

Mortality Risk Amongst Hereditary Angioedema Patients

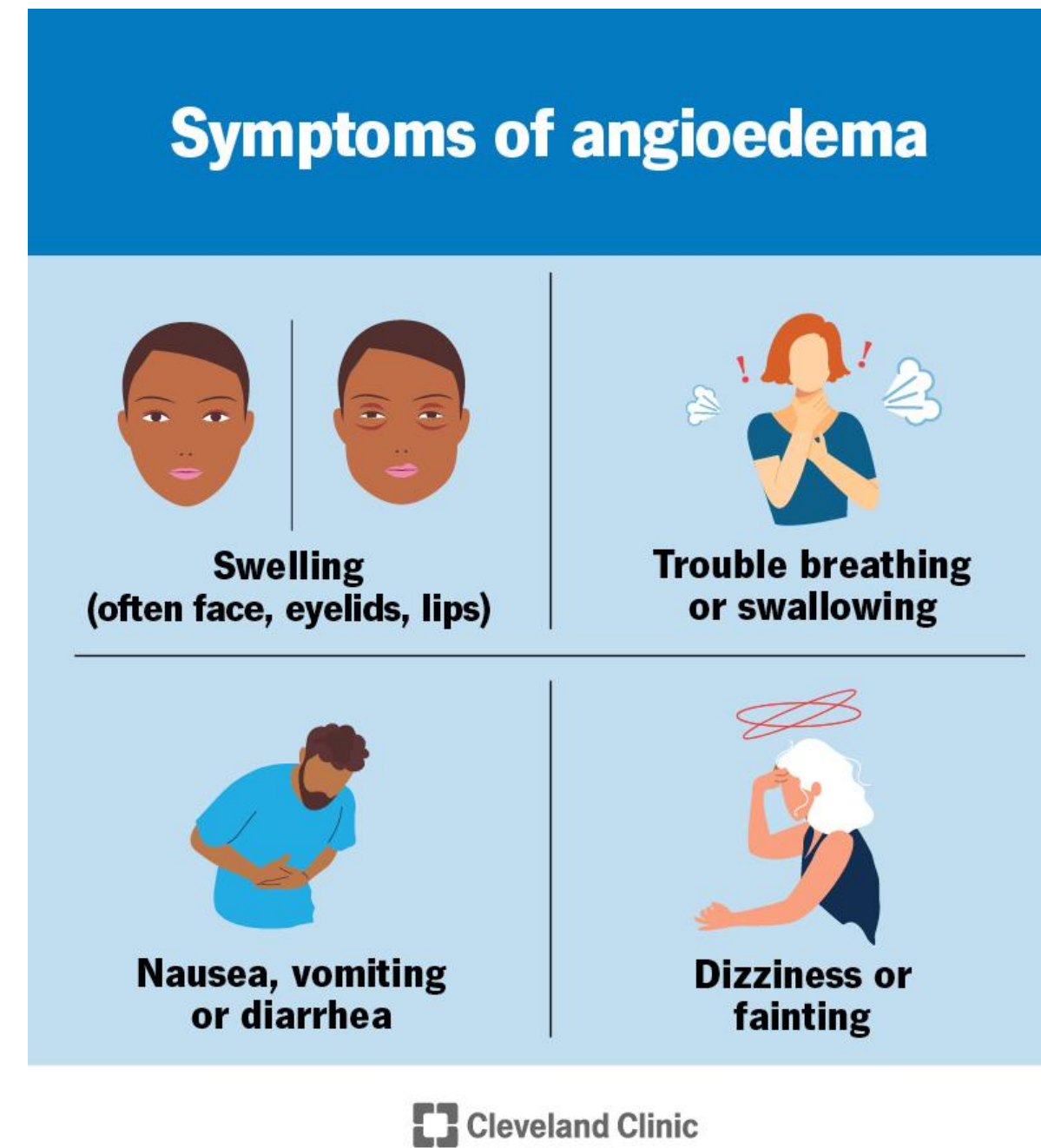
MSR122

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BACKGROUND

Hereditary angioedema (HA) is a rare condition characterized by recurrent swelling of various parts of the body, including the skin, upper airway, and respiratory system.

