A pilot, open labelled, RCT of hypertonic saline nasal irrigation and gargling for the common cold

ELVIS: The Edinburgh and Lothians’ Viral Intervention Study

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The need for a generic antiviral

- **The problem:**
  - Many types of viruses cause a common cold
  - There are no antivirals

- **We need a generic antiviral** that works against:
  - DNA / RNA viruses
  - Enveloped / non-enveloped viruses
The story

- Sore throat
  - Salt water gargles

- ENT surgery:
  - Nasal irrigation with Sodium Bicarbonate
  - Swapped NaCl

- Common cold
Supporting Literature

- Nasal Irrigation for a year in wood workers
  - Reduction in sore throat (p=0.009) & colds (p=0.03)
- Nebulised HTS in Cystic Fibrosis patients (bd)
  - Exacerbations reduced by 56% (P = 0.02)
- Nebulised HTS in Bronchiolitis: Being debated

Effect of salts on Mengo virus

<table>
<thead>
<tr>
<th>Diff. Sodium Salts</th>
<th>Diluent (150mM)</th>
<th>Virus $LD_{50}$ $-\log_{10}$</th>
<th>0’</th>
<th>120’</th>
</tr>
</thead>
<tbody>
<tr>
<td>NaCl</td>
<td></td>
<td></td>
<td>7.7</td>
<td>3.5</td>
</tr>
<tr>
<td>NaClO₄</td>
<td></td>
<td></td>
<td>8.4</td>
<td>7.5</td>
</tr>
<tr>
<td>NaNO₃</td>
<td></td>
<td></td>
<td>8.7</td>
<td>7.8</td>
</tr>
<tr>
<td>NaH₂PO₄</td>
<td></td>
<td></td>
<td>7.5</td>
<td>6.5</td>
</tr>
<tr>
<td>Na₂HPO₄</td>
<td></td>
<td></td>
<td>7.8</td>
<td>7.1</td>
</tr>
<tr>
<td>Na₂SO₄</td>
<td></td>
<td></td>
<td>7.8</td>
<td>7.2</td>
</tr>
<tr>
<td>Na formate</td>
<td></td>
<td></td>
<td>8.2</td>
<td>6.8</td>
</tr>
<tr>
<td>Na acetate</td>
<td></td>
<td></td>
<td>7.8</td>
<td>6.5</td>
</tr>
<tr>
<td>DW</td>
<td></td>
<td></td>
<td>8.3</td>
<td>7.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Diff. Chloride Salts</th>
<th>Diluent</th>
<th>Virus $LD_{50}$ $-\log_{10}$</th>
<th>0’</th>
<th>120’</th>
</tr>
</thead>
<tbody>
<tr>
<td>NaCl (150mM)</td>
<td></td>
<td></td>
<td>7.7</td>
<td>3.4</td>
</tr>
<tr>
<td>KCl (150mM)</td>
<td></td>
<td></td>
<td>8.0</td>
<td>3.5</td>
</tr>
<tr>
<td>MgCl₂ (75mM)</td>
<td></td>
<td></td>
<td>7.8</td>
<td>3.5</td>
</tr>
<tr>
<td>CaCl₂ (75mM)</td>
<td></td>
<td></td>
<td>7.1</td>
<td>3.5</td>
</tr>
<tr>
<td>DW</td>
<td></td>
<td></td>
<td>8.3</td>
<td>7.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Diff. Halide Salts</th>
<th>Diluent (150mM)</th>
<th>Virus $LD_{50}$ $-\log_{10}$</th>
<th>0’</th>
<th>120’</th>
</tr>
</thead>
<tbody>
<tr>
<td>NaF</td>
<td></td>
<td></td>
<td>8.3</td>
<td>7.4</td>
</tr>
<tr>
<td>NaCl</td>
<td></td>
<td></td>
<td>7.8</td>
<td>3.5</td>
</tr>
<tr>
<td>NaBr</td>
<td></td>
<td></td>
<td>7.6</td>
<td>3.6</td>
</tr>
<tr>
<td>NaI</td>
<td></td>
<td></td>
<td>7.7</td>
<td>4.5</td>
</tr>
<tr>
<td>NaSCN</td>
<td></td>
<td></td>
<td>7.0</td>
<td>6.5</td>
</tr>
<tr>
<td>DW</td>
<td></td>
<td></td>
<td>8.2</td>
<td>7.6</td>
</tr>
</tbody>
</table>

