

Disclosures

- ▶ No disclosures.

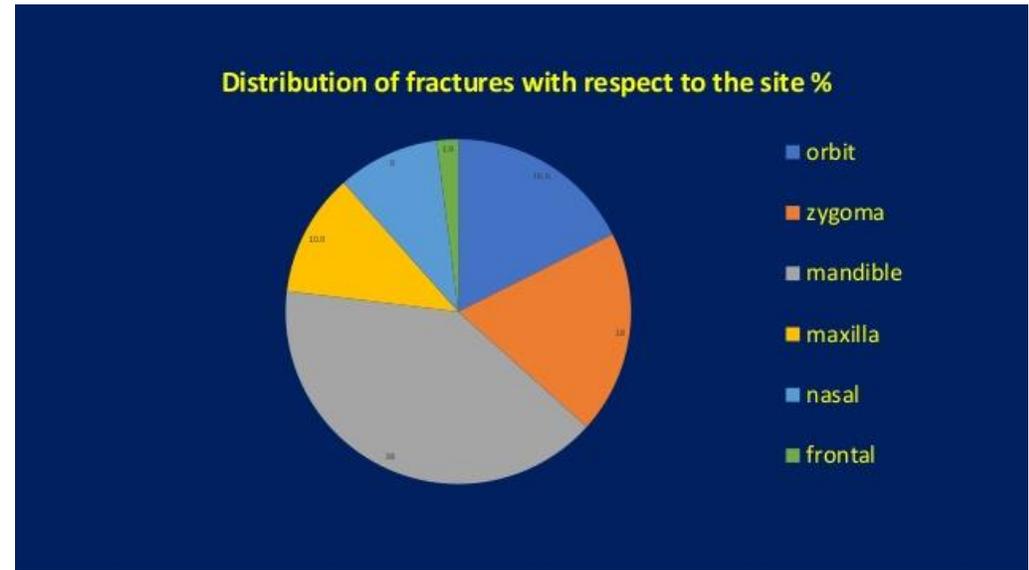
Objectives

- ▶ What is trauma research?
- ▶ Resources
 - ▶ Data analysis
- ▶ Overview of opportunities
 - ▶ Versatility
 - ▶ Publishing opportunities and posters
 - ▶ Grants
 - ▶ Conferences/Travel
 - ▶ Podium presentation
 - ▶ CV
- ▶ Example project
- ▶ Contact information and how to get started



What is trauma research?

- ▶ Almost anything
 - ▶ New devices, medications,
 - ▶ Rib plating, TXA, Kcentra
 - ▶ Data review of complications
 - ▶ Retrospective but can be prospective
 - ▶ Self extubation rate, WRICH project
 - ▶ National Trauma Database, Trauma Quality Improvement Program
 - ▶ Incidence of self extubations
- ▶ Open to any and all ideas, as long as it is related to trauma or trauma surgery



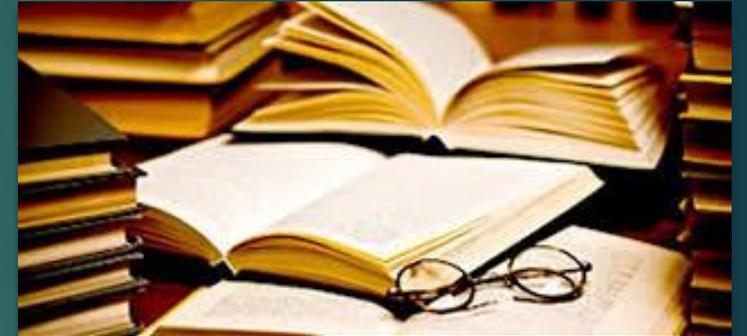
Resources

- ▶ National Trauma Database (NTDB)
 - ▶ CV5 Report Writer Program
 - ▶ Data analysis
 - ▶ Excel
 - ▶ IBM SPSS
- ▶ National benchmark reports
 - ▶ Isolated hip fractures, pneumonia
- ▶ Trauma staff
 - ▶ Surgeons, nurses, registrars
- ▶ Library access
 - ▶ Obtaining articles for review
 - ▶ Fast and painless
- ▶ Security and safety



Publishing Opportunities

- ▶ For those that really enjoy writing
 - ▶ Come up with an idea or join a current project
 - ▶ Extensive review of the literature
 - ▶ Find relevant articles with data
 - ▶ Human Research Protection Committee (HRPC) approval or IRB if necessary
 - ▶ Abstract
 - ▶ Get writing
 - ▶ If data is required, get it, analyze it, discuss in paper.
 - ▶ We have all the paperwork and even templates available.



Publishing Opportunities Contd.

- ▶ Journal of Special Operations Medicine (if related), Society of Trauma Nurses, etc.
- ▶ Publishing does take time.
 - ▶ Writing process may be short but feedback is usually given, in which case edits are made and the paper is resubmitted either for acceptance to publication or more feedback.
 - ▶ Electronic vs Paper publication

Grant Opportunities

- ▶ Very competitive
 - ▶ Usually annual
- ▶ Mid-America Transplant
- ▶ Society of Trauma Nurses
- ▶ National Library of Medicine
- ▶ National Institutes of Health
- ▶ Grants.gov
 - ▶ Usually opens the door for research to take place and accomplish a goal that requires funding that may be unattainable without it



National Library of Medicine



Mid-America
TRANSPLANT

The logo for Mid-America Transplant, featuring a blue arc above the text "Mid-America" and "TRANSPLANT" in a bold, sans-serif font.

STN
SOCIETY OF TRAUMA NURSES

The logo for the Society of Trauma Nurses, featuring the letters "STN" in a bold, red, stylized font with horizontal lines, set against a red circular background. Below it, the text "SOCIETY OF TRAUMA NURSES" is written in a smaller, red, italicized font.

Conferences/Travel

- ▶ Usually occur annually
 - ▶ Deadlines, deadlines, deadlines
- ▶ Trauma Quality Improvement Program
 - ▶ National Conference
 - ▶ Podium and poster opportunities
 - ▶ Great way to network and gain experience in presenting
 - ▶ See what else is going on in the world of trauma
- ▶ Missouri Chapter of the American College of Surgeons Annual Meeting
 - ▶ Abstract and presentation competition
 - ▶ Prizes
- ▶ After conference presentation or poster is completed, can consider publishing in a journal
- ▶ Research Day???



ACS
tqip[®] | TRAUMA
QUALITY
IMPROVEMENT
PROGRAM

A QUALITY PROGRAM
of the AMERICAN COLLEGE
OF SURGEONS



29TH ANNUAL
DECISIONS IN
TRAUMA
CONFERENCE

For health care professionals
who work with adult and
pediatric trauma patients.