Patients face a heightened mortality risk due to multiple factors.

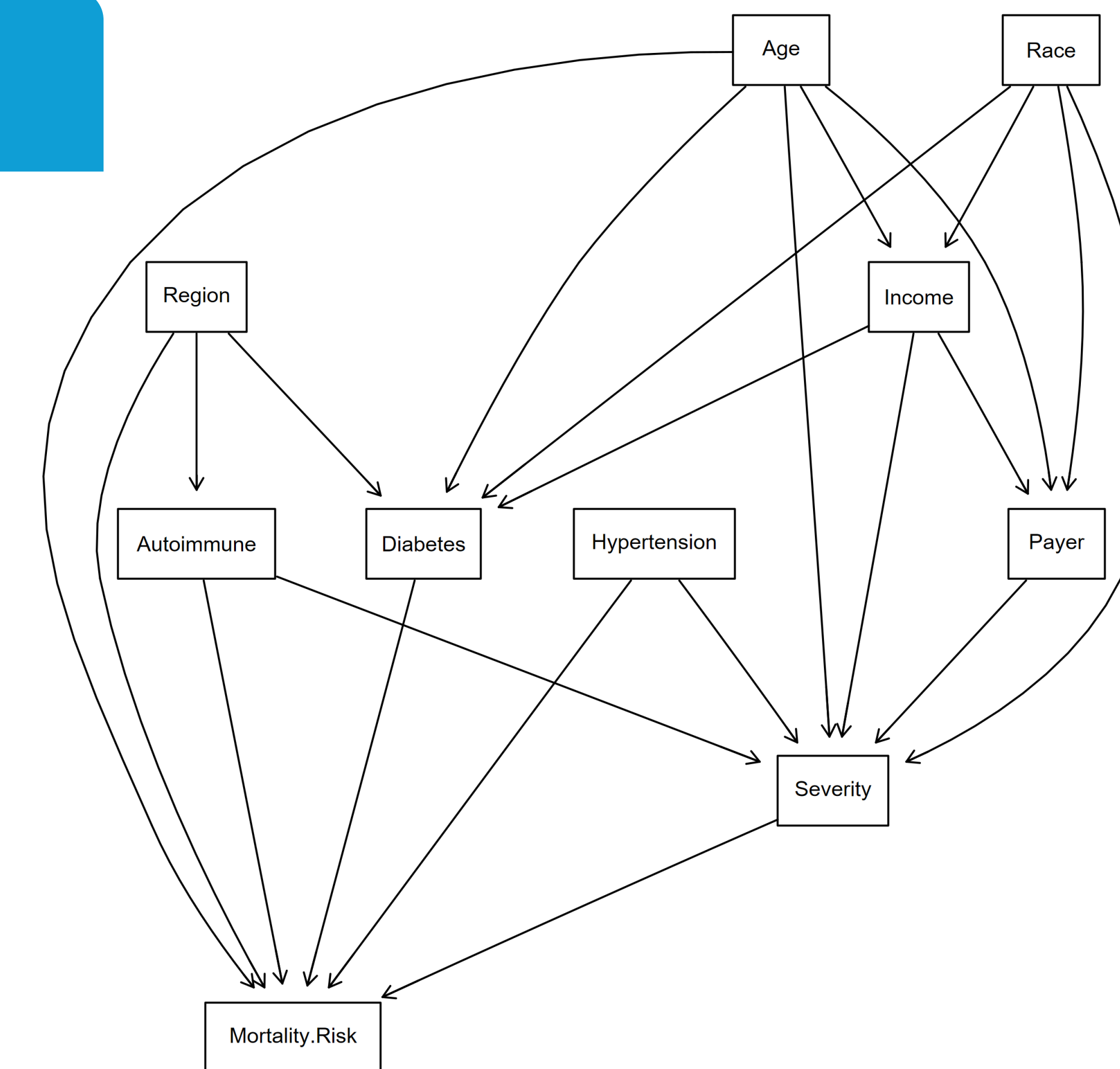


METHODS

A Bayesian network model was developed

Structure learning was performed using:

