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Managing Chronic Disease: An Integrated Care Approach

Primary and Behavioral Health Care Integration Meeting
Washington, DC

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Objectives

- Introduce our practice and model of care
- Describe best practices and lessons learned in providing chronic disease management services to individuals with SMI
- Develop solutions and ideas for participants' organizational needs

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Health Disparities

- Individuals with serious mental illness (SMI) have a 25 year shorter lifespan
- 60% deaths due to medical conditions, 40% due to accidents and suicide
- Primary cause of death is cardiovascular disease

Health Disparities

- Co-occurring modifiable lifestyle risks
  - Substance abuse
  - Tobacco
  - Sedentary lifestyle
- Less access to care
- Less likely to receive evidence-based care

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A Brief History of our Program

Overview & History of Integrated Health Care (IHC)

- Founded in 1998
- Partnership between UIC College of Nursing and Thresholds – Psychiatric Rehabilitation Program
- All clients have SMI

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Integrated Health Care Partners

- University of Illinois, Chicago, College of Nursing
  - Illinois' largest source of nursing leadership
  - Ranked among the top 10 colleges of nursing in the US
  - Provides community-based care to diverse disadvantaged populations in Illinois through academic nursing centers
- Thresholds Psychiatric Rehabilitation Centers
  - Oldest and largest non-profit provider of mental health recovery services in Illinois
  - Provides direct services to over 3500 and outreach to 2500 more each year
- New in 2007
  - Mile Square Health Center
    - a federally qualified health care center

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Key Components of the Model

- Synergistic mission and values
- Primary care clinics are embedded within mental health agency service locations
  - All providers are nurse practitioner faculty of the College of Nursing and their students
- Open communication and ongoing collaboration between partners
  - All clients receive case management support

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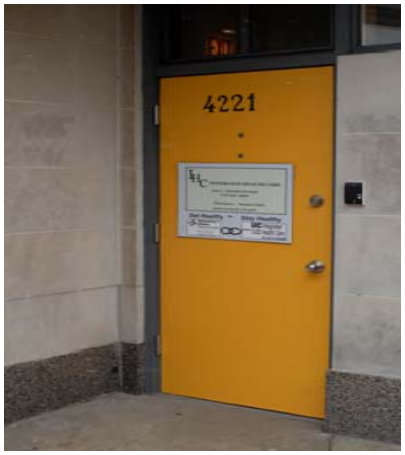
Service Sites

- Sites of Care
  - North side clinic (co-located in alternative high school)
  - South side clinic (co-located in recovery center)
  - Home visits
  - Group visits



Staffing and Utilization

- Staffed by nurse practitioners
- 4000 encounters/year
- Over 900 consumers/year
- 42% Thresholds members utilize our services

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Management of Select Chronic Conditions in People with SMI

