DGIM Project Summary

(1 page preferred, 2 pages maximum)
Name of Project: Human Diagnosis Project

Investigator(s). (Include phone numbers and email address, indicate PI and primary contact)
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Research question(s):
Can the online Human Dx platform impact physician diagnostic accuracy and confidence?

Brief Background/Significance:
Diagnostic errors (defined as missed, delayed, or wrong diagnoses) in primary care affect an estimated 1 in 20 U.S. adults every year. About half of these errors can lead to serious preventable harm, but few interventions have been developed and tested to reduce diagnostic errors in real-world primary care settings.1 In current usual practice, providers commonly diagnose patients independently, without collaboration or consultation with other health professionals or the use of health information technology (HIT), leading to increased risk of diagnostic errors. In its recent report on diagnostic errors, the National Academy of Medicine highlighted inter-provider collaboration and the development and utilization of health IT innovations in the diagnosis process as two key strategies essential to reducing diagnostic error in the ambulatory care setting.

The Human Diagnosis Project (Human Dx) is a web-based, mobile software that allows healthcare providers the combined insight of multiple doctors and machines on any given clinical case. Using the Human Dx software application, providers can 'check', or electronically consult on a case with multiple peers and receive a single, collective opinion within 12-24 hours. Although Human Dx has been shown to improve diagnostic accuracy, applying this innovative tool to improve patient safety will require 1) a scientific understanding of how it can be implemented in a real-world ambulatory care setting that provides care for high-risk populations, 2) evidence of its effectiveness in practice, and 3) a business case for providers and payers.

Inclusion/exclusion criteria (list)
Up to 26 physician participants will be enrolled in the study in the San Francisco Bay Area from different clinics, in which we have access to the medical health record.

Cases included for entry into the platform will follow the following criteria:
1) Patients with a new or unresolved ongoing symptom, laboratory or radiographic study abnormality,
2) The physician ordered a diagnostic test or empiric treatment,
3) The physician entered a new diagnosis in the medical record,
4) Physician submitted an eConsult for the case
5) Patient has returned 2 or more times with same complaint,
OR a case that is designated by the participating physician.

Method of contact/recruitment (be specific)
We will contact potential PCP participants via email and professional knowledge.

Benefits/burden for participants (clearly identify potential for harm)
Participants may experience embarrassment at discussing diagnosing difficult cases. There is a small risk that patient health information could be leaked.

Any benefits or burden to DGIM practitioners?
See above

Timeline for recruitment (projected start and stop dates)
Start: Early Sep (pending IRB approval for UCSF recruitment)
End: Dec 2018
Providers will participate for 4 to 8 weeks depending on clinic schedule. A participant with 5 clinics/week will participate for 4 weeks. Participant with 1 session/week will participate for 8 weeks. Those with clinic schedules in between 1 and 5 will be scaled from 4 to 8 weeks.

Funding source
Gordon and Betty Moore Foundation

Potential for DGIM collaborators? (We encourage DGIM resident and fellow involvement in particular)
We encourage residents to act as clinic scribes to enter cases into the platform.

Do you agree to notify us when recruitment is completed?
Yes

Date form completed: 8/30/18