

Information Management on Air Quality, Heat & Health: Sri Lankan Experience



2 Related Use Cases

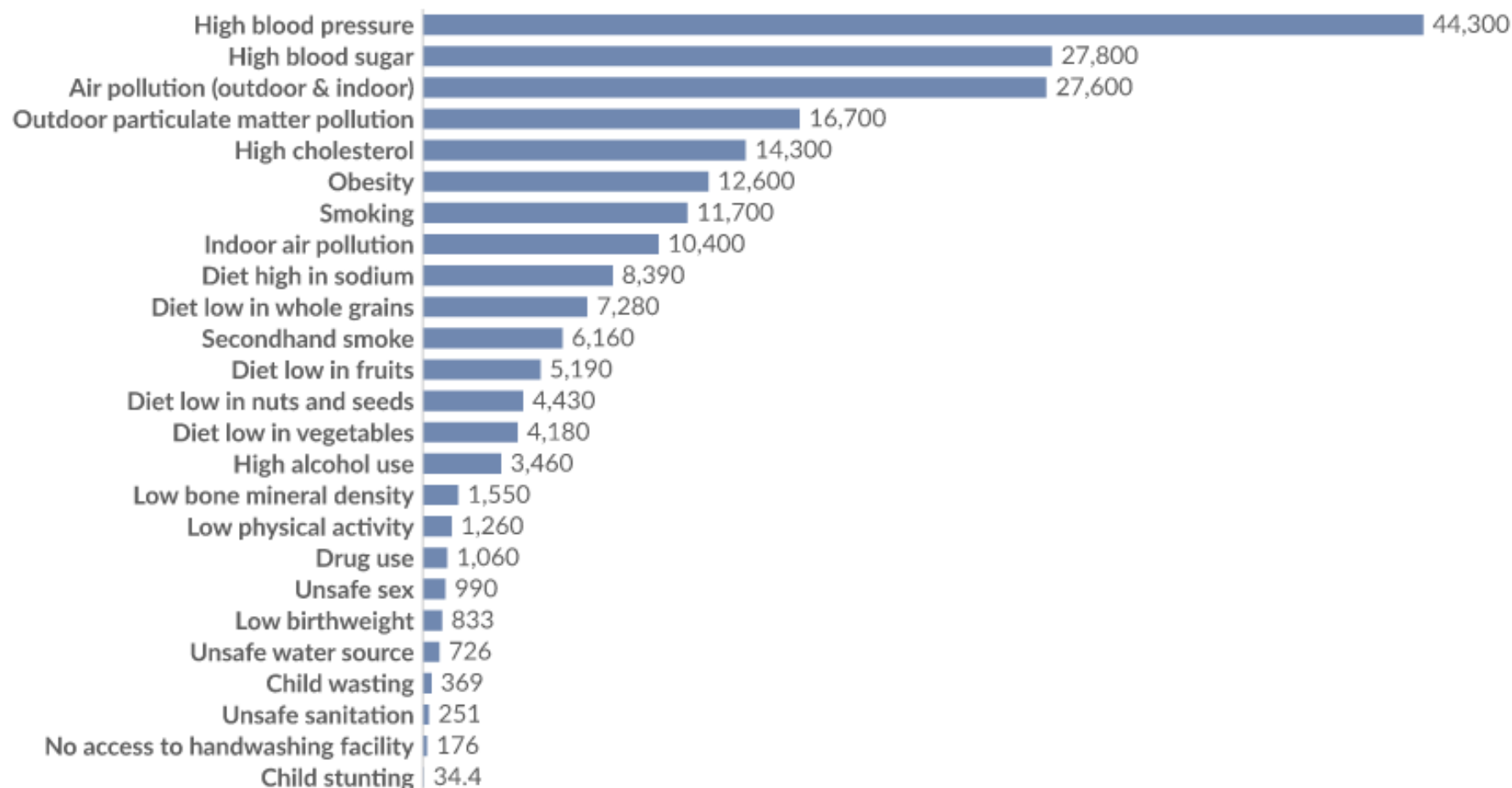


Air Quality & Health Risk



Deaths by risk factor, Sri Lanka, 2023

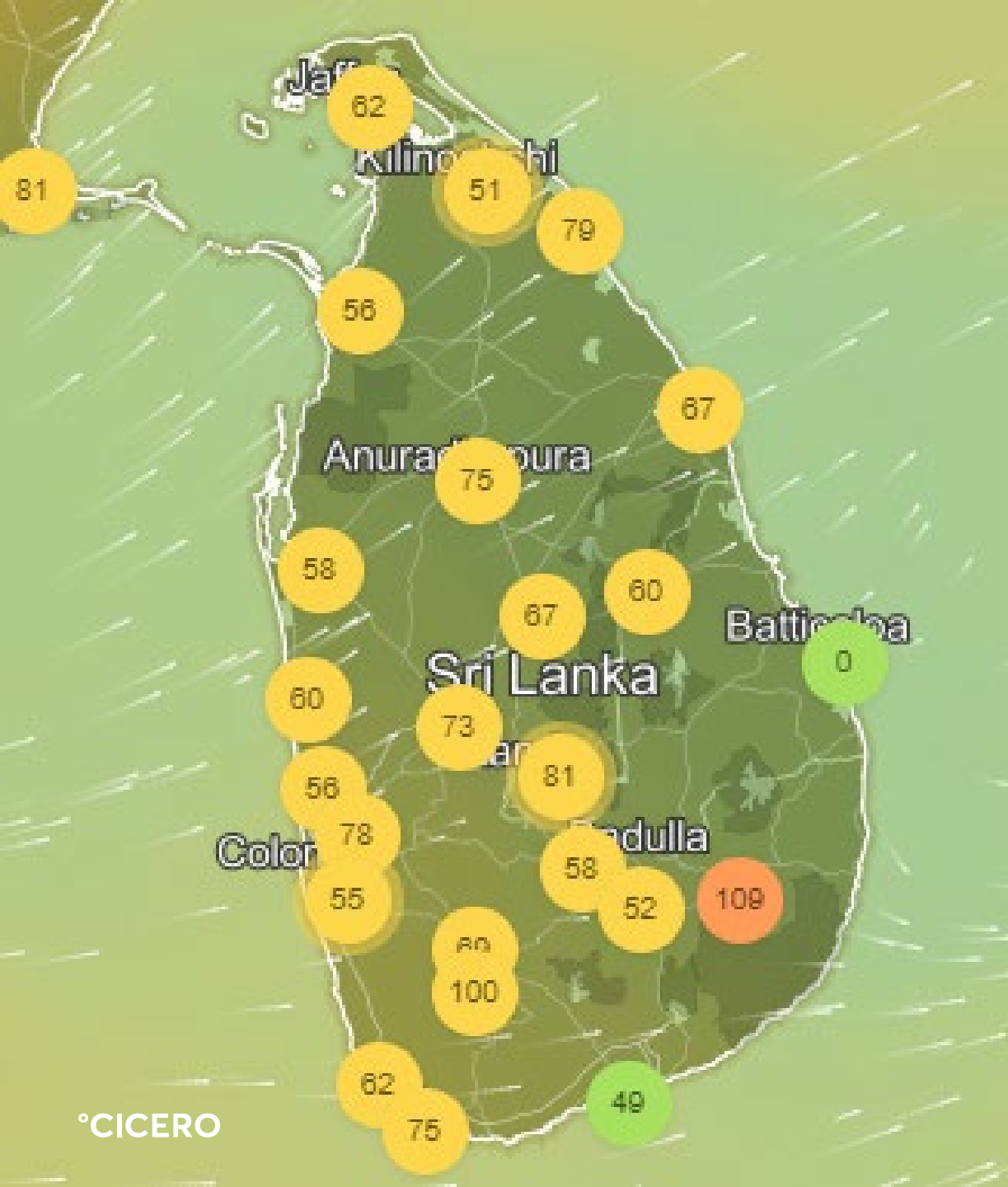
The estimated annual number of deaths attributed to each risk factor. Estimates come with wide uncertainties, especially for countries with poor vital registration.