Fruit fly: Gut epithelial cells produce HOCl

- They took some bacteria and ground it up and added sugar to it.
- Fruit fly were fed the sweet solution containing the bacterial lysate.
- An hour later they cut open the fruit fly and stained the gut epithelium for HOCl.
- Bottom Right – Gut epithelial cells are fluorescing (i.e. producing HOCl).
- HOCl is the active ingredient in bleach!

Hypothesis

- Chloride salts (e.g. NaCl) can help suppress viral infection
- The suppression is mediated through increased HOCl production
- This antiviral mechanism can be used by the cell against different viruses
Effect of NaCl on eGFP HSV-1 in HeLa Cells

- Dose dependent reduction in viral replication
- HOCl production (as early as 2 hours)
DNA/RNA; enveloped/non-enveloped viruses inhibited:
Summary

- NaCl has a dose-dependent antiviral effect
- Antiviral effect is
  - Intracellular
  - Needs Chloride ion
  - Cl\(^-\) is converted to HOCl
  - If you block conversion of Cl\(^-\) to HOCl, viral inhibition is reversed
- Chloride salts can be a therapeutic antiviral agent
ELVIS: Aim & Outcome Measures

Primary outcome measure: What is the recruitment rate?

Secondary outcome measures:
- Compliance
- Acceptability
- Difference in duration of symptoms
- Difference in viral shedding
Sample Size

- Maximum of 80 participants
- Aimed to get feedback from ~30 participants / arm
- 27 per group: Can express proportion of those who return the symptom score diary & samples to within ±19%
- Based on a two-sided 95% CI around an expected proportion of 0.5
- Two groups combined (n= 54): Able to express proportion to within ±13%
- Allow for 10% dropouts: Sample size was increased to 30/arm
Inclusion

- >16 years
- URTI <48 hours of onset
- **Yes to:**
  - Do you have a cold? Or
  - Do you think you are coming down with a cold?
- **AND** Jackson Score of ≥2
  1. Nasal discharge
  2. Nasal obstruction
  3. Sneezing
  4. Sore throat
  5. Headache
  6. Malaise
  7. Chilliness
  8. Cough

At least one of the first four symptoms

Exclusion

- URTI >48 hours
- On antibiotics
- Pregnant
- Chronic conditions
- Immunosuppressed
- Allergic rhinitis
  - H/o allergy + eye/nose itching or sneezing
- Unable to perform HSNIG
- Taking part in another medical trial

28/03/2019
Both Groups

- **Consented & Randomisation (online):**
  - Minimisation by **Sex** and **Smoking Status**

- **Taught:**
  - To fill daily form (paper / online): (Max 14 days / until well for 2 days)
    - Wisconsin Upper Respiratory Symptom Survey – 21 (WURSS-21)
    - EQ-5D-5L Quality of Life
  - **Mid-Turbinate Swabs in eNAT medium (Copan, Italia):**
    - Shown a video
    - Baseline + 4 subsequent days
    - Specimen posted with Royal Mail Safeboxes

- Allowed over the counter medication
## Edinburgh and Lothians Viral Intervention Study

### Daily Form – Day 1

**Subject Number:**

**Daily Form – Day 1**

**Time:**

---

1. **How unwell do you feel today?**
   - Not unwell
   - Very mildly
   - Mildly
   - Moderately
   - Severely

   Once you have answered ‘not unwell’ for 2 consecutive days or for a maximum of 14 days you do not need to complete any further information on the daily form. Please go directly to the ‘End of study form’.

