Sneak peek:
The CVD Prevention Mobile App

A Resource generated within the
ESC CVD Prevention Programme

Nicolle Kränkel
Guidelines on the prevention of CVD recommend the use of risk prediction tools for better risk stratification of individual patients.

Improves clinical outcomes and resources allocation.

CVD risk assessment in clinical practice across Europe is not adequate.

Simple risk assessment tools are warranted.

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**Table:**

<table>
<thead>
<tr>
<th>Case study themes</th>
<th>Country</th>
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<tbody>
<tr>
<td>Policies and guidelines</td>
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<tr>
<td>ESC prevention guidelines are endorsed</td>
<td>X</td>
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<tr>
<td>Also have national guidelines</td>
<td>X</td>
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<tr>
<td>Also have regional guidelines</td>
<td>X</td>
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<tr>
<td>The SCORE risk assessment tool is recommended</td>
<td>X</td>
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<tr>
<td>Alternative risk assessment tools in addition to instead of SCORE are also recommended</td>
<td>X</td>
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<tr>
<td>Financial incentive for risk assessment</td>
<td>X</td>
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<tr>
<td>Current practice</td>
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<tr>
<td>Risk assessment is primarily the responsibility of GPs</td>
<td>X</td>
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<td>and mostly takes places in primary care</td>
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<tr>
<td>CVD risk assessment is acceptable to patients</td>
<td>X</td>
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<tr>
<td>CVD risk assessment is targeted at specific population groups</td>
<td>X</td>
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<tr>
<td>Use of risk assessment is variable between health professionals, practices and regions and often is not frequently used</td>
<td>X</td>
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<tr>
<td>Risk assessment is often estimated based on risk factors rather than formally calculated</td>
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<tr>
<td>Treatment and secondary prevention are prioritized</td>
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<tr>
<td>There are mixed views regarding the acceptability of risk assessment tools for use in practice</td>
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<td>Barriers</td>
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<td>Time constraints and clinician workload</td>
<td>X</td>
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<td>Shortage/under-utilization of nurses</td>
<td>X</td>
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<tr>
<td>Funding for risk assessment and follow-up</td>
<td>X</td>
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<tr>
<td>Lack of re-imbursement of medicines prescribed for primary prevention</td>
<td>X</td>
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<tr>
<td>Lack of awareness of risk assessment among clinicians</td>
<td>X</td>
</tr>
<tr>
<td>Lack of awareness of risk assessment among patients</td>
<td>X</td>
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<tr>
<td>Facilitators</td>
<td></td>
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<tr>
<td>Simple risk assessment tools</td>
<td>X</td>
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<tr>
<td>Incorporation of risk assessment tools into electronic medical records</td>
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<tr>
<td>Calibration of risk assessment tools to national populations</td>
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<td>Flexibility in the setting for risk assessment</td>
<td>X</td>
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<td>Training for clinicians</td>
<td>X</td>
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<tr>
<td>Awareness raising activities</td>
<td>X</td>
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</tbody>
</table>

**Source:** Mossakowska TJ et al. Eur J Public Health 2018
Background: Usage of Risk Calculators

- Different cardiovascular risk algorithms are needed for different groups of patients
  - young patients
  - older patients
  - diabetic patients
  - high-risk patients

- Different geographic regions
  - Europe (SCORE)
  - UK (QRISK)
  - North America (pooled cohort equations)

- Different time frames/measures
  - 10-year risk
  - lifetime risk
  - heart age
Background: Usage of Risk Calculators

➢ Selection and endorsement of available risk calculators
https://doi.org/10.1177/2047487319846715

➢ Provide tables/charts for selection of risk calculators
www.escardio.org/cvd-prevention
**Aim:** To provide one easy-to-use interface
Creation of the app: Where we stand

- An agreement was made with the University of Utrecht for their involvement in developing the app following their creation of the U-Prevent website.
- Advisory Group and the EAPC Primary Care section helped refine the app functionalities and calculators:
  - The calculators SCORE, ASCVD, SMART, ADVANCE and Elderly will be available offline in the app.
  - The calculators SMART-REACH, DIAL, LIFE-CVD (Lifetime risk and treatment effect) will be available online and linked to from the app.
- EU regulation on medical devices meant investigation into possible certification was required, delaying the search for a supplier:
  - after consultancy: certification is not necessary.
- Supplier has been appointed and app production is being planned.
- Feedback/user testing by the EAPC primary care section during the development phase (usability in daily practice)
Creation of the App: Functional overview

- For 5 to 10 year risk:
  - SCORE, ASCVD, SMART, ADVANCE and Elderly
  - available offline within the app
- For lifetime risk:
  - SMART-REACH, DIAL, LIFE-CVD
  - available online via U-Prevent website
Creation of the App: Functional overview

Summary
- patient profile
- current risk
- possible risk reduction
- main advice
- (possibility to show patient-tailored advice, based on guidelines ?)

Resources
- Links to relevant European guidelines
- Link to website
- Relevant papers and other materials
- Explanation page on the different tools used in the app

About
- How to use the app
- Version of the app
- Scope of the development of the app
- Sponsors of the programme
- Contact details

Graphical reports
Option to email results and advice
Creation of the App: Future plans

➢ Target audience: Health Care Professionals
➢ Initially in English
➢ Planned launch: 2020
➢ Regular updates (new/updated ESC guidelines)

➢ Additional tools and functionalities considered for future releases:
  • Additional languages
  • Addition of additional calculators like Globorisk, Qrisk, WHO, MAGGIC
  • Inclusion of Heart Age as an output measure (to facilitate communication to the patient)
  • Inclusion other sub-populations (AF, HF, ...)
  • SCORE calibrated per country
  • Patient data storage
Thank you!

Special thanks to all the volunteers involved in this project!