

O0969 **The Infection Risk Scan (IRIS): standardization and transparency in infection control and antimicrobial use**

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Background: Infection control needs user-friendly standardized instruments to measure the compliance to guidelines and to implement targeted improvement actions. This abstract describes a tool to measure the quality of infection control and antimicrobial use, the Infection Risk Scan (IRIS). It has been applied in a hospital, several nursing homes and a rehabilitation clinic in the Netherlands.

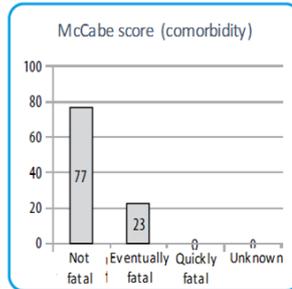
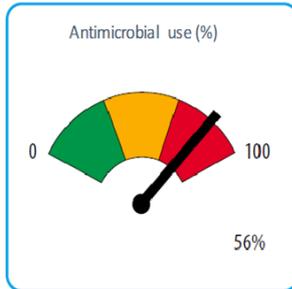
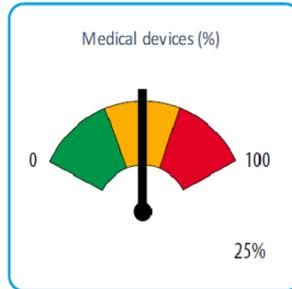
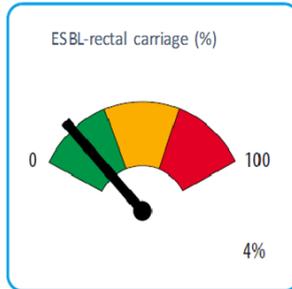
Materials/methods: The IRIS consists of multifactorial objective reproducible measurements, combining patient- and healthcare related variables, such as: hand hygiene compliance, environmental contamination using ATP measurements, prevalence of resistant microorganisms, availability of infection control preconditions, personal hygiene of healthcare workers, appropriate use of indwelling medical devices and of antimicrobials. Results are visualized in a risk profile, using speedometers and an improvement spider plot, using traffic light colors to facilitate the interpretation.

Results: The IRIS provided ward specific results within the hospital that were the basis for targeted improvement programs resulting in measurable improvements. Hand hygiene compliance increased from 43% to 66% (more than 1000 observations per IRIS, $p < 0.000$) and ATP levels were significantly reduced ($p < 0.000$). In the nursing homes, large differences were observed with environmental contamination as common denominator. Most remarkable were the difference in Extended Spectrum Beta-Lactamase Enterobacteriaceae (ESBL-E) prevalence (mean 11%, range 0-21%).

Conclusions: The bundle approach and visualization of the IRIS makes it a useful infection prevention tool providing standardization and transparency. Targeted interventions can be started based on the results of the improvement plot and the effect of interventions can be shown by repeated IRIS. In that way, a quality control cycle with continuous improvement can be achieved. We believe that the IRIS ensures standardization and transparency of infection control outcome and will bring the quality of care to a higher and more professional level. The next two years the IRIS will be implemented in nine hospitals, twenty nursing homes in the Dutch / Belgium border area.

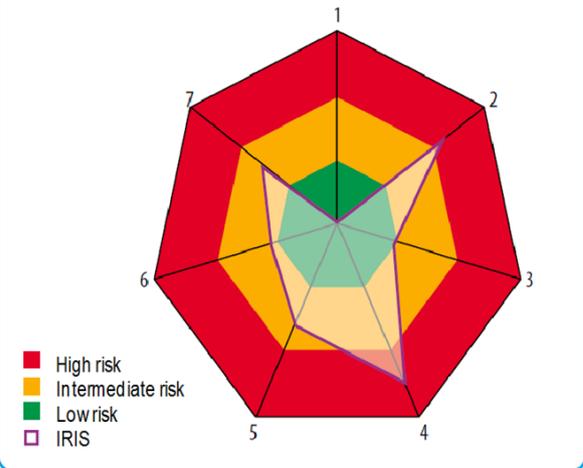
Figure 1: Example of the IRIS for hospitals. The left part of the figure shows the risk-profile, and the right part of the figure shows the improvement-plot.

Risk Profile



Improvement plot

- 1= transmission of ESBL# (%);
- 2= Inappropriate use of medical devices (%)
- 3= inappropriate use of antibiotics (%)
- 4= environmental contamination (score);
- 5= handhygiene non-compliance (%)
- 6= personal hygiene HCW[&]
- 7= preconditions infection control



#ESBL = Extended Spectrum Beta-Lactamase; &HCW = Healthcare Worker