



LOYOLA
UNIVERSITY CHICAGO

GTF Goes Global and The Impact of GTF on Our Lives



PACO-Loyola event
By Maanas Deodhar
October 13, 2023

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Background

- The primary mission of Global Thrombosis Forum (GTF, www.gtfonline.net) is to increase the awareness of thrombosis in the community
- This mission is achieved by young high school students working with a mentor
- Examples of the efforts include presentations about thrombosis in a variety of:
 - Booths
 - Schools
 - Churches
 - Scientific meetings
- Another very important mission is to encourage conduct of scientific research in thrombosis-related areas by the high school students



re·search

[ri-surch, ree-surch], *noun*

1. what you are doing when you don't know what you are doing



Aging researchers

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Objectives of GTF Goes Global

- To achieve my goal of spreading the awareness in the community during my summer vacation trip to India
- To get proficient in my research, writing and presentations skills
- To collect more sample size for the Caprini Risk Score protocol




Why Did I Present?

- I noticed that I had a couple days of free time during my vacation in India
- I wanted to spread the awareness of thrombosis, the mission of the Global Thrombosis Forum
- I came up with an idea to present to a senior citizen's club in my grandmother's neighborhood, located in Pune, India
- I thought it would be beneficial to inform a community likely unaware of the implications of thrombosis
- A majority of the group were seniors who are more prone to developing thrombosis

What Did I Present?

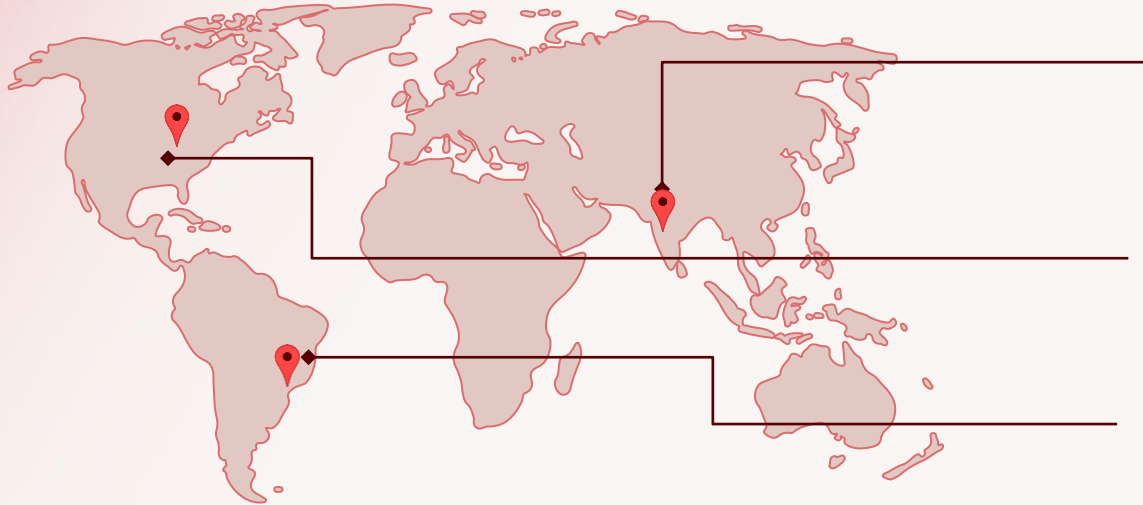
- Since most of the community was unaware, I wanted to keep the information easy to understand but still useful
- I conveyed the information in a slide show and pictorial form
- I presented about:
 - What thrombosis is
 - Causes
 - Symptoms
 - Most importantly, how to decrease the risk
- Many were interested and actively asking questions and engaged
- As well as the presentation, I gave each willing participant the Caprini Risk Score Assessment forms to fill in



“A picture is worth a
thousand words”

