Righting the Wrongs of Psychopharmacology

Addressing the Physical Health of Psychiatric Patient's:

Focus on schizophrenia and "atypical" antipsychotics

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Academic Director
Collaborative Mental Health Care
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Overview

"Wrongs"

- Excess morbidity and mortality in schizophrenia
- Atypical antipsychotic induced diabetes
- Inadequate diabetic care for patients with schizophrenia

"Righting" efforts

- Guidelines for treatment
- Collaborative care as a management strategy
- Diabetes Screening and Management (DSM) in High Risk Patients with Mental Illness: a Pilot Project

Psychiatric - Medical Comorbidity in Patients with Schizophrenia

- Elevated risk for wide range of medical conditions and premature mortality
- Poor health differences most pronounced between ages 25 and 44 years
- Individuals with schizophrenia have a 20% shorter life expectancy than the population at large

Miller BJ *Psychiatr Serv* 2006;57(10):1482-1487; Lyness JM *Psychosomatics* 2006;47(5):435-9; Chwastiak L *Med Care* 2006;44(1):55-61; Ciechanowski PS *Arch Intern Med* 2000;160(21):3278-85; Dixon L l*J Nerv Ment Dis* 1999;187(8):496-502; Newman *Can J Psych* 1991;36:239-245.

Schizophrenia and increased risks of cardiovascular disease

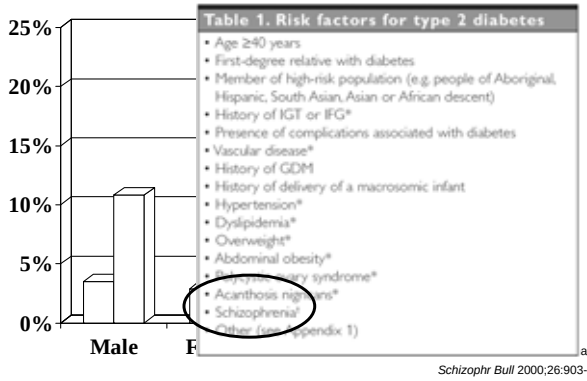
Charles H. Hennekens, MD,[a,b,c] Alissa R. Hennekens, MSW,[d] Danielle Hollar, PhD,[a,b] and Daniel E. Casey, MD[e]
Boca Raton, FL; Boston, MA; and Portland, OR

Table I. Life expectancy and absolute risks of death in the general population and among patients with schizophrenia

	General population	Patients with schizophrenia
Life expectancy (y)	76 (72 men and 80 women)	61 (57 men and 65 women)
Absolute risks of death		
Suicide (%)	1	10
CHD (%)	33	50-75

Am Heart J 2005;150(6):1115-21.

Prevalence of Diabetes in Schizophrenia in Canada



Schizophr Bull 2000;26:903-12
Can J Diabetes 2003;27(suppl 2):S1-152

Cause of Excess Mortality and Morbidity?

Complex and multifactorial[1]

- Toxic substances[2]
- Behavioural risk factors[3]
- Neurohormonal dysregulation[4]
- Iatrogenic effects of medication[5]

1. Katon WJ *Biol Psychiatry* 2003;54(3):216-26.
2. Lieber CS *N Engl J Med* 1995;333(16):1058-65.
3. Daumit GL *J Nerv Ment Dis* 2003;191(12):799-805.
4. Spiegel D *Biol Psychiatry* 2003;54(3):269-82.
5. Newcomer JW. *J Clin Psychiatry* 2007;68 Suppl 1:20-7; Lieberman JA, *NEJM* 2005;353(12):1209-23; Leslie DL Amer J Psych 2004;161(9):1709-1711.

December 2003
Volume 27
Supplement 2

Canadian Journal of Diabetes

Canadian Diabetes Association
2003 Clinical Practice Guidelines
for the Prevention and Management
of Diabetes in Canada

Appendix 1

Etiologic Classification of Diabetes Mellitus

Drug or chemical induced

- Atypical antipsychotics

American Journal of Epidemiology
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Vol. 164, No. 7
DOI: 10.1093/aje/kwj289
Advance Access publication August 30, 2006

Original Contribution

Bruce L. Lambert[1,2], Francesca E. Cunningham[3], Donald R. Miller[4,5], Gregory W. Dalack[6,7], and Kwan Hur[8,9]