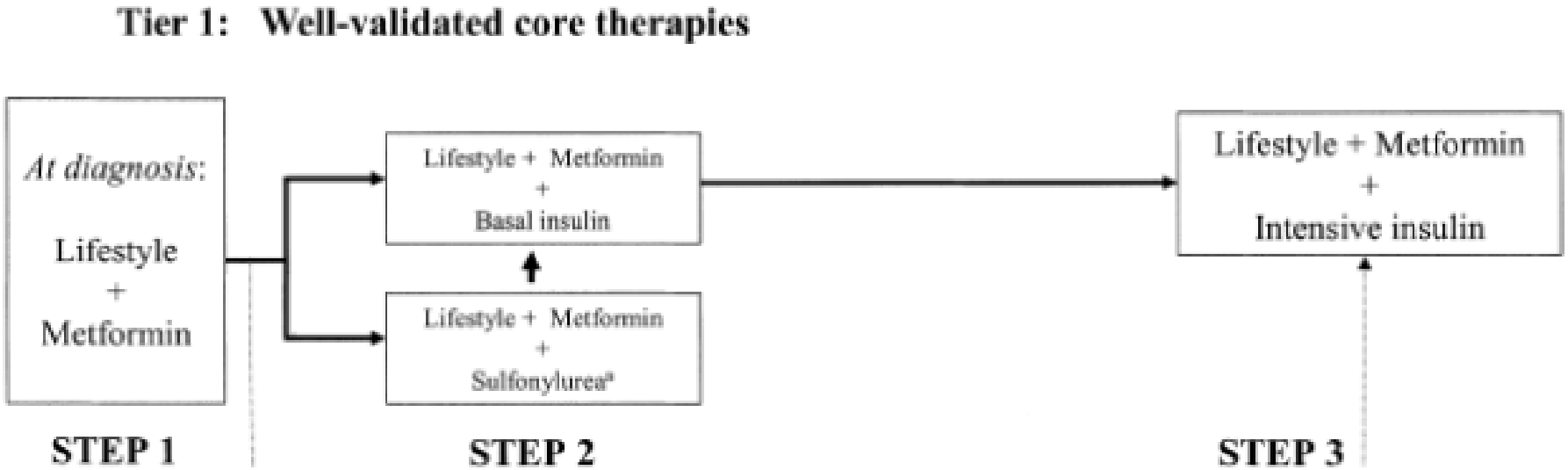
Our Top 5 Diagnoses

1. 401.x (Hypertension)
2. 305.x (Nondependent abuse of drugs)
3. 250.x (Diabetes)
4. 278.x (Overweight and Obesity)
5. 272.x (Disorders of Lipoid Metabolism)

Type 2 Diabetes

- Definition
  - Disease of impaired glucose metabolism due to both defects in insulin secretion as well as reduced insulin sensitivity
- Overview of Management
  - Lifestyle changes are central to management
  - Pharmacotherapy typically includes metformin and insulin

Type 2 Diabetes – Management



Nathan, D., et al. (2009). Management of hyperglycemia in type 2 diabetes: A consensus algorithm for the initiation and adjustment of therapy. *Diabetes Care, 32*(1), 193-203

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Type 2 Diabetes

- Why is DM2 a problem in people with SMI?
  - Certain atypical antipsychotics predispose
  - Low SES
    - Limited access to balanced diet
    - Limited access to fitness resources
    - Issues of motivation (avolition, etc.)

Type 2 Diabetes - Outcomes

- A1c trends
  - Average A1c = 6.7%
    - 76% of patients ≤ 7% (benchmark)
    - 16% of patients ≥ 7.1% ≤ 8.9%
    - 12% of patients ≥ 9% A1c
  - % of diabetic patients at LDL target
    - 69% ≤ 100 mg/dL

(HRSA audit, N = 170, July 2008 – March 2009)

Type 2 Diabetes - Management

- Team-Based Management
  - Patient – selects and implements treatment plan
  - NP (from IHC) – proposes/prescribes treatment plan
  - Case Manager (from Thresholds) – coordinates and monitors treatment plan
  - Pharmacist – unit-packaging of medications, consultation for treatment options

Type 2 Diabetes - Management

- Thresholds Case Manager Involvement
  - Monitor medication usage
  - Coordinate patient's visits to the clinic
  - Monitoring blood sugars (prompting/assisting in procedure)
    - RN vs. MH case managers
  - Quality case management is key to the success of diabetic management

Type 2 Diabetes – New Initiative

- IHC without Walls (WOW) - 5 year grant- Health Resources and Services Administration (HRSA)
- Increase consumer access to primary care
  - Hard-to-reach
  - Socially isolated
  - Homebound
- Community outreach program
  - House calls
  - Group medical visits
  - Telemonitoring

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Type 2 Diabetes – House Calls

- Thresholds case manager (CM) identifies appropriate client for referral
- IHC nurse practitioner accompanies CM for initial encounter (goal = establish rapport)
- If patient willing, home visits from NP continue
- Ultimate Goal – Engagement in clinic-based care

