



TRENDS IN THE CONTRIBUTION OF EMERGENCY DEPARTMENTS TO THE PROVISION OF HOSPITAL ASSOCIATED HEALTH CARE IN THE USA

**David Marcozzi, MD; Brendan Carr, MD; Aisha Liferidge, MD; Nicole Baehr,
Brian Browne, MD
October 2017**

MAY 28, 1990

Eastern Europe's Dirty Secrets

\$2.50

TIME

EMERGENCY!

Overwhelmed and understaffed,
medicine's front lines are
collapsing across America



THE HANSEN MOLE HUNT • DODGING THE DOW

U.S. News & WORLD REPORT

SEPTEMBER 11, 2001

WWW.USNEWS.COM

CRISIS IN THE



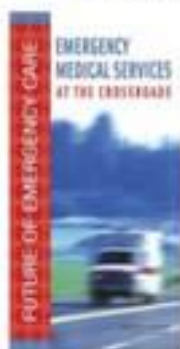
Turnaways and huge delays are a surefire recipe for disaster. What you can do





Background

- IOM reports



- HSPD #21-Para #41
 - Creation of the
Emergency Care
Coordination Center

Hospital-Based Emergency Care: At the Breaking Point

- Capacity of the nation's emergency care has not kept pace with demand
- Nationwide problem of ED overcrowding
- Causes:
 - Increase in ED volume
 - Reduction in number of EDs
 - Increased complexity of cases
 - Use of ED for non-emergent services



ERs are now swamped with seriously ill patients — but many don't even have COVID

October 26, 2021 · 5:00 AM ET
Heard on All Things Considered

KATE WELLS

FROM



INTRODUCTION

TRENDS IN THE CONTRIBUTION OF EMERGENCY DEPARTMENTS TO THE PROVISION OF HOSPITAL ASSOCIATED HEALTH CARE IN THE US

- The contribution of the medical care system to overall health is approximately 20%
- Access to healthcare has a role in health equity and quality of life
- The National Center for Health Statistics cites 44.5 ED visits per 100 persons in the United States in 2015, and 12% of these encounters resulted in hospitalization.
- As an entry point to the healthcare system, Emergency Departments(EDs) serve a critical role in accessibility to the medical care system
- This study is aimed to determine the contribution of EDs to the health care received by Americans between 1996 and 2010 and to compare it with the contribution of outpatient and inpatient sectors.

METHODS

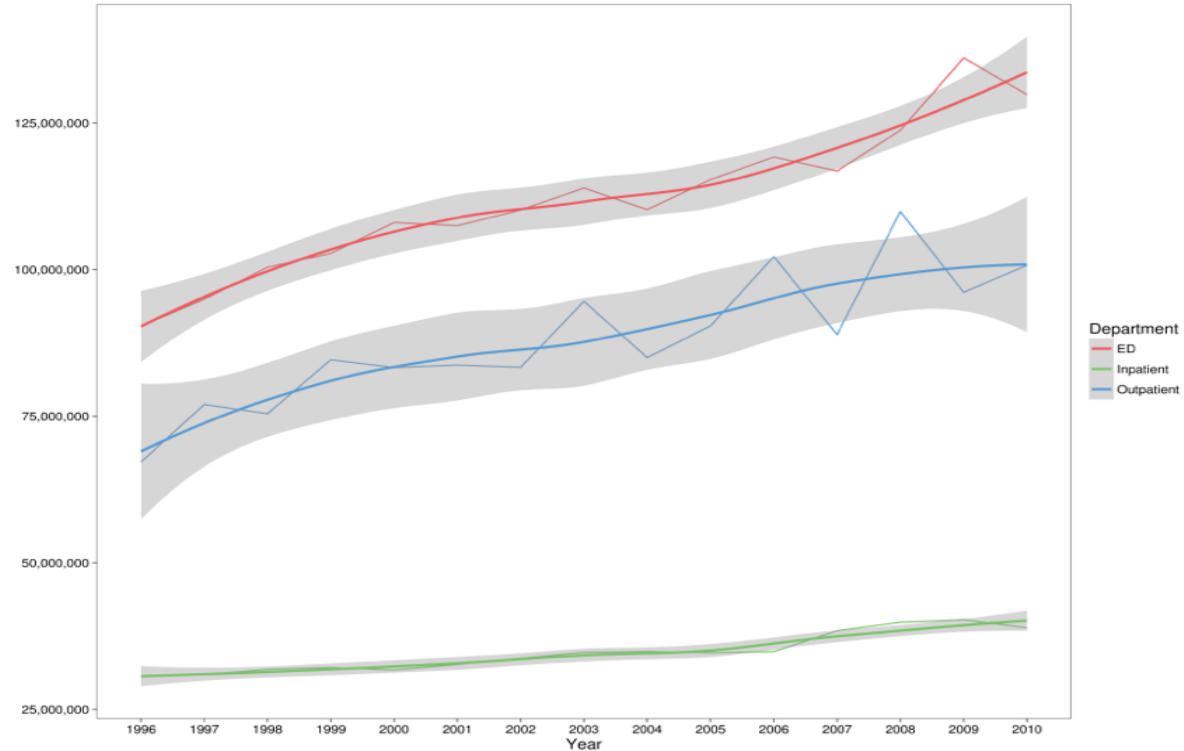
- **Data:**
 - National Hospital Ambulatory Medical Care Survey (NHAMCS)
 - National Hospital Discharge Survey (NHDS)
- **Participants:**
 - Patients visiting emergency and outpatient departments, in addition to inpatients discharged from nonfederal, short-stay, or general hospitals in NHAMCS and NHDS survey
- **Variables:**
 - Generated estimates for the US for the number of visits across different strata, including age, gender, race, source of payment, and metropolitan statistical area
 - Evaluated distributions, frequencies, and percentages for each of the numeric and categorical variables
 - Categorical variables were assessed for near-zero variation
- **Statistics:**
 - Population estimates were generated through masked sample design variables, clustered primary sampling units (PSU) marker and clustered PSU stratum marker along with patient weights.
 - Reported results with an overlap in confidence intervals as a trend rather than a statistically significant finding.

