

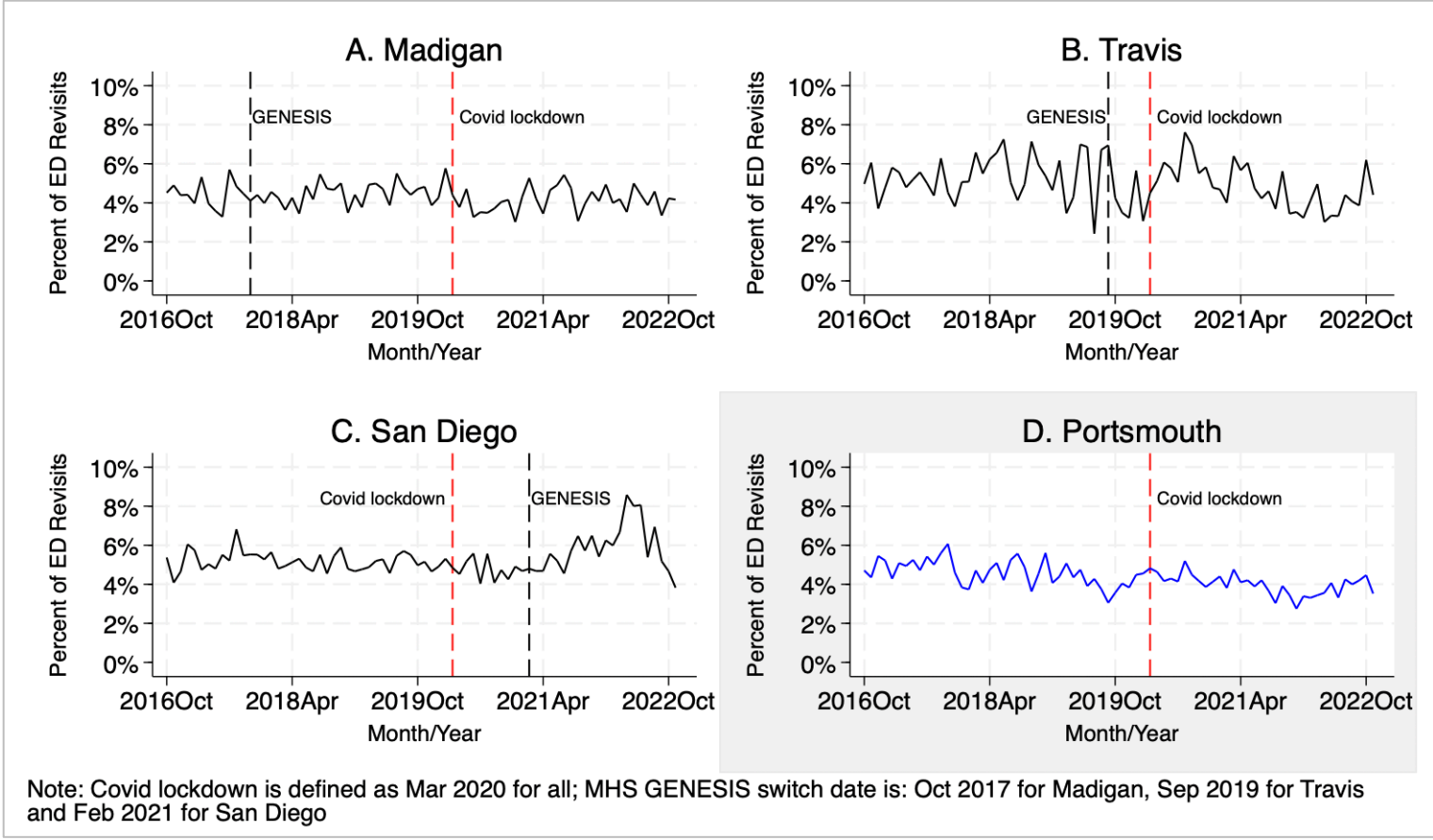
# Assessing the Effect of MHS GENESIS on Emergency Department and Follow-Up Routine Visits