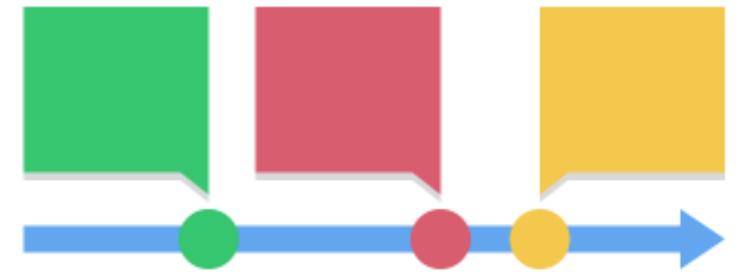
CV/Personal Improvement

- ▶ On a CV or resume, a brief description of what you did is important
- ▶ Research contributes to improvement of healthcare
- ▶ Whether you're nursing, respiratory therapy, social work
 - ▶ Something can be done
 - ▶ Impact of a social worker in trauma care
- ▶ Research is valued, especially here at CoxHealth
 - ▶ Mission: To improve the health of the communities we serve through quality health care, education, and research.
 - ▶ Vision: To be the best for those who need us.
 - ▶ Values: Safety, compassion, respect and integrity



Timeline

- ▶ Idea or join current project if available
- ▶ Meet, collaborate
- ▶ Review of the Literature
- ▶ HRPC, IRB approval
 - ▶ Application
- ▶ Data Collection
- ▶ Data Analysis
- ▶ Abstract
- ▶ Paper, Poster, Presentation



Example Presentation

Correlation of Intracranial Hemorrhage and Anticoagulant Medications



Your **Level I** Trauma Center

Marian S. Krasowski, MD
Keith J. Coates, PhD
Timothy Woods, MD F.A.C.S.
CoxHealth, Springfield, MO

Financial Disclosure Statement

- ▶ I do not have personal financial relationships with any commercial interests.

Introduction

- ▶ More than 800,000 patients a year suffer a fall and are subsequently hospitalized for a head injury.¹
- ▶ The population in Springfield, MO age 65 and older is 23,925 as of 2010 and continues to grow.²
- ▶ The number of Missourians age 65 and older is projected to grow by some 450,000 over the next 15 years, bringing the total number of seniors in the state of Missouri to an estimated 1,255,000.



- ▶ With this expected growth, it's important to remember what brings a lot of that population into the hospital.



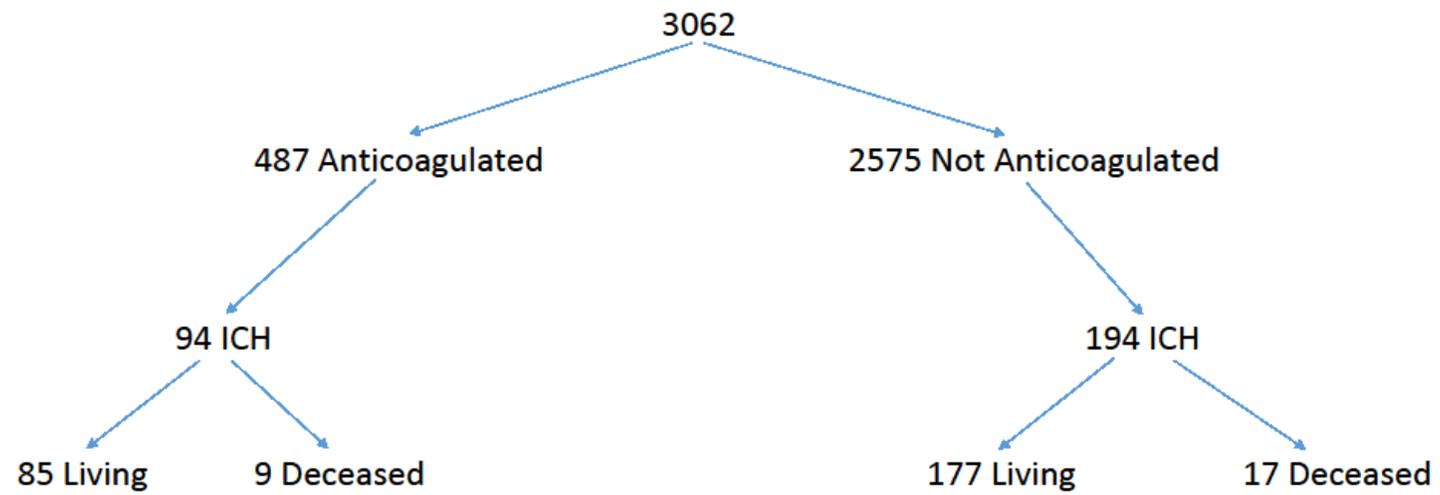
Background

- ▶ Hypothesis:
 - ▶ If a patient was taking an anticoagulant then they were more at risk of an intracranial hemorrhage (ICH).
 - ▶ If a patient was taking an anticoagulant then their age will be younger on average than in an age and ISS matched group who suffered an ICH while not taking an anticoagulant.
 - ▶ If a patient were to suffer an ICH then it's more likely to be a subdural hematoma (SDH).
 - ▶ If a patient was to take an anticoagulant then they are more at risk of death than in a non-anticoagulated group.

