**Aim 2: Create a Geographically and Demographically Stratified Heat-Health Outcome Forecast Model**

Prediction of adverse health outcomes at varying temperature thresholds for different populations and neighbourhoods over a daily and weekly basis.

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| **Variable** | **Hypothesis** |
| **Creatinine Clearance** | **Heat exposure may adversely affect renal function, with an increase in creatinine indicating potential kidney dysfunction.** |
| **C-Reactive Protein Measurement, IL-6, D-dimers** | **Increased levels may be observed following heat exposure, indicating an inflammatory response to heat stress.** |
| **Sodium Measurement, Potassium Measurement** | **Abnormal electrolyte levels may reflect dehydration associated with heat exposure.** |
| **Glucose Level** | **Heat exposure may negatively impact blood sugar control in individuals with diabetes.** |
| **Systolic Blood Pressure, Diastolic Blood Pressure** | **Decreases in blood pressure may be associated with increasing temperatures.** |
| **Hypertension** | **Individuals with hypertension may experience exacerbated symptoms during high heat.** |
| **Alanine Aminotransferase Measurement** | **Elevated levels may indicate liver stress related to heat exposure.** |
| **Cholesterol Measurement** | **Changes may be observed in response to heat exposure, reflecting potential impacts on lipid metabolism.** |
| **CD4 Cell Count** | **CD4 cell count levels may reduce at higher temperatures.** |
| **Total AEs** | **Heat exposure may increase the risk of adverse events.** |