Data source: IHME, Global Burden of Disease (2025)

OurWorldinData.org/causes-of-death | CC BY

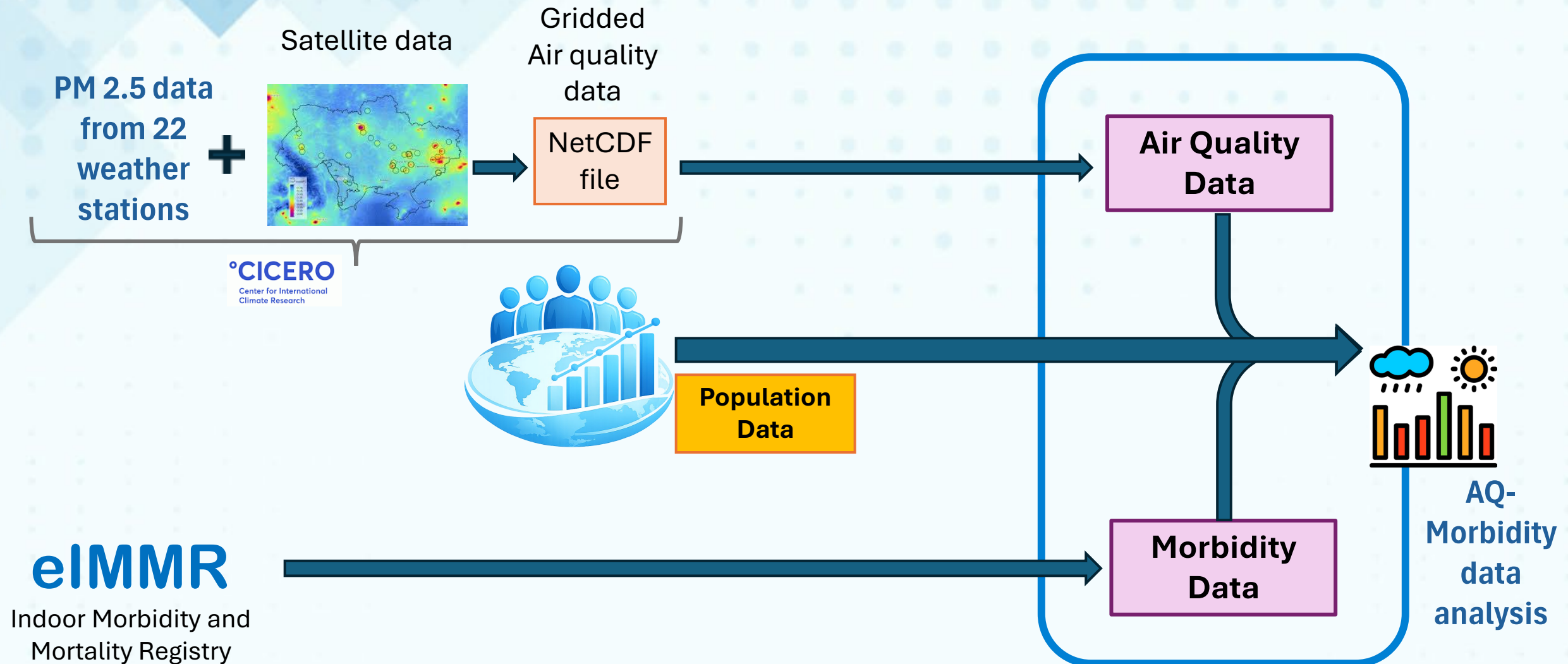
Note: Risk factors are not mutually exclusive. The sum of deaths attributed to each risk factor can exceed the total number of deaths.



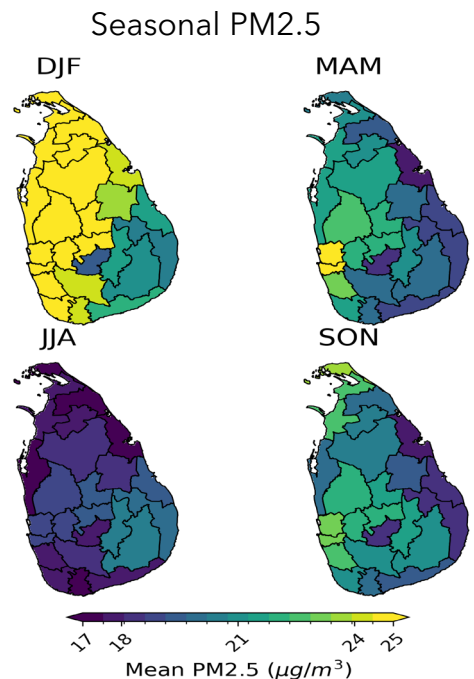
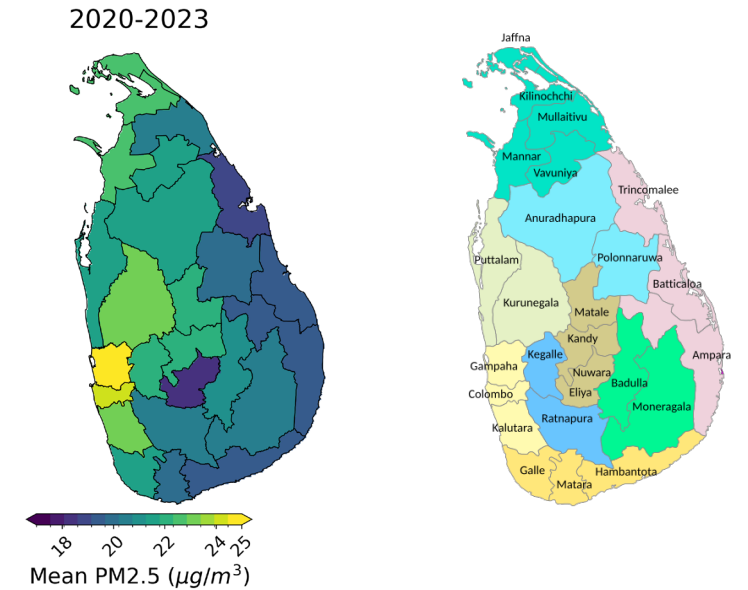
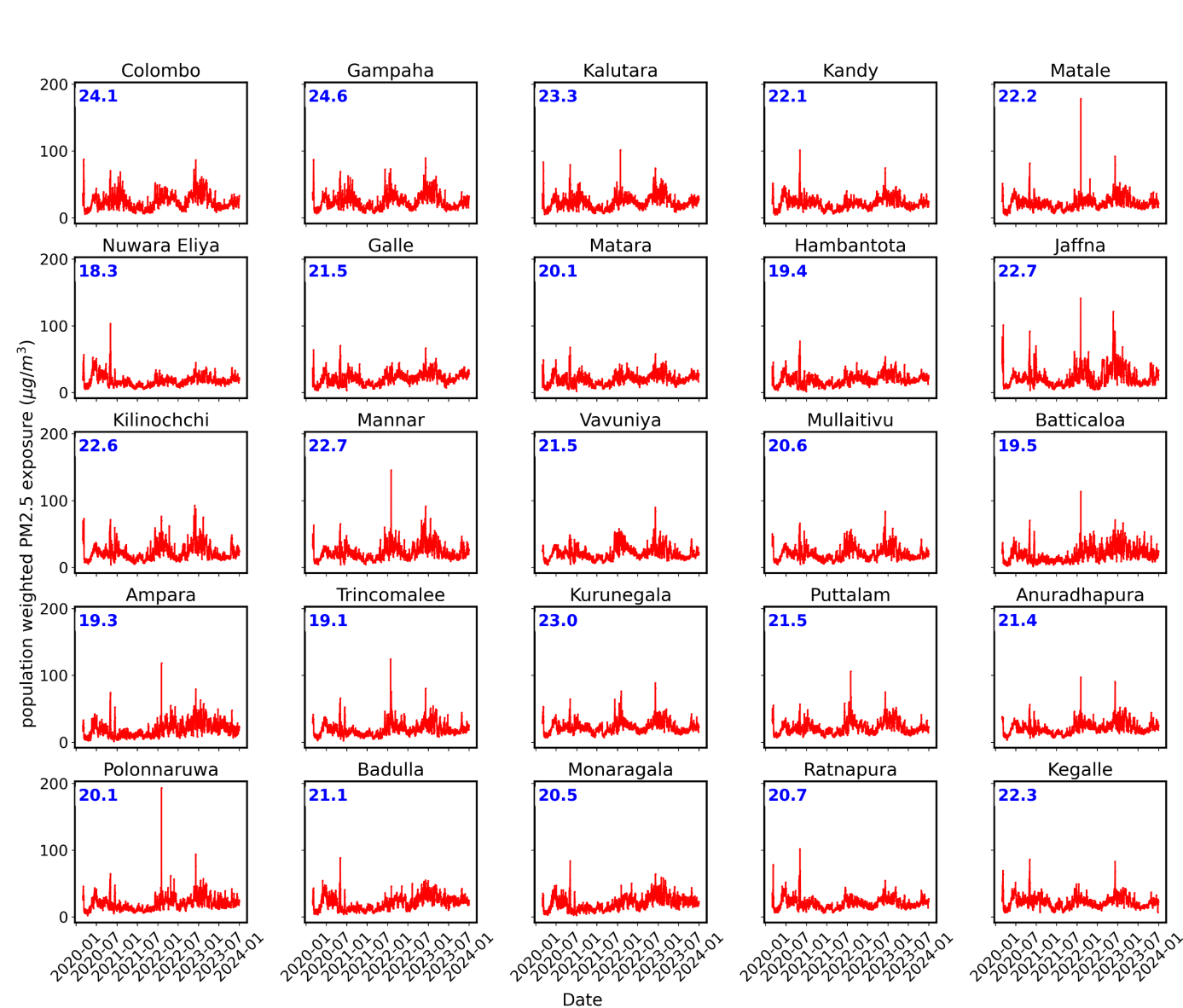
Broader Aims

- Produce a high-resolution dataset of PM2.5 for Sri Lanka.
- Build an epidemiological model linking human health outcomes with exposure to PM2.5 and heat.
- Develop an impact based early warning system for heat and air pollution for Sri Lanka.