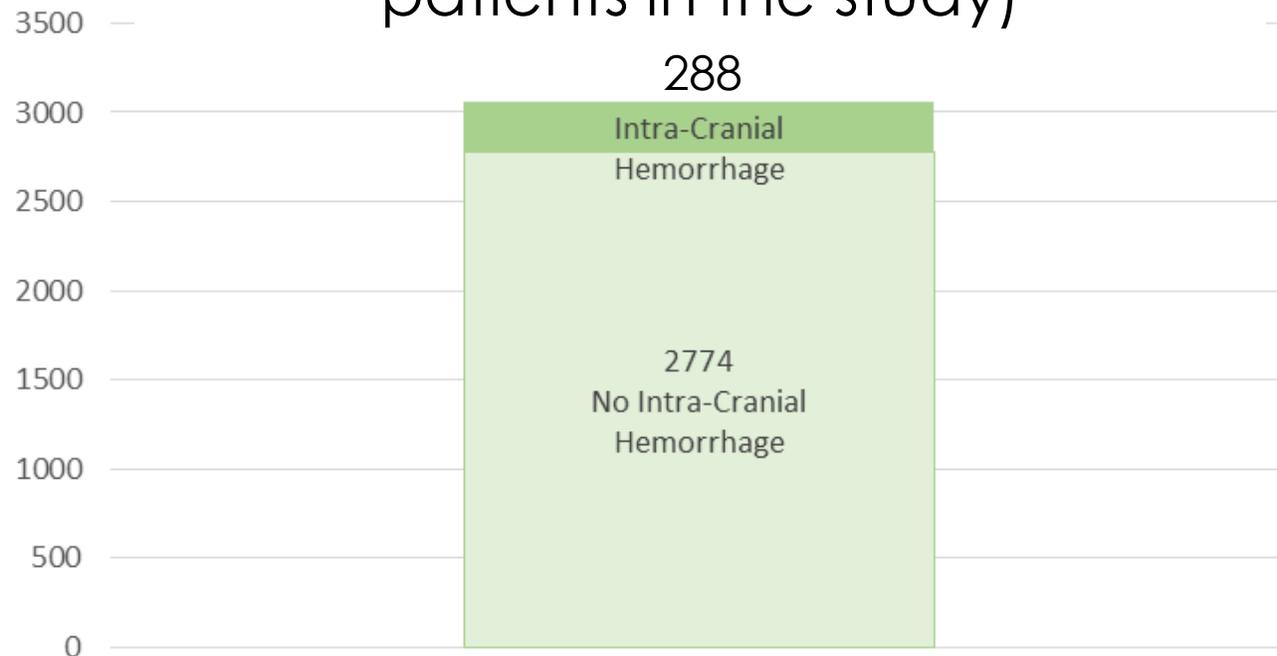
Methods

- ▶ Human Research Protection Committee (HRPC) Approval
- ▶ IRB Exempt
- ▶ Using data compiled from the CoxHealth level 1 trauma center database, we retrospectively identified the patient populations from October 1st, 2015 to February 1st 2017.
 - ▶ Anticoagulated that suffered an ICH
 - ▶ Non-anticoagulated that suffered an ICH
 - ▶ All patients taking anticoagulants
 - ▶ All patients not taking anticoagulants

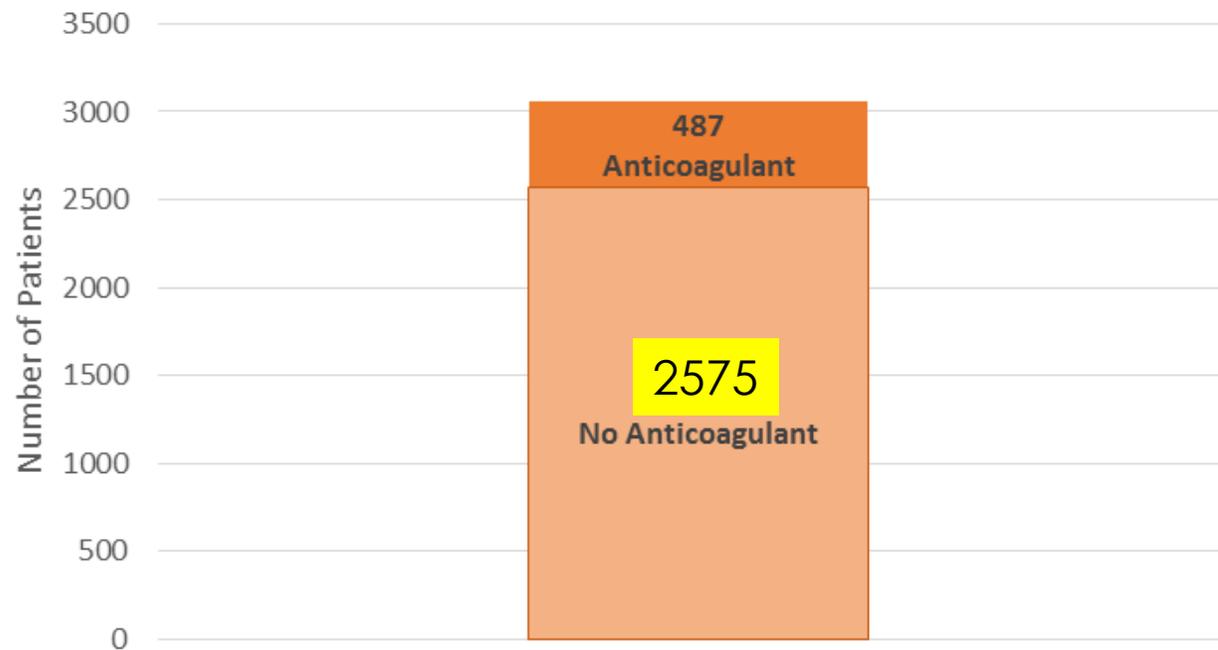
Results



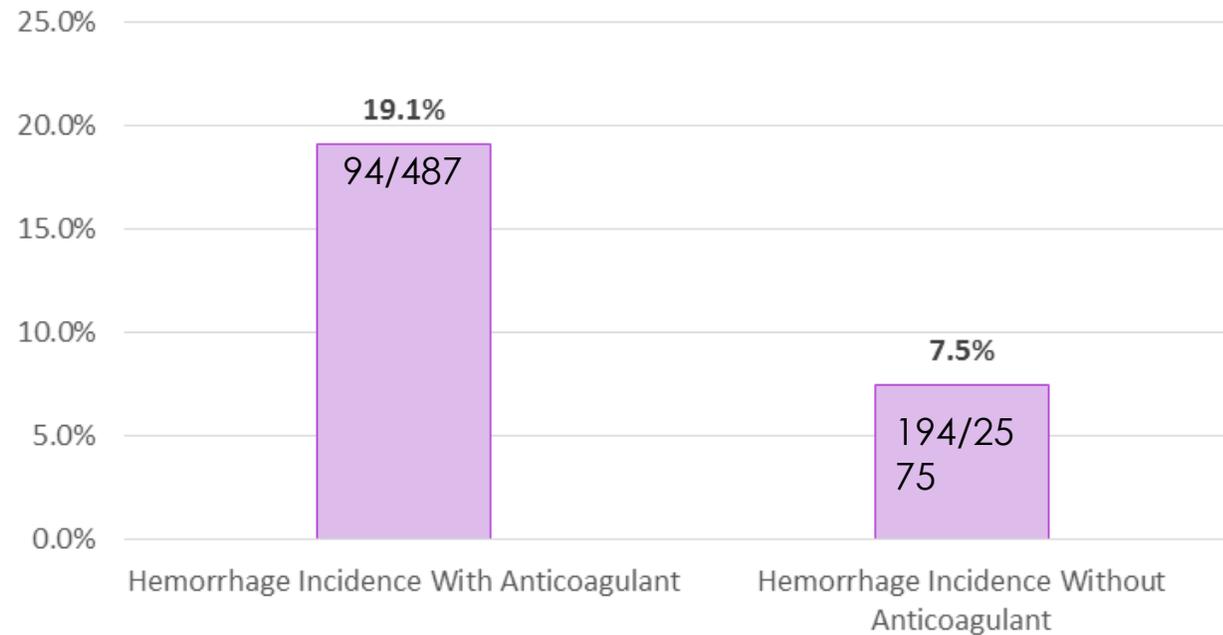
Of the 3062 patients in the study,
288 experienced ICH (9.3% of
patients in the study)