Diabetes Risk Associated with Use of Olanzapine, Quetiapine, and Risperidone in Veterans Health Administration Patients with Schizophrenia

Design: New-user cohort in VA patients with schizophrenia (and no pre-existing diabetes)

Participants: 15,767 initiated use of OLANZ, RISP, QUET, or HDL in 1999-2001 after ≥ 3 months with no antipsychotic Rx and followed 1 year

Results: Hazard ratios - OLNZ 1.6 (1.2-2.2); RISP 1.6 (1.2-2.1); QUET 1.7 (1.0-2.8) – *not significantly different*

Diabetes generated: (a) 1/100 patients per year additional, or

(b) 1/3 of new onset diabetes cases attributable to use of OLNZ, RISP, and QUET.

Reviews and Overviews

Physical Health Monitoring of Patients With Schizophrenia

Stephen R. Marder, M.D.
Susan M. Essock, Ph.D.

Objective: Schizophrenia is associated with several chronic physical illnesses and mass index, plasma glucose level, lipid profiles, and signs of prolactin elevation

(Am J Psychiatry 2004; 161:1334–1349)

Review Paper

Atypical Antipsychotics in Psychiatric Practice: Practical Implications for Clinical Monitoring

Marie-Josée Poulin, MD, FRCPC[1], Leonardo Cortese, MD, FRCPC[2], Richard Williams, MB, BS, MPhil, FRCPsych, FRCPC[3], Nina Wine, MD, FRCPC[4], Roger S McIntyre, MD, FRCPC[4]

Can J Psychiatry, Vol 50, No 9, August 2005

The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 SEPTEMBER 22, 2005 VOL. 353 NO. 12

Effectiveness of Antipsychotic Drugs in Patients with Chronic Schizophrenia

Jeffrey A. Lieberman, M.D., T. Scott Stroup, M.D., M.P.H., Joseph P. McEvoy, M.D., Marvin S. Swartz, M.D., Robert A. Rosenheck, M.D., Diana O. Perkins, M.D., M.P.H., Richard S.E. Keefe, Ph.D., Sonia M. Davis, Dr.P.H., Clarence E. Davis, Ph.D., Barry D. Lebowitz, Ph.D., Joanne Severe, M.S., and John K. Hsiao, M.D., for the Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE) Investigators*

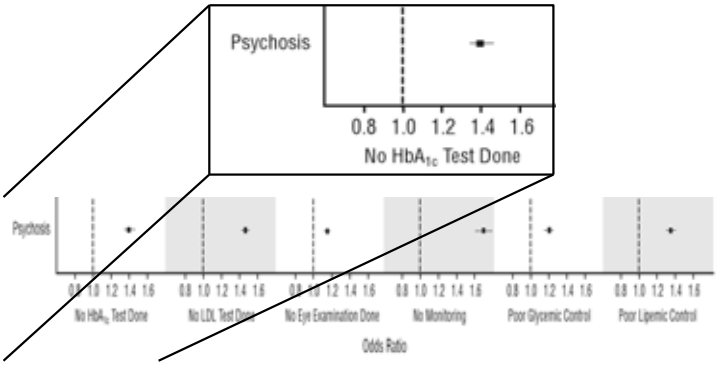
CATIE – Medical Tx at Baseline

Not receiving appropriate medical care:

(a) Diabetes	30%
(b) Hypertension	62%
(c) Dyslipidemia	88%

Nasrallah HA *Schizophrenia Research* 2006:15-22.

Disparities in diabetes care in patients with mental illnesses



N>300,000

Frayne et al. *Arch Intern Med* 2005

RESEARCH

Inequitable access for mentally ill patients to some medically necessary procedures

Stephen Kisely, Mark Smith, David Lawrence, Martha Cox, Leslie Anne Campbell, Sarah Maaten

Background: Measured associations between mental illness, death, hospital admissions and specialized or revascularization procedures for circulatory disease for all patients in contact with psychiatric services and primary care across Nova Scotia.

Methods: Population-based record-linkage analysis of related data from 1995 through 2001 using an inception cohort

Results: In some cases, psychiatric patients were significantly less likely to undergo specialized or revascularization procedures, especially those who had ever been psychiatric inpatients.

Conclusions: Psychiatric status affects survival with and access to some procedures for circulatory disease

CMAJ · MARCH 13, 2007 · 176(6) | 779

Cause of Excess Mortality and Morbidity?

