Preparing the Adult Mental Health Workforce to Succeed in a Transformed System of Care

Overview of Medical/Physical Risk Factors

in Persons with Mental Illnesses
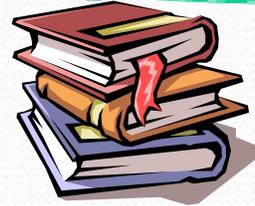
Module XV

NASMHPD/OTA Curriculum

Module Created by Huckshorn

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NASMHPD

Objectives

1. Become familiar with the major causes of serious illnesses and early death in people with serious mental conditions

2. Be introduced to the major health risk factors that cause people to be vulnerable to early death

3. Understand the roles & responsibilities of direct care staff in preventing/decreasing risk factors in your setting, including smoking cessation, reducing weight gain, monitoring medication side effects, and routine assessment & documentation

Health Status of Persons with Serious Mental Illnesses (SMI)

- Recent findings have indicated that the rate of serious illness (morbidity) and death (mortality) have increased in this population

- People with SMI are dying *TWENTY FIVE YEARS* earlier than the general population

- When this trend was discovered, the field was shocked…

(*Parks & Radke*, 2008b)
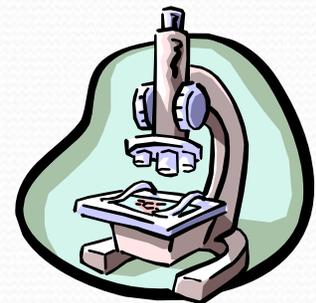
Years of Potential Life Lost (YPLL)

Cause	M	F	N
All	31.8	32.5	32.0
Intentional self-harm (suicide)	41.4	42.7	41.7
Assault (homicide)	42.3	35.8	41.6
Accidents (unintentional injuries)	39.5	43.1	40.4
Symptoms, signs, & abnormal clinical & laboratory findings, NEC	32.8	35.0	33.4
Diabetes mellitus	25.8	37.2	30.2
Pneumonia & influenza	29.4	25.0	28.3
Diseases of heart	27.7	26.6	27.3
Cerebrovascular diseases	20.7	32.8	25.5
Malignant neoplasms (cancers)	24.3	26.9	25.3
Chronic lower respiratory diseases	18.6	24.1	21.1

16 State Study Results: Years of Potential Life Lost

Year	AZ	MO	OK	RI	TX	UT	VA (IP only)
1997		26.3	25.1		28.5		
1998		27.3	25.1		28.8	29.3	15.5
1999	32.2	26.8	26.3		29.3	26.9	14.0
2000	31.8	27.9		24.9			13.5

- Previous research suggested that people with schizophrenia died 10 years earlier than age-matched contemporaries
- This data suggests that people with SMI are dying at least 25 years earlier

Health Status of Persons with Serious Mental Illnesses (SMI)

- The causes of this increase in medical illness and resulting deaths have been identified

- State mental health agencies have agreed on two principles to address this issue:

  - Overall health is essential to mental health

  - Successful recovery includes physical and mental wellness

    (*Parks & Radke*, 2008b)

Health Status of Persons with Serious Mental Illnesses (SMI)

- Many people with SMI do not seek out primary medical health providers for routine care. They rely on us, the mental health system, to treat them for any problems they may have

- This must include *preventative* medicine and education of our staff at all levels so we all know the warning signs of common illnesses and can intervene swiftly

(*Parks & Radke*, 2008b)

Natural Causes of Serious Illness and Death

- Among the people that we serve, the "natural causes" of death include:

  - Cardiovascular disease
  - Diabetes
  - Respiratory disease
  - Infectious disease

- Again, the mortality rates resulting from the above diseases for persons with SMI are three times higher than the general population

(*Parks & Radke*, 2008a)

Identified Risk Factors for Persons with Serious Mental Illnesses (SMI)

- Smoking
- Alcohol consumption
- Poor nutrition/obesity
- Lack of exercise
- "Unsafe" sexual behavior
- IV drug use
- Exposure to institutional diseases (TB, HIV/AIDS, Hepatitis)

(*Parks & Radke*, 2008a)

Identified Risk Factors for Persons with Serious Mental Illnesses (SMI)

- A primary risk factor that deserves its own category is the impact of the medications that we use to treat some illnesses

- These meds, especially the newer (atypical) antipsychotics are highly associated with: 1) weight gain; 2) diabetes; 3) dyslipidemia; and 4) metabolic syndrome

(*Parks & Radke*, 2008a)

What does all this mean for direct care staff?

- Staff need education on these issues:

  - Smoking cessation

  - Diet and exercise programs

  - Routine measurements of physical markers (weight, body mass index, lab work, tests)

  - Careful medication administration, dosing and monitoring

  - Early identification and management of disease

  - Provision of hope for recovery (*motivation*)

    (*Parks & Radke*, 2008a)

"Less Direct" Risk Factors that Lead to Increased Vulnerability for Illness:

- Homelessness
- Victimization/trauma
- Unemployment
- Poverty
- Incarceration
- Social isolation
- Paranoia causing fear in getting care
- Cognitive related confusion
- Mental illness masks physical symptoms or no one believes…
- Lack of access to physical/medical health care

(*Parks & Radke*, 2008a)

Smoking: Know the Facts!

- Half of long time smokers will die from tobacco use

- 75% of people with mental illness (MI) or substance abuse (SA) problems smoke vs. 23% of others

- 20-25% of MI/SA care staff smoke

- Smoking is perhaps the most important modifiable risk factor to decrease death

- Smokers lose between 13-14 years of life

- Many clients want to quit but need help

(*Parks & Radke*, 2008a)

Know the Facts!