1. A directed acyclic graph
2. Probability estimating using Bayesian inference

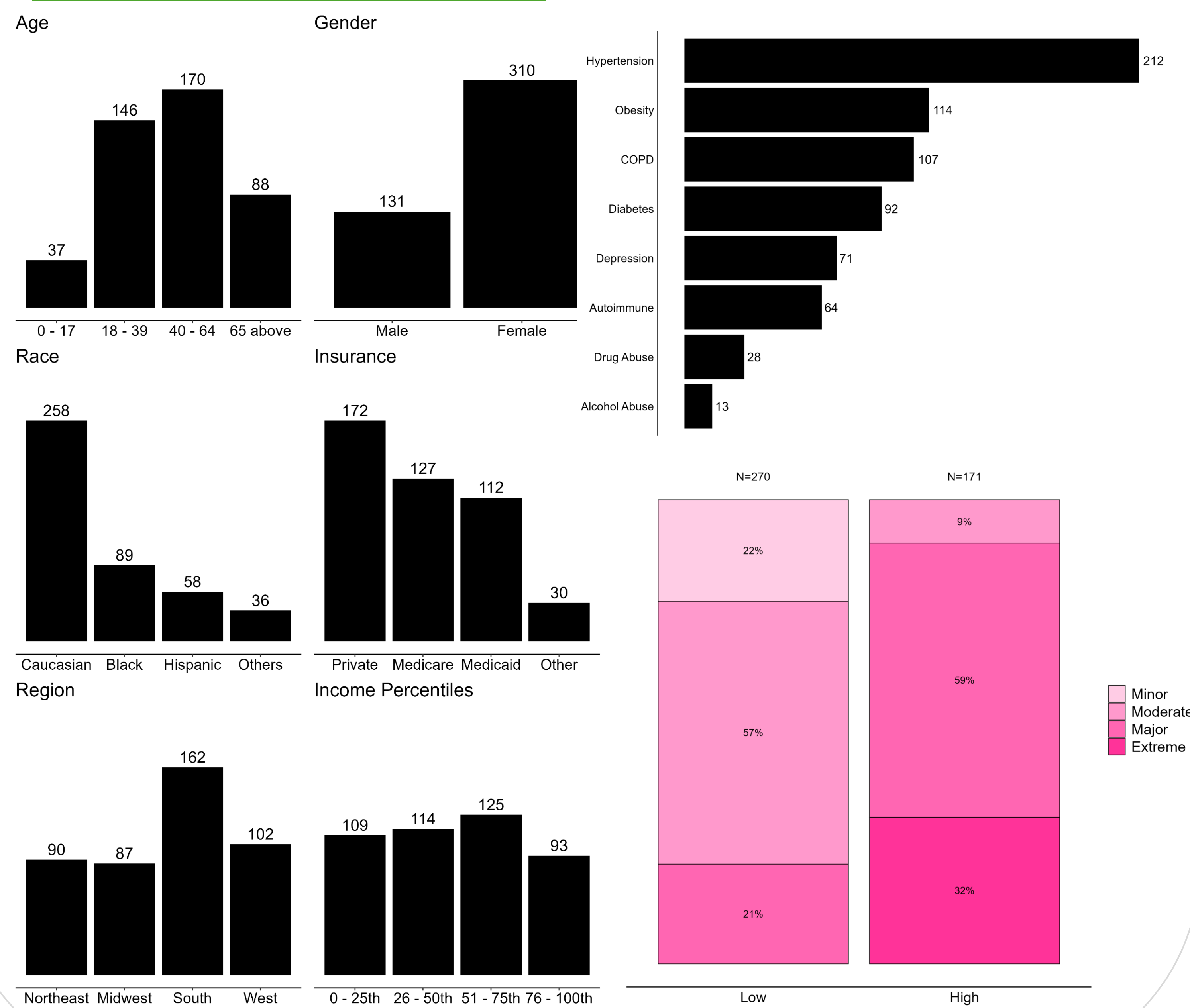


A DAG shows the interconnected nature of the variables associated with mortality risk.

The arrows represent a statistical relation and not causality.