Poor quality general medical care

- Access hindered to evidence-based services[1]
- Enrolled in primary care at risk poor treatment adherence[2]
- Primary providers not comfortable and time constraints[3]
- Socioeconomic factors
- Geographical and ideological separation between primary and speciality care[4]

1. Dickerson FB *Med Care* 2003;41(4):560-70; Frayne SM *Arch Intern Med* 2005;165(22):2631-2638; Kisely S *CMAJ* 2007;176(6):779-84.
2. Di Matteo MR et Al *Arch Intern Med* 2000;160(14):2101-2107; Cohen MH *Am J Public Health* 2004;94(7):1147-1151.
3. Lester H 2005;330(7500):1122-9; Hodges B et al *Am J Psych* 2001;158(10):1579-86.
4. Bartels *Int J Ger Psychiatry* 2004;52:S249-57.

CEQM

TOP 30 QUALITY MEASURES

CONTINUOUS ENHANCEMENT OF QUALITY MEASUREMENT IN PRIMARY MENTAL HEALTH CARE: CLOSING THE IMPLEMENTATION LOOP PROJECT

www.ceqm-acmq.com

Final Rank*	Overall Rank*	Domain	Measure Title
8	13	Shared Care	★ **Availability of Chronic Disease Management** Availability of chronic disease management strategies (including collaborative care) and additional strategies (such as self-management) improves the detection and care of patients with depression.
10	17	Patients with Comorbid Conditions	★ **Physical Health Checks** Physical health checks should pay particular attention to hormonal disorders (e.g., diabetes and hyperprolactinemia), heart disease risk factors (e.g., blood pressure and lipids), side effects of medication, and lifestyle factors (e.g., smoking). These must be recorded in the notes.

Inadequate Training to Mind the Care Gap

- Design and use of systems and tools in management of chronic illness is taught in few health care provider educational programs
- We teach them what to do, but we don't teach how to make sure they do it

Improving general medical care for persons with mental and addictive disorders: systematic review☆

Benjamin G. Druss, M.D., M.P.H.*, Silke A. von Esenwein, Ph.D., M.A.
Rollins School of Public Health, Emory University, Atlanta GA 30322, USA

Objective:

- Conduct SR of interventions designed to improve general medical care in persons with mental and\or addictive disorders

Methods:

- Cochrane Collaborative methods; search through 2005

Results:

- Focus – addictive disorders (4 RCTs), SMI (2 RCTs)
- Continuum of approaches; improved health outcomes; cost neutral

General Hospital Psychiatry 28 (2006) 145–153

Quality Improvement Strategies

- Case finding and diagnosis[1]
- Training psychiatrists to recognize and treat patients basic medical problems[2]
- Dual training programs[3]
- Collaborative care framework[4]

1. Koran *Arch Gen Psychiatry* 1989;46:733-40; Koryani EK *Arch Gen Psychiatry* 1979;36:414-419; Johnson *Can J Psychiatry*. 1986 Apr;31(3):197-201
2. Dobscha *Psychiatr Serv* 2001;52(12):1651-3; Shore JH. *Am J Psychiatry* 1996;153(11):1398-403; Marder SR, *American Journal of Psychiatry* 2004;161(8):1334-49
3. Stiebel V, *Psychosomatics* 2001;42(5):377-81; Doebbeling *Acad Med* 2001;76(12):1247-52.
4. Druss BG, *Arch Gen Psychiatry* 2001;58(9):861-8. Badamgarav E, et al *Am J Psychiatry* 2003;160(12):2080-2090; Whitlock EP *Ann Intern Med* 2004;140(7):557-568; Gilbody S, *JAMA* 2003;289(23):3145-3151.

