The Weight is Over: The Importance of Metabolic Monitoring in Rural Community Mental Health

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Agenda

- The burden of health
- Program example – Diabetes Prevention Program
- The role of the mental health nurse
- Community Psychiatric Service and the guiding framework for the metabolic monitoring program
- Future directions

Burden of Health

- Mental health consumers carry a far greater burden of physical ill-health than the general population
- There is an ever growing body of evidence to support the fact that the use of antipsychotic and antidepressant medications may be compounding physical ill-health through side effects such as **weight gain, elevated triglycerides and low high density lipoprotein (HDL)-cholesterol levels**

(Dunbar, Wheeler, Harrison, Brandt, Pulford, Condell & Stoepker, 2010)

- Individuals with a severe mental illness, such as depression, not only have worse physical health than those in the general population, but also have a reduced life expectancy
- Research regarding the effects of antidepressant medication is currently less comprehensive than that for antipsychotic medication; there *is* evidence to indicate antidepressants can induce weight gain or worsen other metabolic cardiovascular risk factors

(De Hert, Dekker, Wood, Kahl, Holt & Moller, 2009)

- The issues of **weight gain, diabetes, cardiovascular disease and dyslipidemia** among those with a severe mental illness are multifactorial, and include genetic and lifestyle factors as well as specific disease and treatment effects
- Despite these issues, people with a severe mental illness often have limited access to general healthcare and struggle with social determinants of health including poverty, food security and access to education

(De Hert et al., 2009)

Diabetes Prevention Program - Study

- Although not directly focused on individuals with a diagnosed mental illness, one randomized clinical trial conducted by the Diabetes Prevention Program examined the effects of lifestyle interventions versus pharmacological therapy on the prevention or delay of the onset of diabetes, as well as weight loss

(Diabetes Prevention Program, 2002)

- The lifestyle intervention group received intensive training in diet, physical activity, and behavior modification. By eating less fat and fewer calories and exercising for a total of 150 minutes a week, they aimed to lose 7 percent of their body weight and maintain that loss

- The second group took 850 mg of metformin twice a day. The third group received placebo pills instead of metformin. The metformin and placebo groups also received information about diet and exercise but no intensive motivational counseling

- Participants in the lifestyle intervention group reduced their risk of developing diabetes by 58 percent
- Participants taking metformin reduced their risk of developing diabetes by 31 percent
- About 7.8 percent of the metformin group developed diabetes each year during the study, compared with 11 percent of the group receiving the placebo

How can we then use the research to inform our practice as mental health nurses?

- Nurses working in mental health have a responsibility to *recognize* and *address* metabolic health concerns and provide intervention, as research shows that those who have a mental illness are less likely than that of the general population to receive general health screening

  (Koch & Scott, 2012; Organ, Nicholson & Castle, 2010; Velligan et al., 2011)

- Nurses in a range of mental health roles can offer healthy lifestyle programs, and specialist roles for nurses in terms of assessment and treatment of metabolic concerns is an important link for clients with a mental illness

  (Park, Usher & Foster, 2011)

- Several studies have toted the importance of lifestyle groups facilitated by nurses, incorporating health teaching related to exercise and the aim of maintaining weight and the prevention of further weight gain, as well as encouraging and effecting positive lifestyle changes including quality of diet

(Ohlsen, Peacock, & Smith, 2005; Organ, Nicholson, & Castle, 2010; Park et al., 2001)

- Despite the success of diverse group programing, there is an ongoing need to have further studies done on the impact of healthy lifestyle groups

(Organ, Nicholson, & Castle, 2010)

- Mental health nurses can lack confidence in delivering diabetic care as well as health teaching around obesity, therefore, greater emphasis on further training is warranted
- One recommendation is that diabetic nursing care be embedded within the undergraduate nursing degree programs, with an emphasis on practical strategies to equip nurses once they graduate
- More emphasis should be placed on interventions that encourage individuals to engage in physical exercise and dietary changes

(McDaid & Smyth, 2015)

Now that we understand the risk and compounding factors, how does our specific program stack up against the concerns with clients in a rural community health setting?

Urban

Rural

Urban

Rural

Social Learning (Cognitive) Theory

- Behavioural change is determined by *environmental*, *social*, *personal and behavioural* elements; each of these factors influence each other and is the result of reciprocal relationships among the four elements
- Behaviour is learned through observation, imitation and positive reinforcement
- Learning is facilitated through role modeling, and clients re-enact the behaviour they observe
- Behaviour is guided by expected consequences
- Self efficacy is one of the most significant qualities that determine behavioural change

(Alcalay & Bell, 200)

Six main concepts of SLT

- **Reciprocal Determinism**: Person, behaviour and environment all influence each other
- **Behavioural Capability**: Clients posses the knowledge and skill to perform a behaviour
- **Expectations**: There are expected outcomes
- **Self-efficacy**: Clients have confidence in their ability to take action
- **Observational Learning**: Learning is facilitated by observing others
- **Reinforcements**: Responses to a behaviour can either increase or decrease the likelihood of reoccurrence

- ***Modifiable risk factors***
- Physical inactivity
- Poor dietary habits

- ***How is CPS addressing these with clients***
- Wellness Group, Mood Walks, Gentlefit, Recreation Therapy(ist), gardening program, aquafit classes
- Presentations from the diabetes team, additional food offered

- ***Modifiable risk factors***
- Hypertension
- High blood glucose

- ***How is CPS addressing these with clients***
- Metabolic Monitoring, good connection and relationships with GP's and psychiatrists
- Strong connection with the diabetes team in each community…

- Providing comprehensive service in a rural community can have several challenges including:
  - Weather and road conditions
  - Access to transportation
  - Access to programming
  - Health literacy

- The utilization of the Ontario Telemedicine Network -  - offers clients the ability to address the needs of their health in a unique way
- Our program uses OTN in a variety of ways on a regular basis, and one the most effective ways it is utilized is to connect clients with the diabetes team located at the hospital

- Utilizing OTN allows clients to:
  - Get and stay connected with their diabetes team
  - Ensure they are able to meet with the clinicians on a regular basis *in their own community*
  - Manage their time more efficiently as they are often able to connect with their primary clinician at the same time

- Decrease barriers such as completing referral forms as well as potential wait list concerns

- Help to foster and maintain positive relationships between outpatient mental health programs and hospital based non-mental health programs

Future Directions

- Continue to ensure best practices and current literature guide clinical practice and groups
- A Passport Program is currently being developed to help further engage clients and allow for a more seamless transition between programs
- Continue to utilize OTN to the fullest benefit
- Engage community partners more and further develop effective programming in partnership with these agencies

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