Data Sources

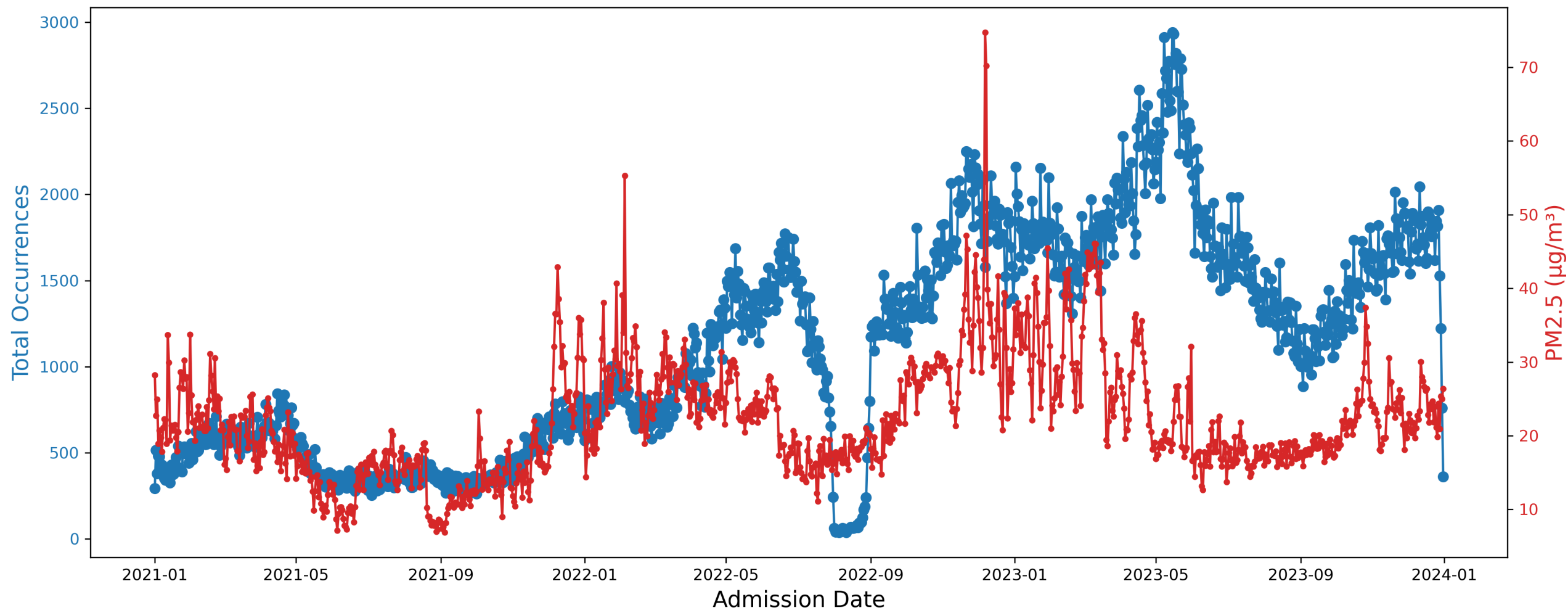


Bias-corrected PM2.5 for districts in Sri Lanka



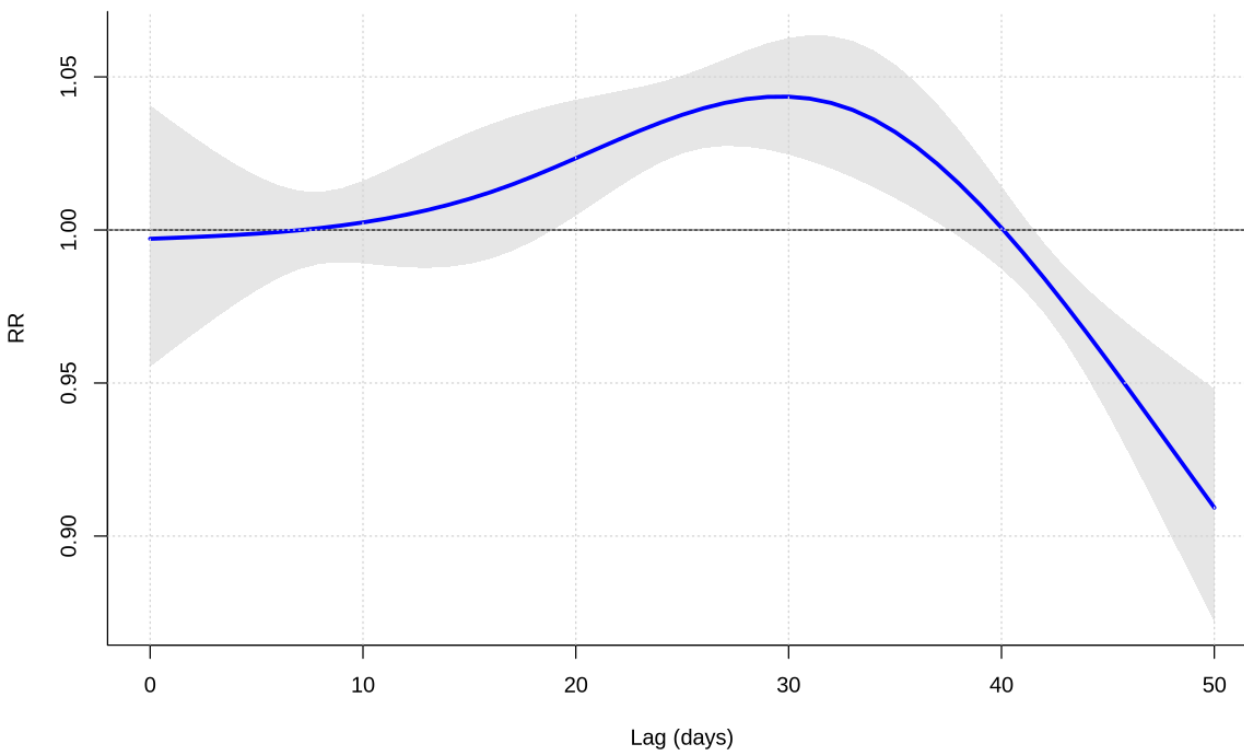
Time series of PM2.5 and respiratory disease hospitalizations.

Total Respiratory Disease Admissions and Mean PM2.5 (All Regions)

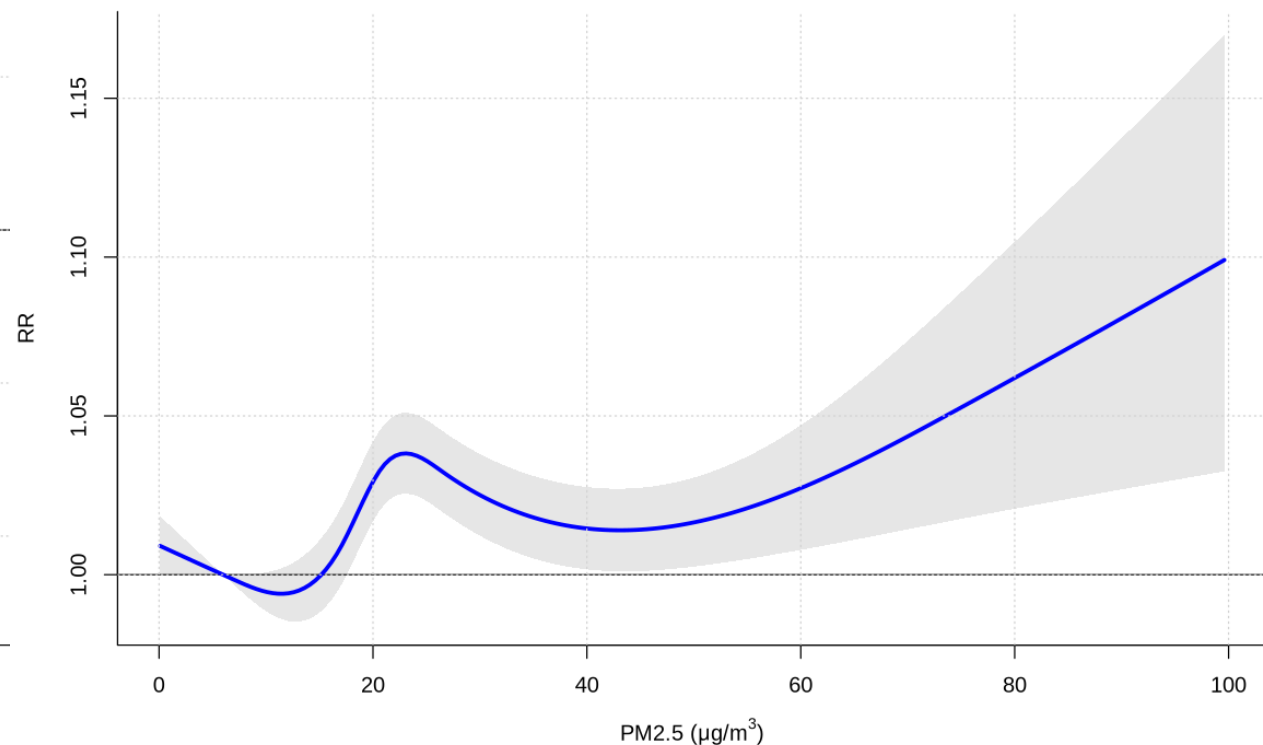


Exposure response relationships for Respiratory Hospitalizations

DLNM: RR vs Lag at Mean PM2.5 (Country-level)