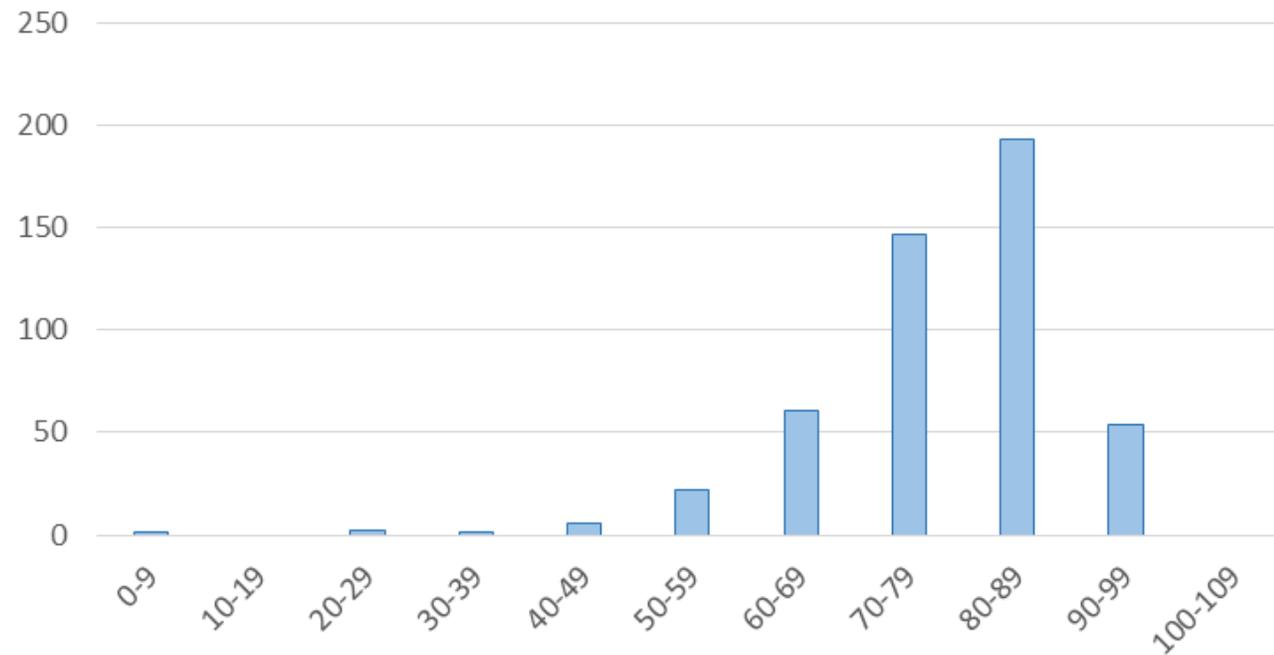
Of the 3062 patients in the study, 487 are taking an anticoagulant (15.9% of the patients)



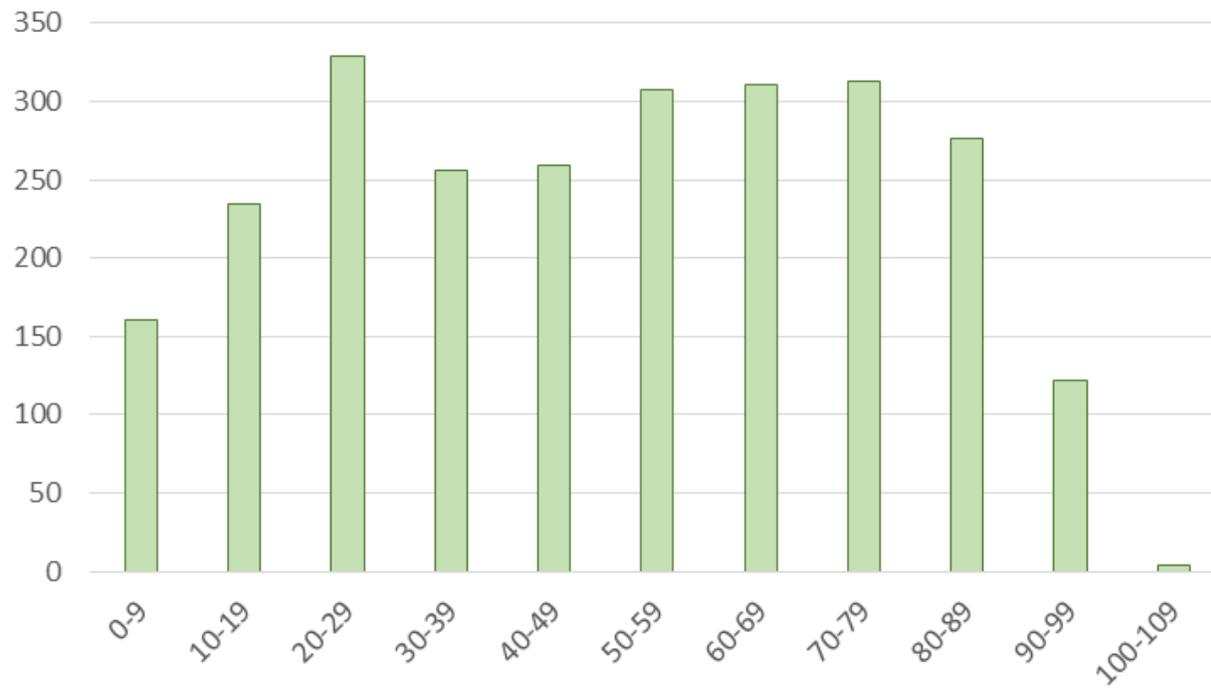
Patients taking anticoagulants were more likely to experience ICH than patients not taking anticoagulants (p value.0001).