RESULTS

Overall Utilization:

ED visits increased by 43.7% over the study period

Patients treated in EDs were significantly younger than those treated as outpatients or admitted as an inpatient, but had a similar gender distribution



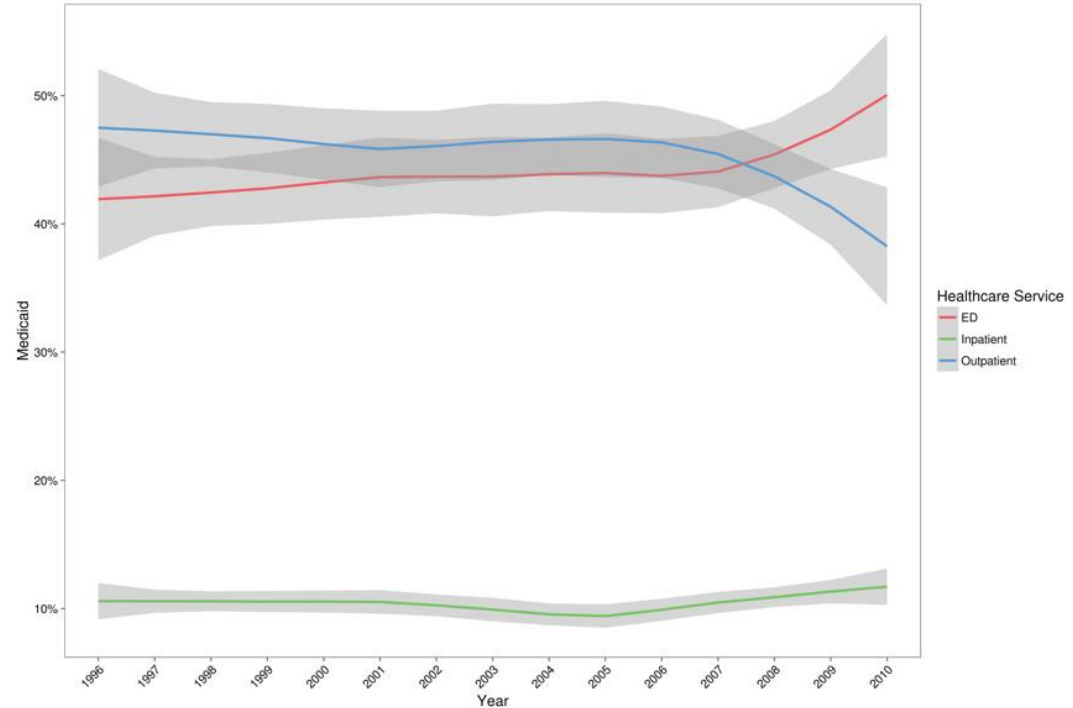
The number of health care contacts as ED visits, use of outpatient resources, and hospitalizations over a 14-year period.

