

PURPOSE / OBJECTIVES

Background:
 Venous thromboembolism (VTE) is a leading preventable cause of death following surgery or hospitalization. One method for preventing these deaths is performing a thorough risk assessment using the 40-element Caprini risk score (CRS). This score has been validated in more than 5 million patients involving more than 200 publications. The CRS allows high-risk patients to be identified so they can be protected from fatal thrombosis using anticoagulants. Collecting data at the time of illness, injury or emergency surgery is problematic. One solution consists of involving patients in their medical care by completing a risk assessment prior to any injury or hospitalization. This is best done in the presence of family members including relatives. The information can be shared with their personal physician for verification and placement in the permanent medical record.

Aims:
 We designed a pilot program involving a unique method of prospective data collection. This educational program is also intended to improve community understanding of VTE (Video 1).

MATERIALS & METHODS

The patient friendly CRS (table1) and a letter describing thrombosis-related epidemiological facts were distributed by two Global Thrombosis Forum high school students (PS & GS) to their classmates and friends. These documents were to be shared among family and other relatives suggesting they complete the risk assessment process. The Global Thrombosis Forum is dedicated to the development of innovative approaches to further education and research programs among young students worldwide.

RESULTS

Responses were received from 1,219 individuals including students, friends, family members, and Global Thrombosis Forum residents in Florida, Georgia and Missouri. Family history of blood clots was reported in 22% of respondents (figure 1). Most individuals (59.4%) were 41 years of age or less, and 28% had a BMI > 25 (figure 2). Hospitalization occurred in 10.4%; 9% had insulin dependent diabetes; and swollen legs were present in 10.7% of the respondents. Patients 75 years of age or older had a CRS in the highest risk category of 8+ (figure 3).

Preventing the #1 cause of death after surgery is Critical. Our exploratory study shows the importance of involving patients and their family members in gathering important personal health data especially family history of blood clots

Video 1



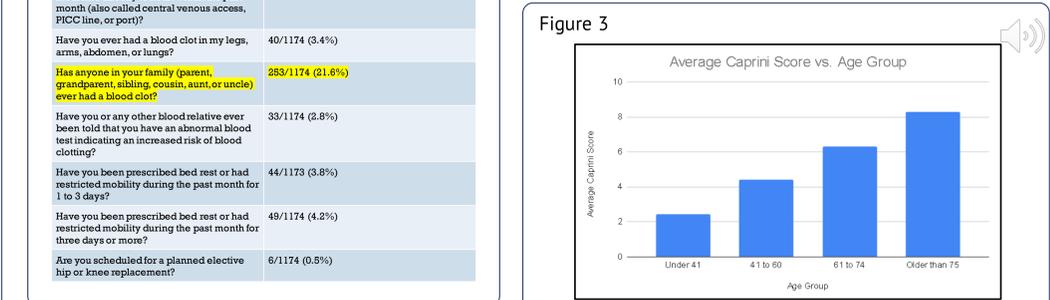
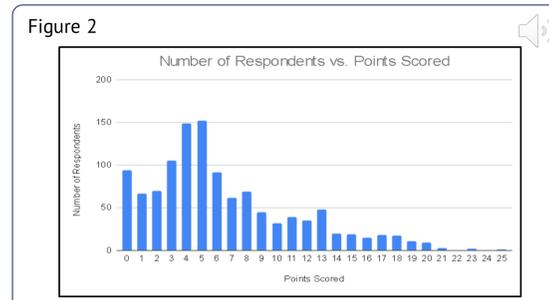
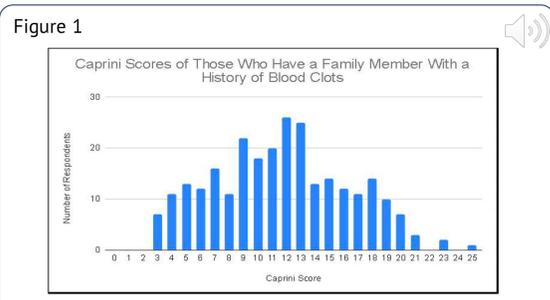
RESULTS