2. **Please rate the average severity of your cold symptoms over the last 24 hours for each symptom:**

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Not at all</th>
<th>Very mildly</th>
<th>Mildly</th>
<th>Moderately</th>
<th>Severely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Runny nose</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blocked (plugged) nose</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sneezing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sore throat</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scratchy throat</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cough</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Headache</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chest congestion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feeling tired</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. **Over the last 24 hours, how much has your cold interfered with your ability to:**

<table>
<thead>
<tr>
<th>Ability</th>
<th>Not at all</th>
<th>Very mildly</th>
<th>Mildly</th>
<th>Moderately</th>
<th>Severely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Think clearly</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sleep well</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breathe easily</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Walk, climb stairs, exercise</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accomplish daily activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work outside the home</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work inside the home</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interact with others</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use your personal life</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. **Compared to yesterday, I feel that my cold is:**

<table>
<thead>
<tr>
<th>Improvement</th>
<th>Not improved</th>
<th>The same</th>
<th>A little worse</th>
<th>Somewhat worse</th>
<th>Very much worse</th>
</tr>
</thead>
</table>

---

**Procedure – All:**

5a. Please note you are allowed to either blow or not blow your nose before nasal swab is collected. We just need to know the procedure you followed.

   Did you collect nasal swab?
   - Yes **O**
   - No **O**

   If Yes: Did you blow your nose prior to collecting nasal swab?
   - Yes **O**
   - No **O**

5b. If you performed the nasal irrigation procedure yesterday did you use the same concentration of solutions?

   Yes **O**
   - No **O**
   - Did not perform yesterday **O**

   If yes please go to Q9, if not:

   - How much salt you used? ______ grams
   - How much water have you used? ______ ml

6. **How many times have you performed the procedure in the last 24 hours?**

   0 1 2 3 4 5 6 7 8 9 10 11 12

7. **What techniques did you use?**

   - Irrigation + gargle **O**
   - Irrigation only **O**
   - Gargle only **O**
   - None **O**

---

**Procedure – Intervention arm only, controls please go to Q9:**

10. To help people say how good or bad their mental state is, we have drawn a scale (rather like a thermometer) on which the best state you can imagine is marked **00** and the worst state you can imagine is marked **100**.

   We would like you to indicate on this scale how good or bad your own mental state is today in your opinion. Please do this by drawing a line from the box below to whatever point on the scale indicates how good or bad your mental state is today.

---

**Your own mental state today**

---

**28/03/2019**

**NHS R&D 2019**

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**Daily Forms: Based on WURSS-21**

(2x “not unwell” OR 14 days max)
Intervention Arm

- Taught: (WWW.ELVISSTUDY.COM)
  - To prepare hypertonic saline solution
  - To perform Nasal Irrigation and Gargling
  - Number of times: Depending on symptoms

Amount of Salt in grams to be added to make different volumes of solution

<table>
<thead>
<tr>
<th>Bowl Size</th>
<th>3.0%</th>
<th>2.5%</th>
<th>2.0%</th>
<th>1.5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>100ml – Bowl</td>
<td>3g</td>
<td>2.5g</td>
<td>2g</td>
<td>1.5g</td>
</tr>
<tr>
<td>200ml – Bowl</td>
<td>6g</td>
<td>5g</td>
<td>4g</td>
<td>3g</td>
</tr>
<tr>
<td>500ml – Flask</td>
<td>15g</td>
<td>12.5g</td>
<td>10g</td>
<td>7.5g</td>
</tr>
</tbody>
</table>
How to prepare and perform HSNIG:

Please visit


for instructions and videos.
CONSORT 2010 FLOW DIAGRAM

ENROLLMENT
Assessed for eligibility (n=171)

Excluded (n=103)
- Not meeting inclusion criteria (n=80)
- Declined to participate (n=15)
- Other reasons (i.e. unable to attend within 48 hours (n=8)

Randomized (n=68)

Allocated to Intervention (n=33)
- Received allocated intervention (n=32)
- Did not receive allocated intervention (Declined to perform HSNIG) (n=1)

Allocated to Control (n=35)
- Removed (Was on antibiotics) (n=1)

Analysis
Analysed (n=31)

Follow-Up

Lost to follow-up (n=2)
- Did not return daily form (n=2)
- Did not return swabs (n=4)
- Did not return end of study form (n=4)
Discontinued intervention (n=0)