—Fred R. Barnard

GTF Worldwide



Pune, India

My presentation

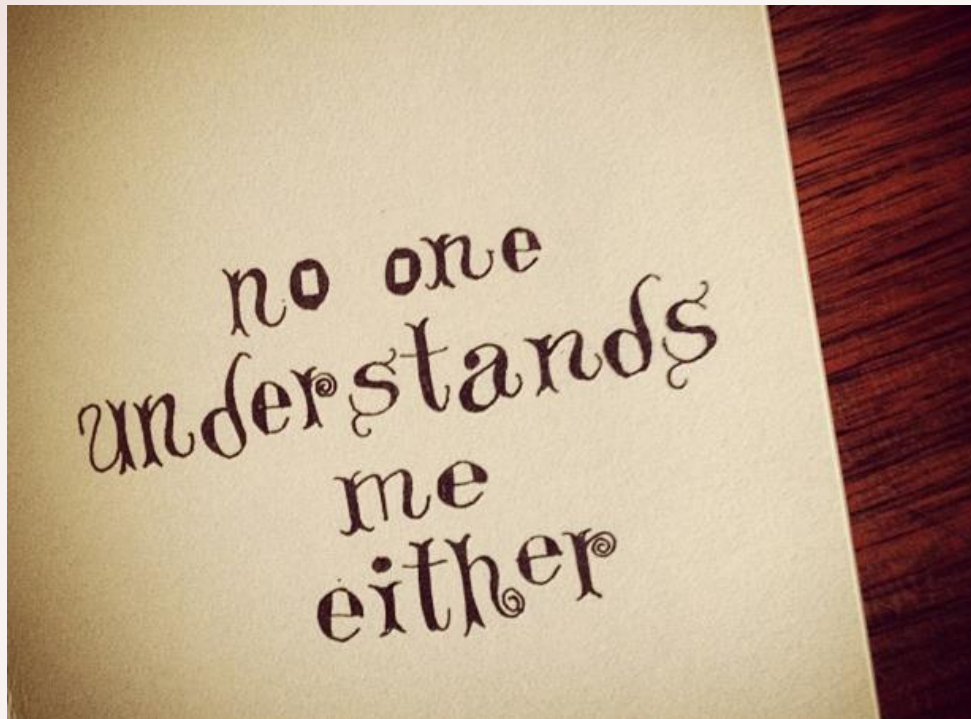
Chicago, Illinois

This event

São Paulo, Brazil

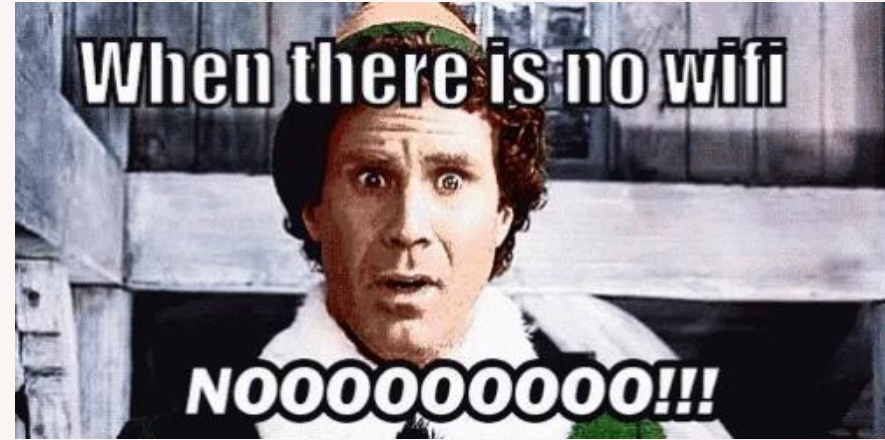
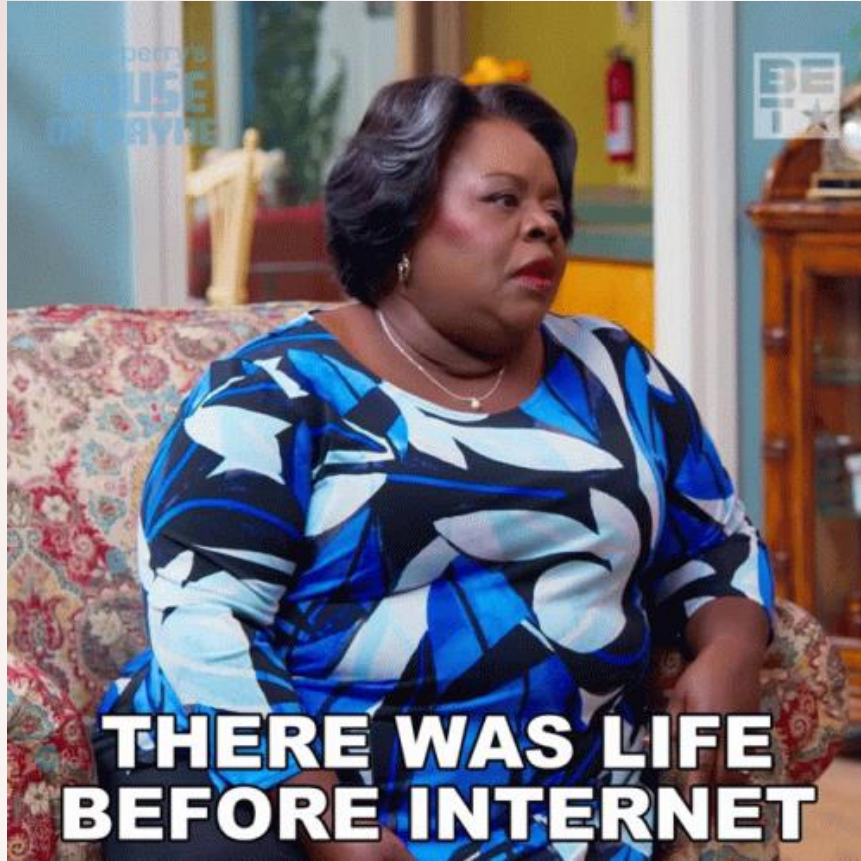
My peers traveled here for a conference

Challenge A



Challenge A

- A big obstacle that I faced during the entire presentation was the language barrier
- Some attendees did not know English
- Some attendees had trouble understanding my American accent
- However, I had a plan B in place
- After each slide of my presentation was complete, my father acted as a translator
- The attendees greatly appreciated the bilingual presentation
- This solution helped effectively convey the intended information to the audience



Challenge B

- There was not a good internet connection at the venue
- We could not have given each participant the Caprini Risk Score Assessment online from the DePaul protocol
- I previously anticipated this and had prepared a solution Using the online version of the Caprini Risk Score Assessment, I created a printout version for the audience members to fill out
- Participants filled out individual questionnaire forms which we then collected
- Inputting the collected data into the online version of the Caprini Risk Score Assessment, I generated each individual's Caprini Risk Score
- Participants' risk scores and forms were later shared with them.

Summary

- Aside from the two major obstacles present, the rest of the presentation went smoothly and I am pleased with the outcome
- I was very surprised to see the audience so interested in the topic
- I am also proud that I could give each willing participant the Caprini Risk Score Assessment to know their risk of developing thrombosis ahead of time
- I was able to accomplish the GTF goal of spreading awareness of thrombosis in this small community in Pune, India
- This project helped me develop my presentation skills with a new audience
- I also learned effective techniques to plan for potential obstacles
- I succeeded in collecting the local citizens' data in the Caprini Research Score protocol
- Overall, I feel I have accomplished my goal of spreading awareness to a high-risk elderly audience, as many of them had never heard of thrombosis before the presentation.



