Ethical vetting of group 1 project

AI for active drug disposal and monitoring
Aim of the project

• To contribute to the development of technical solutions to help the care-taking of nurses in a hospital environment. Specifically, an artificial intelligence (AI) was developed that can monitor and regulate the dose of painkillers for patients.
In short

- Software decision -> nurse decision
- Benchmark with cap value from doctor and bottom line from patient
Previous study

• 2:8 Describe previous experience (your own and/or others) of the procedure, technique or treatment used.

• The AI has been trained in an offline process on data collected in a previous experiment. In the offline training, the AI took the same decision as a trained medical doctor in 75% of the cases presented to the AI. In 20% of the other cases, doctors considered the dosage of the AI to lay within an acceptable range. In the remaining 5%, the dosage of the AI was too conservative. The AI never suggested a dangerous dosage for any patient.

• If it is similar to the real case, 75% workload of nurse might be saved.
<table>
<thead>
<tr>
<th>Reliability of the data</th>
<th>More effort to enlarge the sampling range, or regardless of reliability to get a quick result</th>
<th>Medical staffs</th>
<th>patients</th>
<th>Feeling is subjective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over dosage</td>
<td>Better results for software reliability, easy solution for all the problems with disrespecting patient health and trust</td>
<td>Cost efficient, Risk on bad reputation in long term</td>
<td>Burden reduced</td>
<td>Not what I want!</td>
</tr>
<tr>
<td>Under dosage</td>
<td></td>
<td>Medical staffs</td>
<td>patients</td>
<td>Potential risk on higher insurance cost</td>
</tr>
<tr>
<td>Usage of the data</td>
<td></td>
<td>Medical staffs</td>
<td>patients</td>
<td>Privacy might be violated by accidental exposure before data being anonymized</td>
</tr>
<tr>
<td>Using software for management</td>
<td>Fundings, and products, Responsibility on maintaining and frequent feedback and update</td>
<td>Cost efficient, Performance similar to real human, A good excuse to cut down the number of employees</td>
<td>Workload reduced, less job?</td>
<td>I don't care as long as it isn't worse than human</td>
</tr>
</tbody>
</table>
Minor questions

• 6. Presenting the results
• 6:3 In what manner will the right to integrity of those participating in the research be guaranteed when the material is made public or is published?
  • Names will be omitted, demographics will be assigned labels and ages will be divided into age ranges.

• Is age a part of demographics?
7. Reporting the financial circumstances and dependencies

7:3 Give an account of the interests of the entity principally responsible for the research, the principal researcher and of participating researchers

For the hospital the main interest is in reducing the need for nursing staff. For the researcher is to evaluate the performance of an AI when compared to a human. For the IT department is to showcase the research capability of the department
• In what conditions, is this software designed to be used?

• Any solution if there are no volunteers in such a cruel world?