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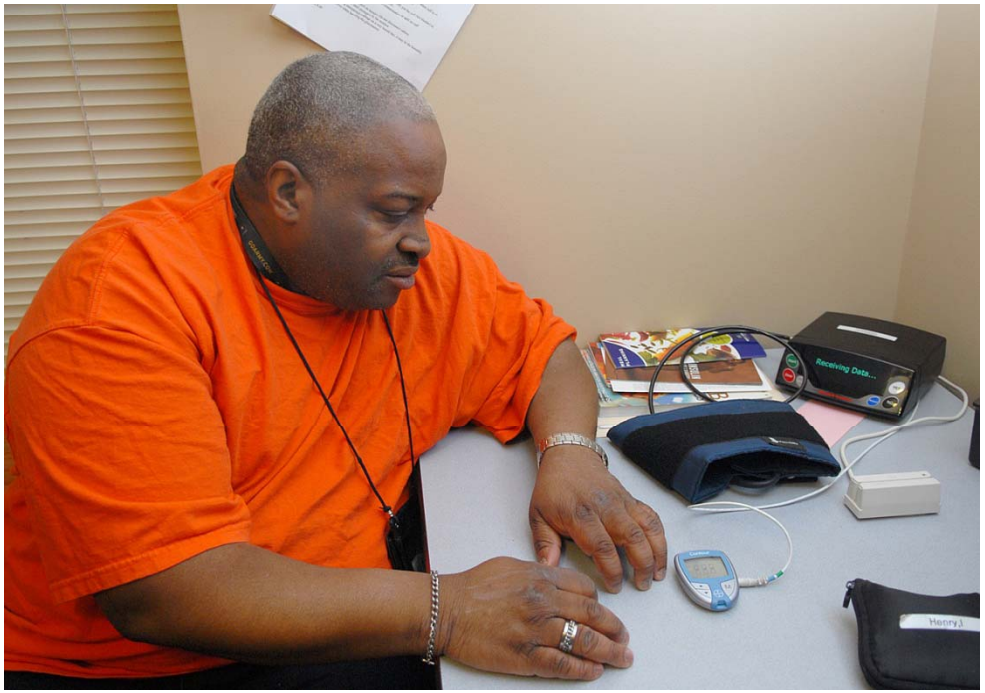
Type 2 Diabetes – Group Visits

- NP identifies candidate for group health care visits
- Group visit occurs at Thresholds program site or in IHC clinic
- Group may be disease-specific (e.g. diabetes) or general health education
- Ultimate Goal – Enhanced self management

Type 2 Diabetes - Telemonitoring

- Remote collection of biometric data (BP, glucose, weight, heart rate) and treatment adherence questions
- Data transmitted to RN care manager (employed by IHC) for review
- Currently in 4 group homes (24 participants)
- Capacity for additional 6 monitoring sites



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Type 2 Diabetes – Case Study

- Ezekiel - 48 y.o. African-American male
- **Psychiatric Diagnosis:** Schizophrenia
- **Current Meds:** risperidone extended release injection
  - Previously seen in West-side clinic (now closed.) Care was transferred to another local community health center.
  - One year later case manager contacted us with concerns
- What next?

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Type 2 Diabetes – Case Study

- House Calls
  - NP visited patient at home
    - Labs drawn (A1c 10%)
    - Interval history collected (pt had stopped care at community health center due to “personality conflicts”)
  - Follow up home visit
    - Previous medications resumed (metformin)
  - What next?

Type 2 Diabetes – Case Study

- Referred to North clinic
  - Patient agreeable
  - Case manager willing to drive
- Subsequent clinic visits
  - Reinforced lifestyle modifications
  - Assessed adherence to metformin
  - A1c 8.3%
  - Basal insulin initiated
- What next?

Type 2 Diabetes – Case Study

- Group Health Encounter
  - Diabetes group at clinic
  - Seven participants (predominantly insulin users)

Type 2 Diabetes – Case Study

- Structure of Group Encounter
  - Patient flow (VS, group, individual)
  - Conversation Map
  - Positive deviance as a tool

"This group has helped to keep me on track. I was going to drink last night but knew I was coming here, so I didn't have one beer!"

Type 2 Diabetes – Case Study

- Billing for Group Encounters
  - Group encounters are billed with same E&M codes as individual encounters
    - Assuming all CPT criteria are met
    - Most group encounters are 99213
  - Effective and efficient use of provider time
    - 2 ½ hour total group visit time = seven billable patients
    - 2 ½ hour standard clinic time = five billable patients

Type 2 Diabetes – Case Study

- Outcomes
  - Observed thus far:
    - Increased peer support
    - Group problem solving
    - Group strategizing for improved treatment adherence
    - Too soon for quantifiable outcomes
  - Literature supports improved clinical outcomes from group health encounters