UTILIZATION AMONG MEDICARE AND MEDICAID BENEFICIARIES

An increasing trend of ED visits among Medicare beneficiaries, moving from 29.9% to 38.4% of all Medicare visits.

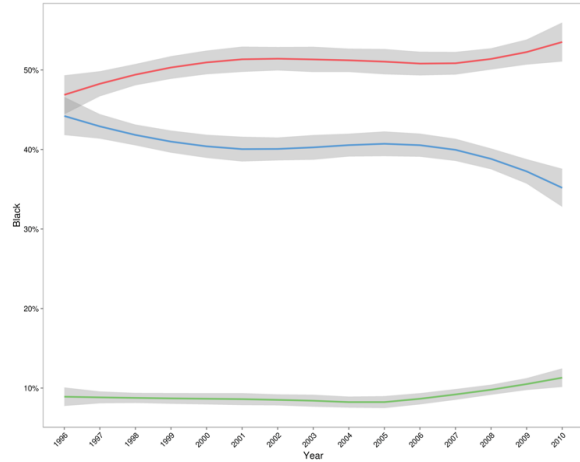
Utilization of EDs among Medicaid beneficiaries trended upward shifting from 43.3% to 49.6%

The utilization of EDs in Medicaid beneficiaries surpassed the care provided through outpatient departments.

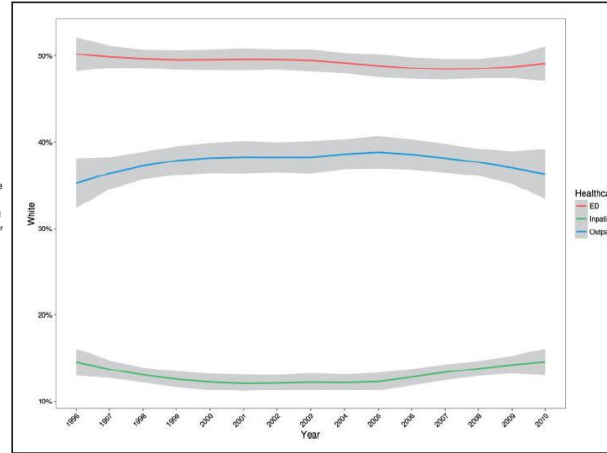


Patterns in the use of EDs, outpatient resources, and inpatient facilities by Medicaid recipients

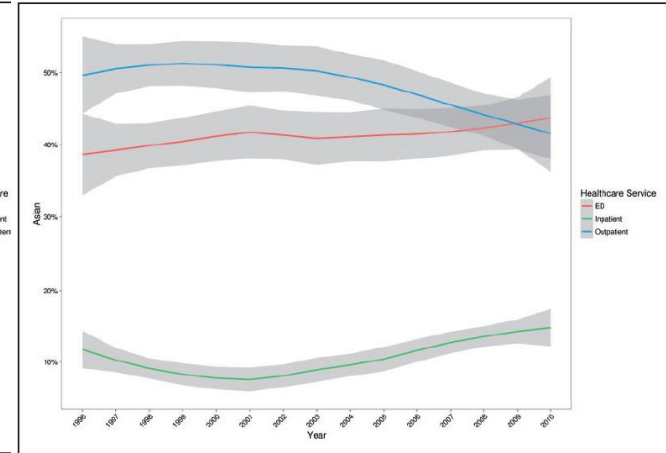
ED UTILIZATION BY RACE



Patterns in the use of EDs, outpatient resources, and inpatient facilities by Black people



Patterns in the use of EDs, outpatient resources, and inpatient facilities by White people