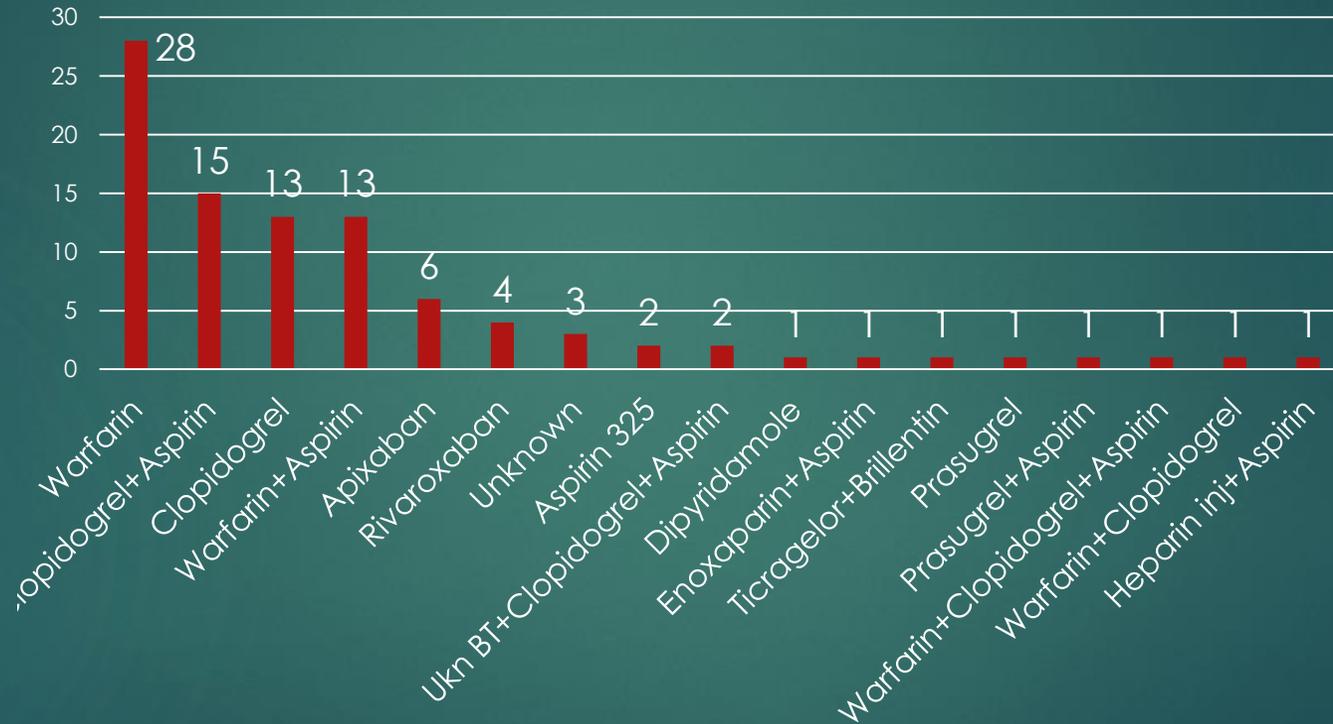
Ages of Patients Taking Anticoagulants
(98% are over 50 years old;
81% are over 70)



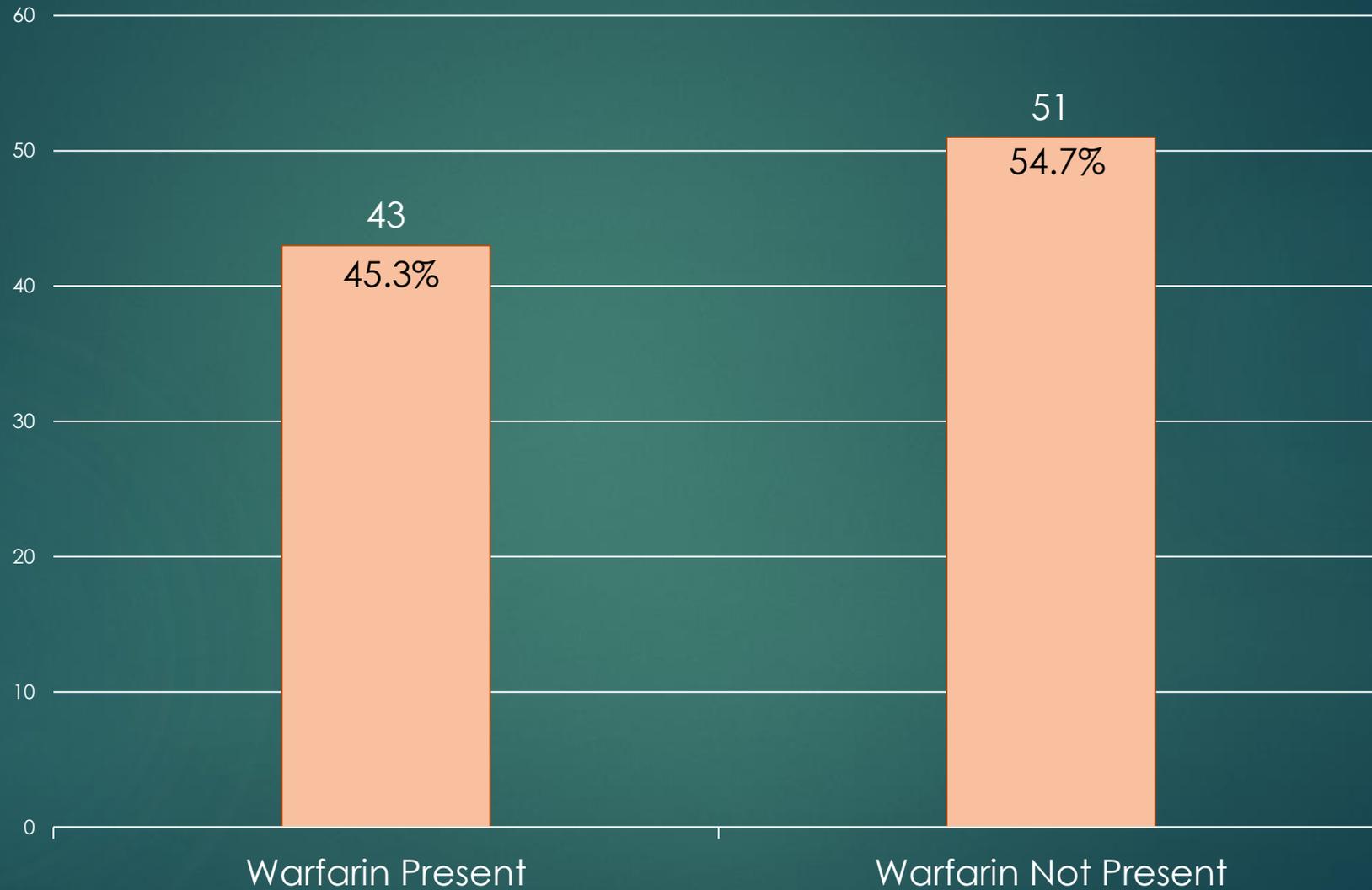
Ages of Patients Not Taking Anticoagulants (widely spread across all ages)