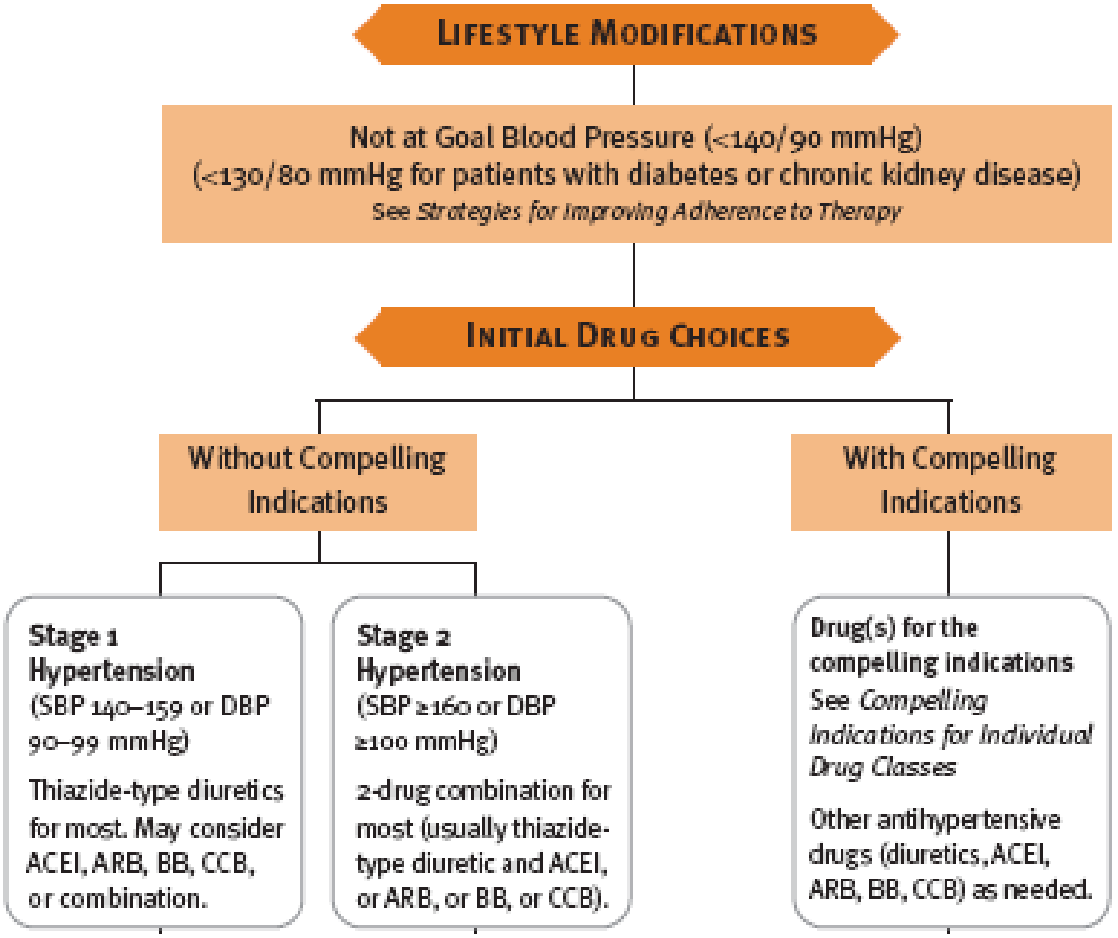
Type 2 Diabetes – Case Study

- Ezekiel
  - Attended group visit, actively participated
  - Now continuing in individual visits to titrate insulin
  - Most recent A1c - 8.2%
  - Case management support transportation and assistance in lifestyle modification
  - Not quite at goal, but headed in the right direction

Hypertension

- Definition
  - A disease of the circulatory system in which blood pressure remains persistently elevated over 140/90
- Overview of Management
  - Lifestyle changes are central to management
  - Pharmacotherapy typically includes multiple antihypertensive agents

Hypertension – Treatment Algorithm



The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7)

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Hypertension Management

- Difficulties of managing in patients with SMI
  - How do you communicate the severity of an asymptomatic disease to a patient with a highly symptomatic comorbidity?
  - Promoting lifestyle changes in a population with low SES
  - Encouraging adherence to medication therapy

Hypertension Management

- Don‘t ignore secondary causes of hypertension in this population
  - Drug side effects (recreational and prescribed)
  - Sleep apnea
  - White coat phenomenon (don’t draw conclusions until you have a rapport with the patient)

Hypertension – Case Study

- Sandra – 41 y.o. female
- **Psychiatric Diagnosis:** Bipolar Disorder
- **Social History:** Lives independently, employed as grocery bagger; uninsured
- Referred to clinic by case manager concerned about medication adherence
- Why would medication adherence be a problem?

Hypertension – Case Study

- First clinic encounter
  - Chief Complaint: “I feel fine”
  - Current Meds: aripiprazole 15 mg daily, valsartan 80 mg daily
  - BP today – 148/102
    - Stopped taking BP medications because feels fine without them and couldn’t afford them
    - Until now, BP medications had been supplied by local PCP – intermittently sampled, otherwise patient buying medication herself
  - What are your goals for this encounter?