Table 1

Risk Factor	Number of Responses Who Indicated "Yes"
Are you between the ages of 41 and 60?	118/1178 (9.8%)
Are you between the ages of 61 and 74?	132/1174 (11.2%)
Are you older than 75?	201/1173 (17.1%)
Have you had a major surgery (more than 45 minutes) under general anesthesia within the last month?	33/1174 (2.8%)
Have you had visible varicose veins within the last month? (Not including spider veins)	86/1176 (4.9%)
Have you had swollen legs within the past month?	128/1174 (10.9%)
Have you had a heart attack within the past month?	8/1174 (0.7%)
Have you had a serious infection (for example, pneumonia) for which you have been hospitalized within the past month?	124/1173 (10.6%)
Do you have a history of Inflammatory Bowel Disease (IBD) (for example, Crohn's disease or ulcerative colitis)?	9/1174 (0.8%)
I have or have had congestive heart failure	45/1174 (3.8%)
Do you have a chronic lung condition such as emphysema or COPD? (Not including asthma)	26/1174 (2.2%)
Are you scheduled for a major planned surgery (longer than 45 minutes), including laparoscopic and arthroscopic surgery?	27/1174 (2.3%)
Have you been told by a doctor that you have cancer, leukemia, lymphoma, or melanoma?	62/1175 (5.3%)
Have you used a non-removable plaster cast, removable leg brace or mold that has kept you from walking or bending your leg within the last month?	89/1174 (5.0%)
Have you had a tube in the blood vessel or neck or chest that delivers blood or medicine directly to heart within the past month (also called central venous access, PICC line, or port)?	36/1174 (3.1%)
Have you ever had a blood clot in my legs, arms, abdomen, or lungs?	40/1174 (3.4%)
Has anyone in your family (parent, grandparent, sibling, cousin, aunt, or uncle) ever had a blood clot?	283/1174 (21.6%)
Have you or any other blood relative ever been told that you have an abnormal blood test indicating an increased risk of blood clotting?	33/1174 (2.8%)
Have you been prescribed bed rest or had restricted mobility during the past month for 1 to 3 days?	44/1173 (3.8%)
Have you been prescribed bed rest or had restricted mobility during the past month for three days or more?	49/1174 (4.2%)
Are you scheduled for a planned elective hip or knee replacement?	6/1174 (0.5%)

Table 1 (continued)

Risk Factor	Number of Responses Who Indicated "Yes"
Have you fractured your hip, pelvis, or leg in the last month?	5/1178 (0.4%)
Have you had multiple traumatic injuries (for example multiple broken bones due to a fall or car accident) within the last month?	3/1174 (0.3%)
Have you suffered a stroke within the past month?	4/1174 (0.3%)
Are you scheduled for a minor surgery (Less than 45 minutes) in the future which involves anesthesia?	42/1173 (3.6%)
Are you scheduled for a major surgery (more than 45 minutes) in the future which involves anesthesia? (excluding total joint replacement)	26/1174 (2.1%)
Are you overweight or obese (Body Mass Index of 25 or higher)?	317/1170 (27.1%)
Are you morbidly obese (Body Mass Index of 40 or higher)?	47/1169 (4.0%)
Do you smoke?	183/1174 (13.0%)
Do you have diabetes which requires insulin?	106/1173 (9.0%)
Are you currently undergoing chemotherapy?	32/1173 (2.7%)
Have you had a blood transfusion?	74/1174 (6.3%)
Do you have HIV?	36/1188 (3.1%)
Did you have a surgery within the last 30 days that has lasted longer than 2 hours? (Not including total joint replacement)	3/1174 (0.3%)
Do you currently use birth control or Hormone Replacement Therapy (HRT)?	93/1169 (8.0%)
Have you been pregnant or had a baby within the last month?	5/1188 (0.4%)
Do you have a history of unexplained stillborn infant, recurrent spontaneous abortion (more than 3), premature birth with toxemia or growth restricted infant?	2/1189 (0.2%)



SUMMARY/CONCLUSION

The substantial incidence of important comorbidities seen in this relatively young group of individuals, especially family history of thrombosis, illustrates the value of this method of data collection. The success of this program establishing a baseline CRS for individuals prior to injury, hospitalization, or surgery should result in improved use of thrombosis prophylaxis and lower the death rate from fatal pulmonary emboli.