

## » Integration of care: Physical health in severe and enduring mental illness

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## » Scope of presentation

1. Background
2. Why now (for mental health services) ?
3. What is the evidence ?
4. Where are we with this locally & nationally ?
5. How do we take this forward ?
6. Questions

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## Physical Health in Severe and Enduring Mental Illness



### Summary of issues

- Patients with SMI die about 15 - 20 years earlier than peers
- Mortality due to treatable physical diseases is 4 X commoner than in the general population (Brown et al, 2000)
- Increased prevalence of risk factors for cardiovascular, metabolic & respiratory diseases
  - Obesity
  - Smoking
  - Alcohol & drug abuse
- Poor access to physical healthcare
- Poor quality of physical healthcare
- Impact of psychotropic medications

## 11-year follow-up of mortality in patients with schizophrenia: a population-based cohort study (FIN11 study)

Jari Tiihonen, Jovko Lonnqvist, Kristian Wahlbeck, Timo Klaukka, Leo Niskanen, Antti Tanskanen, Jari Haukka

'the gap in life expectancy between patients with schizophrenia and the general population was 25 years in 1996 and 22.6 years in 2006'


'Overall risk of death was 30% lower during treatment with any antipsychotic drug'

## PICU Demographic Data and Diagnosis

	Tarn	PICU popn	Chi <sup>2</sup>	df	P
<b>Gender</b>					
Male	100%	75%	15.5	1	<0.001
Female	0	25%			
<b>Employment</b>					
Not working	90%	93%	0.5	1	NS
Employed/student	10%	7%			
<b>Marital Status</b>					
Single	90%	89%	0.1	1	NS
Married/cohabiting	10%	11%			
<b>Ethnicity</b>					
Caucasian	50%	77%	14.7	1	<0.001
Black/ethnic minority	50%	33%			
<b>Diagnosis</b>					
Schizophrenia/schizoaffective	65%	52%	10.7	5	NS
Mania	27%	18%			
Depression	0%	5%			
Drug induced psychosis	0%	6%			
Personality disorder	2%	5%			
Other	6%	14%			

## WHO global risk factors

The WHO leading global risk factors for mortality

- Hypertension
  - Smoking
  - Raised glucose concentration
  - Physical inactivity
  - Overweight and obesity
  - High cholesterol concentration
- 

## Risk factors for cardiovascular disease

Risk factors for CVD are split into modifiable and non-modifiable

### Modifiable

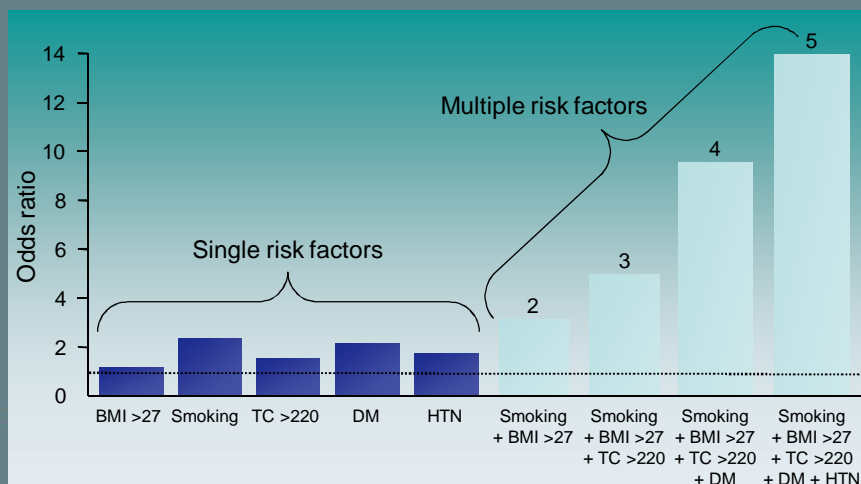
- Smoking
- Elevated blood pressure
- Elevated cholesterol
- Obesity
- Physical inactivity
- Stress/behaviour
- Poor glycaemic control

### Non-modifiable

- Family history
  - Age
  - Gender
  - Ethnicity
- 

American Heart Association

## Risk factors for heart disease in the general population



BMI = body mass index (kg/m<sup>2</sup>); TC = total cholesterol (mg/dL); DM = diabetes mellitus; HTN = hypertension

Wilson et al 1998

## CVD risk factors in people with SMI

### Estimated prevalence and relative risk

Modifiable risk factors	Schizophrenia	Bipolar disorder
Obesity	45-55% RR: 1.5-2	21-49% RR: 1-2
Smoking	50-80% RR: 2-3	54-68% RR: 2-3
Diabetes	10-15% RR: 2	8-17% RR: 1.5-2
Hypertension	19-58% RR: 2-3	35-61% RR: 2-3
Dyslipidemia	25-69% RR: < 5	23-38% RR: < 3
Metabolic Syndrome	37-63% RR: 2-3	30-49% RR: 1.5-2

RR: relative risk.

(De Hert et al 2009)

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## Antipsychotics and metabolic risk factors –

### CATIE study (McEvoy et al 2005)

Large pragmatic randomised study in people with schizophrenia

	Prevalence	Proportion <b>NOT</b> receiving treatment
Hypertension (BP >140/90)	27%	40%
Diabetes	11%	30%
Raised TG	50%	90%
Low HDL	50%	90%

- 68% cigarette smokers
- 10 yr CHD risk significantly higher than in matched controls

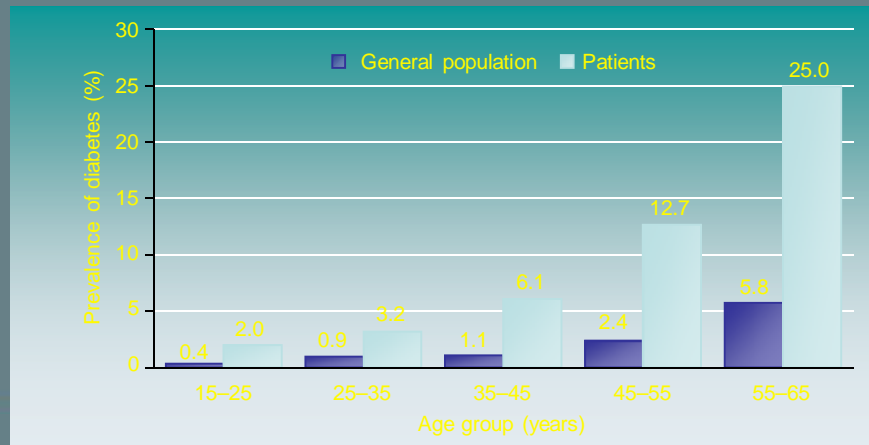
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## Diabetes prevalence

Diagnosis	Diabetes
Schizophrenia	9.4
Schizoaffective disorder	9.0
Delusional disorder	13.7
Psychosis UNS	6.7
Bipolar	17.0
Other	3.3