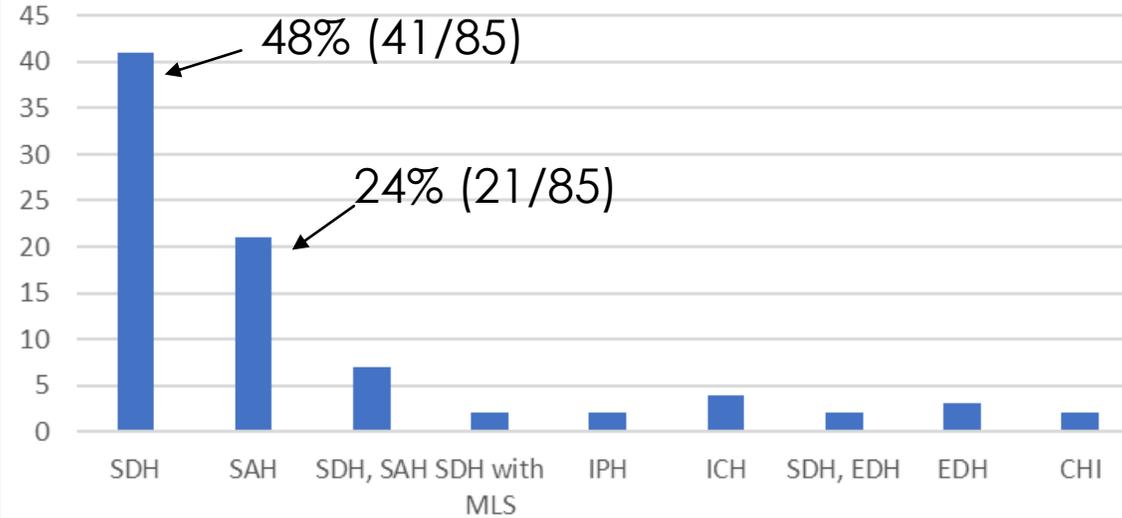
Frequency of Various Anticoagulants Among Those ICH Patients Taking Anticoagulants



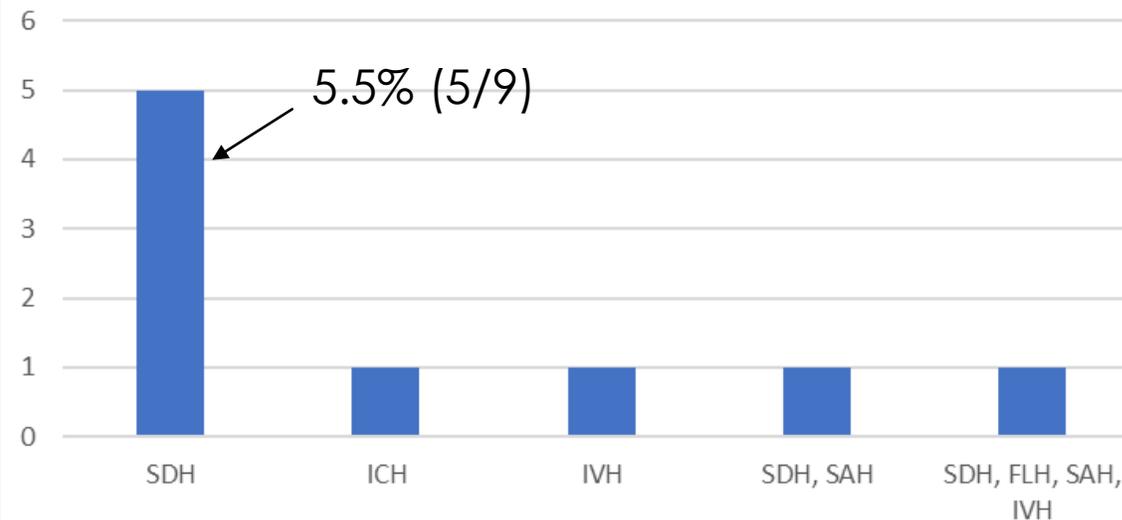
Use of Warfarin (Alone or in Combination) Compared with Use of Other Anticoagulants, in Patients with an ICH



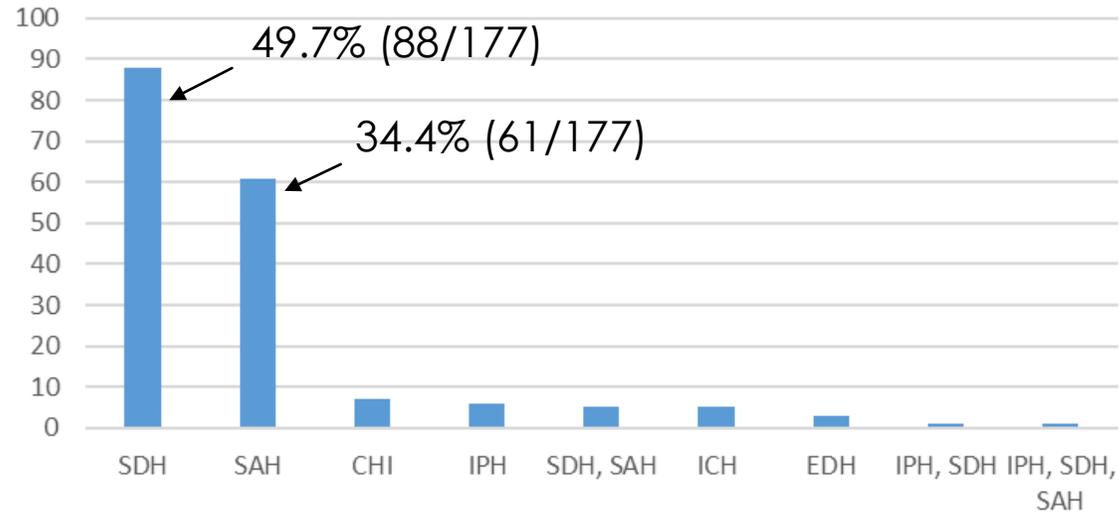
Diagnoses of Those Patients Taking Anticoagulants (Living)