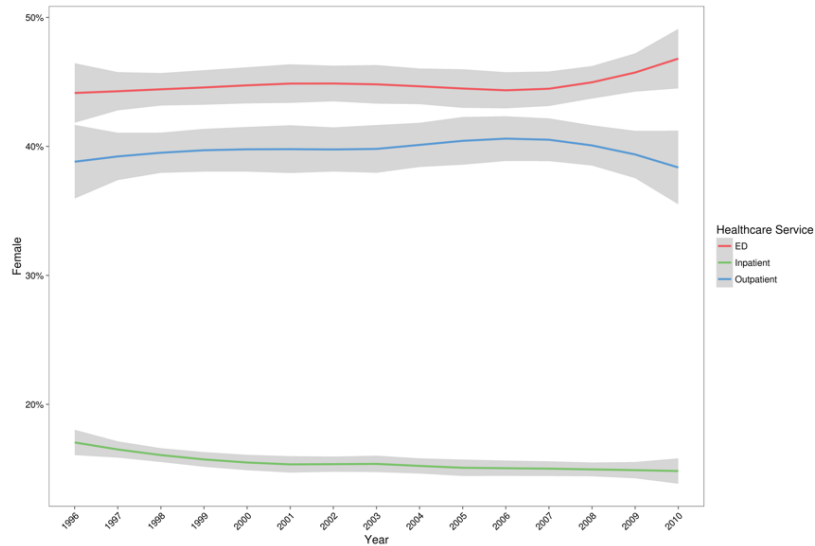


Patterns in the use of EDs, outpatient resources, and inpatient facilities by Asian people

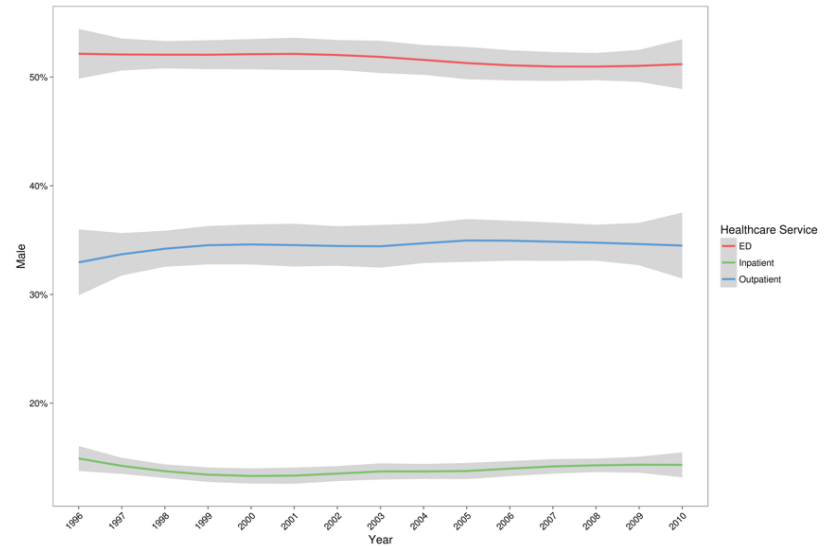
UTILIZATION BY GENDER

Males and females demonstrated a stable utilization pattern of EDs, although the percentage of women has progressively increased, accounting for 55.1% of all ED visits.

Both genders utilized the ED consistently more than inpatient and outpatient services.



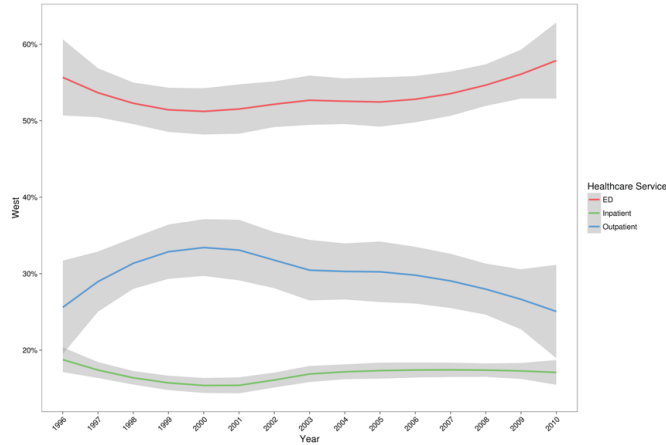
Patterns in the use of EDs, outpatient resources, and inpatient facilities by women



Patterns in the use of EDs, outpatient resources, and inpatient facilities by men

