The role of specific disease knowledge in counteracting bias in diagnostic reasoning

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Ethische beoordeling	Niet van toepassing
Status	Werving nog niet gestart
Type aandoening	-
Onderzoekstype	Interventie onderzoek

Samenvatting

ID

NL-OMON25411

Bron
NTR

Verkorte titel
KnowBias

Aandoening

Inflammatory bowel disease; Hyperthyroidism; Vitamin B12 deficiency; Addison’s disease; Acute appendicitis; Acute bacterial endocarditis

Ondersteuning

Primaire sponsor: Institute of Medical Education Research Rotterdam (iMERR) and Department of Internal Medicine, Erasmus Medical Center; Department of Psychology, Education and Child Studies, Erasmus University Rotterdam
Overige ondersteuning: Erasmus MC, iMERR

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

Frequency of wrong diagnoses induced by the bias

Toelichting onderzoek

Achtergrond van het onderzoek

Diagnostic errors have been attributed to flaws in physicians' reasoning associated with the use of heuristics. Experimental studies have provided evidence that the use of heuristics may eventually induce bias in reasoning, causing physicians to make diagnostic errors. However, this research suggests that among physicians at the same level of training some seem to be more susceptible to bias than others. The sources of these differences in ability to overcoming the influence of bias are unclear. The present study examines whether specific disease knowledge predicts susceptibility to bias in diagnostic reasoning. Physicians will diagnose the same set of clinical cases both under conditions that make them subjected to bias and not subjected to bias in a counterbalanced design. Physicians' knowledge of critical diagnostic features for the diseases presented in the cases will be evaluated and it will be analyzed whether differences in knowledge predict the frequency of bias-induced errors.

Doel van het onderzoek

Overall, diagnostic accuracy will be lower on subjected-to-bias than on not-subjected-to-bias cases, but the difference in accuracy will be smaller in the group of physicians with higher knowledge of critical diagnostic features.
Overall, the frequency of the wrong diagnoses induced by the bias will be higher on subjected-to-bias than on not-subjected-to-bias cases but lower in the higher-knowledge than in the lower-knowledge group.
Overall, physicians will spend more time to diagnose subjected-to-bias than not-subjected-to-bias cases.
Overall, the rating of confidence in the diagnosis will be lower on subjected-to-bias than on not-subjected-to-bias cases, but the difference will be lower in the higher-knowledge group.
Overall, the diagnosis triggered by the bias will be mentioned more frequently when physician recall which diagnoses they had considered on subjected-to-bias than on not-subjected-to-bias cases, without differences between the two knowledge groups.

Onderzoeksopzet

Outcomes measured in the knowledge evaluation phase and in the diagnostic performance phase, with 4-48 hours in between.

Onderzoeksproduct en/of interventie

Each clinical case will be manipulated to become either subjected to bias or not subjected to bias. Bias will be induced by adding to the case salient distracting features, findings that though irrelevant to the case tend to catch physicians' attention because they are strongly associated with a particular disease that seems at first glance a plausible diagnosis.

Contactpersonen

Publiek

Erasmus Medical Center
Silvia Mamede

+ 31 10 7038270

Wetenschappelijk

Erasmus Medical Center
Silvia Mamede

+ 31 10 7038270

Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

Residents in internal medicine or emergency medicine in hospitals in the Netherlands who have at least 1 year of clinical experience

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

Medical students; residents in internal medicine or emergency medicine with less than 1 year of clinical experience or from other specialties

Onderzoeksopzet

Opzet

Type:	Interventie onderzoek
Onderzoeksmodel:	Cross-over
Toewijzing:	Gerandomiseerd
Blindering:	Dubbelblind
Controle:	Geneesmiddel

Deelname

Nederland

Status:	Werving nog niet gestart
(Verwachte) startdatum:	15-12-2020
Aantal proefpersonen:	62
Type:	Verwachte startdatum

Voornemen beschikbaar stellen Individuele Patiënten Data (IPD)

Wordt de data na het onderzoek gedeeld: Nee

Ethische beoordeling

Niet van toepassing

Soort:	Niet van toepassing

Registraties

Opgevolgd door onderstaande (mogelijk meer actuele) registratie

Geen registraties gevonden.

Andere (mogelijk minder actuele) registraties in dit register

Geen registraties gevonden.

In overige registers

Register	ID
NTR-new	NL9119
Ander register	EC-DPECS Erasmus University Rotterdam : EC-DPECS 20-026

Resultaten