mental health staff trained to understand importance of ongoing monitoring and when to refer e.g. MEWS chart
- All patients registered with a GP
- Agreement with GP about speedy response to referrals and clear actions and responsibilities.
- In-house primary care clinics
- Agreements with relevant secondary care services, e.g. Diabetes services, Cardiologists (ECG reading arrangements)

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5. Develop an Effective Mechanism to deliver physical health care

This algorithm can be used by your team to determine how your local setting most accurately aligns with the suggested levels for supporting physical health monitoring and interventions.

**Level 5**
- Has little or no awareness of physical health issues affecting people with schizophrenia
- Provides no routine physical health interventions

**Level 4**
- Has specific activities/processes aimed at improving the physical health of people with schizophrenia
- Interfaces with other agencies to manage these patients
- Regularly records basic physical measurements, e.g., weight, waist circumference, blood pressure

**Level 3**
- Follows a specific process to ensure all psychiatric patients are registered with a GP
- Maintains a register of all patients needing physical health screening

**Level 2**
- Has a shared care agreement with primary care
- Follows an ongoing physical health review process
- Has a process for managing patients with abnormal results
- Follows agreed protocols detailing the action to be taken and referral paths to be followed

**Level 1**
- Provides a health screen clinic that can be accessed by all patients with schizophrenia
- Runs healthy lifestyle intervention programmes, including both individual and group activities
Implementation in the real world!

- FOR PRIMARY CARE
  - Quality and Outcomes Framework (QOFs)
  - Incentive funding for monitoring in SMI
  - BMI, BP, total and HDL cholesterol ratio, glucose

- FOR MH PROVIDERS
  - Commissioning for Quality and Innovation (CQUIN)
  - Vary according to service provided
  - Non-participation in an applicable CQUIN scheme results in non-payment of that proportion of CQUIN funding…
  - e.g. % of CPAs that demonstrate PH assessments of alcohol, smoking, BMI, BP, cholesterol, glucose

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Implementation in the real world – from the bottom up

Lone practitioner
- when the practitioner leaves, the intervention dies: if this is you, raise awareness in your team, team leader and service manager

Single Team
- when the team changes, the intervention dies: if this is you, disseminate your good work around other teams; audit your work and present to the service managers and Trust board

Team Leader
- Team Leader support is vital: without Team leader support, the intervention is not prioritised and eventually will peter out.

Service Manager
- without service manager support, the intervention will have a shelf-life. Service managers will be looking to provide what their Trust board and the CCG/SCG wants. The CCGs and SCGs have a directive from government around physical health in SMI. Service managers need help to develop physical health strategies.

Trust
- if it’s not a Trust priority then it won’t last. If it’s a Trust priority then service areas which don’t have physical health initiatives will start to develop them. Make it easy for your Trust board. You’re pushing on an open door

Commissioner
- if Commissioner’s don’t make this a priority it won’t be part of the contract…
- the CCGs and SCGs are required by government to make physical health in SMI a priority
- if the CCGs and SCGs are paying for physical health care in SMI (or not paying if it’s not being done)

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Implementation in the real world – from the top down

**Commissioner (CCG, SCG, HWB)**
- physical health monitoring and health promotion with sensible physical health outcomes based on objective measures should be part of the contract

**Trust**
- let service managers know that this is a priority and the service won’t be paid if they don’t attend to it. Develop a Physical Health Lead role

**Service Manager**
- find a willing team and team leader to champion the cause and compel all team leaders to make this a priority using a pyramidal approach to learning and dissemination.

**Team Leader**
- find an interested team member to train up and disseminate learning, use a pyramidal cascading approach to training. Allocate physical health responsibilities to a “champion” in the team. Give them a job description (keeping up to date; disseminating new ideas; keeping up the SMI register; liaising with local primary and secondary care services; coordinating the physical health strategy for the team).

**Single Team/lone practitioner**
- enthuse team/disinterested team members/new team members when they see how much more you enjoy your job and the greater autonomy you have and how toned you look!
- Take pride in setting up your health promotion intervention. Don’t add physical health to the workload, replace 2-4 weekly MI monitoring chats with the health intervention. Team members can take turns in running groups. The monitoring chats still occur, but in a different setting, e.g. whilst walking round the park

Shubulade Smith, May 2013
And Finally…

IF YOU BUILD IT, THEY WILL COME!

THANK YOU!!
IMPACT Team

- Robin Murray
- Fiona Gaughran
- Khalida Ismail
- Shubulade Smith
- Zerrin Atakan
- Kathy Greenwood
- Anita Patel
- Daniel Stahl
- Tony David
- Philippa Lowe
- Maurice Arbuthnott

- Poonam Sood
- Ruth Ohlsen
- Stefania Bonaccorso
- Anna Kolliakou
- Conan O’Brien
- Ali Featherman
- Evangelos Papanastasiou
- Stella Anakwe-Umeh
- Gill Todd
- Manyara Mushore
- John Lally
- Damilola Ongagbesan
- Catherine Fung

- Bee Harries
- Hannah Sallis
- Catherine Fung
- Keji Dalemo
- Candice Joseph
- Jonas Eberhard
- Irene Sambath
- Guilia Di Clemente
- Claudia Fullalove
- Josefine Breedvelt