

Choosing Wisely Champions Sample Submissions

Arielle Langer, MD, MPH, Brigham and Women's Hospital

Brief Bio (*max one paragraph*):

Arielle Langer is currently an Instructor in Medicine at Harvard Medical School and an attending physician in the Division of Hematology at Brigham and Women's Hospital. She graduated Phi Beta Kappa and Magna cum Laude from Dartmouth College with a BA in Economics with High Honors for her thesis. She obtained her MD and MPH degrees concurrently from Columbia University College of Physicians and Surgeons and Mailman School of Public Health, graduating Alpha Omega Alpha. She did internal medicine residency and a Chief Resident year at New York Presbyterian/Columbia University Medical Center. She then went on to complete her fellowship in Hematology/Oncology and served as a Chief Fellow at Icahn School of Medicine at Mount Sinai. Dr. Langer is interested in benign hematologic disorders including anemia, venous thromboembolism, and hematologic issues affecting pregnancy.

Project Abstract (*max 300 words*):

Patients with venous thromboembolism (VTE) are often subjected to extensive testing to determine the etiology of their thrombosis, despite the fact that it usually should not impact management of the individual or their family members. We noted a high volume of low yield thrombophilia testing – on average 801 tests per month. We were concerned that this testing was not being used appropriately. Exploring the underlying causes, we observed that thrombophilia testing order sets in our medical record included a variety of inappropriate tests including tests that should never impact management and that cannot be accurately assessed in the

to reduce this testing as part of my research during fellowship. I first developed a consensus testing algorithm and got it approved by all of the benign hematology faculty and the director of the clinical laboratory. I disseminated this handout through the following routes: I presented it to the medicine house staff at their noon conference; it was added to both the medicine house staff program website and their iPhone app that includes similar guides; I sent it to all hematology/oncology fellows and added it to their program website; I presented it at the hematology/oncology division conference along with the data underlying the recommendations. Additionally, the fellows choose to post the algorithm in their work room. As well, I worked with our department QI chairs to have multiple inpatient and outpatient order sets changed, so that they were designed to facilitate testing that should impact anticoagulation decision in the right clinical setting and omit all other tests. I chose this simpler approach rather than an alert-based intervention because of concern about alert fatigue and our impression that remarkably few of these tests were clinically indicated. There were several challenges encountered along the way, which primarily related to convincing other physicians to supp6 (an)13.1 (d

Were patients involved in the genesis, design, or implementation of this project? If so, how?
While patient cases inspired the project, patients themselves were not directly involved in the design or implementation.

Have educational resources or an implementation toolkit been developed as part of the project? If yes, would you be interested in collaborating with ASH to share these tools with a wider audience? If no, would you be interested in developing these resources and collaborating with ASH to share with a wider audience?

A testing algorithm was developed that serves as both an educational resource and as a handout. I also have a PowerPoint presentation used to describe part of the rationale behind the algorithm. We would love to collaborate with ASH to share these resources with a wider audience and would welcome any changes thought to be helpful to its wider use.

Additional Data/Information (optional)

Please include any additional information you think would be helpful to provide context to your project.

The complete list of order set changes is below. I am happy to make the testing algorithm available, if desired for review with the application. Deleted from outpatient thrombophilia order sets: MTHFR mutation, PAI-1 gene polymorphism, Prothrombin mutation, Homocysteine, APC resistance, Factor V Leiden, Plasminogen act inhibitor, Factor VIII, Factor IX, Factor XI, D-Dimer, Fibrinogen, Euglobulin lysis Deleted from inpatient thrombophilia order sets: Protein S activity, Protein S Ag free, Protein S Ab total, Protein C function, Protein C antigen, Antithrombin test, Homocysteine, APC resistance, Factor V Leiden

mapping were conducting to identify reasons for over utilizations of these services. Timely documentation of goals of care was identified as a main reason for this problem. Then interventions were implemented to improve the practice. Post intervention data was captured and compared to the baseline data. Result The timely documentation of goal of care for patients with palliative intent had significantly increased from 59% of cases in the baseline to 86% for the post intervention phase. As a result, admission to ICU decreased from 32% of cases in the pre intervention phase to 14% in the post intervention phase reducing monthly cost of admission to the ICU by 40% and estimated to be on average of 48000 USD monthly(576,000 USD annually). Conclusions Our intervention resulted in improved documentation of the goal of care leading to decrease in the utilization of critical care interventions including reduction of intensive care unit (ICU) bed admissions and cost. This outcome is even more relevant nowadays during COVIDevS8.12.9 rfm2.6 (iy)-4.6 (s-e0.1 (e)-6 (d)1 28-5.n)13.1 (aad)2.3 (v)-5.6 (e)

Simran Swarup, MD, Texas Tech University Health Sciences Center

Brief Bio (max one paragraph):

I am the chief fellow in Hematology/Medical Oncology at Texas Tech University Health Science Center, Lubbock. My work focuses on benign hematology, patient safety, and policymaking. My oral presentation in ASH 2019 and my scholarship in HTRS were both based on my work related to improving patient safety specifically in the field of hematology for patients. I also pursued a master's degree in business administration with a focus on healthcare to enable me to further my work at institutional levels (graduating MBA in October 2020 from Texas A&M).