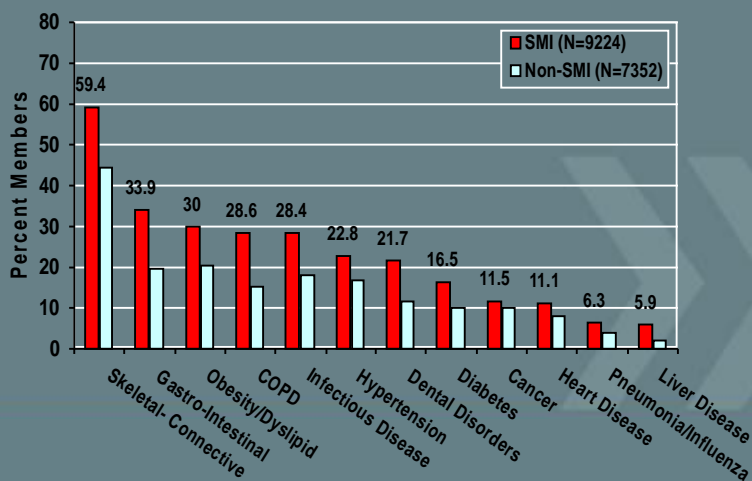
## Prevalence of diabetes in schizophrenia compared to general population



8.6% diabetes; n=415

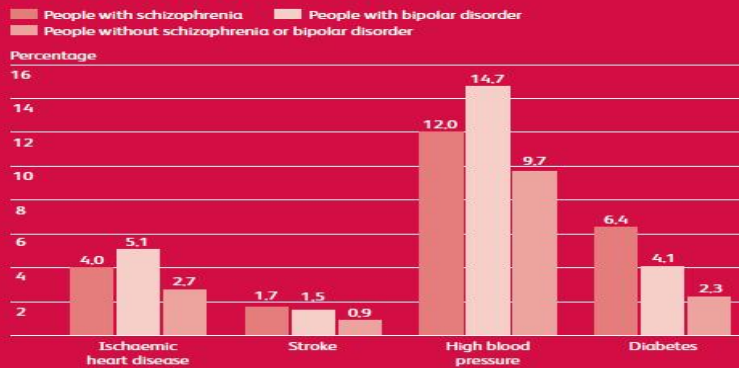
De Hert et al 2006

## Maine Study Results: Comparison of Health Disorders Between SMI & Non-SMI Groups



## Mental Illness and Physical Illness

### Prevalence of physical health conditions among people with schizophrenia or bipolar disorder



(Source: Hippiisley-Cox and Pringle 2005)

- Women with schizophrenia are 42 % more likely to get breast cancer than other women.
- People with schizophrenia are 90 % more likely – ie nearly twice as likely – to get bowel cancer (the second most common cause of cancer death in Britain).<sup>6</sup>

## Causes of death in schizophrenia

- Suicide
- Cancer
  - 1.5 times higher than general population
  - Commoner in women than men
  - Breast cancer in women
  - Lung cancer in men
- Cardiovascular diseases



- Frédéric Limosin of the University of Reims followed up 3,470 patients with schizophrenia for 11 years, during which 13.9% died.
- The absolute mortality rate by cause of death was:
  - 4.2% from suicide
  - 2.2% from cancer
  - 2.0% from cardiovascular disease
  - 2.5% from unknown causes
  - 1.4% from accidental or non suicidal poisoning

- Breast cancer accounted for 39% of cancers in women and was 3X more common as cause of death in schizophrenia than the female general population (SMR 2.8, 95% CI 1.6 to 4.9)
- Lung cancer accounted for 50% of cancers in men and was 2X as likely to cause death as in the general population (SMR 2.2, 95% CI 1.6 to 3.3).
- Years of tobacco consumption were significant independent predictors in lung cancer mortality in schizophrenia ( $P < 0.0001$ ).
- Smoking was significantly more prevalent among the schizophrenia cohort than in the general French population (56.3% versus 33.0%,  $P < 0.001$ ).
- Age at baseline was an independent risk factor for both breast cancer and lung cancer mortality in schizophrenia ( $P = 0.04$  and  $P = 0.0004$ , respectively).

- Bipolar disorder appears to increase the risk of early death from medical illnesses
- Common causes of death in bipolar disorder:
  - Cardiovascular disease (31% of observed deaths in the cohort of 14,000 bipolar patients by Osby et al)
  - Suicide (19%)
  - Cancer (14%)
- Review of 17 studies involving more than 331,000 patients
  - The risk of early death was from 35 percent to 200 percent higher than the mortality rate for the general population
  - The risk is the same for men and women.
  - The most common conditions leading to premature death:
    - heart disease, respiratory diseases, stroke, and endocrine problems e.g., diabetes

## Psychiatric Characteristics Associated With Long-term Mortality Among 361 Patients Having an Acute Coronary Syndrome and Major Depression

Seven-Year Follow-up of SADHART Participants

Alexander H. Glassman, MD; J. Thomas Bigger Jr, MD; Michael Gaffney, PhD

**Context:** Major depressive disorder (MDD) after acute coronary syndrome (ACS) is associated with an increased mortality rate. We observed the participants of the Sertraline Antidepressant Heart Attack Randomized Trial (SADHART) to establish features of MDD associated with long-term mortality.

**Objectives:** To determine whether the following variables were associated with long-term mortality: baseline depression severity, previous MDD episodes, onset of MDD before or after the ACS event, 6 months of sertraline hydrochloride therapy, and mood improvement independent of treatment.

**Design:** SADHART was a double-blind, placebo-controlled, randomized trial comparing the safety and antidepressant efficacy of sertraline vs placebo in 369 patients with ACS who met criteria for MDD. The trial was completed in June 2000, and follow-up for vital status was completed in September 2007.

**Setting:** Academic research.

**Participants:** SADHART participants.

**Main Outcome Measures:** Vital status was determined in 361 participants (97.8%) during a median follow-up of 6.7 years.

**Results:** During the study, 73 participants (20.9%) died. Neither previous episodes of MDD, nor onset before or after the index ACS, nor an initial 6 months of sertraline treatment was associated with long-term mortality. Cox proportional hazards regression models showed that baseline MDD severity (hazard ratio, 2.30; 95% confidence interval, 1.28-4.14;  $P < .006$ ) and failure of MDD to improve substantially during treatment with either sertraline or placebo (hazard ratio, 2.39; 95% confidence interval, 1.39-4.14;  $P < .001$ ) were strongly and independently associated with long-term mortality. Marked improvement in depression (Clinical Global Impression-Improvement subscale score of 1) was associated with improved adherence to study medication.

**Conclusions:** Severity of MDD measured within a few weeks of hospitalization for ACS or failure of MDD to improve during the 6 months following ACS predicted more than a doubling of mortality over 6.7 years of follow-up. Because persistent depression increases mortality and decreases medication adherence, physicians need to aggressively treat depression and be diligent in promoting adherence to guideline cardiovascular drug therapy.

