**ASEP: Safe Hands**

**The Story of Semmelweis**
- Viennese obstetrician believed doctors were to blame for puerperal fever
- He monitored handwashing and scrubbing with a nail brush.
- The death rate dropped from 20% to 1%

<table>
<thead>
<tr>
<th></th>
<th>Doctor</th>
<th>Nurse</th>
<th>Auxiliary Staff</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Washed</td>
<td>104</td>
<td>237</td>
<td>184</td>
<td>49.6%</td>
</tr>
<tr>
<td>Didn't wash</td>
<td>126</td>
<td>231</td>
<td>176</td>
<td>50.4%</td>
</tr>
</tbody>
</table>

£1,000,000,000
The amount spent on hospital acquired infections each year

300,000
Patients acquire an infection whilst in hospital

9000
Deaths each year

- WHO has introduced a zero tolerance approach.
- Staff wash their hands half to a third as much as they should.
- Our priorities have become distorted, focussing on fear and unrealistic infections.

**Our Evidence: Newcastle upon Tyne Hospitals, UK**
Observational audit at two hospitals, monitoring who used the hand-gels when entering and leaving the wards

- Option 1: A motion sensor can detect when the gel is used, providing generic data about when usage.
- Option 2: Connecting hand gel dispenser to ID badges, monitoring individual handgel usage. Those not using the gel enter behavioural change programmes.

Data Analysis: Linking this data to a computer, provides statistics about when the gel is used, who is using it, and when the dispenser need to be refilled.

**About the Creator**
Jonathan Mayes is a 5th year medical student at Newcastle University with an interest in healthcare and technology. He has been working with the RiseUp Entrepreneurial Team to develop this idea. Funding has been received from Innovate UK and RiseUp Start-Up Awards. Contact him: j.w.mayes@newcastle.ac.uk or on Twitter: @MayesJ