02

GTF and GTF Scholars

The Role of GTF

- What started as a small group of high schoolers 12 years ago has now turned into a global forum with over 200 scholars, 50 of which have graduated and received admissions in key universities in the U.S. (Cornell, Emory, Harvard, Loyola, UGA, UM, UNC, etc.)
- GTF has impacted the high-school members in positive ways
- GTF events give the members a feeling of accomplishment from giving back to the community
- GTF inspires members to create innovative ways to give back by spreading awareness of thrombosis (like my presentation in India)



GTF

**GTF: In Partnership with the North American Thrombosis
Forum (NATF, www.natfonline.org) in Community Service
for Thrombosis**

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GTF Mission Statements

1. Work and enhance the mission of NATF
2. Increase the awareness of thrombosis in Georgia
3. Network with various groups involved in thrombosis
4. Coach the youth volunteers in skills such as communication and presentation
5. Encourage the youth volunteers to organize, plan, and conduct all the activities
6. Arrange research projects that will result in presentations/publications in various media involving our efforts in the community



Levels of GTF

Level 1

1. Understanding the basics of thrombosis

Level 2

1. Manage easy research projects
2. Assisting in projects
3. Attending meetings at Albany College of Pharmacy and Health Sciences (ACPHS), Cardiovascular Research Institute (CVRI), Evanston Hospital, Loyola, NATF and PACO Foundation.

Level 3

1. Conducting interviews of patients
2. Interviewing members of medical community.

Level 4

Attend internships at:

1. ACPHS
2. Brigham and Women's Hospital (BWH)
3. Loyola
4. NATF
5. PACO Foundation
6. Offices of Drs. Kulkarni, Dr. Mahajan, Dr. Pai and other institutions.
7. Prof. Eduardo Ramacciotti, MD, PhD: Sao Paulo, Brazil

Level 5

1. Create publications from the research work
2. Submit and present at National (ACF, ASH, ASPET) and International meetings (ISTH, IUA, TSH)
3. Graduate with pride from GTF and High School.

GTF affiliations With International Organizations Involved In Thrombosis Research

GTF has been an affiliate member of NATF, and an associate Society of the International Union of Angiology (IUA), with strong backing from Albany College of Pharmacy and Health Sciences (ACPHS), Loyola, NATF, and the Promoting Awareness of Clotting Outcomes (PACO) Foundation

Internship opportunities for GTF Scholars

1. Albany College of Pharmacy & Health Sciences, Albany, NY
2. Brigham & Women's Hospital Pharmacy (Harvard University), Boston, MA
3. Loyola University, Chicago, IL
4. Promoting Awareness of Clotting Outcomes (PACO) Foundation, Evanston, IL
5. Professor Eduardo Ramacciotti, MD, PhD, São Paulo, Brazil

High School Scholars' Day at Loyola

An annual event, started in 2016, initiated by Jawed Fareed, PhD, Professor of Pharmacology and Director of Thrombosis and Hemostasis Laboratories, Loyola University, honoring GTF

Summer Interns: Yearly event

Research Symposia Conducted at GTF

2017: Management of complex dental patients

2019: Anticoagulation in GI Tract: An update on GI Disorders: Diagnostic and therapeutic considerations

2020: COVID-19 and cardiovascular effects

2021: CLOVES Syndrome: Keynote Speaker: Alfonso Tafur, MD

2022: PE: Keynote Speaker: Samuel Goldhaber, MD

2023: DVT and PE: Making a diagnosis and creating a treatment plan: Keynote Speaker: Stephan Moll, MD

2024: Role of radiology in the management of VTE (planned)

Publications from research

1. Badkundri, Rohil: One Hundred Years of Heparin Poster
<https://www.angiology.org/AngiologyOrg/media/system/Guidelines/NATF-GTF-Loyola-Poster-PDF.pdf>
2. Bhave, Anjali: Altered Coagulation Parameters and D-Dimer Measurements in Sepsis are useful in Scoring the Risk Stratification
<https://faseb.onlinelibrary.wiley.com/doi/10.1096/fasebj.2020.34.s1.04208>
3. Bhave, Anjali; Krishnappan, Sharan: Impact of Anticoagulant and Antiplatelet on the Thrombotic Risk in Cancer-Associated Thrombosis https://ashpublications.org/blood/article/134/Supplement_1/3677/428263/Impact-of-Anticoagulant-and-Antiplatelet-on-the?searchresult=1
4. Joshi, Divya: Altered Coagulation Parameters and D-Dimer Measurements in Sepsis are useful in Scoring the Risk Stratification <https://faseb.onlinelibrary.wiley.com/doi/10.1096/fasebj.2020.34.s1.04208>

Publications from research, contd.