DLNM: RR vs PM2.5 at lag 25 (Country-level)

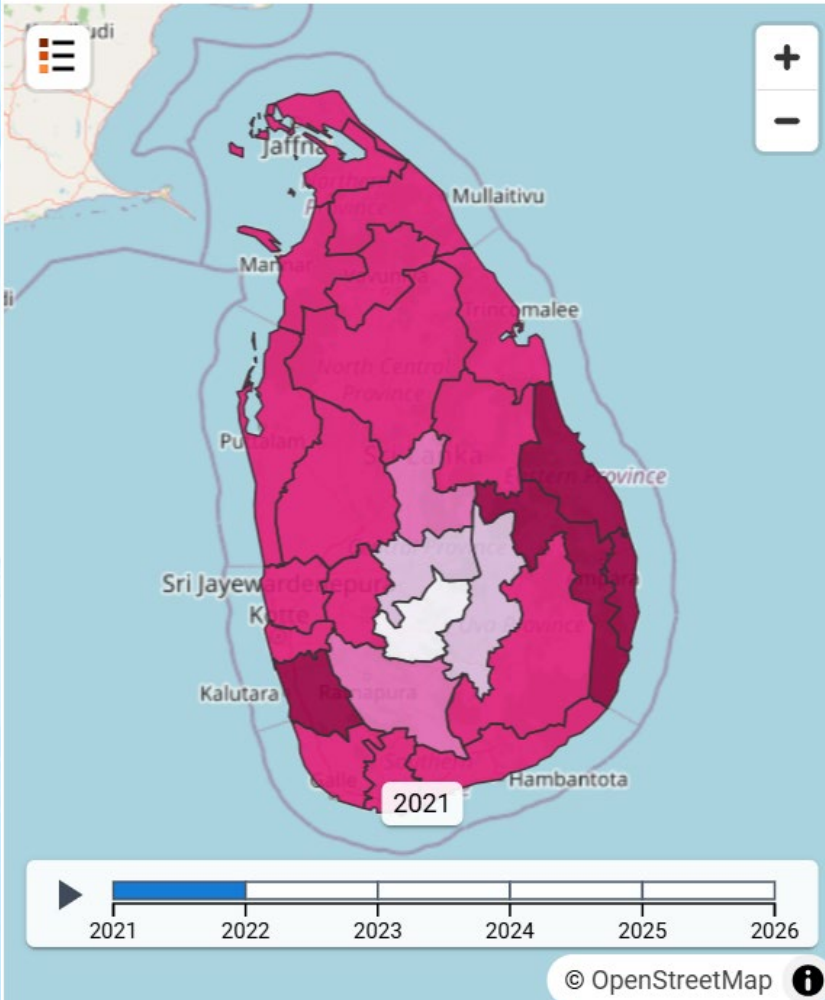


Heat and Impact on Health

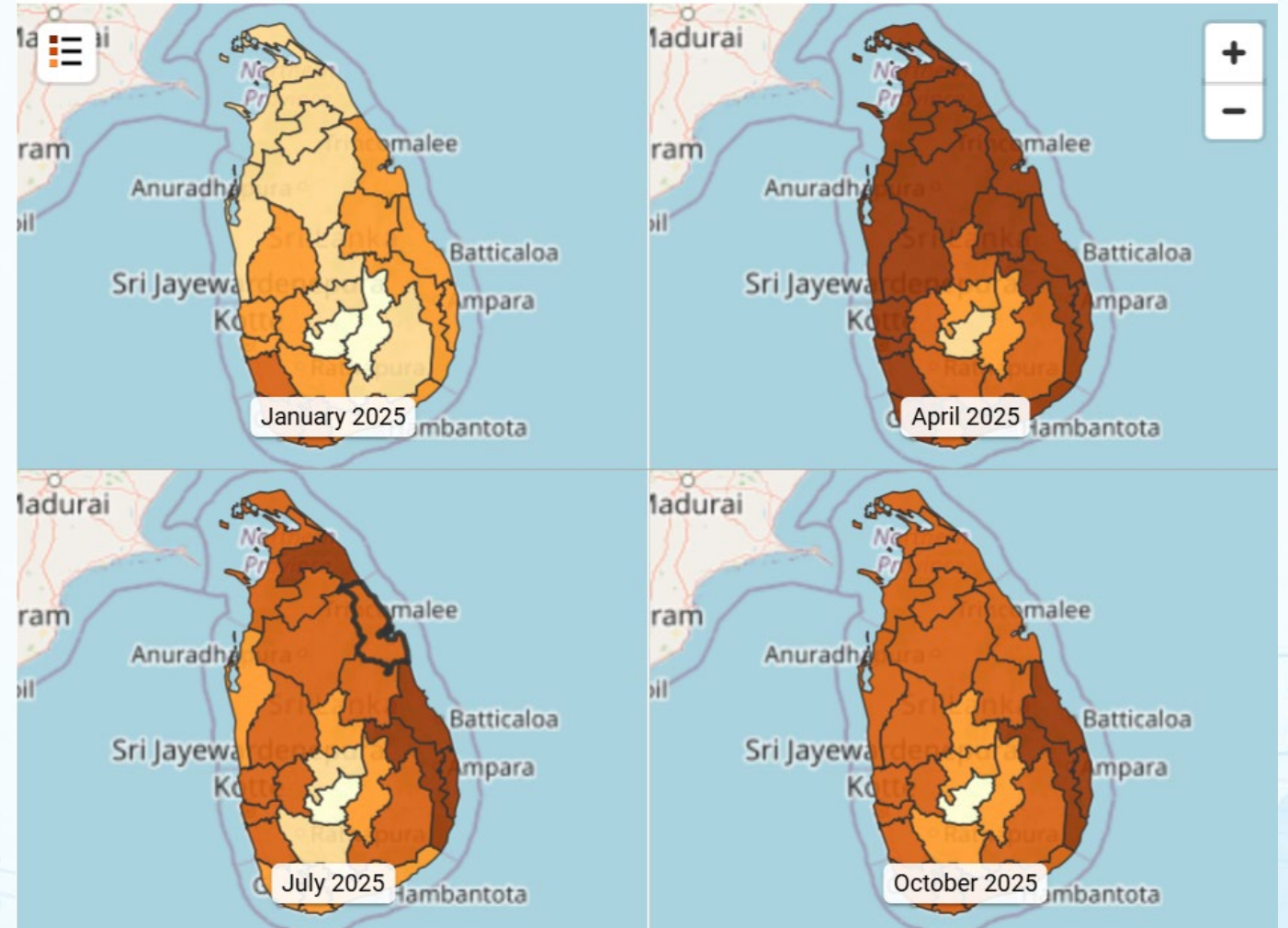


Context

Heat Stress Variation in Sri Lanka over last 5 years by District



Seasonal Variation of Heat Stress in Sri Lanka Last Years by District



Sri Lanka Health Sector





1. Preventive Health System

Promoting health, preventing disease,
and caring for mothers and children in the community



RMNCAH System in Sri Lanka

eRHMS

Data Entry ?

Organisation Unit: PHM - Akurana
Data Set: H524 - PHM M
Period: August 2025

වැදගත් / முக்கியமான:

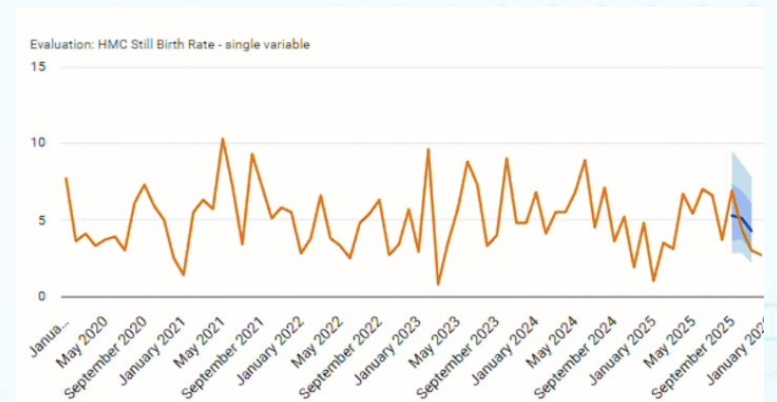
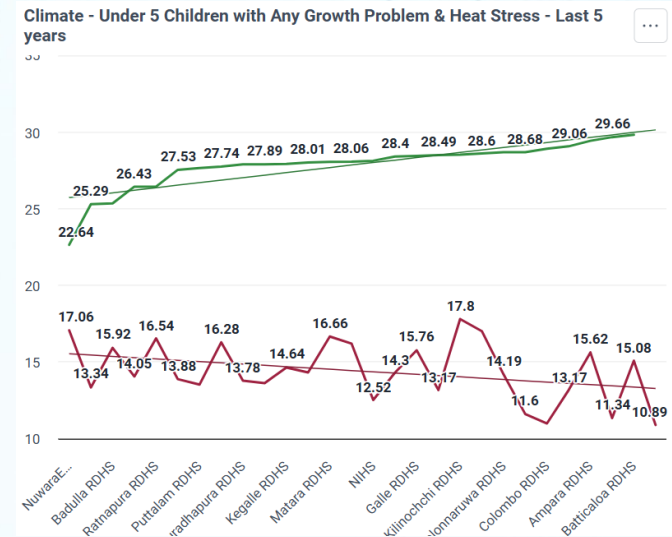
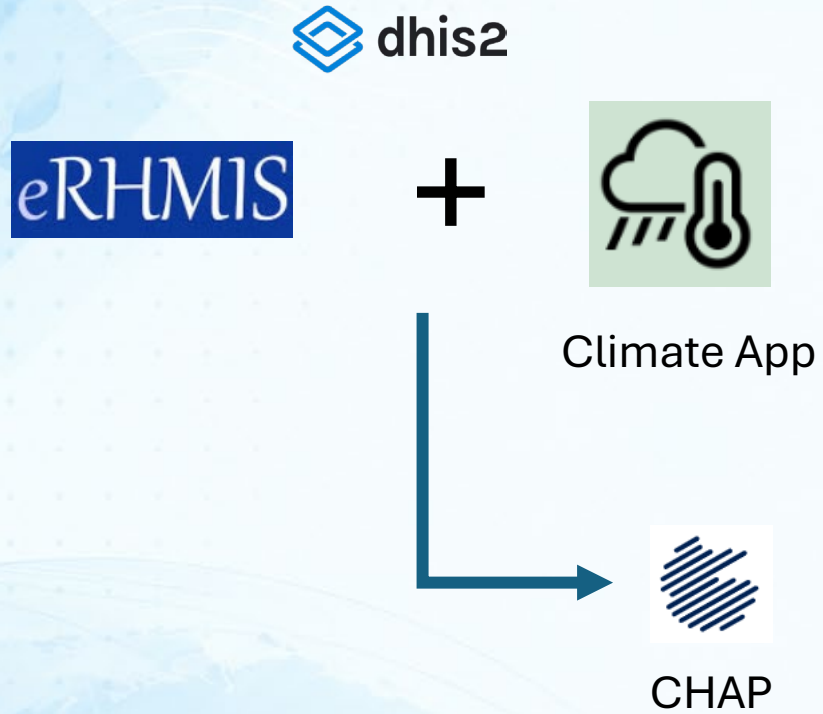
- 10 වනදා වනවිට සම්පූර්ණ කළ සෞථම පමණක් කැමැත්ත (10th day by the end of the month only the confirmed cases are accepted)
- 20 වන දායින් පසු දත්ත ඇතුළත් කිරීම ස්වයංක්‍රීයව අක්‍රීය වේ (Data entered after 20th day will be automatically inactive)

1. යෝග්‍යතා පවුල් පිළිබඳ තොරතුරු
தகுதியுடைய குடும்பங்கள் பற்றிய தகவல்கள்
2. මාතෘ සංරක්ෂණය - ලියාපදිංචි කරන අවස්ථාවේදී
பதிவு செய்யப்படும் போது தாயின் பராமரிப்பு
3. මාතෘ සංරක්ෂණය - ප්‍රසූත වාර්තාකරණයේදී
தாயின் பராமரிப்பு பிரசவ அறிக்கை சமர்ப்பித்தல்
4. මාතෘ සංරක්ෂණය (ප්‍රථම පසු ප්‍රසව ගමනේදී)
தாயின் பராமரிப்பு பிரசவத்தின் பின்னர் முதல் தரிசிப்பின் போது
5. ගර්භණීභාවයේ ප්‍රතිඵල
கர்ப்பத்தின் பெறுபேறுகள்
6. පසු ප්‍රසව සංරක්ෂණය
பிரசவத்தின் பின்னான பராமரிப்பு
7. ළදරු සංරක්ෂණය
சிகு பராமரிப்பு
8. ළමා සංරක්ෂණය
சிகு பராமரிப்பு (1 முதல் 5 வயது வரை)
9. ළමා හා නව යෞවන සංරක්ෂණය
சிறுவர்கள் மற்றும் புதிய இளம் தலைமுறையினர்
10. පවුල් සංවිධානය
குடும்பத்திட்டம்

Bar Chart Data (Approximate):

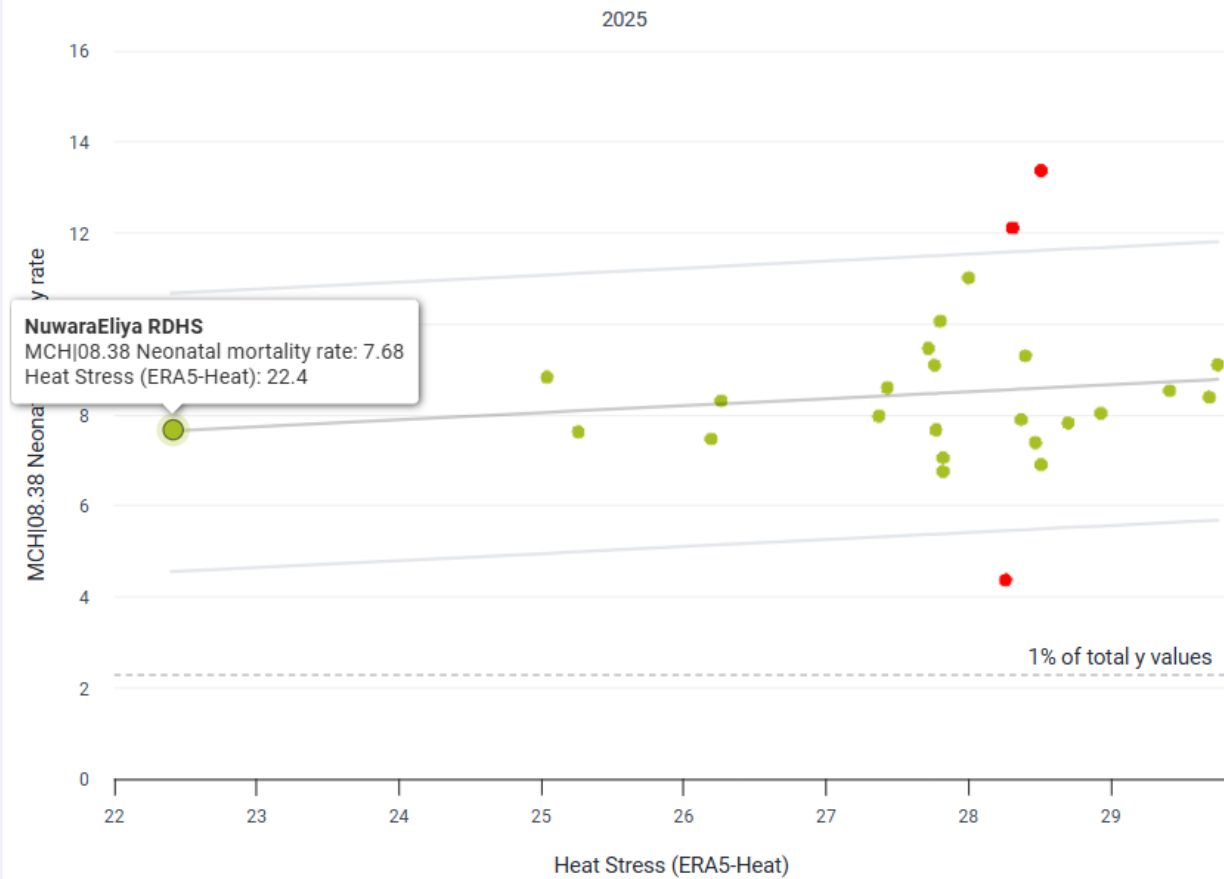
Category	Value
1	100
2	90
3	80
4	70
5	60
6	50
7	40
8	30
9	20
10	10