Project Abstract (max 300 words):

Heparin-induced thrombocytopenia (HIT) is a rare life-threatening prothrombotic disorder affecting patients treated with heparin or related substances. Its treatment depends on timely clinicopathologic diagnosis with the use of 4T score and subsequently a screening test like PF4 ab testing through ELISA or LIA (Latex Immuno Assay). Subsequently confirmed by serotonin release assay (SRA). We noticed that the 4T score was not being done consistently at our hospital and the lab relied upon a test with substandard results as compared to ELISA (lab used PIFA - Platelet Immunofiltration Assay). We initiated a quality improvement project to increase utilization of 4T score at the hospital by incorporating 4T scoring into HIT workup in the EMR. We also worked with the lab to change screening tests from PIFA to LIA as the initial screening test for HIT, with monitoring of change in trends in order, testing, and financial gains of the new method.

How did the project develop? Please include information about what prompted the need for action.

get an additional sample drawn for serotonin release assay which is sent to an outside lab for confirmation of diagnosis. I will be happy to provide pictures (attached) and other required information for the incorporation of 4T scores into EMR.

Were patients involved in the genesis, design, or implementation of this project? If so, how?

Patient data was involved in the genesis, design, and implementation of the project. We started out by collecting data in 2017 on the number of patients who were tested for HIT Ab in the lab (at the time lab used PIFA). We retrospectively reviewed those charts with the help of 3 independent reviewers who scanned the charts for 4T score, SRA results, use of alternative anticoagulation (each chart was read by 2 reviewers to ensure accuracy while the third reviewer would get involved if there was a discrepancy between the first two reviewers). We noted that less than 1% of the charts with HIT ab testing had 4T scores documented. We also noted that the PIFA test had a sensitivity of 60% and specificity of 50% in our study with potentially 5 cases of missed HIT diagnosis during 2017 (missed because of high 4T score and negative PIFA). We also noted that over 50% of cases tested had a low 4T score leading to inappropriate testing, sometimes with potentially dangerous use of anticoagulation. Hence, we worked with the IT department to design and implement a HIT protocol in the system which will be the only way to access tests for HIT, after calculation of 4T (picture attached.) It will also automate serotonin release assay for those with positive screening test or high HIT (moderate scores with negative screening left to clinician discretion). Also, given the subpar performance of PIFA, we worked with the lab to switch over to LIA. It took about 6 months to achieve above, after which we gave a 6-month washout period to implement the above system. Our post-intervention period began in Jan 2019 and we now have data for the period Jan-June 2019. We noted that we improved compliance of 4T scoring from 1% to 100%. We also noted a 18.8% reduction in HIT Ab testing, 50% reduction in SRA testing and 42% reduction in alternative anticoagulation used (refer to attached excel sheet). We went ahead and involved the finance department in the project and noted that length of stay for HIT suspected patients reduced by 4 days on an average. We also reduced total cost by 49% (about 41,000\$ per case) for HIT suspected cases. Contribution margin (reimbursement less direct cost to hospital) per case was increased by 94% (nearly 8,000\$)

Jordan Schaefer, MD, University of Michigan

Brief Bio (*max one paragraph*):

Jordan Schaefer is an Assistant Professor of Internal Medicine in the Division of Hematology/Oncology at the University of Michigan. He earned a BS in Sociology Health and Aging; Social Inequality; Race, Class and Gender with a minor in Chemistry from the University of Michigan and his MD from Michigan State University. He then completed an Internal Medicine residency at the Mayo Clinic in Rochester, MN prior to entering the Hematology/Oncology fellowship program at the University of Michigan. Following completion of his fellowship, Dr. Schaefer joined the hematology/oncology faculty at the University of Michigan where his clinical and research interests focus on health disparities in anticoagulation care, cancer associated thrombosis, and the optimal use of antiplatelet/anticoagulant therapies.