Lost to follow-up (n=3)
- Did not return daily form (n=3)
- Did not return swabs (n=3)
- Did not return end of study form (n=5)

Analysis
Analysed (n=31)
### Baseline Characteristics

#### Similar

<table>
<thead>
<tr>
<th></th>
<th>Intervention</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Randomised</strong></td>
<td>32</td>
<td>34</td>
</tr>
<tr>
<td><strong>Sex - F</strong></td>
<td>24</td>
<td>25</td>
</tr>
<tr>
<td><strong>Non/Ex-Smokers</strong></td>
<td>31</td>
<td>31</td>
</tr>
<tr>
<td><strong>&gt;1 adults at home</strong></td>
<td>26</td>
<td>29</td>
</tr>
<tr>
<td><strong>No kids at home</strong></td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td><strong>Nobody sick before them</strong></td>
<td>19</td>
<td>21</td>
</tr>
<tr>
<td><strong>Full time employment</strong></td>
<td>20</td>
<td>21</td>
</tr>
<tr>
<td><strong>Part time employment</strong></td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td><strong>Full time education</strong></td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

#### Mean and SD

<table>
<thead>
<tr>
<th></th>
<th>Intervention</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td>34.6</td>
<td>39.4</td>
</tr>
<tr>
<td><strong>WURSS-21 Scot Score</strong></td>
<td>65.9</td>
<td>63.7</td>
</tr>
<tr>
<td><strong>EQ-VAS (QoL score)</strong></td>
<td>41.6</td>
<td>43.9</td>
</tr>
</tbody>
</table>

#### Preference

<table>
<thead>
<tr>
<th></th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Feedback</strong></td>
<td>75 / 25</td>
</tr>
<tr>
<td><strong>Hypertonic saline concentration</strong></td>
<td>3.0% / 2.5% / 2.0%</td>
</tr>
</tbody>
</table>
Intervention arm: Well 2 days earlier:

- Diary from 61 participants
  - 5 – Did not reach end point on day 14
  - 11 – Stopped before scoring 0 for 2 days
    - 8 – Scored 0 on last day
    - 2 – Scored 1 on last day
    - 1 – Scored 6 on last day

### Days

<table>
<thead>
<tr>
<th></th>
<th>Intervention n=30</th>
<th>Control n=31</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>6.8</td>
<td>8.7</td>
<td>0.012</td>
</tr>
<tr>
<td>SD</td>
<td>2.2</td>
<td>3.3</td>
<td></td>
</tr>
</tbody>
</table>

28/03/2019  NHS R&D 2019
Days to clear symptoms:

- Runny Nose: Mean days = 6.7, p=0.01
- Blocked Nose: Mean days = 8.5
- Sore throat: Mean days = 5.1, p=0.09
- Sneezing: Mean days = 7.3, p=0.02
- Scratchy throat: Mean days = 6.3
- Cough: Mean days = 4.9, p=0.003
Days to clear symptoms:

- Mean days = 6.5
- Mean days = 4.8
- Mean days = 7.9
- Mean days = 6.4
- Mean days = 5.2
- Mean days = 4.4

- p=0.02
- p=0.64
- p=0.06

- Median (IQR) days of HSNIG= 5 (3,6)
- Median (IQR) n/day = 2 (2,3)
Feedback from participants

<table>
<thead>
<tr>
<th></th>
<th>Intervention</th>
<th>Control</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>n=28</strong></td>
<td><strong>n=29</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time off work</td>
<td>3</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>3 days off work</td>
<td>0</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td><strong>Medication</strong> for URTI</td>
<td>14</td>
<td>25</td>
<td>0.004</td>
</tr>
<tr>
<td>Symptoms after participant</td>
<td>8</td>
<td>19</td>
<td>0.005</td>
</tr>
</tbody>
</table>
## HSNIG – Feedback:

