Team 3

Idea 1:

**Question**: What is the impact of social determinants of health on the predictive accuracy of early sepsis detection algorithms?

Previous studies have shown that when incorporating SDoH data into early sepsis detection models we can better predict risk of mortality when compared to using SOFA (gold standard) alone.

In cardiology, the impact of SDoH has started to be integrated into ASCVD risk calculators with greater predictive capabilities\*\*\*.

**Goal**: Further refine SOFA predictive capability by integrating zip code data using a novel dataset (Cosmos)

* Emulating the AHA PREVENT online calculator:
* <https://professional.heart.org/en/guidelines-and-statements/prevent-calculator>

Zoom: <https://duke.zoom.us/my/brianlerner>

Idea 2:

Goal: Take MIMIC IV data SOFA score is generic. Stratify sofa by age gender and race and see how it performs

<https://pdf.sciencedirectassets.com/272986/1-s2.0-S0883944124X00040/1-s2.0-S0883944124003447/main.pdf?X-Amz-Security-Token=IQoJb3JpZ2luX2VjELD%2F%2F%2F%2F%2F%2F%2F%2F%2F%2FwEaCXVzLWVhc3QtMSJIMEYCIQDFb9HrFgISrPRf%2FU8NfCxwUJ3qeb0WuvVtNl5V%2FLxwzgIhAJfPgpz0Qo3wHiFn2HL54VOG5IKCBHEsiaJ8fKrGCefKKrMFCEkQBRoMMDU5MDAzNTQ2ODY1Igw5btd53tJYF8hnha0qkAXbjBTV5XqnfZUNqWnFAkq7pe1ViTxBlqspq6fxvPmWIIBtCX3eEyxOqNYG6gLEOaxdMwqkkh6AnKR1bneAutLVmUUwHy4B9%2FrvhHIuO7kPViSrhuuy54un54aomBp83DJNxhIWS5RYYWL2A70XQSyKHmjGPQ067%2FQA915G7p%2FEcedY3Zriv19p1FEWjXNljLHuOgUM%2BGUtzUjErjzNMiVVVnZ3a5ymGNT4zdbBeUQbG49HyZ6i5MwJQwuZF2JMX%2BKQ7d5JpUCtLe6oL2q%2F59XIAbV9egR8nnBCFGUvtqX0JxHYie1U3%2BxXvpSFDrY1RP0Qo7z27drDOkJvsiwx6tDhFlBCUpHwzNh7EumekgSBrvzZxTTQJ9nvlg7LtLHucPYf6MjWmlTJ6uupUK91AynOUNErzVaVLNBV%2BwbVKGe4emLR5hP5oD%2BRtOA0OH%2F7b%2B4gYYs6G2vL51kHyxa%2BqVZQKKOitwnUhL0%2FVxwF9OoJ6AlQ%2BkxPK0koY8MwIpAiZsND1i1igbTVn%2BmV%2Bnwm2nl1eE32%2Bw4jCgSzh4HabJgp7GhnwMnsnEHbN6Ivh8NK4REnxncOwNKpBziL8SZ3KZSp2Em%2BVYbrXoZT5qwZdA5fTNf%2BwB%2FEY4pR2CvSaJq6C9FqaBbMekeBZojSBY0%2BEG43guQT4Cl0jwgTwkK4gJM6SOC7%2Fj6lazjhwM2sevUI6ai7p9XkESh6IrSHLLvHOjf%2BhsASjRRaWX5UEMl0bm8EidmpYmoHwPHVbBIDTqJzGRajpyIFHdUcuAJSzB8xX3i3BVOzvO0vwKKh9pwXK%2Famb%2FHh6Cg7dl1ldPC1wFREqgnW0fCx3O3fXaHnr7hZZ0RF6ZxDWzEJjHXBbssGcoqZ3TCugLTABjqwAfwuIjkRZGV%2BvQ4A2bLYADiySPO42XWJ5gzbW8qjQU91YdBSM2m%2FEHqXJ8hvyDLPgG7UOS1yYpNFvYS1RHi4oIF5U1c1nYneHTgIwuq2D0PLJwPCnxAF9dP461bfnrobgZAtysaA3x5dAjhh9EV7571vJE%2Bh%2Bj%2BkCs8m%2BvKHfAJvW%2FcENmJio92GllVjbxqIC3jeRNIz1Z00SdnsHQerjDQcLvzbpANrsYPQGvAr1aAd&X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Date=20250426T160123Z&X-Amz-SignedHeaders=host&X-Amz-Expires=300&X-Amz-Credential=ASIAQ3PHCVTY6GAWUUG6%2F20250426%2Fus-east-1%2Fs3%2Faws4_request&X-Amz-Signature=85ab250630eddad5223fa4a5dc03cb3d57b722d4379bda6d9c3739507c7ffec1&hash=efe687dcb3c96e1a7f7a907e881695306435538c42c93f91dd467557a090862b&host=68042c943591013ac2b2430a89b270f6af2c76d8dfd086a07176afe7c76c2c61&pii=S0883944124003447&tid=spdf-819f6437-ebc0-45e2-858f-d5c159aa69b6&sid=b7fb74c426aef649c87a3073b028212af82cgxrqa&type=client&tsoh=d3d3LnNjaWVuY2VkaXJlY3QuY29t&rh=d3d3LnNjaWVuY2VkaXJlY3QuY29t&ua=0f105d5c575856015250&rr=93674c678f723b41&cc=us>

Introduction:

Methods:

Results:

Discussion