

**1st Round Challenge**

**Preamble:** Inappropriate hospitalizations are unnecessary hospitalizations of patients who would be better served attending an outpatient service. These unnecessary and avoidable hospitalizations are based on “Ambulatory Care Sensitive Conditions (ACSC)”. Ideally, patients with ACSCs should not be admitted to the hospital (inpatient hospitalization). Such admissions (inpatient hospitalizations) costs the state, health system and patients money, puts the patient at iatrogenic risks and consumes scarce resources in hospitals

**Task:** You have been provided with the international statistical classification of diseases and related health problems (IDC-10) codes for ACSCs. You are also provided data that contains all information about statewide inpatient hospitalizations for calendar years 2016,2017, 2018 and 2019.  Using the data provided, create the recovery rules necessary for the creation for the ACSC\_flag binary classification you have in the data. You will be required to provide the parameter (s) or decision rules that guide this classification. You are required to present all analytical techniques used. As part of the deliverables you will submit, create a worksheet for all of the variables and show what proportion (%) of each variable contributed to the creation of the ACSC\_flag binary classifier (and yes values can include 0% since some variables might not contribute anything to the flag). Present your findings and also think about how you can implement your best algorithm in a hospital setting to help the hospital avoid inappropriate hospitalizations.

Schedule

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| **All times EST** | **Panel A** | **Panel B** | **Panel C** |
| 12-12:30 | Fresh Trendies | Analytical Dogs | Triple L |
| 12:40-1:10 | Healthy Buzz | Salus | Masterminds |
| 1:20-1:50 | Data Explorers | Prince Avenue Heroes | Asclepias |
| 2:00-2:30 | Burdell's Besties | KDBAA | Data Vaders |
| 2:40-3:10 | Goldminers | Phoenix | Primum Non Nocere |
| 3:20-3:50 | Best In Show | Vault | Lock, Stock and Neural |
| 4:00-4:30 | Cyclone | Data Drivers | Next Top Modelers |
| 4:40-5:10 | Flames |  |  |