Arch Gen Psychiatry. 2009;66(9):1022-1029

Monitor and record the following regularly and systematically throughout treatment

1. Physical health (primary care)
2. Side effects of treatment



## QOF

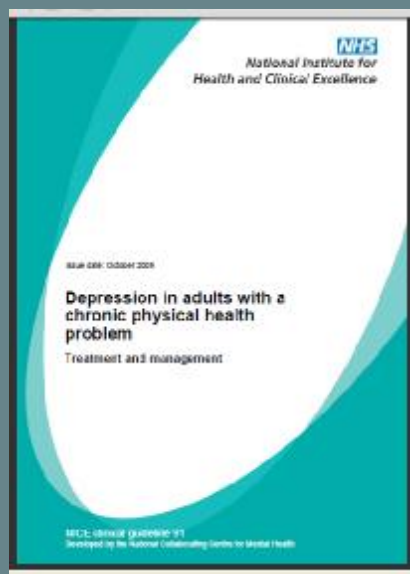
**MH08.** The practice can produce a register of people with schizophrenia, bipolar disorder and other psychoses (4)

**MH09.** The % of patients with SMI with a review in the last 15/12..... evidence that the patient has been offered routine health promotion and prevention advice appropriate to their age, gender and health status (23)

**MH06.** The percentage of patients on the register who have a comprehensive care plan (6)

**MH07.** The % of patients with SMI who do not attend the practice for their annual review who are identified and followed up by the practice team within 14 days of non-attendance

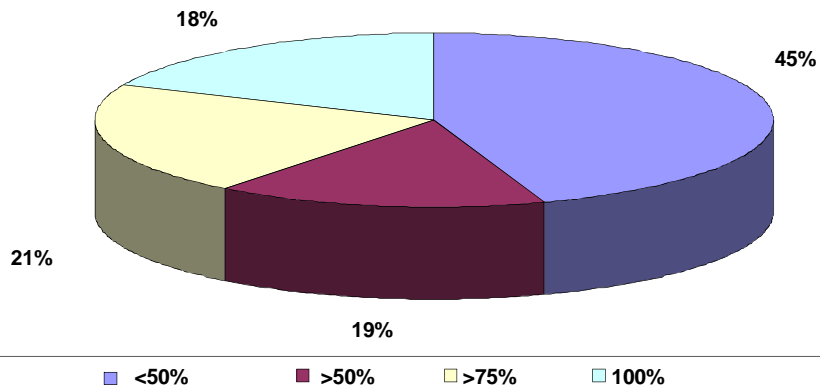
## People with depression



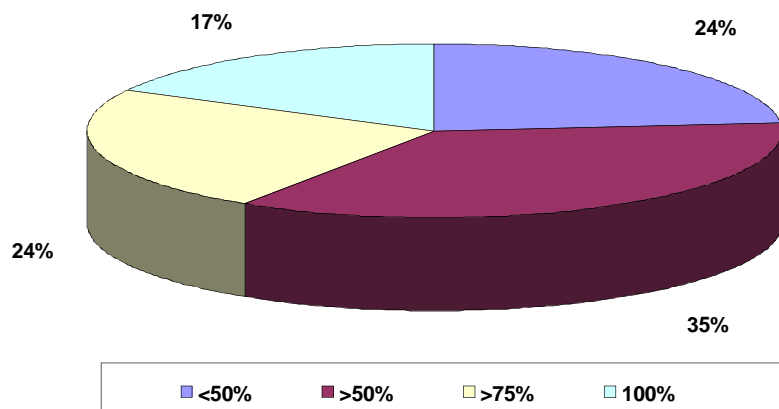
## QOF

**DEP01:** The percentage of patients with diabetes and /or heart disease for whom case finding for depression has been undertaken on one occasion during the previous 15 months (8)

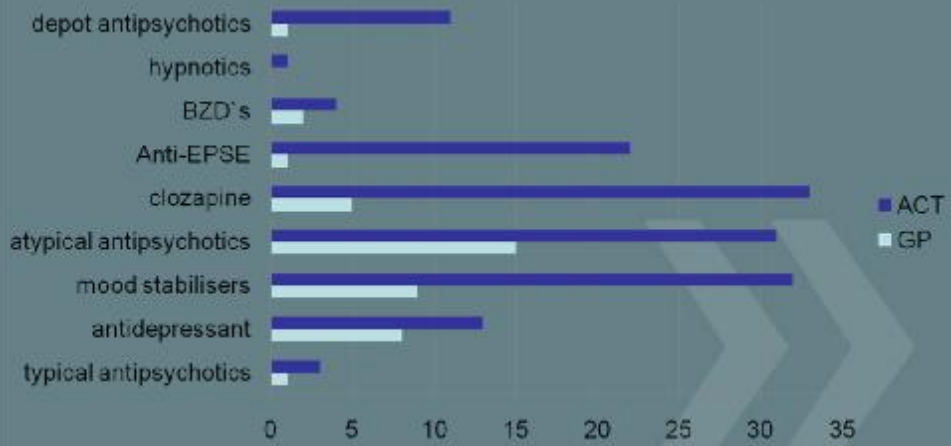
## Consistency for physical health diagnoses



## Consistency for MH diagnoses



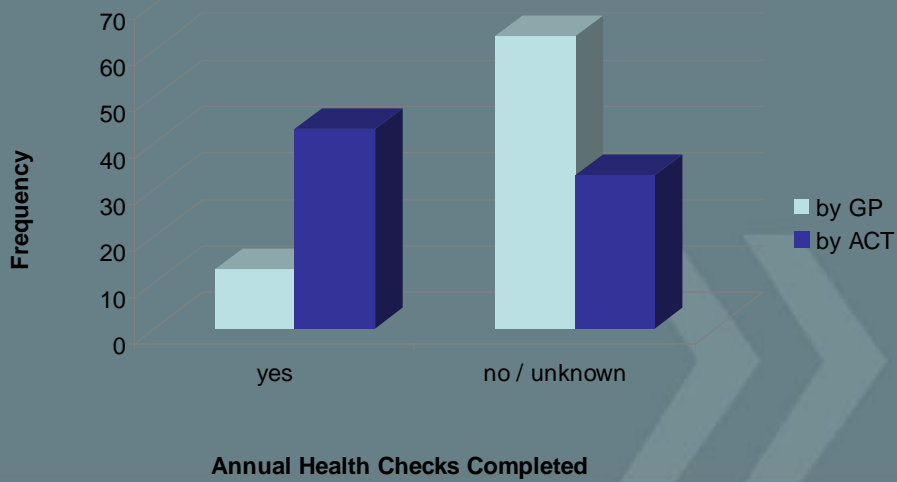
## Consistency of recording of MH medications



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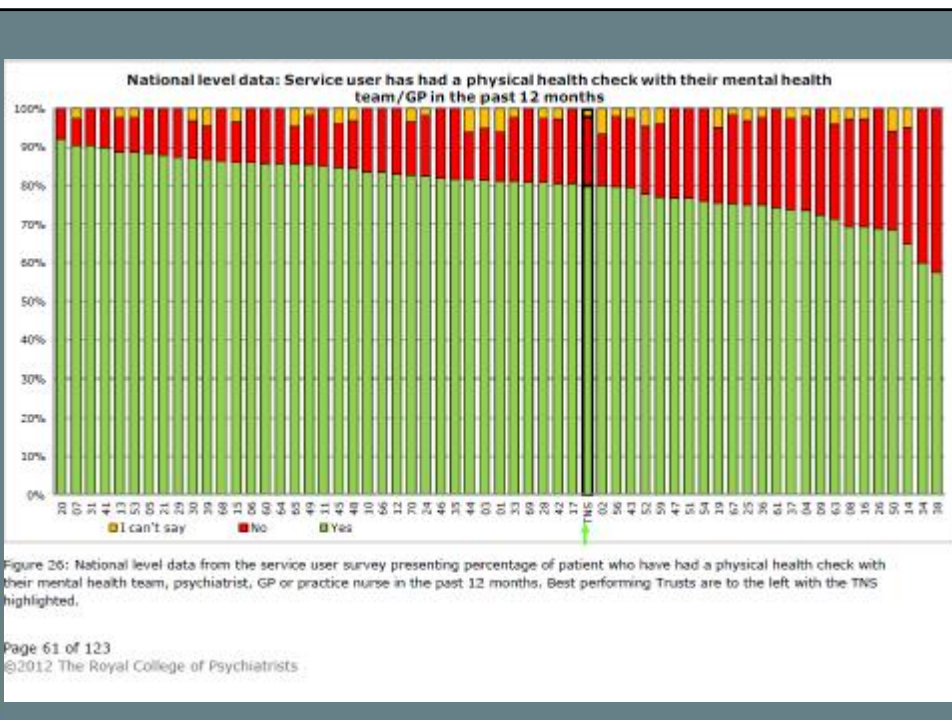
## Annual Health Checks