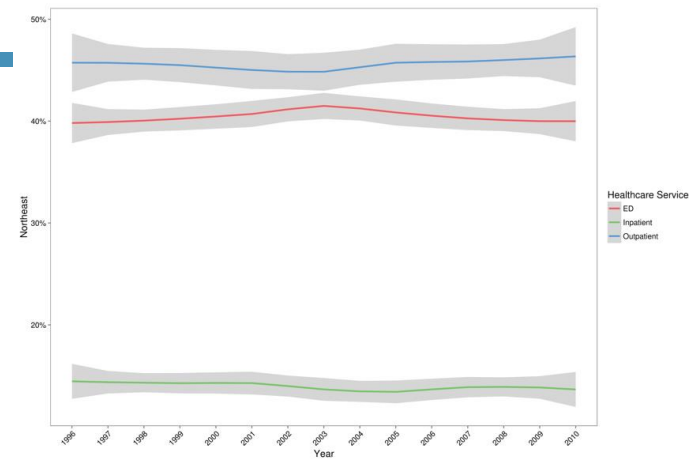
RESULTS BY GEOGRAPHIC REGION

Patients in the southern and western region were significantly more likely to have ED visits than patients in other areas.

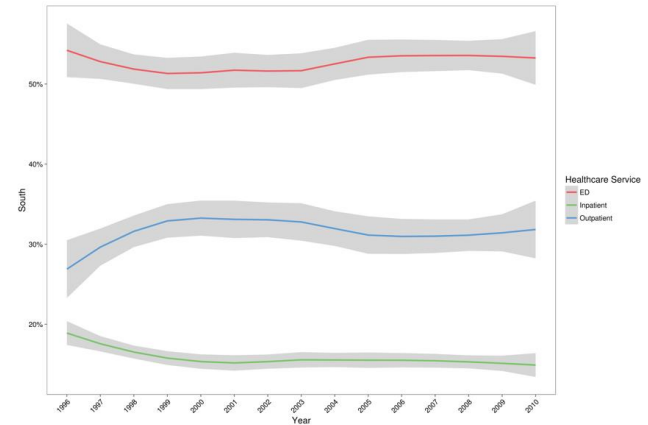


Patterns in the use of EDs, outpatient resources, and inpatient facilities by people who live in western states

Patterns in the use of EDs, outpatient resources, and inpatient facilities by people who live in southern states



Patterns in the use of EDs, outpatient resources, and inpatient facilities by people who live in the northeastern United States



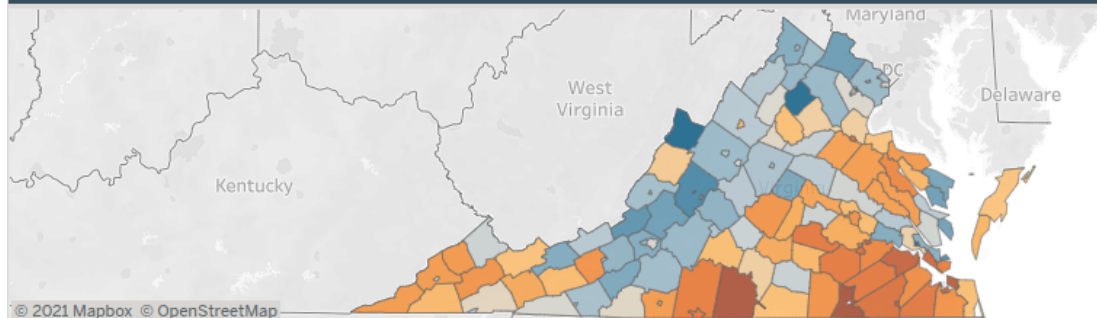
DISCUSSION

The study found that EDs contributed an average of 47.7% of the hospital-associated medical care delivered in the United States, and this percentage increased steadily over the 14-year study period.