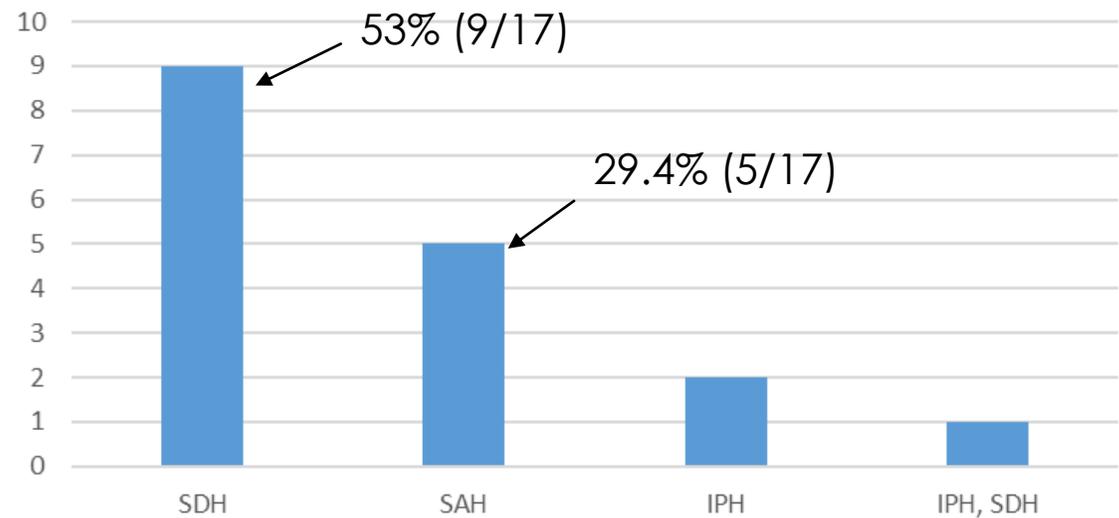
Diagnoses of Those Patients Taking Anticoagulants (Deceased)

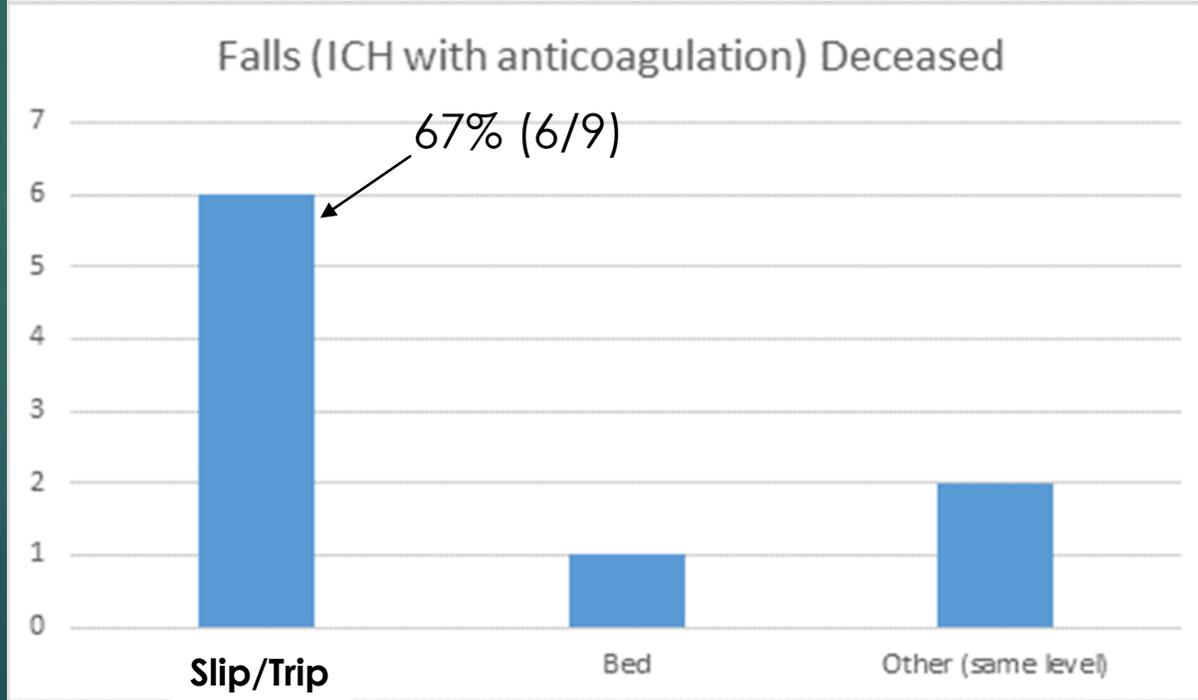
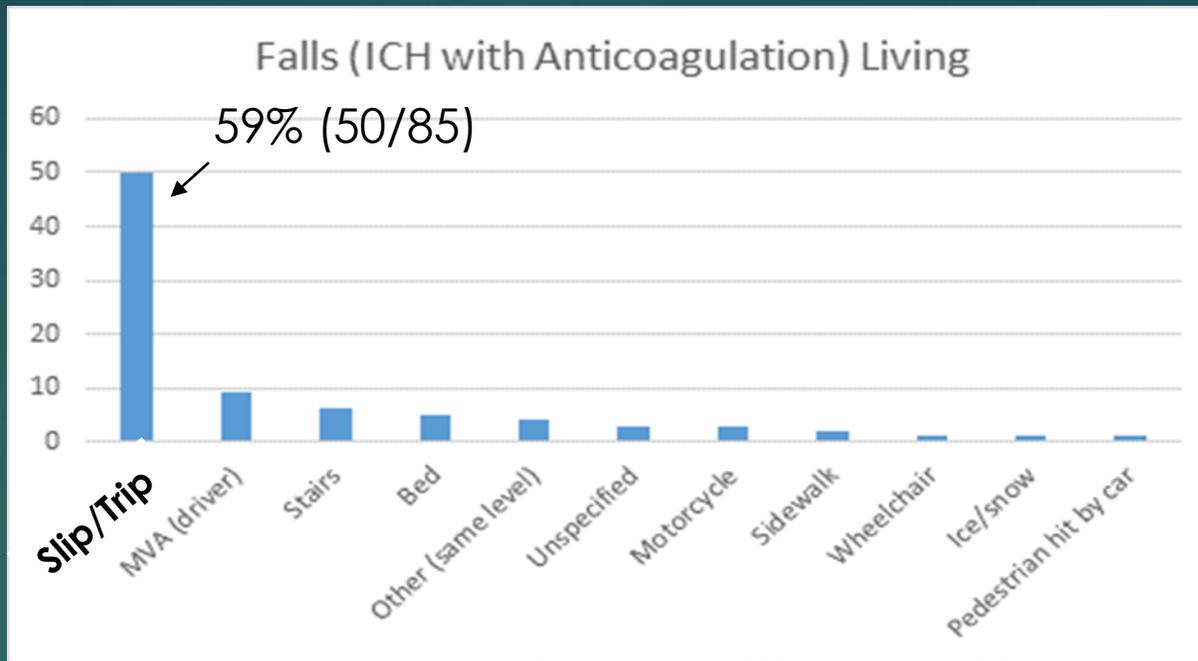


Diagnoses of Those Patients Not Taking Anticoagulants (Living)

