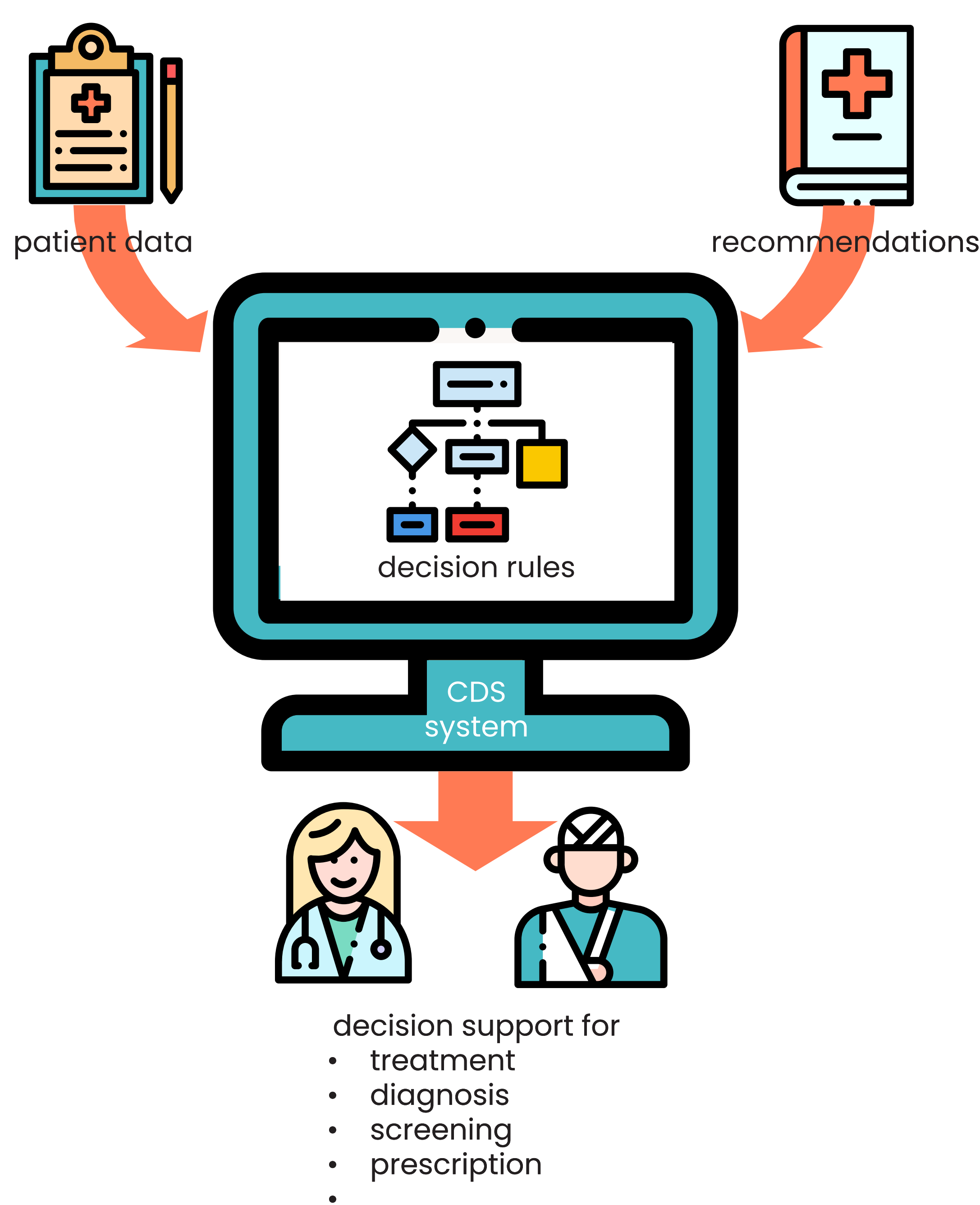


# Development of a tool to assess the trustworthiness of clinical decision support systems

**Clinical Decision Support (CDS) systems** support healthcare providers and their patients in the process of clinical decision-making. **Recommendations** from guidelines or non-guideline evidence-based practice (EBP) information are combined with **patient data** and converted into **clinical decision rules** to propose one or several patient tailored treatment options.

**Methods** A systematic search was executed in Medline to identify existing tools for evaluation of trustworthiness of decision rules. After critical appraisal, only one tool was selected for further use. A team of methodologists experienced in guideline and EBP-source assessment defined in consensus the criteria for ①, ② and ③ based on the retrieved tool and their own expertise.

## Evaluation of the trustworthiness of a CDS-system



- ① Evaluation of **the recommendations** used as source information
  - with validated instruments:
    - CAPOCI-tool for non-guideline EBP-info
    - AGREE II for guidelines
- ② Evaluation of the **methods** used to translate recommendations into decision rules
  - 3 criteria developed for evaluation of the evidence-to-decision process
- ③ Evaluation of the **decision rules**
  - GUIDES-checklist for evaluation of CDS-systems

**Conclusion** The developed criteria and procedure may support validation teams in the assessment of the trustworthiness of CDS-systems. It may also provide guidance to developers of CDS-systems and present an added value to an evidence based clinical decision-making process.