Process

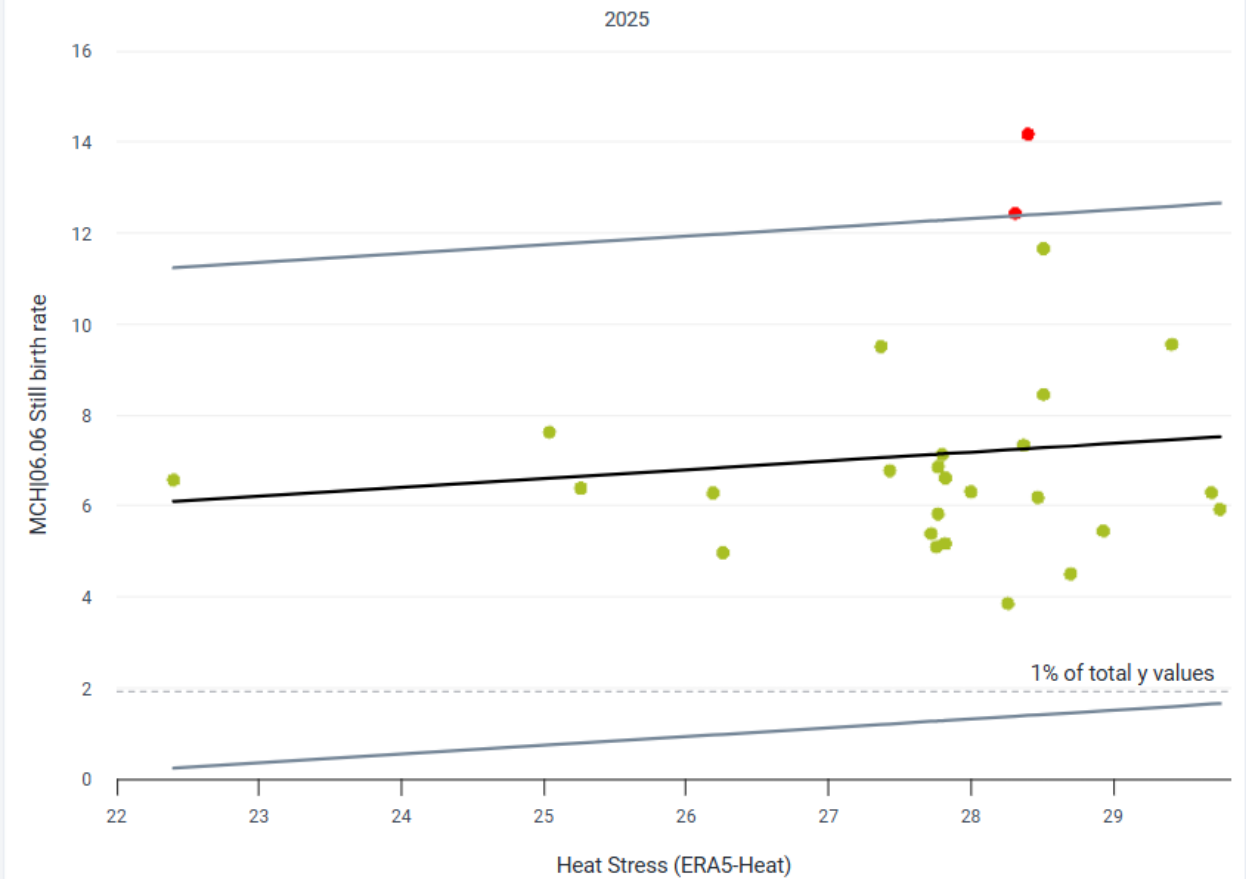


RMNCH Indicators vs Heat

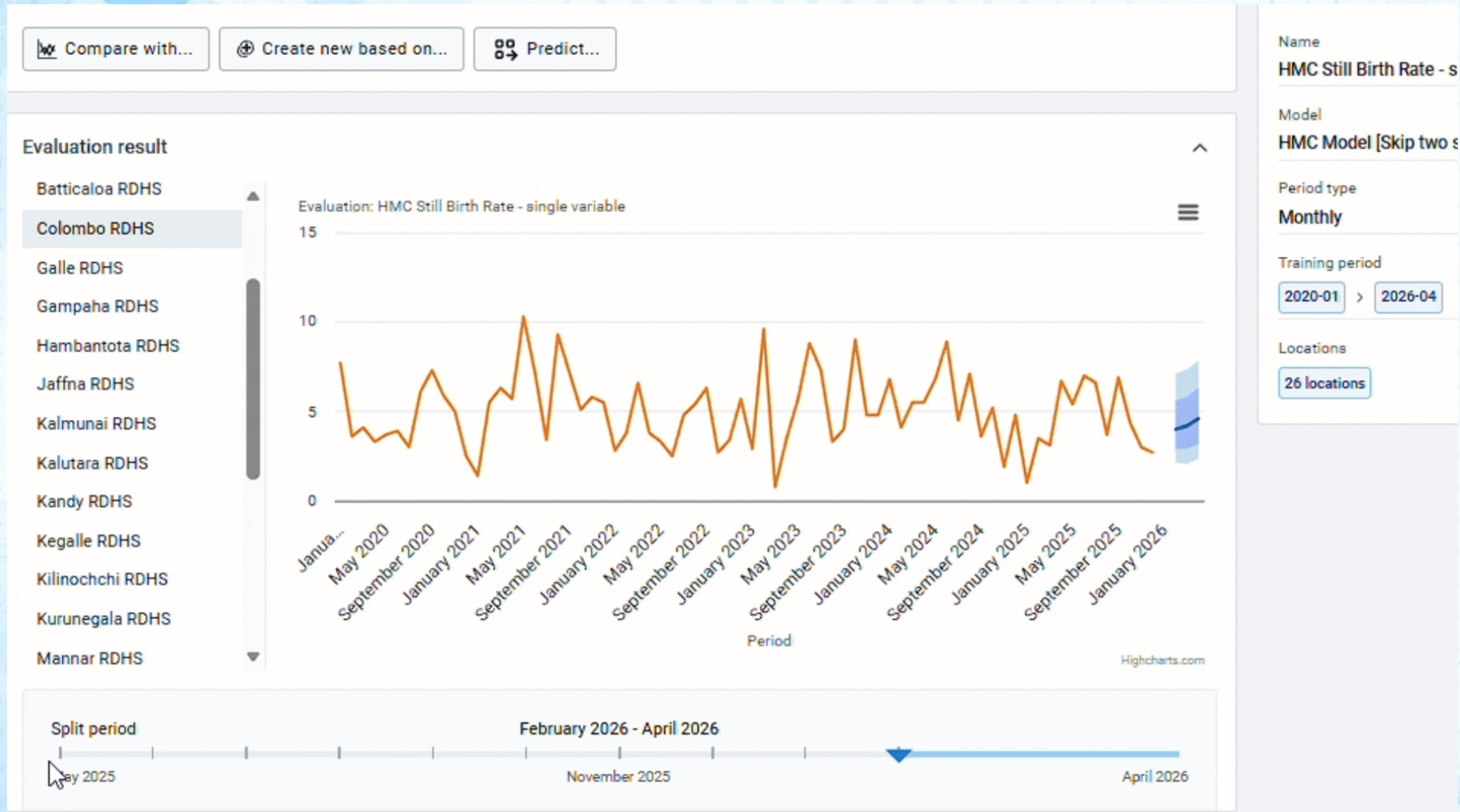
Climate HS11 - Neonatal mortality rate vs heat stress



Climate HS9 - Still birth rate vs heat stress



Predictions





2. Curative Health System

Diagnosing, treating, and caring for patients in hospitals and specialized health institutions



eIMMR

Indoor Morbidity and
Mortality Registry

Process

 **dhis2**
National Climate
Health Data System

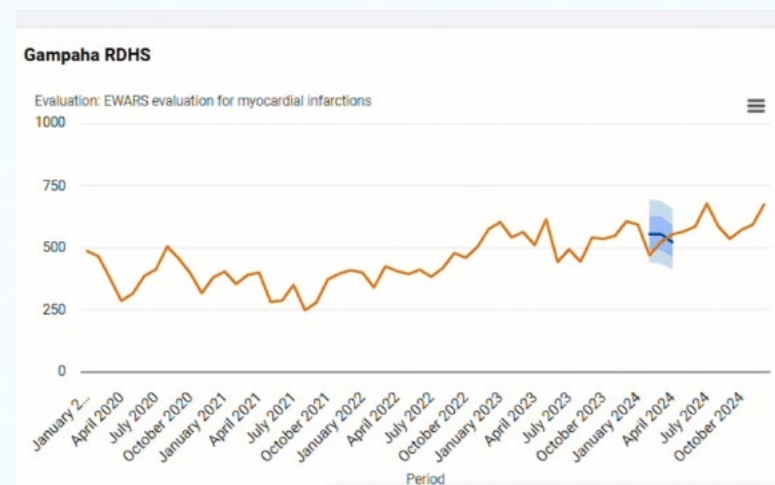
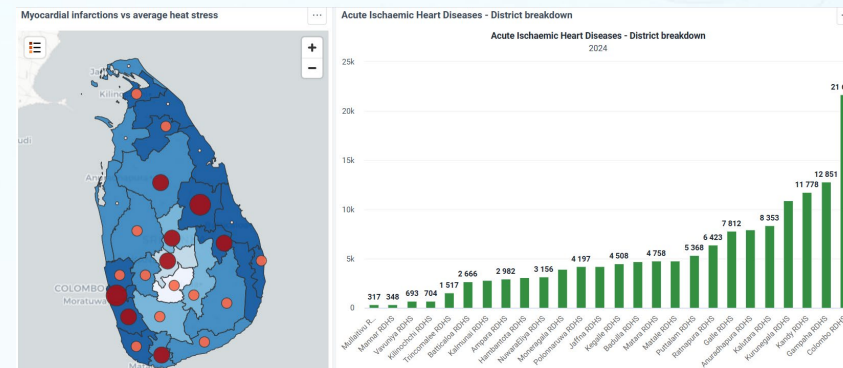
+