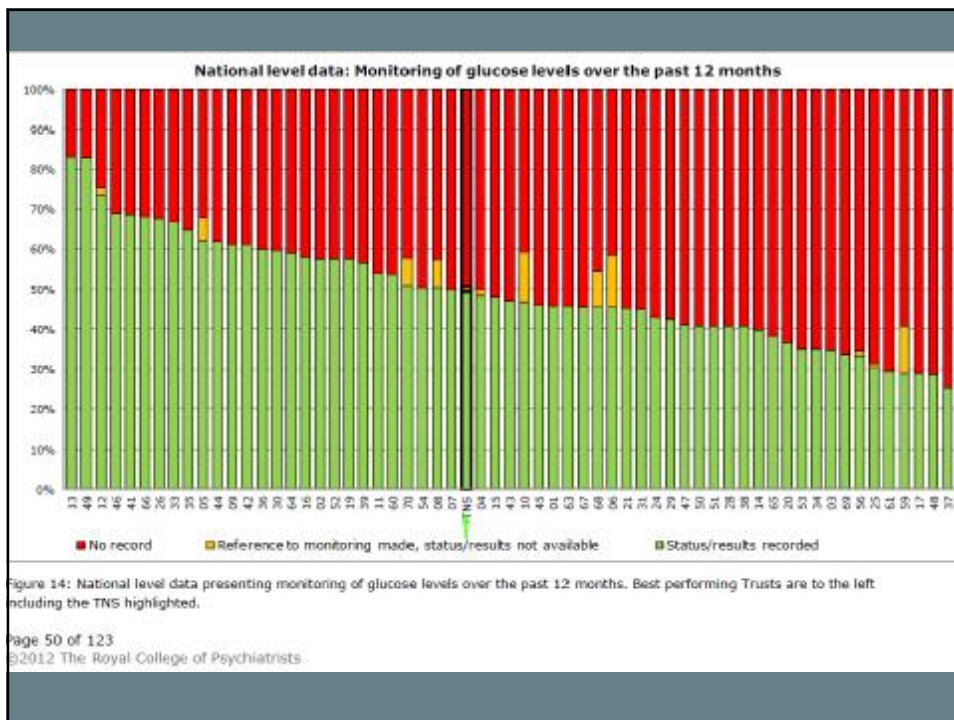
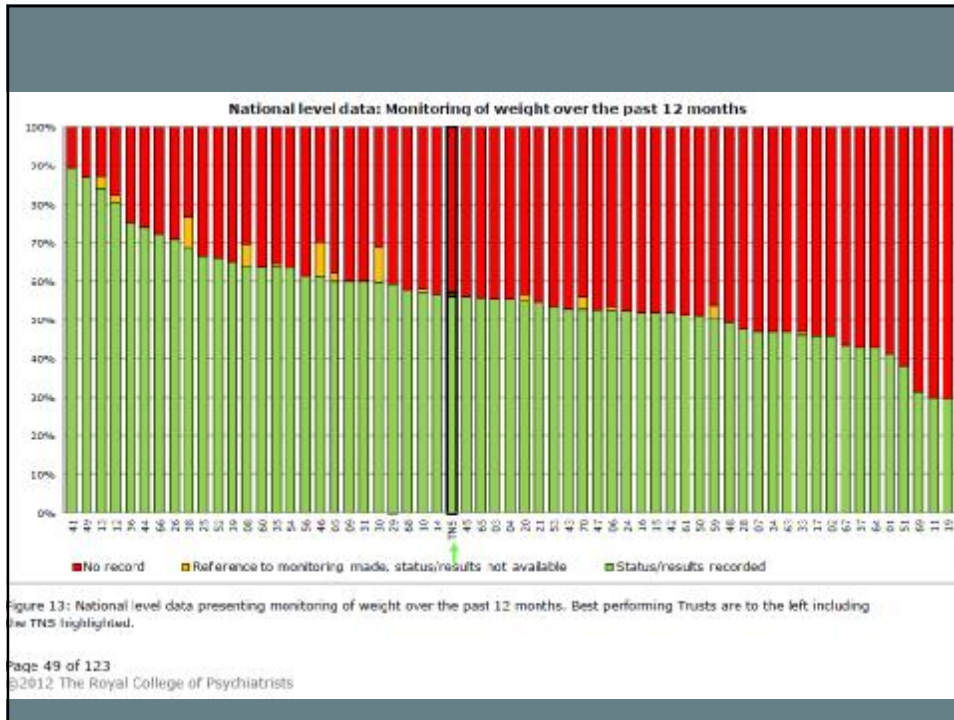


