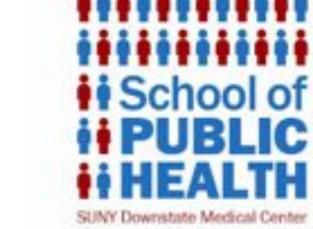


Analyzing Factors that Impact Potential Mortality of COVID-19 in Persons with Type II Diabetes

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ABSTRACT

- Type II Diabetes and COVID-19 are both epidemics occurring simultaneously in the United States
- Type II Diabetes is a preventable disease
- Researchers are gathering information on how diabetes affects the severity of COVID-19
- Long term affects of COVID-19 are still unknown

OBJECTIVES

- Determine factors that worsen diabetes
- Do social determinants increase likelihood of diabetes and COVID-19?
- Factors in common between diabetes and COVID-19 (environmental, social, economic, etc.

METHODS

- Literature review explores COVID-19 deaths, with diabetes as the sole comorbidity in Guo et al (2020).
- Explore the factors that cause and contribute to diabetes:
- -Cohort studies, literature reviews and discussions, review of statistical results
- -Various methods considered when looking at COVID-19 and diabetes, comparing incidence of the two diseases and factors that overlap is critical for drawing conclusions and hypothesis

RESULTS

- ACE Inhibitors do not affect prognosis of COVID-19 (Lopes et al, 2021)
 - Significant because many diabetics use these medications (those with heart disease).
- Kolb and Martin (2017) discuss the environmental and lifestyle factors that influence the increase in Diabetes in the world.
- -Those with genetic risk and beta cell damage are thought to be at higher risk when environmental and lifestyle factors are accounted.
- Sorensen et al. (2017) discusses the affect that noise pollution and environmental factors have on the incidence of diabetes.
- -Exposure to 10-decibel higher level of "road traffic noise" during the prior 5 years in the cohort study of increased risk of diabetes.

TABLE 1

P-value^a Total (n = 50) Diabetes (n = 24) Age, median (IQR), y <.01 41 (32-60) 61 (57-69) 32 (30-37) 12 (50) 21 (42) 9 (34.6) 29 (58) 17 (65.4) 12 (50) 40 (80) 22 (84.6) 18 (75) .30 4 (15.4) 5 (20.8) 37.3 to 38.0 6 (23.1) 15 (57.7) 11 (45.8) 38.1 to 39.0 3 (12.5) 9 (34.6) 20 (76.9) 19 (79.2) 15 (57.7) 11 (45.8) 7 (26.9) 4 (15.4) 2 (7.7) 4 (16.7) 3 (11.5) 4 (15.4)

4 (15.4)

4 (15.4)

4 (15.4)

7 (4.5-10)

7 (5-10)

Shortness of breath

Onset of symptom to, median (IOR), or

- Those older than 60 had worsened symptoms, according to the prior chart symptoms included:

RESULTS

- Nausea
- Vomiting
- Higher mortality (16.5% vs. 0%)

(Guo, et al. 2020)

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DISCUSSION/CONCLUSION

- -Novelty of COVID-19 makes it increasingly hard to have a solid consensus
- -Those with diabetes oftentimes have other comorbidities, which can confound the data
- -How will the development of vaccines impact health outcomes due to COVID-19 in those with Type II Diabetes
- -Allocate funding to communities heavily impacted by COVID-19
- -Prioritize education at all levels regarding
 Type II Diabetes in communities where
 Diabetes is prevalent
- -Provide resources to manage and prevent
 Type II Diabetes in at risk communities
 Explore social and environmental factors that
 impact prevalence of diabetes

Conclusions:

- -Push for positive policy changes in the US healthcare system to prevent chronic illness
- -Create a system in which healthcare is trustworthy and empathetic, increasing the likelihood that individuals will adhere to medical advice
- -Create an environment in every neighborhood that fosters wellness
 Increase access and quality of care in at risk communities

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