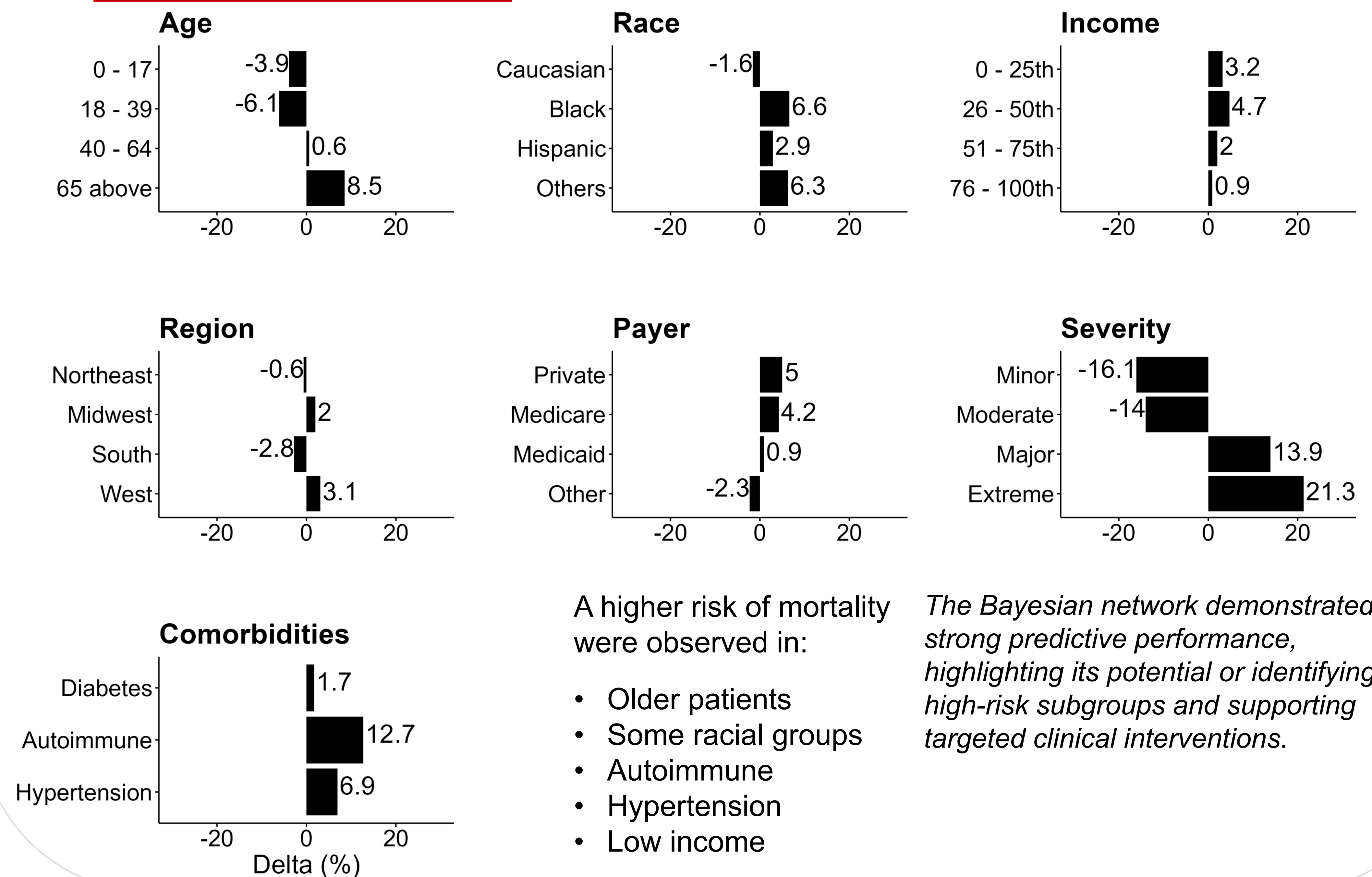
DATA

The Nationwide Inpatient Database for 2021 was used for this analysis.



RESULTS

After applying the DAG to the data, the estimated probability of mortality risk for HA patients was **41.6%**.



A higher risk of mortality were observed in:

- Older patients
- Some racial groups
- Autoimmune
- Hypertension
- Low income

The Bayesian network demonstrated strong predictive performance, highlighting its potential or identifying high-risk subgroups and supporting targeted clinical interventions.