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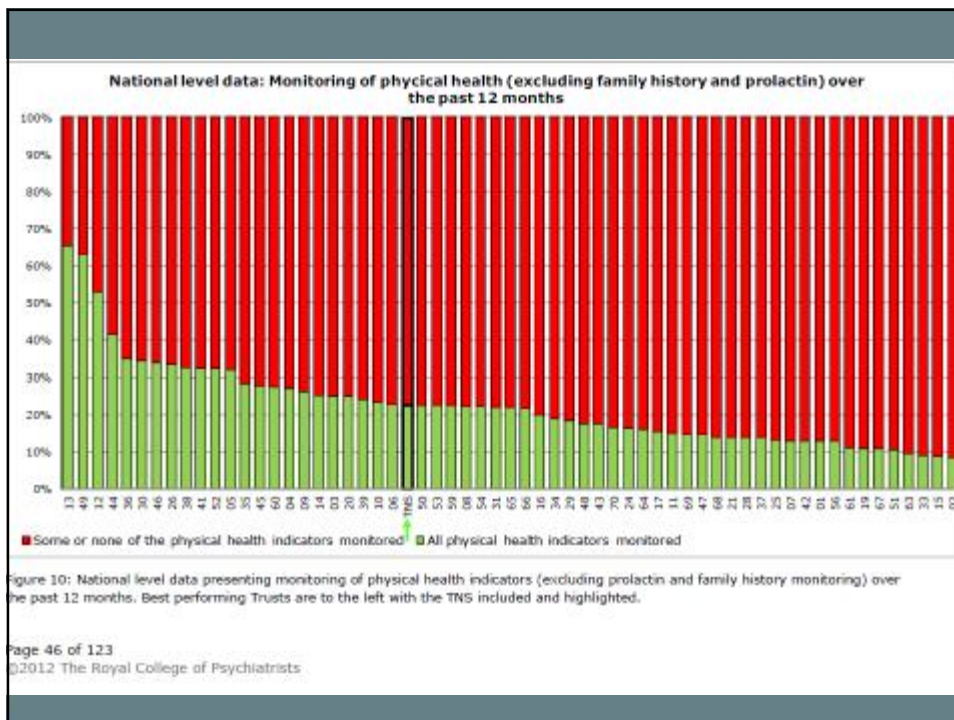
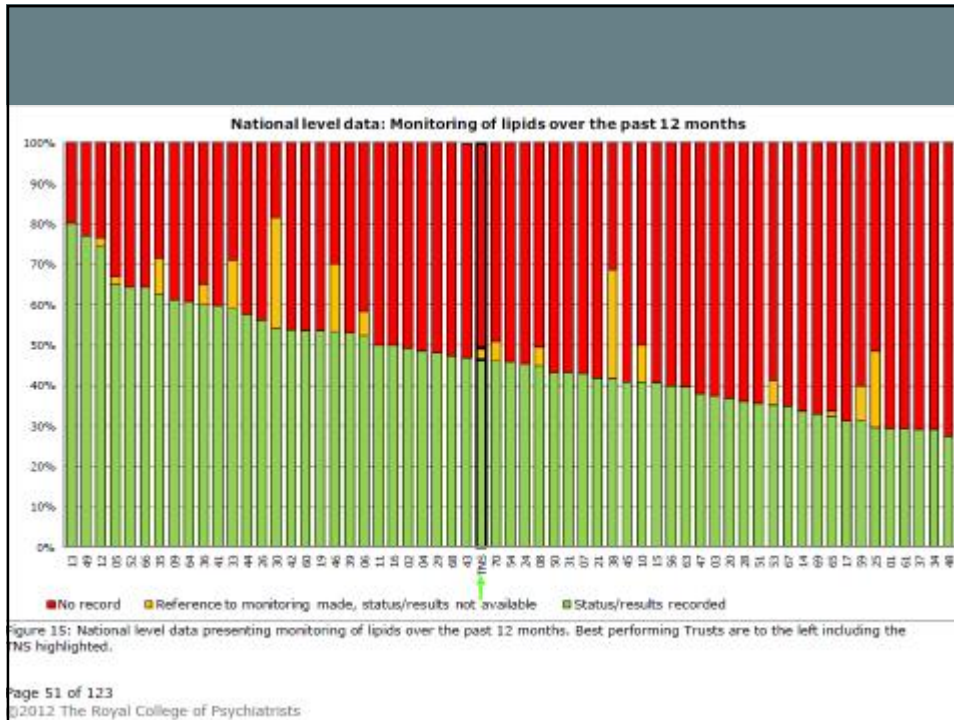
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National Clinical Audits (2011/12)	Participation Yes/No	Number of cases submitted	% of cases submitted
National Audit of Schizophrenia (Royal College of Psychiatrists)	Yes	102	100%
National Audit of Continence Care (Royal College of Physicians) - PILOT	Yes	20	100%
Monitoring of patients prescribed lithium (NICE UK Audit - Topic 7)	Yes	171	100%
Use of long-acting products for people with bipolar disorder (UK Audit - Topic 11)	Yes	305	100%
Assessment of patients with depression using the PHQ-9 (UK Audit - Topic 1)	Yes	135	100%
Low back pain in primary care (The UK Health Services Research Audit - Topic 10)	Yes	72	100%
Treatment of people with bipolar disorder in mental health and primary care (UK Audit - Topic 1)	Yes	155	100%
Prescribing of high dose antipsychotics for one year (UK Audit - Topic 1)	No		
Falls and Bone Health – Royal College of Physicians	Yes	20	50%
National Enquiries (2011/12)	Participation Yes/No	Number of cases submitted	% of cases submitted
National Confidential Inquiry into Suicide and Homicide	Yes	21	100%

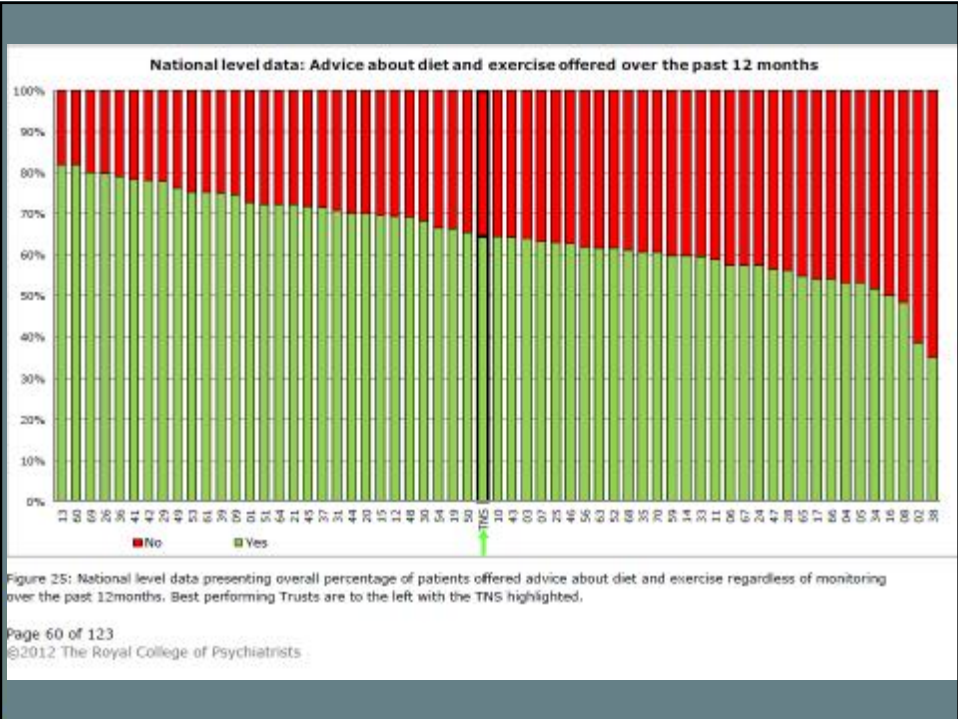
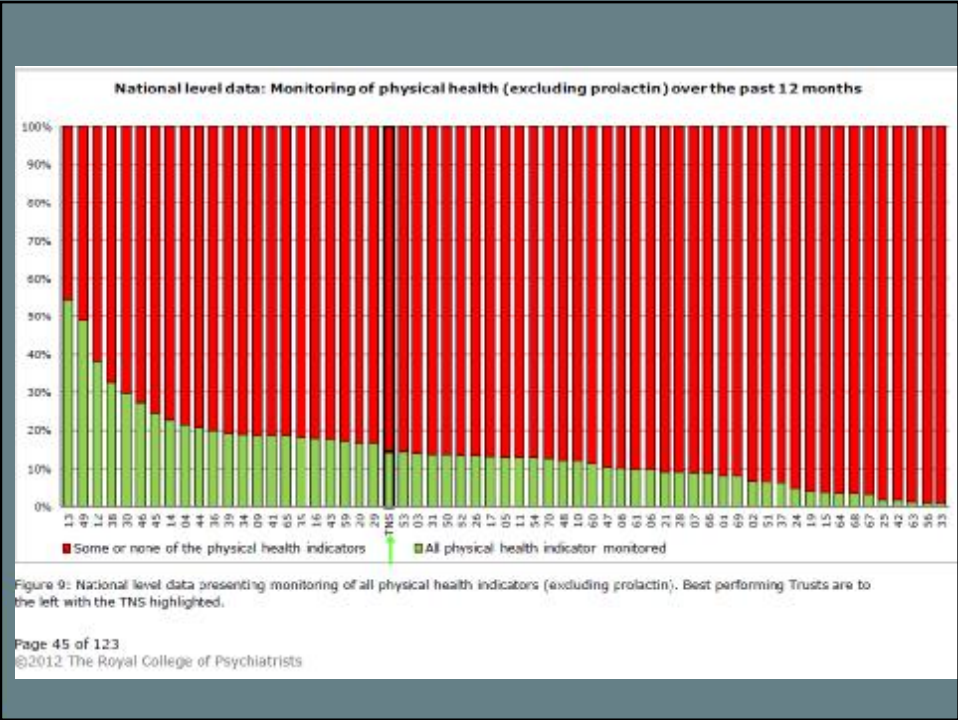