Hypertension – Case Study

- Motivational Interviewing Approach
  - "What does it mean to you to say that you have high blood pressure?"
  - "What would happen if your blood pressure stayed this high?"
  - "Would it be important for you to lower your blood pressure?"
  - "What are some ways you could lower your blood pressure?"

Hypertension – Case Study

- Pharmaceutical Management
  - Absent compelling indications, do not use branded antihypertensives
  - Majority of effective, once-daily antihypertensives are available through discount store “$4 formularies”
- What might you prescribe for Sandra?

Hypertension – Case Study

- After discussing pathology of hypertension and consequences of delaying treatment, Sandra decided to initiate therapy
- Rx: hydrochlorothiazide 25 mg daily
- Cost: $.01 per tablet

Best Practices

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Partnership

- Open, honest collaboration has been key to our success as an organization
  - Not always easy
  - Two organizations sometimes don't see eye-to-eye
- Keys to success
  - Acknowledgment of interdependence
  - Sometimes: agree to disagree
  - Mutual commitment to the members

Partnership

- Who are your partners?
- What are some of the attributes of your partnership that will foster success of your primary care/chronic disease management program?
- What are some of the attributes of your partnership that may get in the way of success?

Communication

- Communication must occur frequently and at every level
- Leadership – Monthly advisory committee meeting
- Providers – Daily and with every encounter
  - Case worker communication form
- Thresholds-IHC Liaison

Communication

- Case Worker Communication Form
  - We've tried many tools
  - This is what works for us
  - Many incarnations to arrive at this and probably many more in the future

Communication

- How do/will you foster communication between your clinicians and case management team?

Interdependence

- Many types of providers practice at/with Integrated Health Care
  - Nurse Practitioners
  - Physicians (psychiatry, family medicine, specialists)
  - Social Workers
  - Case Managers
  - Registered Nurses

Interdependence

- What types of providers are/will be practicing in your site? How will you nurture and grow your team collaboration?
  - Clinician managing primary care
  - Clinicians/workers coordinating care
  - Mental health providers

Evidence Based Practice

- Faculty practice facilitates this (bridges the divide between academia and clinical practice)
- Access to evidence-based tools and resources to facilitate practice

Evidence Based Practice

- How do/will you implement EBP in your clinical practice site?
- Do you have access to EBP tools and resources to facilitate this?

Training the Next Generation

- Our practice is a training site for family/ adult/mental health NP students, nurse midwifery students, RN students, podiatry students, and nutrition students
- Site exposes students to the needs of people with SMI

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Training the Next Generation

- Breaking down prejudices and stereotypes
  - *"I went to the ER and as soon as they saw that I have bipolar disorder they called psychiatry."*
- Future directions: collaboration with emergency departments to improve care of patients with SMI

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Training the Next Generation

- Does/will your practice site partner with an academic institution to expose the next generation of students to your practice model?

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Small Group Activities

Managing Chronic Illness in Your Program

- What challenges would you like to brainstorm today?
- What issues would you like to address?

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Conclusions

- Management of chronic disease in patients with SMI is both challenging and rewarding
- Many strategies exist for management
  - All require collaborative, interdisciplinary approach
  - All require time, patience, and resources
  - All require patient engagement in process

Thank you for your time

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Selected References

1. National Association of State Mental Health Program Directors (NASMHPD) Medical Directors Council. (2006). *Morbidity and mortality in people with serious mental illness.* Alexandria, VA.
2. Newcomer, J. (2009, May). "Cardiometabolic Risk in Individuals with Severe Mental Illness". (power point slides). Paper presented at Condition Critical Conference, Chicago, IL.
3. Burke, N., Niezgoda, S., Rose, D., & Marion, L. (2001). Integrating primary and mental healthcare: An innovative model of practice*. Journal of American Psychiatric Nursing Association*, 13(20), 8.
4. Marion, L. N., Braun, S., Anderson, D., McDevitt, J., Noyes, M., & Snyder, M. (2004). Center for integrated health care: Primary and mental health care for people with severe and persistent mental illness (Academic Practice Exemplars). *Journal of Nursing Education, 43* (2), 71-74.
5. McDevitt, J. (2004). Primary care update for mental health nurses: Evidence-based guidelines for nursing assessment, intervention, and follow-up (article, exam questions, CEU). Journal of Psychosocial Nursing and Mental Health Services, 42 (10), 22-35.