Strategies to Improve Medical Care in Persons With Serious Mental Illness: A Continuum of Involvement of Medical Providers[2]

Strategy	Involvement of Medical Providers	Requirements	Potential Sites
Training for patients or staff	Low	Time; training; motivated trainees	Sites with co-located clinicians
On-site medical consultation	Intermediate	Sufficient flow of patients to support medical consultant	Inpatient mental health and addiction settings
Collaborative care	Intermediate	Regular contact between medical and mental health/addiction staff	Primary care, CMHCs
Facilitated referral to primary care	High	Adequate community medical resources; mechanism for linkage between the systems	Free-standing mental health and substance use clinics

Abbreviations: CMHCs = community mental health centers

[2]Based on Bower *Brit J Psych* 2006 and *Druss BG. J Clin Psychiatry 2007, Apr, 68(4):40-44*

Collaborative Mental Health Care (CMHC): A Working Definition[1]

- Process of collaboration between family physician and mental health professional
- Enables responsibilities for care to appointed according to:
  (a) Treatment needs of the patient
  (b) Respective skills of mental health professional and family physician

1. Collaborative Working Group on Shared Mental Health Care. Ottawa: Canadian Psychiatric Association and College of Family Physicians of Canada, 2000.

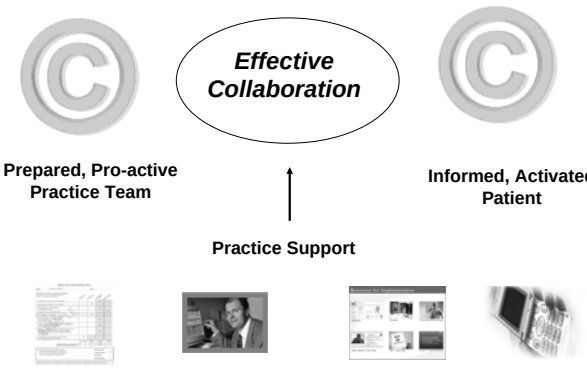
Collaborative Care

- Conventional strategies unlikely effective
- Interdisciplinary care management[1]
- Key elements of cost effective interventions
  - systematic care
  - consultation between care manager, primary care provider, consultant or other appropriate specialist[1]
  - "Stepped care"[2]

1. Katon W*Gen Hosp Psychiatry* 1997;19(3):169-78 and *Gen Hosp Psychiatry* 2001;23(3):138-44.
2. Katon JAMA 1995;273:1026-31; Unutze rMedcial Care 201;39:785-99,

René Descartes

Collaborative Care



Systematic review of multifaceted interventions to improve depression care☆

John W. Williams Jr., M.D., M.H.S.[a,b,*], Martha Gerrity, M.D., Ph.D.[c], Tracey Holsinger, M.D.[a],

	Included Component of Care (%)
Functions	
- Education and support	100%
- Communication and coordination	89%
- Monitoring of symptoms and adherence	86%
- Medication management only	82%
- Self-management	36%
Processes	
- Care manager discipline	Pharm. (19%), PharmD or Med nurse (31%), M.H. specialist (25 %), Mixed (25%)
- Duration	≥ 3 months (72%)
- Number of contacts	≥ 4 contacts
- Case manager contact	Ph (57%), Ph\In-Pers (11%), In-Pers (32%)
- Specialist supervision	Non-MH (14%), MH: < wkly (21%), wkly (65%)

Williams *Gen Hosp Psych* 2007 29;91-116

Senate Sénat
CANADA

OUT OF THE SHADOWS AT LAST

Final Report of
The Standing Senate Committee On Social Affairs, Science And Technology

The Honourable Michael J.L.Kirby, Chair
The Honourable Wilbert Joseph Keon, Deputy Chair

May 2006

13 That collaborative care initiatives be eligible for funding through the Mental Health Transition Fund.

That the Knowledge Exchange Centre to be established as part of the Canadian Mental Health Commission (see Chapter 16) actively pursue the promotion of best practices in the development and implementation of collaborative care initiatives.

Diffusion of Innovation in Complex Adaptive Systems

- Minimum specifications preserved[1]
- Flexibility on implementation[1]
- Trainability[2]
- Relative advantage[2]
- Compatible with current culture[2]
- Observe success at other site prior to adapt
- Key opinion leaders\early adopters and champions[3]

1. Zimmerman B. et al, Edgeware: Insights from Complexity Science….,1998.
2. Rogers EM, Diffusion of Innovations, 2003.
3. Gladwell M, Tipping Point, 2000

Diabetes Screening and Risk Management (DSM) in a High Risk Mental Health Population – Pilot Project

David Haslam MD, MSc, FRCPC[1,2,3]

Stewart Harris MD, MPH, FCFP, FACPM[2,3]

Christine Sansom, RN, BA[5]

Betty Harvey RNEC BScN, MScN[4,5]