## NICE schizophrenia guideline

### Recommendations

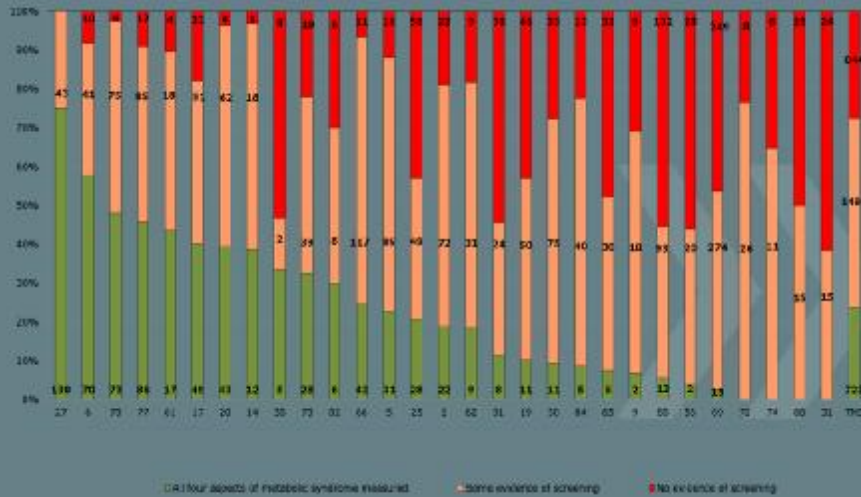
- Provide information and offer choice
- Oral/depot
- If response suboptimal, try another antipsychotic
- Monitor side effects regularly during treatment
- Do not routinely initiate regular combined antipsychotic medication
- Offer clozapine
- Consider augmenting clozapine with a second antipsychotic
- Annual physical health check



## DOCUMENTED EVIDENCE OF SCREENING FOR THE METABOLIC SYNDROME AT EACH AUDIT SINCE BASELINE

	Baseline (June 2006)	Re-audit (June 2007)	2c suppl. (Aug 2008)	2d suppl. (July 2009)	2e suppl. (April 2010)
Number of Trusts and patients	21 Trusts N=1966	21 Trusts N=1516	13 Trusts N=1035	21 Trusts N= 2522	29 Trusts N=3058
No evidence of screening	897 (46%)	375 (25%)	323 (31%)	698 (28%)	844 (28%)
Some reference to screening	850 (43%)	791 (52%)	521 (50%)	1265 (50%)	1491 (49%)
Test/result measurement recorded	219 (11%)	350 (23%)	191 (18%)	559 (22%)	723 (24%)

## % OF PATIENTS SCREENED FOR ALL FOUR ASPECTS OF THE METABOLIC SYNDROME IN EACH TRUST SUPPLEMENTARY AUDIT - APRIL 2010, N=3,058

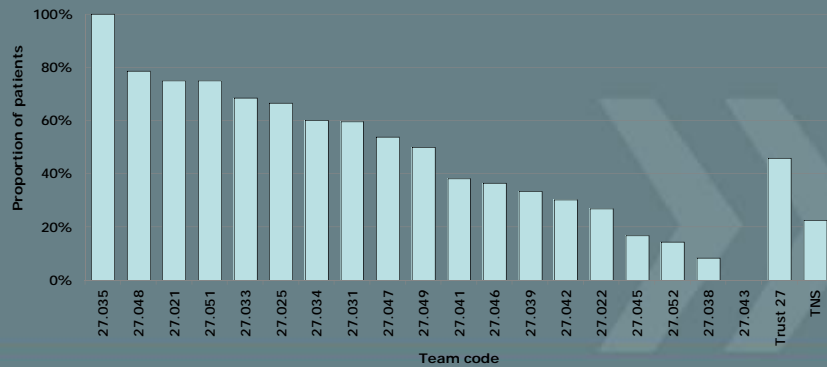


## AUDIT FINDINGS

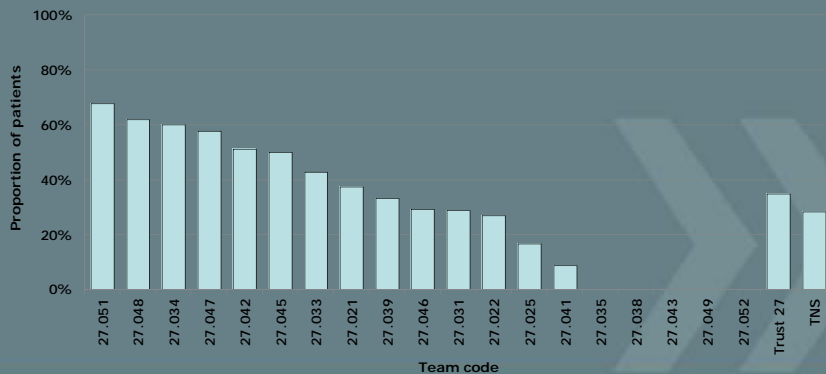
Nature of documented evidence in the clinical records of assessment of side effects in the last year at baseline, re-audit and supplementary audit.

	<i>Baseline (n=5,804)</i>	<i>Re-audit (n=5,037)</i>	<i>Supplementary audit 6c (n=6,105)</i>
No documented evidence	2,047 (35%)	1,188 (24%)	1,120 (18%)
General statement side effects are not present	1,518 (26%)	1,339 (27%)	2,159 (35%)
General statement that side effects are present	1,605 (28%)	1,508 (30%)	1,874 (31%)
Physical examination to assess side effects	629 (11%)	965 (19%)	1,372 (23%)
Blood tests related to side effects	710 (12%)	1,081 (21%)	1,728 (28%)
Local Trust checklist or rating scale	207 (4%)	206 (4%)	454 (7%)
Published side effect rating scale	437 (8%)	651 (13%)	1,265 (21%)
Scale designed by pharmaceutical company	47 (1%)	28 (1%)	18 (<1%)

Proportion of patients in each service, your Trust and the total national sample at supplementary audit 6c with documented evidence in their clinical records that a physical examination had been conducted to assess side effects in the last year.