Summary

1. EDs are a major source of medical care in the United States and this contribution increased throughout the study period.
 2. It is valuable to analyze utilization patterns across several strata to understand causes and ED impact to health
 3. The stratification of results demonstrated specific subgroups utilized the ED more frequently-
 - Self-identified black population
 - Medicare and Medicaid beneficiaries
 - Residents of the southern and western populations
 - Women
- ✕ Improving the understanding of a population's health needs, including the value of emergency departments to individuals, is beneficial

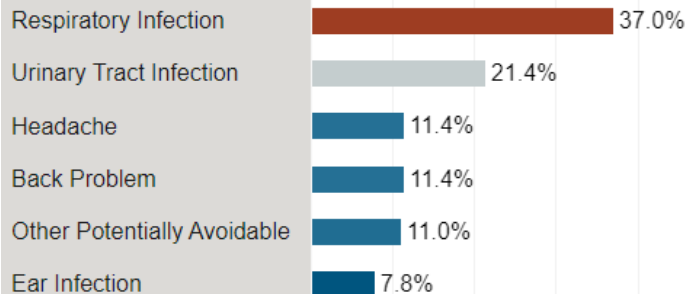
Rates by Virginia County: All



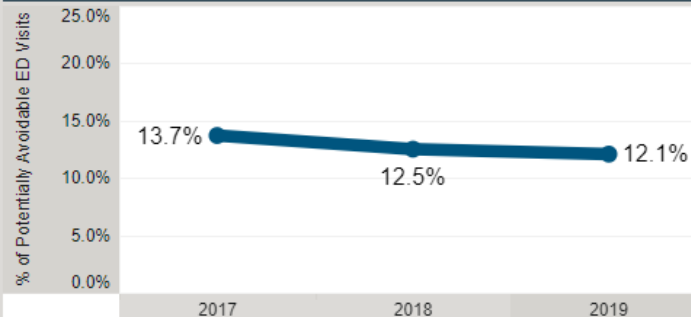
6.1%

16.4%

Top Potentially Avoidable Diagnosis Categories



2017-2019 Trend



1. Potentially avoidable ED visits were defined using the Oregon Health Authority (OHA) methodology, derived from the Medi-Cal methodology. Other methodologies for potentially avoidable ED visits exist, which could produce different results.

2. Dashboard is based off of data from the Virginia All Payer Claims Database (APCD) and contains Medicare FFS data obtained from the CMS Qualified Entity (QE) Program.

3. Per CMS requirements, records containing a county representing a numerator of less than 30 individuals were removed from the analysis to ensure statistical validity by eliminating small sample sizes.

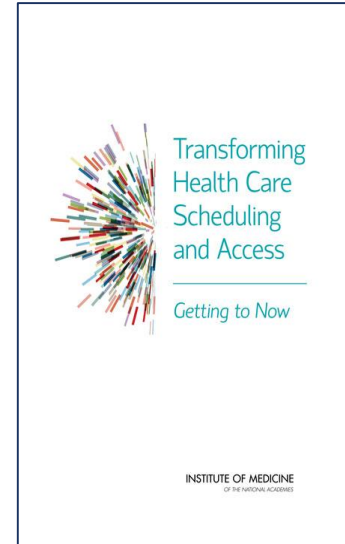
FROM NUMBERS TO KNOWLEDGE



TAKEAWAYS—LET’S GET TO ‘NOW’

- ✗ In every community, EDs play an important medical access point and social support role: guaranteeing access to healthcare at any time for any concern and providing assistance to vulnerable populations, uninsured and low-income individuals
- ✗ Emergency Care (EMS, EDs) plays a critical role in the response to any mass casualty or community health crisis
- ✗ EDs are a valuable prism into the evolving customer driven healthcare market—access, comprehensive, timely
- ✗ Potential Policy actions for consideration
 1. Strengthening the linkage between emergency care and population health within any health reform efforts will prove valuable to supporting overall health
 2. Examine population density locations and ED use to determine gaps in access to broaden care opportunities
 3. Through incentives*, encourage customer driven approaches, learning from ED utilization data, to other components of healthcare

Institute of Medicine. 2015. *Transforming Health Care Scheduling and Access: Getting to Now*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/20220>.





THANK YOU

David Marcozzi, MD, MHS-CL, FACEP
Professor
Department of Emergency Medicine
University of Maryland School of Medicine

Chief Clinical Officer/SVP
University of Maryland Medical Center

Incident Commander
UMB-UMMS COVID-19 Unified Command

Senior Medical Advisor to the Governor on COVID-19

22 S Greene St
Baltimore, MD 21201
(410)-328-5631 (office)
davidmarcozzi@umm.edu

Twitter: @DavidMarcozzi2
[linkedin.com/in/david-marcozzi-95965ab](https://www.linkedin.com/in/david-marcozzi-95965ab)