5. Joshi, Divya: Biomarkers of Hemostatic Activation and Inflammation Are Associated with Altered Coagulation Parameters in Sepsis Patients
https://ashpublications.org/blood/article/134/Supplement_1/2401/422883/Biomarkers-of-Hemostatic-Activation-and?searchresult=1

6. Joshi, Priya: Molecular Pathogenesis of Bone Degenerative Disease and Associated Inflammatory Processes
<https://faseb.onlinelibrary.wiley.com/doi/10.1096/fasebj.2020.34.s1.04303>

7. Krishnappan, Sharan and Laddu, Atul: Interview by Mohamed Ghonim, Ph.D.
<https://www.aspet.org/aspet/news/news/2020/12/17/interview-with-atul-r-laddu-md-phd-president-and-ceo-of-global-thrombosis-forum>

8. Krishnappan, Sharan: A Comparison of Mass and Potency Equated Bovine and Porcine Heparins
<https://faseb.onlinelibrary.wiley.com/doi/10.1096/fasebj.2020.34.s1.03677>

9. Kulkarni, Akshay: Biomarkers, inflammation, and thrombosis in Hepatocellular Carcinoma
<https://faseb.onlinelibrary.wiley.com/doi/10.1096/fasebj.2021.35.S1.03754>

Publications from research, contd.

10. Laddu, Rajan: Relative Neutralization of Heparin from Different Origins by Protamine, Polybren
https://faseb.onlinelibrary.wiley.com/doi/abs/10.1096/fasebj.2018.32.1_supplement.570.8

11. Laddu, Rajan: Differentiation of the anticoagulant effects of Activated Protein C and Recombinant Thrombomodulin as studied in whole blood and retrieved plasma
https://faseb.onlinelibrary.wiley.com/doi/10.1096/fasebj.2018.32.1_supplement.lb568

12. Laddu, Rajan: Decreased Thrombin Generation Potential Is Associated with Increased Thrombin Generation Markers in Sepsis Associated Coagulopathy
<https://ashpublications.org/blood/article/132/Supplement%201/2505/264321/Decreased-Thrombin-Generation-Potential-Is>

13. Laddu, Rajan: Bovine Heparin Compared to Porcine Heparin to Demonstrate Bioequivalence
<https://ashpublications.org/blood/article/132/Supplement%201/1253/262860/Bovine-Heparin-Compared-to-Porcine-Heparin-to?searchresult=1>

Publications from research, contd.

14. Nimkar, Sneha: Biomarkers of Inflammation and Thrombosis in Patients Undergoing Total Joint Replacement

<https://faseb.onlinelibrary.wiley.com/doi/10.1096/fasebj.2021.35.S1.04117>

15. Niverthi, Manoj: Comparison of GMP Manufactured Ovine Mucosal Enoxaparin, Branded Porcine Enoxaparin

https://faseb.onlinelibrary.wiley.com/doi/10.1096/fasebj.2019.33.1_supplement.515.11

16. Niverthi, Manoj, and Varun Rangnekar, Varun: Ovine Mucosal Enoxaparin Exhibit Comparable Pharmacokinetic Profiles to Porcine Mucosal Enoxaparin

https://faseb.onlinelibrary.wiley.com/doi/10.1096/fasebj.2019.33.1_supplement.515.12

17. Niverthi, Manoj, Rajan Laddu, Rajan, and Rangnekar, Varun: Bovine Mucosal Heparins Are Comparable to Porcine Mucosal Heparin at USP Potency

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6333674/#:~:text=BMH%20exhibited%20an%20anti%2DXa,was%20proportional%20to%20USP%20potency>

Publications from research, contd.