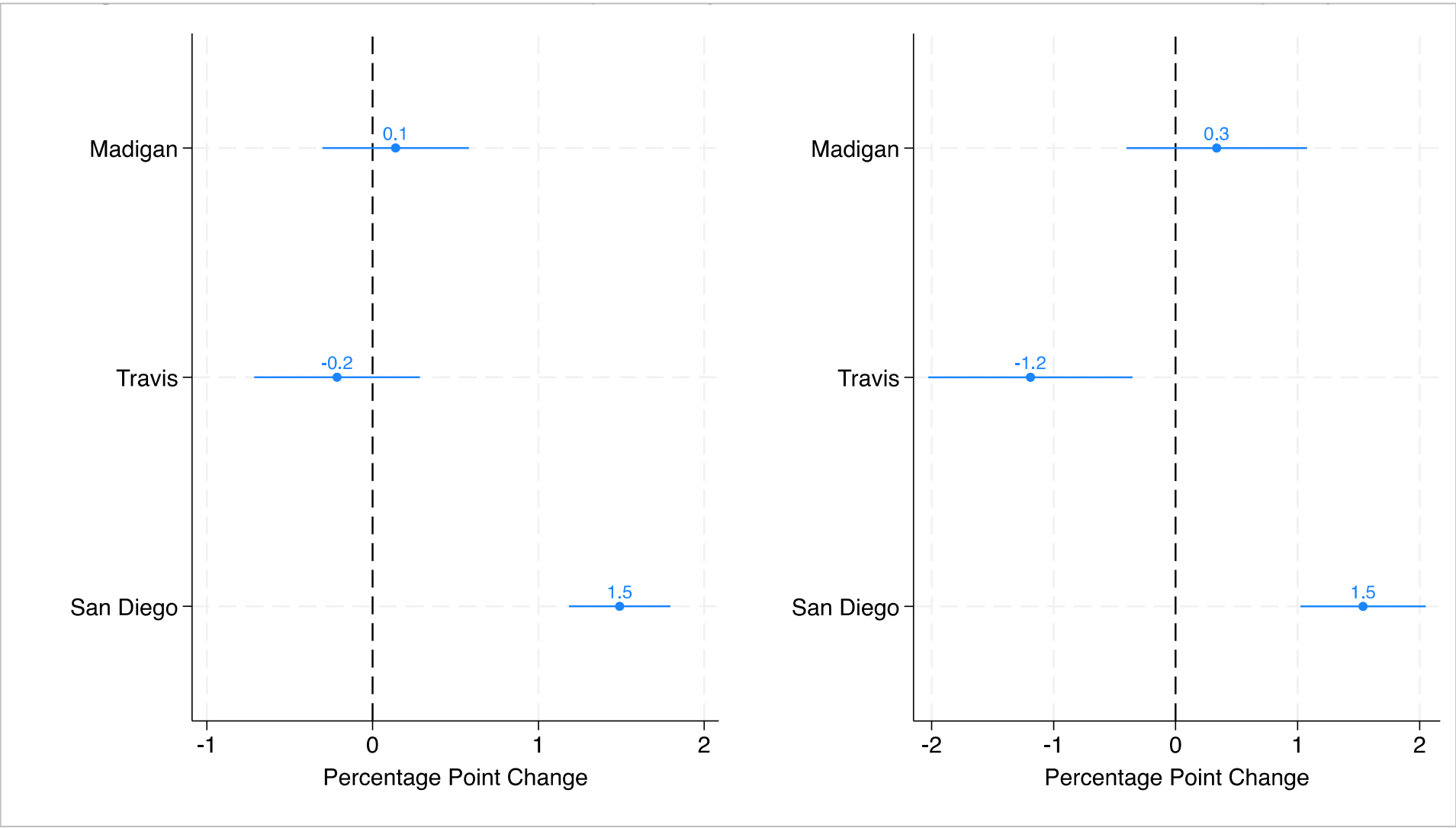
Naval  
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## Research Objective

In 2015 the Department of Defense (DOD) purchased MHS GENESIS, an electronic health record (EHR), to modernize and standardize medical and dental records across the Military Health System (MHS). This thesis evaluates MHS GENESIS’s impact on appointment utilization patterns, focusing on emergency department (ED) revisits, routine follow-ups after ED visits, and telehealth visits across four selected military treatment facilities (MTFs).



