

Cluster 1 -
Monitoring is going to
be...

personalized - wireless - predictive - automated - interoperable
modular - flexible - silent - integrated - analytical - portable
more efficient - intuitive - sustainable - reliable - user friendly

Cluster 2 -
A future alarm system...

- is wireless and provides situational awareness with minimal disruptive effect
- informs a responsible, capable and competent person (medical and nursing staff)
- knows that the recipient has registered the alarm
- is predictive and indicates what will happen if there is no/wrong reaction/intervention
- is action-guiding and designed to be human centered
- integrates and evaluates alarms from different systems

Cluster 3 -
What clinical questions
can be answered with
an ICU alarm dataset?

alarm fatigue - working atmosphere - alarm volume - measuring errors
data bundling on a user interface - automatic error analysis
impact on alarm events due to artifacts - patient's vigilance and orientation

Cluster 4 -
Necessary steps to
prepare an ICU alarm
database for a hackathon

- in-depth risk assessment needed
- scientific use file (age, gender, diagnosis, ZIP code) and correlation of e.g. vital signs to age
- statistical anonymization approach and synthesizing patients to add "additional fake data"
- for hackathon: using subset, making shifts, synthetic data
- pen-testing (internal/external) and safe harbour concept (BFAM)