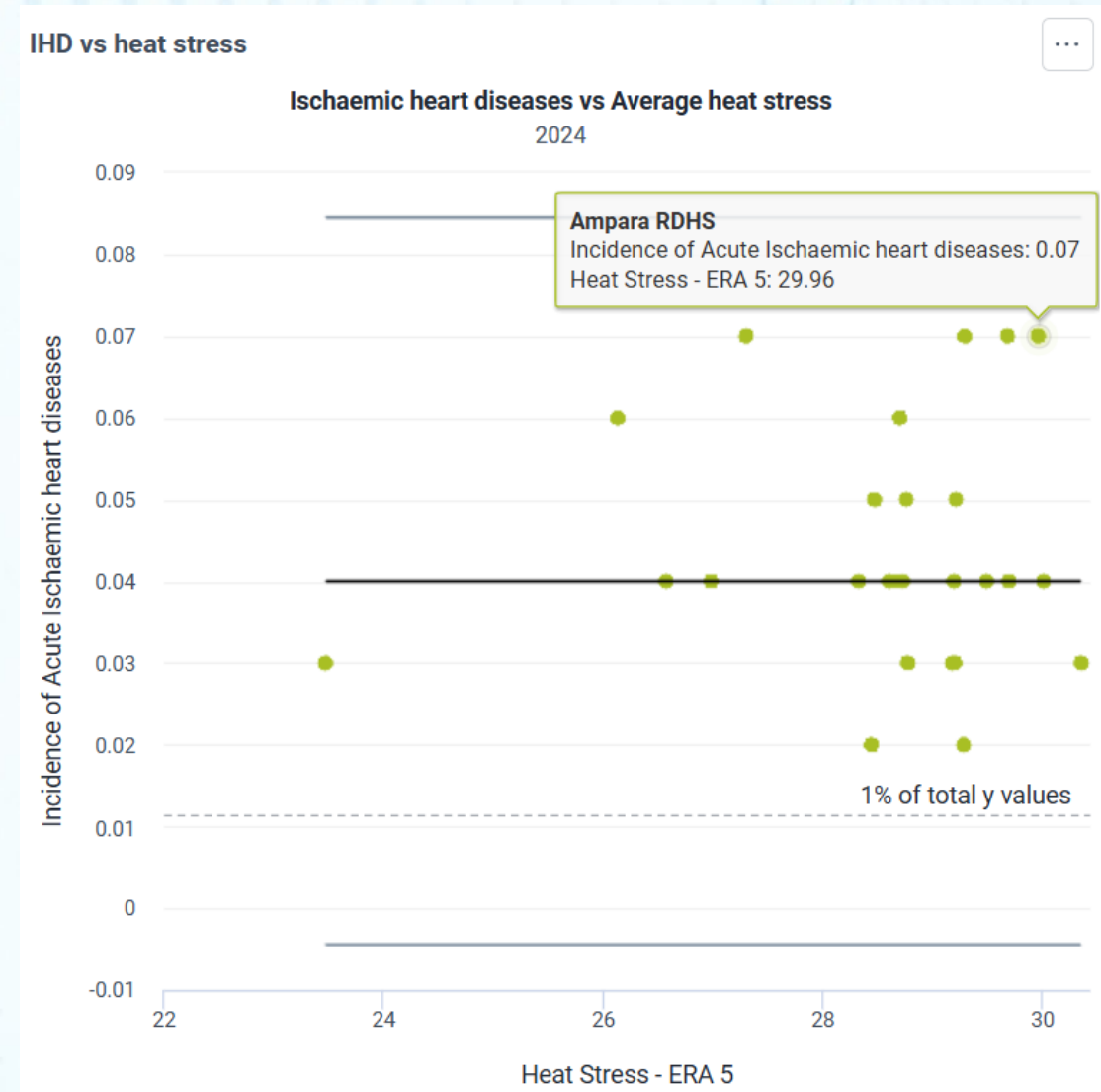
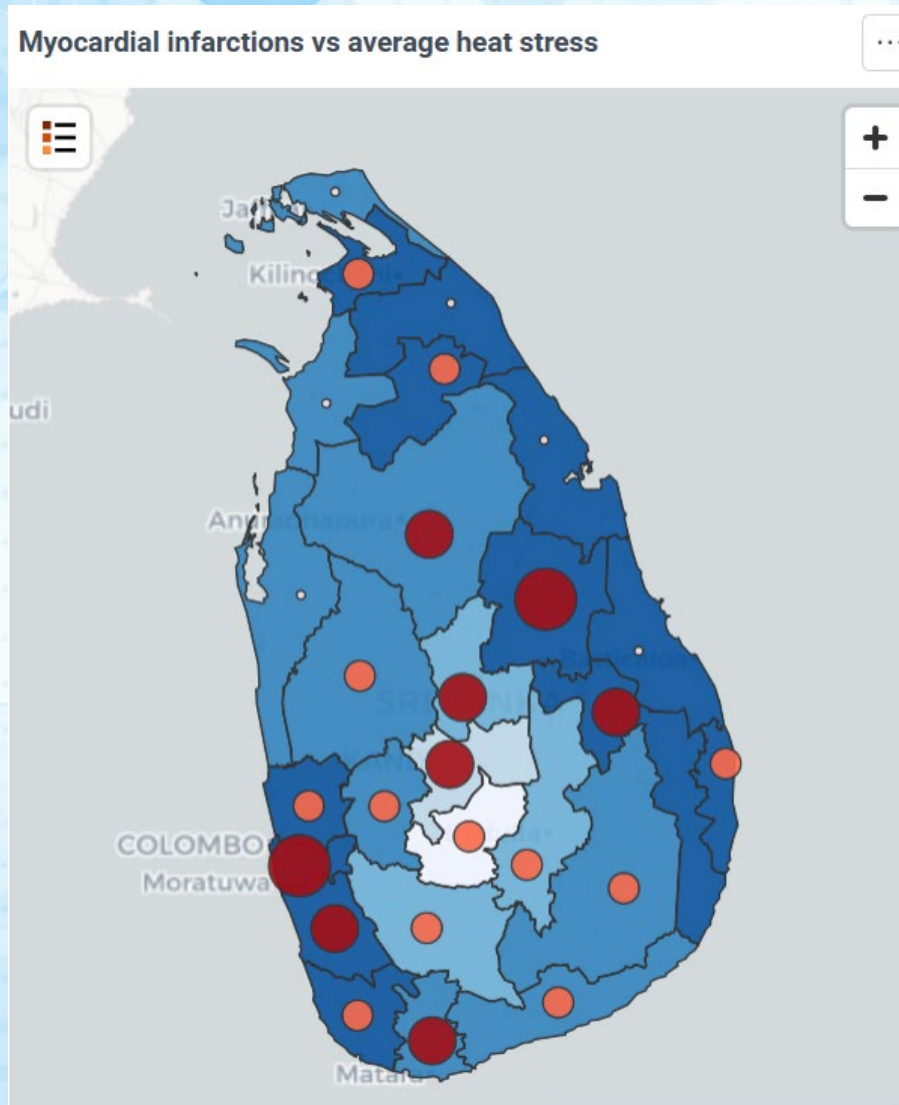
Climate App