Departments of Psychiatry[1], Epidemiology and Biostatistics[2], Family Medicine[3], Nursing [4],University of Western Ontario, London, Ontario

Community partners:
London Intercommunity Health Centre (LIHC)[5]
Western Ontario Therapeutic Hostel (WOTCH)[6]
Canadian Mental Health Association (CMHA)[7]

***Funding*: Primary Health Care Transition Fund, Ministry of Health and Long Term Care, Province of Ontario**

DSM Measures

Health Outcomes

- Body mass index
- Blood pressure
- Plasma glucose, HbA1c, lipid profile
- Brief Symptom Index, WHO Disability Scale II

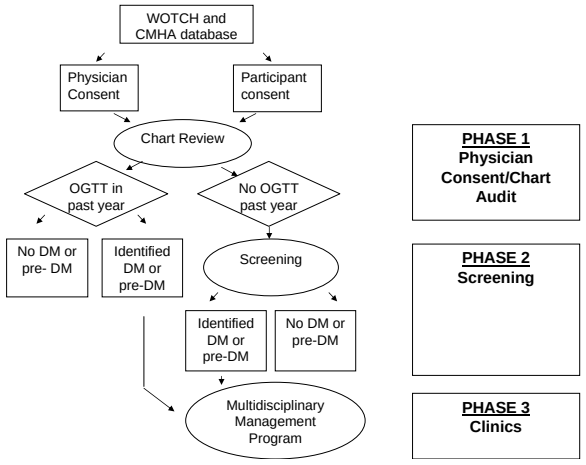
Utilization Outcomes

- Attendance at clinic
- Number of referrals to specialists
- Number of directed appointments to family physician
- Use of foot care, dietician/diabetes educator

Satisfaction Outcomes

- Client Satisfaction Questionnaire; community providers, family physician

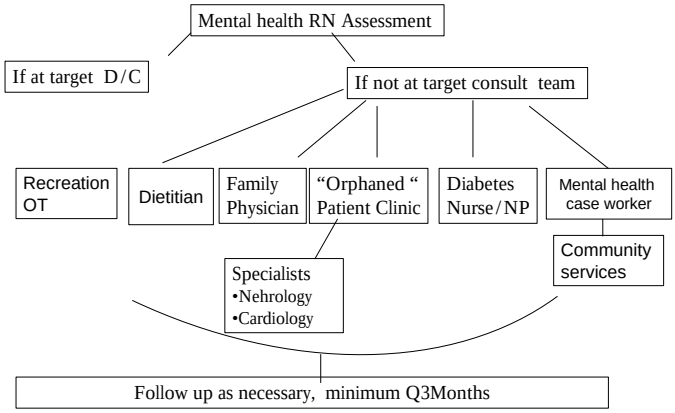
Three Phase Project Outline



Risk Management…

- Monthly diabetes prevention "Clinic" offered at Client's usual point of Care (WOTCH).
- **Risk Management focus:**
  - Activity plan – YMCA partnership for a walking program, pedometers, foot care, support accessing good shoes and socks
  - Portion control, daily high calorie habits and food security issues including a community kitchen program
- **Monitoring focus:**
  - Random Capillary blood sugars
  - Weight and % body fat
  - Annual OGTT

Mental Health Agency Based Diabetes Clinic



Outcomes of the Pilot Study….

- The screening approach identified 25/97 (27%) of those screened as having previously undiagnosed pre-diabetes or diabetes.

% of Sample at target	Baseline		6 month clinic	
• HbAic (6.5-7.0%)	67%	(22)	81%	(27)
• BP target <130/80)	42%	(14)	65%	(22)
• On an ACE inhibitor	23%	(8)	50%	(13)
• Taking daily ASA 1	5%	(5)	4%	(1)
• On a Statin	23%	(8)	73%	(19)

WWW. DRMHC.com

Summary

- Increased mortality among patients with schizophrenia largely from greater burden of medical illness
- Most excess deaths attributed directly to CV and metabolic disorders that have gained importance in atypical antipsychotic era
- Systematic study of barriers to optimal care beginning (include contribution of inferior care and ability of patients to participate)
- Strategies proposed for improving medical care of SMI patients
- Best evidence for collaborative models (co-locate and integrate)
- Great need for controlled effectiveness trials
- WWW. DRMHC.com