Percent of Monthly ED Revisits within 72 hours from October 2016–December 2022, by MTF



Effect of MHS GENESIS on the Probability of ED revisit within 72 hours (left) and 30 days (right), by MTF

## Methods

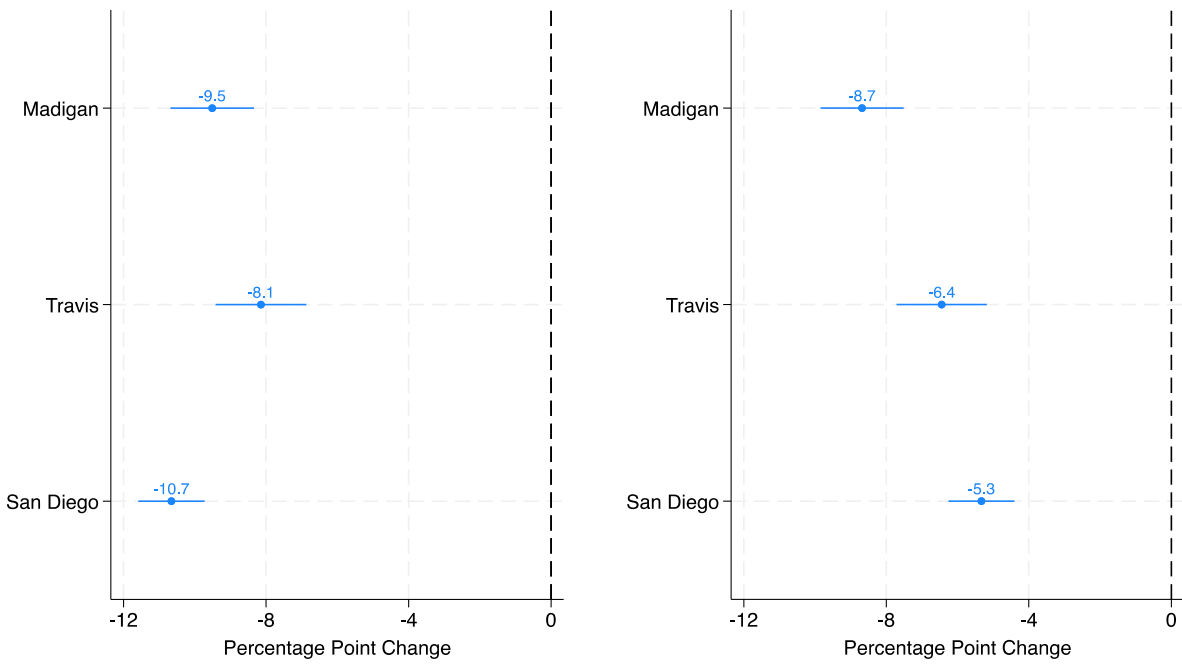
Using a quasi-experiment framework, the study analyzed data from the Military Health System Data Mart (M2), which includes both legacy and MHS GENESIS clinical and demographic records. The study used difference-in-differences models to compare changes in outcomes of the active-duty population who received treatment at four selected military hospitals between late 2016 and 2022—three underwent GENESIS transition and one did not. Outcomes included: % of ED revisits within 72 hours and < 30 days; % of routine follow-ups within 7 and 30 days; and % telehealth visits.

## Results & Their Impact

- After initial transition period (6 months), MHS GENESIS is associated with mostly neutral or negative patient visit outcomes and one positive outcome for Travis.
- 30-day ED revisits decrease at Travis while 72 hour and 30-day ED revisits increase at San Diego.
- Decreases in routine follow-up visits and telehealth visits observed at all sites.

**Operational Impact:** These findings highlight the importance of the ongoing assessment of MHS GENESIS to ensure that our technological investments align with our commitment to providing quality health care.

Military Treatment Facility	MHS GENESIS Start Date
AMC Madigan	10/21/2017
60th MEDGRP- Travis	09/07/2019
NMC San Diego	02/27/2021
NMC Portsmouth (control)	01/21/23



Effect of MHS GENESIS on Probability of Routine Follow-up within 7 days (left) and 30 days (right), by MTF

## Recommendations

- Additional studies should evaluate the effect of MHS GENESIS on other aspects of patient care and facility performance measures specific to the MHS, as well as measures that allow for comparison with civilian benchmarks.
- Factors that should be considered when evaluating MHS GENESIS includes staffing, mobilizations, capability changes and patient enrollment site, which may impact selected outcomes.

