Treating the Future: Our Chance to Protect the Next Generations from Diabetes

Virginia M. Kay
University of Montana, virginia.kay@umontana.edu

Follow this and additional works at: https://scholarworks.umt.edu/gsrc

Let us know how access to this document benefits you.
The population of the United States and our healthcare system is in the midst of a costly obesity and diabetes epidemic. Currently, Type 2 diabetes is a managed chronic disease with no cure. This literature review examined recently published journal articles with a focus on how healthcare professionals can use new discoveries in epigenetic research to better the health of the general population.

**Diabetes Facts**
- Type 2 diabetes is a complex disease that begins as insulin resistance and impaired insulin secretion.
- The Center for Disease Control reports that at least 86 million people have prediabetes - more than 1 out of 3 adults - and 9 out of 10 cases are undiagnosed.
- All risk factors are on the increase in the US: having a family history of diabetes, being overweight, and having gestational diabetes.
- Total estimated cost for diabetes in 2012: $245 billion.

**Literature Themes**

**Environmental Factors**
- Environmental information has the potential to create a disease predisposition in children.
- Many individuals go undiagnosed for years before showing diabetes symptoms.
- Having gestational diabetes increases the risk of developing Type 2 diabetes in the next 10 years by over 50%.

**Recommendations**
- Annual prediabetes screening for all individuals of child bearing age.
- Optimizing the health of adults before conceiving a child to reduce the risk of passing on an unhealthy predisposition for obesity and diabetes.
- Healthy pregnancy programs.

**Public Health Promotions**
- Create a Culture of Health across the United States.
- Community-based participatory programs to increase public awareness of prediabetes.
- Address the root causes for risk factors and implement healthy lifestyle changes.
- Increase access to nutritional foods at affordable prices:
  - Community gardens and farmers markets; fresh fruits and vegetables.
  - Policy changes to SNAP program: remove sugary drinks, candy, and cookies.
- Create built environments and communities that incorporate active lifestyles and transportation.
- Epigenetic education for healthcare providers and continuing education opportunities.
- Community assessment: How to reach people of all demographics?
  - Use mainstream social media
  - Newspapers and news programs
- Expand current programs working on these goals.
- Conduct program evaluation and assessments.

**Public Health Promotions**

**Summary**

Three key factors will help reduce the burden of diabetes:
- Applying recent advances in epigenetic research to healthcare, including healthy breakfast and lunch programs and classroom movement activities.
- Treating the Future: Our Chance to Protect the Next Generations from Diabetes.

**Introduction**

The population of the United States and our healthcare system is in the midst of a costly obesity and diabetes epidemic. Currently, Type 2 diabetes is a managed chronic disease with no cure. This literature review examined recently published journal articles with a focus on how healthcare professionals can use new discoveries in epigenetic research to better the health of the general population.

**Diabetes Facts**
- Type 2 diabetes is a complex disease that begins as insulin resistance and impaired insulin secretion.
- The Center for Disease Control reports that at least 86 million people have prediabetes - more than 1 out of 3 adults - and 9 out of 10 cases are undiagnosed.
- All risk factors are on the increase in the US: having a family history of diabetes, being overweight, and having gestational diabetes.
- Total estimated cost for diabetes in 2012: $245 billion.

**Literature Themes**

**Environmental Factors**
- Environmental information has the potential to create a disease predisposition in children.
- Many individuals go undiagnosed for years before showing diabetes symptoms.
- Having gestational diabetes increases the risk of developing Type 2 diabetes in the next 10 years by over 50%.

**Recommendations**
- Annual prediabetes screening for all individuals of child bearing age.
- Optimizing the health of adults before conceiving a child to reduce the risk of passing on an unhealthy predisposition for obesity and diabetes.
- Healthy pregnancy programs.

**Public Health Promotions**
- Create a Culture of Health across the United States.
- Community-based participatory programs to increase public awareness of prediabetes.
- Address the root causes for risk factors and implement healthy lifestyle changes.
- Increase access to nutritional foods at affordable prices:
  - Community gardens and farmers markets; fresh fruits and vegetables.
  - Policy changes to SNAP program: remove sugary drinks, candy, and cookies.
- Create built environments and communities that incorporate active lifestyles and transportation.
- Epigenetic education for healthcare providers and continuing education opportunities.
- Community assessment: How to reach people of all demographics?
  - Use mainstream social media
  - Newspapers and news programs
- Expand current programs working on these goals.
- Conduct program evaluation and assessments.

**Public Health Promotions**

**Summary**

Three key factors will help reduce the burden of diabetes:
- Applying recent advances in epigenetic research to healthcare, including healthy breakfast and lunch programs and classroom movement activities.
- Treating the Future: Our Chance to Protect the Next Generations from Diabetes.

**Introduction**

The population of the United States and our healthcare system is in the midst of a costly obesity and diabetes epidemic. Currently, Type 2 diabetes is a managed chronic disease with no cure. This literature review examined recently published journal articles with a focus on how healthcare professionals can use new discoveries in epigenetic research to better the health of the general population.

**Diabetes Facts**
- Type 2 diabetes is a complex disease that begins as insulin resistance and impaired insulin secretion.
- The Center for Disease Control reports that at least 86 million people have prediabetes - more than 1 out of 3 adults - and 9 out of 10 cases are undiagnosed.
- All risk factors are on the increase in the US: having a family history of diabetes, being overweight, and having gestational diabetes.
- Total estimated cost for diabetes in 2012: $245 billion.

**Literature Themes**

**Environmental Factors**
- Environmental information has the potential to create a disease predisposition in children.
- Many individuals go undiagnosed for years before showing diabetes symptoms.
- Having gestational diabetes increases the risk of developing Type 2 diabetes in the next 10 years by over 50%.

**Recommendations**
- Annual prediabetes screening for all individuals of child bearing age.
- Optimizing the health of adults before conceiving a child to reduce the risk of passing on an unhealthy predisposition for obesity and diabetes.
- Healthy pregnancy programs.

**Public Health Promotions**
- Create a Culture of Health across the United States.
- Community-based participatory programs to increase public awareness of prediabetes.
- Address the root causes for risk factors and implement healthy lifestyle changes.
- Increase access to nutritional foods at affordable prices:
  - Community gardens and farmers markets; fresh fruits and vegetables.
  - Policy changes to SNAP program: remove sugary drinks, candy, and cookies.
- Create built environments and communities that incorporate active lifestyles and transportation.
- Epigenetic education for healthcare providers and continuing education opportunities.
- Community assessment: How to reach people of all demographics?
  - Use mainstream social media
  - Newspapers and news programs
- Expand current programs working on these goals.
- Conduct program evaluation and assessments.

**Public Health Promotions**

**Summary**

Three key factors will help reduce the burden of diabetes:
- Applying recent advances in epigenetic research to healthcare, including healthy breakfast and lunch programs and classroom movement activities.
- Treating the Future: Our Chance to Protect the Next Generations from Diabetes.