Project Abstract (*max 300 words*):

The combination of aspirin (ASA) and warfarin increases bleeding events, often without a reduction in thrombotic outcomes. Combination therapy with warfarin and ASA is associated with a 1.5-1.8 fold risk of major bleeding compared to warfarin alone. As a result, guidelines advocate for warfarin monotherapy instead of combined warfarin-ASA therapy for many patients with an indication for chronic anticoagulation. Despite these recommendations, the combined use of warfarin and ASA is pervasive. To date, no established method has been developed, implemented, and tested to address this issue. In an effort to reduce the numbpldtioni, ih

Stephen L. Wang, MD, Kaiser Permanente Santa Clara Medical Center

Institution/Practice

Kaiser Permanente Hospital Santa Clara and Kaiser Permanente Northern California

Brief Bio (*max one paragraph*):

Stephen L. Wang is a vascular and interventional radiologist at Kaiser Permanente Northern California. He has spent over 12 years doing basic science and clinical research on inferior vena cava (IVC) physiology and computational flow modeling with a particular interest in IVC filters. Over the last decade, Dr. Wang has implemented a step wise approach for Kaiser Permanente Northern California to reduce unnecessary IVC filters and to maximize IVC filter retrieval.

Project Abstract (*max 300 words*):

Title: Reduction in inferior vena cava filter (IVCF) utilization and increase in IVCF retrievals across a large healthcare region through physician education and a novel IVC filter tracking system. Purpose: To evaluate the effects of physician education and a novel IVCF tracking system on IVCF utilization and IVC retrievals. Materials and Methods: Fourteen CME approved in-hospital grand rounds covering evidence-based review of IVCF efficacy, guidelines, and complications were performed at 14 medical centers across a large US healthcare region serving more than 3.5 million members. Physician attendance at each facility was recorded. A computer-based IVCF tracking system was deployed at the same time. IVCF use, rates of retrieval, and fulfillment of guidelines

interventional radiology to be the lead service in tracking and retrieval. Our initial single center study showed an increase in retrieval rate from 10%-54% and IVF follow-up from 10-99%. The results led to administrative sponsorship for regional deployment of our educational grand rounds to 14 medical centers and to regionalize tracking of filters. Regional collaboration with the regional leads for hospitalist services, critical care, pulmonology, hematology, and surgical specialties (often ordering IVCFs for pre-surgical prophylaxis) was necessary. This multi-specialty took one year to complete and the results, as discussed in the abstract (22% reduction in IVCFs and increa[re]-3 (s)-1.3 (u)2.2 5.72 468 ()1s-i

would you be interested in developing these resources and collaborating with ASH to share with a wider audience?

Yes. In the right context, would be willing to share our grand rounds information.

Additional Data/Information (*optional*)

Rachael F. Grace, MD, Boston Children's Hospital, Dana-Farber/Boston Children's Cancer and Blood Disorders Center

Institution/Practice

Dana-Farber/Boston Children's Cancer and Blood Disorders Center

Brief Bio (*max one paragraph*):

I am an Assistant Professor of Pediatrics at Harvard Medical School and the medical director of the Boston Children's Outpatient Hematology Clinic and the Hematology Clinical Research program. In my role as director of the ambulatory hematology program, I am actively involved in following quality metrics and projects which aim to improve quality of care. My clinical work and research is focused entirely on non-malignant hematology. In 2012, I developed the pediatric Immune Thrombocytopenia (ITP) Consortium of North America (ICON), a group of 45 investigators and sites in North America focused on improving ITP care, for which Boston Children's Hospital is the data coordinating center. The consortium's studies have ranged from multicenter retrospective chart reviews, prospective observational studies, biobanking studies, to a randomized clinical trial. My other clinical and research focus is in rare hemolytic anemias. I developed the Pyruvate Kinase Deficiency Natural History Study (PKD NHS), open at >30 sites in North America and Europe, to improve our understanding of the range of symptoms, complications, monitoring, and treatment in PKD. The registry data have helped to inform the design of clinical trials in pyruvate kinase deficiency, including trials of an oral small molecule activator of

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Project Abstract

covering hematology who primarily see oncology patients or other types of non-malignant hematology patients and may also benefit from guidelines to decrease provider-specific variability in management. From a clinical practice perspective, the algorithm and the associated data forms can be used regardless of the size of the institution. Depending on the geography of individual practices and practice preferences, the guideline may need to be modified slightly to improve acceptability within various practices and institutions. From a quality perspective, if institutions work together, the smaller centers can be more certain that their care according to the algorithm is both safe and cost effective and they can be part of collaborative iterative changes. If institutions work alone, smaller centers may find that the algorithm is more of a clinical practice guideline