SGIM Foundation
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«CLINICAL DECISION MODELS IN HOSPITAL AND OUTPATIENT CARE»

The award of CHF 50'000.-- is granted to the following project:

«Frequency of use an acceptability of clinical prediction rules for pulmonary embolism»

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Abstract

Background
Clinical prediction rules (CPRs) are tools that estimate the probability of a certain disease or outcome and thus help physicians improve their ability to make accurate diagnoses and prognoses. However, evidence suggests that even high-quality rules with proven impact on quality of care are underused in clinical practice. Various reasons may explain this phenomenon, including the complexity of the rule, insufficient support of rule use in medical centers, perceived superiority of clinical judgment, and perceived lack of benefit from rule use. All these factors determine whether a CPR is acceptable to physicians.

Several well validated CPRs exist in the field of pulmonary embolism (PE), including the Revised Geneva Score (RGS) and the Pulmonary Embolism Severity Index (PESI). The RGS estimates a patient's clinical pretest probability of PE, whereas the PESI identifies low-risk patients with confirmed PE who may be potential candidates for outpatient care. Both CPRs have been extensively validated and have undergone an impact analysis in a randomized trial. Medical societies, such as the European Society of Cardiology and the American College of Chest Physicians, recommend the use of these rules. In spite of this, the frequency of use, acceptability, and factors driving the use of the RGS and the PESI in clinical practice remain largely unexplored. The *broad objective* of this project is to evaluate the frequency of use, the acceptability, and what physician and hospital division factors drive the use of the RGS and the PESI among Swiss General Internal Medicine residents.

Aims
Our project has the following specific aims:
1) To assess the self-reported frequency of use of the RGS and PESI in clinical practice
2) To evaluate physician acceptability of the RGS and PESI using a validated questionnaire

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3) To explore physician and hospital characteristics that are associated with the use of the RGS and PESI in clinical practice

Methods
We will conduct an electronic survey in General Internal Medicine residents from five Swiss university and five large non-university teaching hospitals to evaluate the frequency of use and acceptability of the RGS and PESI in clinical practice. To assess the acceptability of the two rules, we will use the Ottawa Acceptability of Decision Rules Instrument (OADRI), a 12-item questionnaire that was specifically developed and validated to assess physician acceptability of a CPR. The OADRI covers key aspects of CPRs, such as rule characteristics, risk and benefit of use, face validity, and the impact of the working environment on rule use. For each item in the OADRI, physicians will indicate their level of agreement on a 6-point Likert scale. In addition, we will use logistic regression to explore what physician and hospital characteristics are associated with rule use.

Relevance for General Internal Medicine: Our proposal is the first study seeking to gain insight into the frequency of use and acceptability of two well-validated and recommended CPRs in Switzerland. If our study demonstrates a rule underuse, our results will help inform general internists and clinical investigators about potential barriers to rule acceptability and use. The next step will be to devise appropriate interventions to promote the utilization of the RGS and the PESI in General Internal Medicine to increase quality and efficiency of care in patients with suspected/confirmed PE.