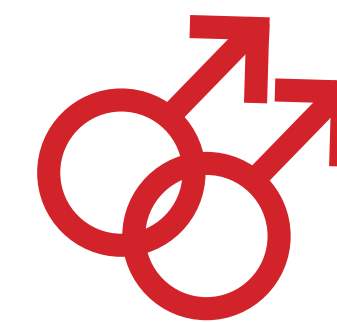


Evaluation of the HCV-MOSAIC risk score for identifying HIV-positive men who have sex with men at risk for Hepatitis C, at the STI clinic of Amsterdam



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Background

- Since the early 2000s, outbreaks of sexually transmitted Hepatitis C virus (HCV) infections have been reported among HIV-positive MSM.
- Early detection and treatment of infections to prevent further transmission.
- Development of the HCV-MOSAIC risk score to identify HIV-positive MSM at risk for HCV¹.
- In response to the increasing HCV prevalence, the sexually transmitted infection (STI) clinic in Amsterdam introduced routine HCV testing for HIV-positive MSM and implementation of the HCV-MOSAIC risk score alongside.

Objective

Evaluating the HCV testing policy by prospectively validating the HCV-MOSAIC risk score examining the HCV-MOSAIC risk score in daily practice exploring barriers and areas for improvement and make recommendation for further optimisation.



Method & Results

Interviews with nurses to assess acceptability and feasibility

Short and long-term nurses were asked about their experience incorporating the HCV-MOSAIC risk score questions into practice.

Assessing the effectiveness of the HCV-MOSAIC risk score

Determining the discriminative capacity by calculating the sensitivity and specificity.

Acceptability

Long-term nurses were **directly positive**, but the affective attitude of the short-term nurses shifted from **intense and perceived as personal** in the initial phase, to positive at time of the interviews.

The majority of the nurses mentioned that the questions **took them by surprise**.

The nurses **understand the risk score** and they find it a useful tool for doing a risk assessment.

The HCV-MOSAIC risk score also serves as a tool for creating **HCV risk awareness** and creates a possibility to talk about **risk reduction**.

Barriers of the HCV-MOSAIC risk score included, asking for information that is already known and having to ask even more questions.

Practicality of the risk score

By means of **preparing the client** on the intensity of the questions, all nurses introduce the risk score questions, mostly by explaining why these questions are asked.

The specific **content of the questions is not clear** to all nurses and not all questions are asked the way they are formulated.

Some **information is asked double** and most nurses already fill in the questions when information is known, or present in the patient file.

Overall, **clients do not remember** precisely when an HCV associated risk event took place or which specific STI they had, especially when it happened more than 6 months ago.

Figure: Receiver operating characteristics curve for the HCV-MOSAIC risk score in 578 consultation with HIV+ MSM

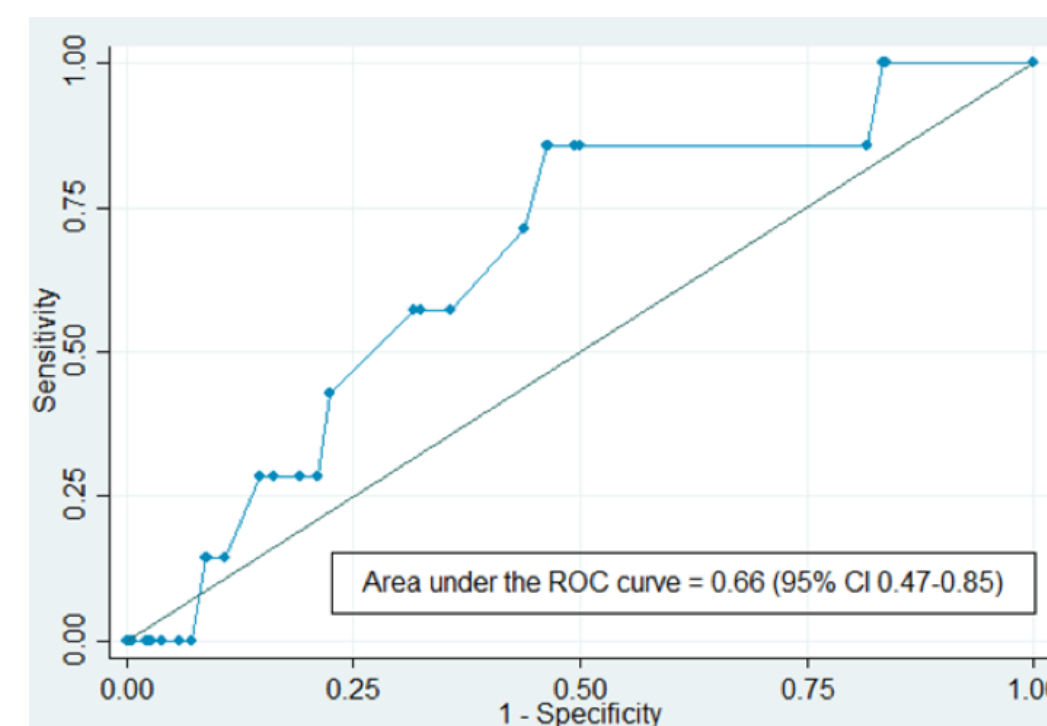


Table: Performance of the HCV-MOSAIC risk score among HIV-positive MSM

Performance measure using a cut-off of ≥ 2.0	Original HCV-MOSAIC risk score (95% CI)
Sensitivity	85.7% (48.7-97.4)
Specificity	53.6% (49.5-57.6)
Proportion to be tested ¹	46.9%

¹Proportion of all men with a risk score of ≥ 2

Conclusion

- First time prospective validation of the HCV-MOSAIC risk score, results are similar to the development study¹.
- The overall experience of the nurse with the HCV-MOSAIC risk score is positive and acceptability is high.
- However, the practicality of the questions seems far from optimal, and certain changes are deemed necessary

Discussion & Recommendation

- We would recommend to continue using the HCV-MOSAIC risk score when routine HCV screening of HIV+ MSM at the STI clinic.
- The HCV-MOSAIC risk score can detect 85% new HCV infections, lowering the number of MSM needed to be tested with 46.9%, saving test costs.
- Discrepancies in the formulation of the questions and recall bias can give unreliable answers, influencing the performance of the risk score.
- Risk score questions and answers need to be clarified to increase reliability and limit recall bias.