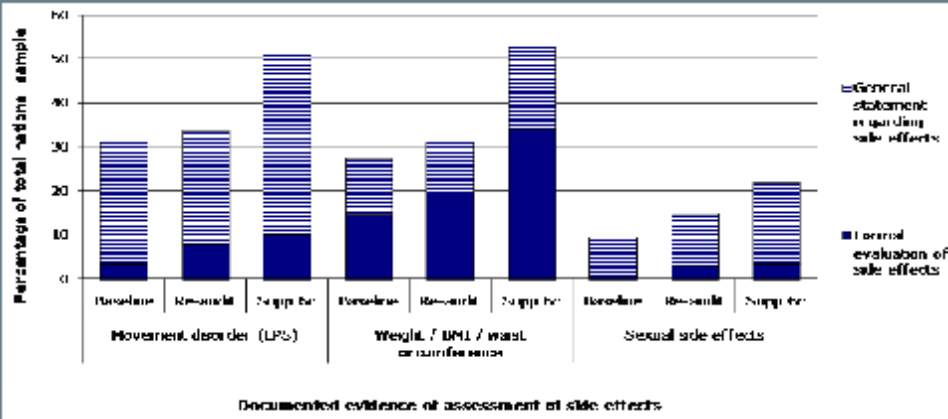


Proportion of patients in each service, your Trust and the total national sample at supplementary audit 6c with documented evidence in their clinical records that blood tests related to side effects had been conducted in the last year.

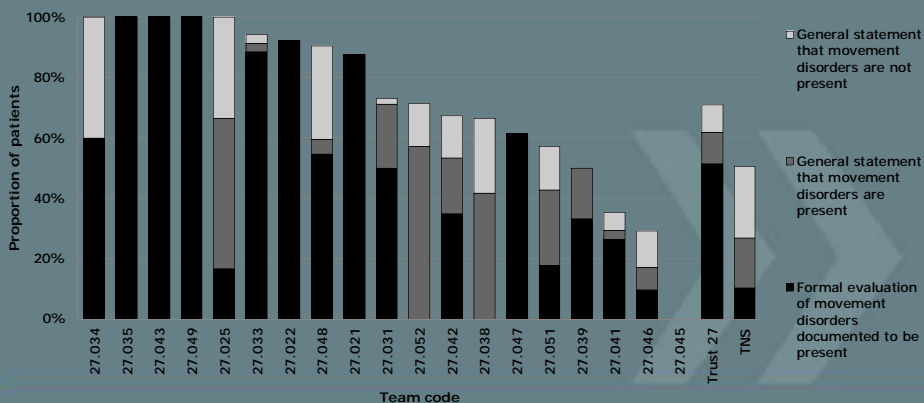


**Side effects –**

Quality of assessment of movement disorder, weight/BMI / waist circumference and sexual side effects in the total national sample in the last year, at baseline (n=5804), re-audit (n=5037) and supplementary audit (n=6105)



Proportion of patients in each service, your Trust and the total national sample at supplementary audit 6c with documented evidence in their clinical records of assessment of movement disorders in the last year.



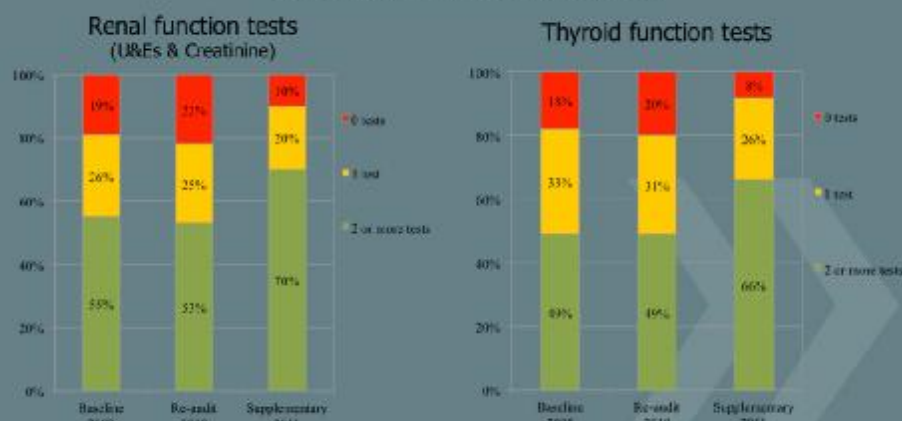
# LITHIUM MONITORING

## AUDIT STANDARDS

1. The following tests/measures should be completed before initiating lithium treatment
  - Renal function tests; urea and electrolytes (U&Es) including creatinine (or e-GFR or creatinine clearance)
  - Thyroid function tests (TFTs)
  - Weight or BMI or waist circumference.
2. The following tests/measure should be conducted during maintenance treatment
  - Serum lithium level every 3 months
  - U&Es and TFTs every 6 months
  - Weight or BMI or waist circumference during the last year

## LITHIUM MONITORING QIP

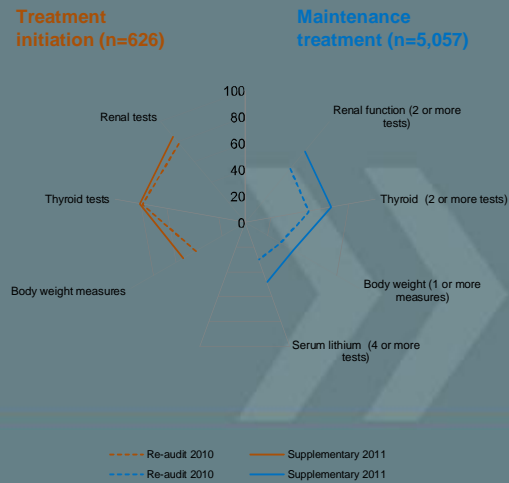
TESTS CONDUCTED DURING MAINTENANCE TREATMENT IN THE TOTAL NATIONAL SAMPLE, AT BASELINE (N= 2,976), RE-AUDIT (N= 3,169) AND SUPPLEMENTARY AUDIT (N=5,057)



## Supplementary audit – monitoring of lithium treatment: total national sample

Lithium has a narrow therapeutic index, is nephrotoxic and adversely affects the thyroid

- at least one patient in three does not have the physical health checks recommended by NICE



Data on file, POMH 2011

## How do we take this forward ? Working with GPs and doing more?

### Encourage/request an annual physical check for everyone with SMI (and recurrent or chronic depression)

- BP
- BMI
- Glucose
- Lipids
- Cardiovascular risk assessment
- Advice/encouragement/help with smoking cessation

### We need systems for sharing

- All diagnoses (chronic illness)
- Results of investigations/tests
- Medication prescribed

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## Going forward....