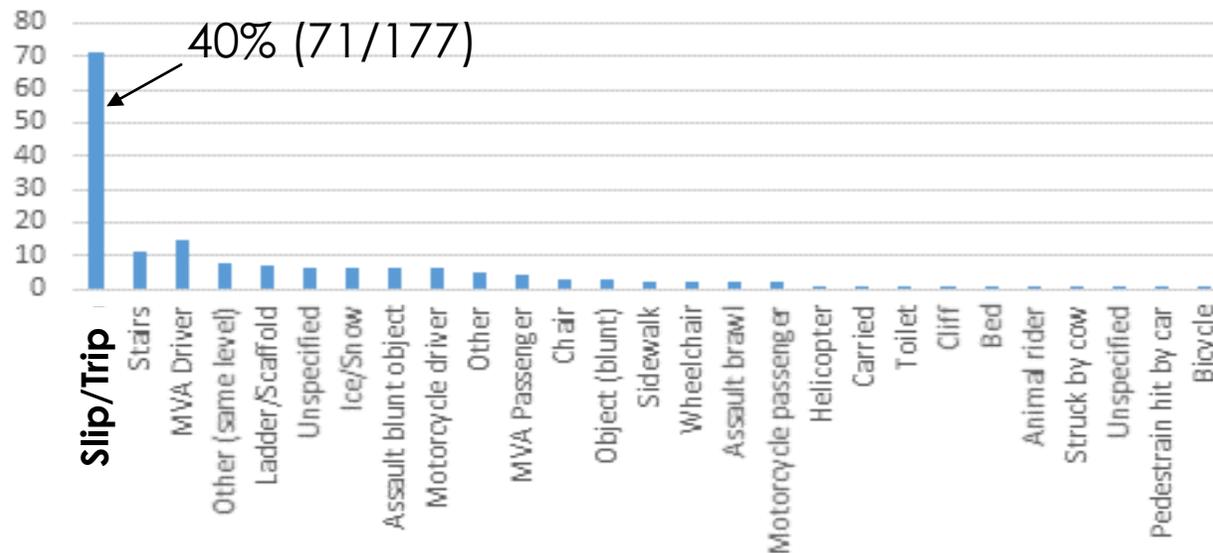


Diagnoses of Those Patients Not Taking Anticoagulants (Deceased)

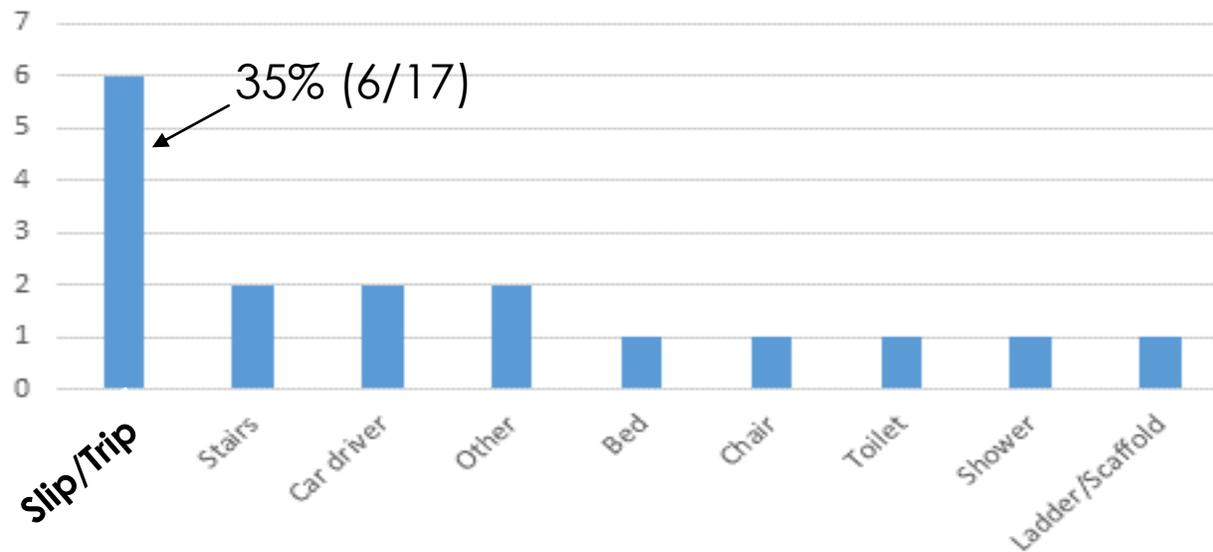




Falls (ICH without Anticoagulation) Alive



Falls (ICH without Anticoagulation) Deceased



Conclusions

- ▶ Patients taking anticoagulants were more likely to experience ICH than patients not taking anticoagulants (p value.0001).
- ▶ Falling causes most ICH in all populations.
- ▶ SDH was the most common type however SAH also causes a high percentage of ICH.
- ▶ Warfarin was most commonly used of the anticoagulants and this same population was more likely to have a SDH.
- ▶ Anticoagulated ICH patients do not show a statistically significant increase in risk of death than non-anticoagulated ICH patients.

References

- ▶ Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. [Web-based Injury Statistics Query and Reporting System \(WISQARS\)](#) [online]. Accessed March 3, 2017.
- ▶ Stevens JA, Ballesteros MF, Mack KA, Rudd RA, DeCaro E, Adler G. Gender differences in seeking care for falls in the aged Medicare Population. *Am J Prev Med* 2012;43:59–62.

Where can you be?



TRAUMA QUALITY IMPROVEMENT PROGRAM

SAVE THE DATE!

Annual Scientific Meeting and Training

November 16–18, 2019 | Hilton Anatole, Dallas, TX



Friday, March 29, 2019



9 a.m. - 4:30 p.m.

2ND ANNUAL RESEARCH CONFERENCE

IMPROVING THE HEALTH OF THE COMMUNITY THROUGH RESEARCH

For all health care professionals and students who have an interest in research.



WWW.PHDCOMICS.COM



References

- ▶ Me...just kidding don't do that.
- ▶ 1. FACIAL TRAUMA STATISTICS Polyclinic YGIA Limassol 2005-2017 Dr Christos Michaelides DDS,MD Oral/Maxillofacial Surgeon
- ▶ 2. 16.6 18 38 10.9 9 1.9 Distribution of fractures with respect to the site
% orbit zygoma mandible maxilla nasal frontal
- ▶ 3. Distribution with respect to the cause of injury Polyclinic YGIA and Nicosia General Hospital
48.45% 19.08% 11.41% 4.24% 9.13% 7.66%
23.26% 3.96% 14.28% 5.89% 47.75% 3.95% 0.00% 10.00% 20.00% 30.00%
40.00% 50.00% 60.00% FALLS SPORTS ASSAULT LABOUR R.T.A other
N.G.H PY

Thank you!

- ▶ Contact Information
- ▶ marian.krasowski@coxhealth.com