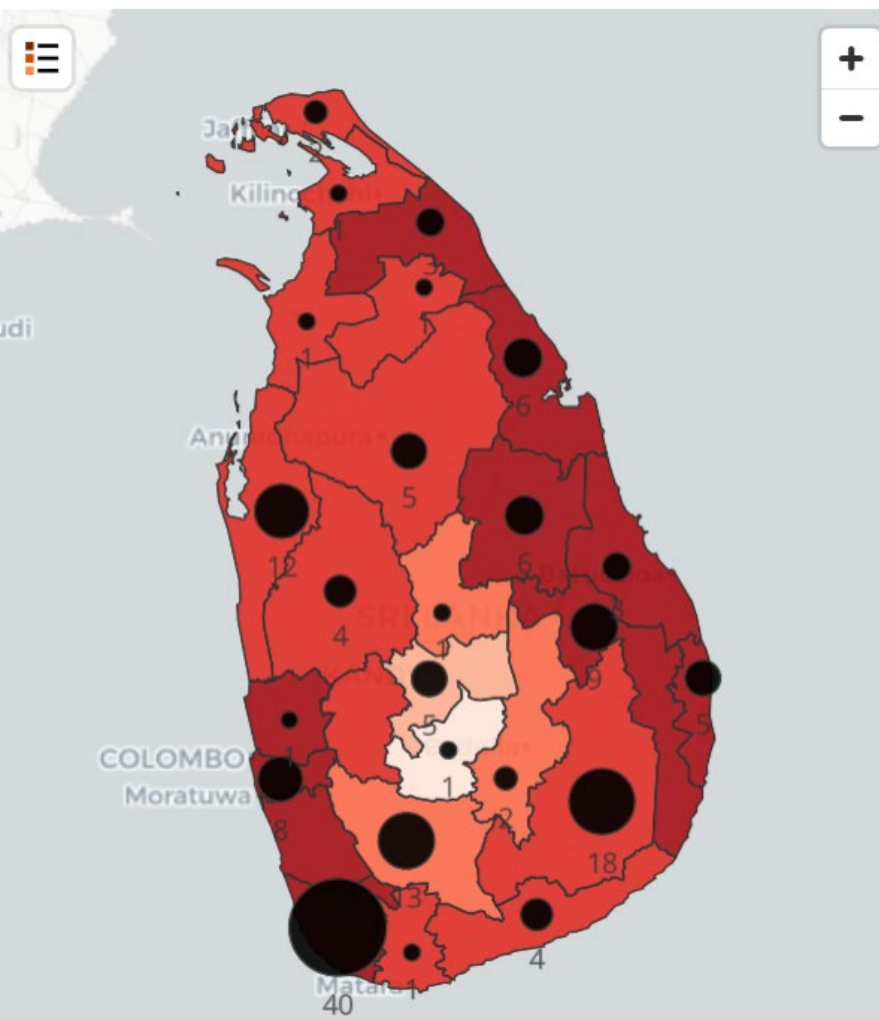
CHAP



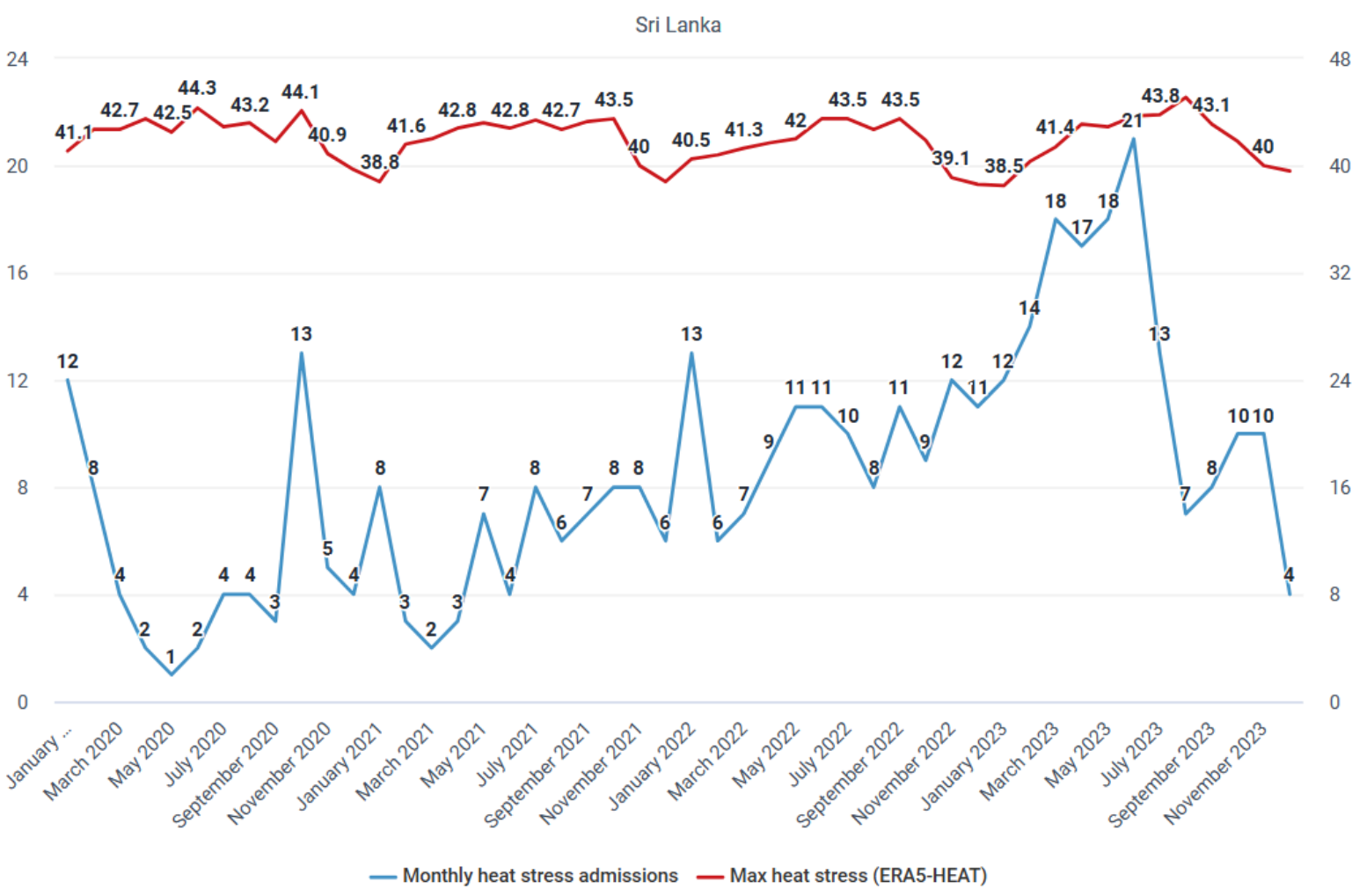
Ischemic Heart Disease & Heat



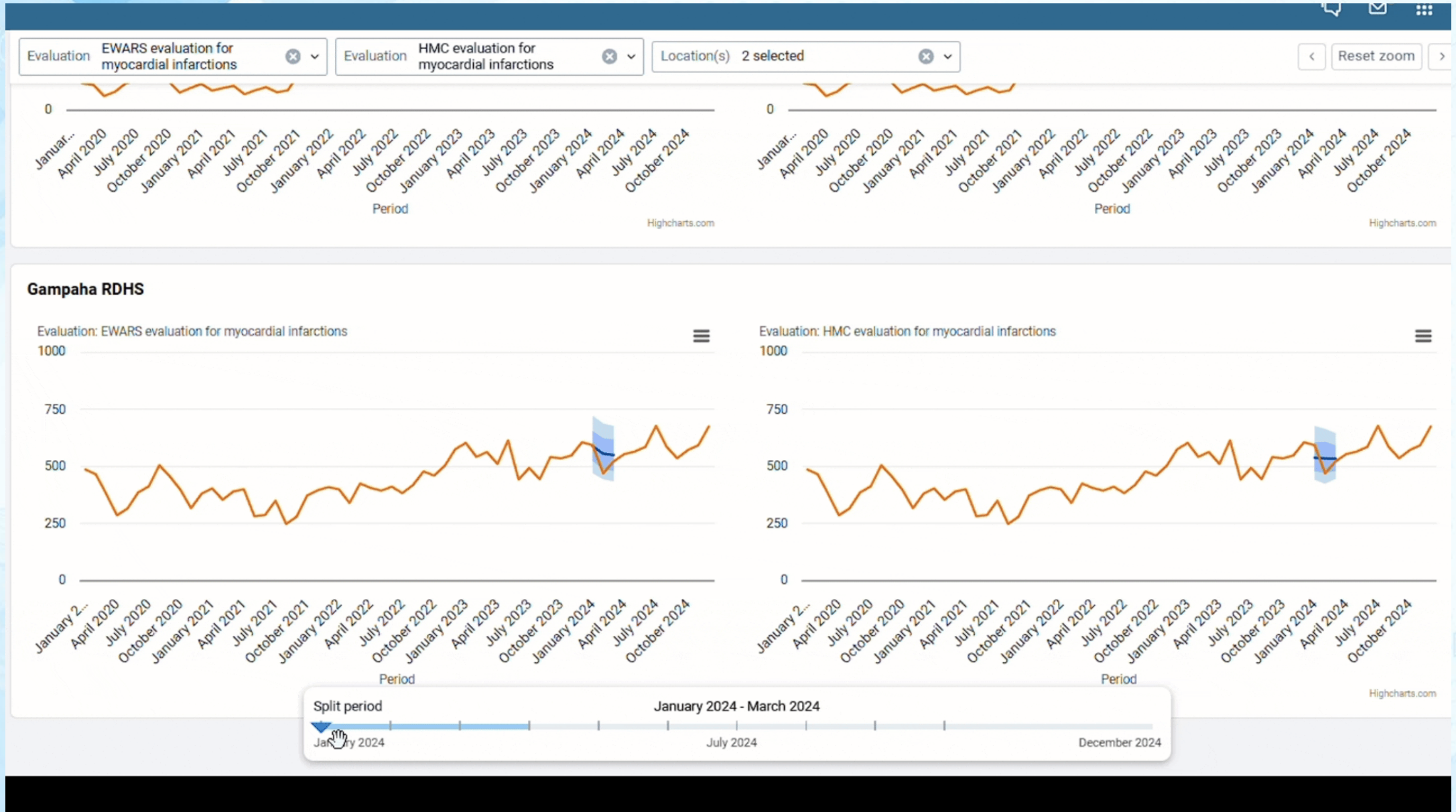
Atmospheric heat stress vs heat related admissions 2023



Heat related admissions vs Max atmospheric heat stress - trend



Predictions



Thank you