- Education of healthcare professionals – high risk of CVD and DM in SMI patients
- Communication between Mental Health & Primary Care
- Mental Health services need to support patients to engage with Primary Care
- Annual Physical Health Check – share & track results
- MH Services to embrace “holistic care”: treatment of MI and addressing physical health & Lifestyle needs)

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## MH & LD CQUINS 12/13

What	How
Improving the physical health of patients with MH problems and good practice communication	SMI Register Coding of MH and PH Access to annual physical health checks Medicines Reconciliation Timely Communication Smoking
To improve information to inform future clinical commissioning priorities	Information sharing with primary care
To strengthen the ongoing local assurance regarding safeguarding children	Safeguarding scorecard
Improving dementia care	POMH-UK Audit Regular review of anti-psychotic prescribing for those with dementia Develop and deliver sustainable quality improvement plan to reduce inappropriate prescribing Improve discharge summaries for people with dementia, including those on anti-psychotics
To ensure vulnerable adults are receiving fair access to MH services	Self assessment

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## Oxleas House Acute Inpatient Group & Activity Timetable

Category	Group	Facilitated by
Exercise	Gym sessions	Wards/DTT
	Walking group	Ward
	Dance DVD	Ward
	Walking Group	DTT
	Exercise	DTT
Arts & crafts	Individual Backstroke	
	Pottery	DTT
Memory & Concentration	General Arts and craft	Wards
	Jewellery making	Wards
	Current Affairs	Wards/DTT
Health Promotion	Quiz	wards
	Goal setting	DTT
	Creative Writing	DTT
	Memory & concentration	DTT
	Smoking cessation	Wards
Education & Information	Smoking	DTT
	Fruit trolley	Wards
	Healthy Eating	wards
	Challenges group	wards
	Sexual health Information Group	Wards
Relaxation	Pharmacy sessions	Aysha/Al
	Drugs & alcohol management	DTT
	Medication Management	Wards
	Drugs & Alcohol Discussion group	wards
Leisure	Relaxation session	Wards/DTT
	Tai chi DVD	Wards
	acromethology	DTT
	Stretch & Relax	DTT
Forward Planning	Board games	Wards
	Movie	Wards
	Karaoke	Wards
	Pinx	Wards
	Discussion	Wards
	Table tennis	wards
	Womens groups	wards
Music	DTT	
Psychological	Goal Setting	DTT
	Discharge planning	Wards/DTT
Well Being	Art Psychotherapy	DTT
	Psychology sessions	Hanna Jakobsen / Sharon Lines
Cookery	Wellness class	Wards
	Womens group	wards
	Mens group	wards
	Cookery Group	DTT

## Oxleas House Acute Inpatient Group and Activity Timetable August 2008

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	
AM	DTT	Memory & Concentration 10.30 - 11.30 Shrewsbury (Judy & Terri)	Art Psychotherapy 10.15 - 11.15 Shrewsbury (Stephen)	Art Psychotherapy 10.15 - 11.15 Avey (Stephen)	Walking Group 10.30 - 12.00 (Majella & Esther) Please see member of DTT if you would like to attend	Exercise Group 10.00 - 10.45 Avey Chris & Judy		
				Music 10.30 - 11.30 Shrewsbury (Judy & Terri)				
PM	DTT	Gym session 10.30-11.00	Current Affairs 10.30 - 11.30 Alternate weeks 1 & 3	Gym session 10.30 - 11.30 Alternate weeks 1 & 3	Smoking Cessation 10.30 - 11.30	Men's Group 10.30 - 11.30 Alternate Weeks 2 & 4	Arts & Crafts 10.30 - 11.30 Alternate weeks 1 & 3	Womens Group 10.30 - 11.30 Alternate weeks 1 & 3
			Board Games 10.30 - 11.30 alternate weeks 2 & 4	Quiz 10.30 - 11.30 Alternate Weeks 2& 4	Psychology (By app only) Hanne Jacobson		Walking Group 10.30 - 11.30 Alternate weeks 2 & 4	Tai Chi 10.30 - 11.30 Alternate weeks 2 & 4
PM	DTT	Creative Writing 1.30 - 2.30 Shrewsbury (Terri & Judy)	Relaxation 1.30 - 2.30 Avey (Terri & Esther)		Art Psychotherapy 12.45 - 1.45 Mayson (Stephen)			
		Individual Goal Setting 2 - 4pm Mayson (Majella)	Talking Therapy 2.45 - 3.45 Mayson (Majella & Sharon)		Cookery Group 1.30 - 3.30 (Esther & Terri)			
PM	DTT	Board Games 3.30 - 4.30 Alternate Weeks 1& 3	Psychology (By app only) Hanne Jacobson Alternate Weeks 1 & 3	Drug & Alcohol Discussion Group 3.30 - 4.30 Alternate Weeks 1 & 3	Relaxation 2 - 3pm Avey (Majella & Judy)	Playstation 3.30 - 4.30 Alternate Weeks 1 & 3	Bingo 3.30 - 4.30 Alternate Weeks 1 & 3	Film Club 3.30 - 4.30 Alternate Weeks 1 & 3
		Jewellery Making 3.30 - 4.30 Alternate Weeks 2 & 4	Fruit Frenzy 3.30 - 4.30	Healthy Eating 3.30 - 4.30 Alternate Weeks 2 & 4	Healthy Eating 3.30 - 4.30 Alternate Weeks 1& 3	Anxiety & stress management skills 3.30 - 4.30 Alternate Weeks 2 & 4	Sexual Health Information Group 3.30 - 4.30 Alternate Weeks 2 & 4	Karaoke 3.30 - 4.30 Alternate Weeks 2 & 4

if groups must be changed every effort should be made to substitute to a group from the same category

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psychiatryonline

**From: Physical Health Monitoring of Patients With Schizophrenia**

Am J Psychiatry. 2004;161(8):1334-1349. doi:10.1176/appi.ajp.161.8.1334

**OBJECTIVE:** The authors reviewed the literature on physical health monitoring of patients with schizophrenia. The authors reviewed the literature on physical health monitoring of patients with schizophrenia. The authors reviewed the literature on physical health monitoring of patients with schizophrenia.

**SETTING:** The authors reviewed the literature on physical health monitoring of patients with schizophrenia. The authors reviewed the literature on physical health monitoring of patients with schizophrenia. The authors reviewed the literature on physical health monitoring of patients with schizophrenia.

**RESULTS:** The authors reviewed the literature on physical health monitoring of patients with schizophrenia. The authors reviewed the literature on physical health monitoring of patients with schizophrenia. The authors reviewed the literature on physical health monitoring of patients with schizophrenia.

**CONCLUSIONS:** The authors reviewed the literature on physical health monitoring of patients with schizophrenia. The authors reviewed the literature on physical health monitoring of patients with schizophrenia. The authors reviewed the literature on physical health monitoring of patients with schizophrenia.

**KEY WORDS:** schizophrenia, physical health, monitoring, patients.

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SEARCH

DEGREE TABLE

Table of monitoring parameters appropriate for patients receiving this medication

When	Parameters
On admission	Height
	Weight
	Waist circumference
	Glucose
	Lipids
	Electrocardiogram <sup>1</sup>
	Blood pressure
	Liver function test
	Blood and electrolytes
	Thyroid function test
	Full blood count
Monthly	BUN/CREA
	Weight
	Smoking
Annually	Waist circumference
	Glucose
	Lipids
	Electrocardiogram <sup>1</sup>
	Blood pressure
	Liver function test
	Blood and electrolytes
	Thyroid function test
	Full blood count
	Eye examination (≥40 years old)
Every 2 years	BUN/CREA
	Eye examination (≥50 years old)

BUN/CREA, Liver panel, Bilevelox, Neuroleptic side effect rating scale.

a. If any abnormalities are detected or the patient has particular medical risk factors, monitoring will be required as appropriate for the individual patient.

b. Electrocardiogram monitoring should be repeated 3-monthly for patients on high-dose antipsychotics or higher risk drugs such as Haloperidol, seclonine and pimozide.

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QUESTIONS

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