- Obesity, insulin resistance, hypertension, metabolic syndrome and diabetes are often related:

  - Body Mass Index (BMI) is the best predictor for insulin resistance leading to diabetes

  - Being overweight/obese causes a higher BMI

  - Insulin resistance is associated with cardiovascular disease + smoking, lack of exercise, aging, meds, ethnicity and high blood sugar

  (*Parks & Radke*, 2008a)

Know the Facts!

- Metabolic syndrome is diagnosed when 3+ risk factors are present (obesity, hypertension, insulin resistance, and/or abnormal lipids (cholesterol & triglycerides)

- People with serious mental illness are at high risk for metabolic syndrome because of the medications we provide and the other risk factors previously noted: smoking; poor diets; weight gain; lack of exercise; poor health care/access; ethnicity

(*Parks & Radke*, 2008a)

Comparison of Metabolic Syndrome and Individual Criterion Prevalence in Fasting SMI Subjects and Matched General Population Subjects

	Males		Females	
	SMI N=509	Gen.Pop. N=509	SMI N=180	Gen.Pop. N=180
Metabolic Syndrome Prevalence	36.0%	19.7%	51.6%	25.1%
Waist Circumference Criterion	35.5%	24.8%	76.3%	57.0%
Triglyceride Criterion	50.7%	32.1%	42.3%	19.6%
HDL Criterion	48.9%	31.9%	63.3%	36.3%
BP Criterion	47.2%	31.1%	46.9%	26.8%
Glucose Criterion	14.1%	14.2%	21.7%	11.2%

Specific Direct Care Staff Responsibilities:

- Early identification and intervention can have meaningful effects

- One study noted that just a 5-10% modest weight loss greatly decreased blood pressure, blood glucose, insulin levels, bad cholesterol (LDL-C/trig), and increased good cholesterol (HDL-C) & improved sleep

- Quitting smoking reduces risk for cardio vascular disease by 50-70%

(*Parks & Radke*, 2008a)

Specific Direct Care Staff Responsibilities:

- In order to decrease the health risks for people with serious mental illness, staff in mental health settings must understand and implement early identification and interventions

- Depending on your job, you all have important roles here

- We are often the *only accessible providers for the consumer*

Specific Direct Care Staff Responsibilities:

- Health indicators have been identified as important to monitor

- However, even if these indicators are used, often the medical record does not allow for easy identification of the emergence of problems

- As such, all staff need to have available documentation that tracks these health indicators and identifies changes, even from admission to admission

(*Parks & Radke*, 2008a)

Specific Direct Care Staff Responsibilities: Health Indicators

- Again, you will be using these health indicators in different ways, depending on your jobs. But all of you should know them

  - Body Mass Index (BMI)

  - Blood Pressure (BP)

  - Fasting Blood Sugar (hbAIC)

  - Lipid Profile

  - Smoking History

  - Substance Abuse History

Specific Direct Care Staff Responsibilities: Health Indicators

- History of Diabetes, Hypertension, Cardiovascular Disease (CVD)
- Family history of Diabetes, Hypertension, Cardiovascular Disease (CVD)
- Medication history, not just psychotropics
- Social supports

- Most of this information needs to be gathered on admission and reviewed in the treatment team

(*Parks & Radke*, 2008b)

In the English system, the BMI formula is:

1. Weight in pounds (lbs) divided by height in inches (in) squared and multiplied by a conversion factor of 703 = BMI

2. Therefore, to calculate BMI, take the weight (lbs) and divide it by height (in). Take the result of that calculation and divide it by height (in) again. Then, multiply that number by 703. Round to the second decimal place

3. Let's do it, just to practice!

(http://bmi.emedtv.com/bmi/how-to-calculate-bmi.html)
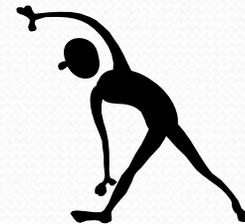
What is the body mass index (BMI)?

- BMI values less than 18.5 are considered underweight

- BMI values from 18.5 to 24.9 are healthy

- Overweight is defined as a body mass index of 25.0 to less than 30.0. A BMI of about 25 kg/m2 corresponds to about 10 percent over ideal body weight. People with BMI's in this range have an increased risk of heart and blood vessel disease

- Obesity is defined as a BMI of 30.0 or greater (based on NIH guidelines) — about 30 pounds or more overweight. People with BMI's of 30 or more are at higher risk of cardiovascular disease

- Extreme obesity is defined as a BMI of 40 or greater

(http://www.americanheart.org/presenter.jhtml?identifier=4489)

Specific Direct Care Staff Responsibilities: Health Indicators

- All of these indicators (questions) should appear in the nursing assessment and the physician's history and physical exam records. In addition, social worker psycho-social evaluations can identify the existence of about 50% of these indicators

- However while staff may identify these risk factors, you will need support from the physician and treatment team to intervene in a consistent basis

Specific Direct Care Staff Responsibilities:

- All healthcare staff, regardless of setting, need to support smoking cessation programs in the work setting for staff and patients

- The taking of vital signs needs to be done meticulously, and if equipment is faulty this needs to be reported immediately

- Healthy diets need to be provided in all settings, fast food and high sugar foods need to be reduced or eliminated

- Exercise should be a daily or twice daily activity

In Conclusion…