18. Niverthi, Manoj; Dandavate, Nupur; Pujari, Sarang: Use of EKOS® Catheter in the management of Venous Thromboembolism

<https://thrombosis.org/wp-content/uploads/2017/12/EKOS%C2%AE-Catheter-Article.pdf>

19. Raina, Rithik; and Venkitasubramony, Vishnu: Comparative Studies on the Oral Anticoagulant Activities of Orally Active Anti-Xa and Anti-IIa Agents in Whole Blood and Plasma and their Neutralization by FEIBA

https://faseb.onlinelibrary.wiley.com/doi/10.1096/fasebj.2019.33.1_supplement.515.2

20. Rangnekar, Varun: Comparative Pharmacokinetic Profile of Three Batches of Ovine Enoxaparin

https://faseb.onlinelibrary.wiley.com/doi/abs/10.1096/fasebj.2018.32.1_supplement.lb603

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6714839/>

21. Venkitasubramony, Vishnu: Differential Effects of Dabigatran, Rivaroxaban, Apixaban, Edoxaban, and Betrixaban on Fibrinokinetics and their Modulation by FEIBA

https://faseb.onlinelibrary.wiley.com/doi/10.1096/fasebj.2019.33.1_supplement.819.13

Publications from research, contd.

22. Venkitasubramony, Vishnu: Biological and Pharmacological Profiling of Pentosan Polysulfate (PPS) in Comparison to Heparin and its Relative Neutralization by Protamine Sulfate -

<https://faseb.onlinelibrary.wiley.com/doi/10.1096/fasebj.2020.34.s1.04049>

23. Venkitasubramony, Vishnu and Raina, Rithik: Factor Xa Inhibitory Profile of Apixaban, Betrixaban, Edoxaban, and Rivaroxaban Does Not Fully Reflect Their Biologic Spectrum

<https://ashpublications.org/blood/article/132/Supplement%201/2520/263980/Factor-Xa-Inhibitory-Profile-of-Apixaban?searchresult=1>

Publications in J-CATH

1. Jeske, Walter; Kouta, Ahmed; Rangnekar, Varun; Niverthi, Manoj, Fareed, Jawed, et al: Comparative Pharmacokinetic Profile of 3 Batches of Ovine Low-Molecular-Weight Heparin and 1 Batch of Branded Enoxaparin: CATH: 2018, 24, I150S-I156 S
2. Kantarcioglu, Bulent; Patel, Krishan; Lewis, Joseph; Laddu, Atul; Charles A. Carter, and Fareed, Jawed: Public Perceptions of Current COVID-19 Vaccinations. Results of a Pilot Survey: CATH: 27, 1-8, 2021
3. Saadaldin, Hassan; Shetye, Prasad; Gavankar, Sanket; Laddu, Atul ; Tafur, Alfonso; Caprini, Joseph: Using the Caprini Risk Score to increase VTE Awareness in the Community. The Know Your Score project, CATH: In Press

How GTF Has Helped My Peers and I

- Although I have only been a part of GTF for about 10 months now, I have learned a lot
- Through the various resources and opportunities available to GTF scholars I have:
 - Greatly improved my presentation skills
 - Learned how to effectively research
 - Learned how to better manage my time
 - Learned new information about thrombosis
 - Met and interacted with experts in the field
 - Attended scientific conferences such as this one (Loyola Presentation)
- Many of my peers have also:
 - Attended internships at prestigious universities (which I hope to do in the future)
 - Shadowed doctors through the GTF shadowing program
 - Traveled abroad to attend events
- The BOD have spent and continue to spend hours of their time to help us (members)

The Impact of GTF



Conclusions

- The Global Thrombosis Forum serves as a stepping stone for high schoolers to enter the professional world and pave a bright path for their future
- GTF members get to experience what would only be a dream to others
- The mission of GTF is now being spread to more people than ever, with GTF going global
- The Global Thrombosis Forum Board of Directors are excellent mentors who help expand the skills of GTF members

Thanks!

Do you have any questions?

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