<table>
<thead>
<tr>
<th>Preparation of solution</th>
<th>n=28</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flask</td>
<td>24</td>
<td>86</td>
</tr>
<tr>
<td>Easy</td>
<td>28</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Procedure</th>
<th>n=28</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small bowl</td>
<td>21</td>
<td>75</td>
</tr>
<tr>
<td>Comfortable</td>
<td>11</td>
<td>39</td>
</tr>
<tr>
<td>Moderately comfortable</td>
<td>14</td>
<td>50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cleaning</th>
<th>n=28</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easy</td>
<td>27</td>
<td>96</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Outside home</th>
<th>n=28</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easy</td>
<td>8</td>
<td>28</td>
</tr>
<tr>
<td>Moderately Easy</td>
<td>11</td>
<td>39</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Carrying</th>
<th>n=28</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easy</td>
<td>16</td>
<td>57</td>
</tr>
<tr>
<td>Moderately easy</td>
<td>7</td>
<td>25</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>On the whole</th>
<th>n=28</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convenient</td>
<td>11</td>
<td>40</td>
</tr>
<tr>
<td>Moderately convenient</td>
<td>14</td>
<td>50</td>
</tr>
</tbody>
</table>

### Did HSNIG make a difference
- Yes: 26 (93%)
- Likely: 17 (61%)
- Undecided: 7 (25%)
- Unlikely: 4 (15%)

### Will you use procedure?
- Likely: 24 (86%)
- Undecided: 2 (7%)
- Unlikely: 2 (7%)

### If more convenient
- Likely: 24 (86%)
- Undecided: 2 (7%)
- Unlikely: 2 (7%)

### As a preventative measure
- Likely: 6 (21%)
- Undecided: 2 (7%)
- Unlikely: 20 (72%)
Virology

- 18 – No virus identified
- 44 – One virus
- 4 – Two viruses identified
  - 3 – Rhinovirus + enterovirus,
    - 1 – Confirmed
    - 1 – No followup
  - 1 – Rhinovirus + Coronavirus OC43

<table>
<thead>
<tr>
<th></th>
<th>Intervention</th>
<th></th>
<th>Control</th>
<th></th>
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<td>%</td>
<td>n=34</td>
<td>%</td>
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<tr>
<td>Rhinovirus</td>
<td>15</td>
<td>47</td>
<td>13</td>
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<td>All Coronaviruses</td>
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<td>22</td>
<td>8</td>
<td>24</td>
</tr>
<tr>
<td>Coronavirus 229E</td>
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<td>9</td>
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<td>0</td>
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<tr>
<td>Coronavirus OC43</td>
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<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Coronavirus HKU1</td>
<td>3</td>
<td>9</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>Coronavirus NL63</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>6</td>
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<tr>
<td>Influenza A</td>
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<td>3</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Respiratory syncytial virus</td>
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<td>3</td>
<td>1</td>
<td>3</td>
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<tr>
<td>Parainfluenza virus-3</td>
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<td>6</td>
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<td>0</td>
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<tr>
<td>Enterovirus</td>
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<td>6</td>
<td>1</td>
<td>3</td>
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28/03/2019

NHS R&D 2019
Symptoms, Irrigation Vs Viral shedding:
Symptoms, Irrigation Vs Viral shedding:

28/03/2019 NHS R&D 2019

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Symptoms, Irrigation Vs Viral shedding:

28/03/2019

NHS R&D 2019
Reduction in Viral Shedding:

- The mean inter-assay variation for the Day 0 sample was $0.21 \log_{10}$ (SD = 1.17)
  - A reducing trend in viral shedding was seen on days HSNIG was done in 20 individuals.
  - Among these viral shedding increased after HSNIG was stopped in 8/20 (40%)
  - Two participants restarted HSNIG (1 with an increase in viral shedding)

- **Fall in viral shedding by $\geq 0.5 \log_{10}$/day:**
  - Intervention arm 73% [n=16/22]
  - Control arm 43% [n=9/21]
  - Difference -30%, 95% CI for difference in proportion (-58, -2) ($p=0.038$)
Conclusions:

<table>
<thead>
<tr>
<th>Outcome measures</th>
<th>Our findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are we able to recruit and retain participants?</td>
<td>Yes</td>
</tr>
<tr>
<td>Is procedure acceptable?</td>
<td>Yes</td>
</tr>
<tr>
<td>Is there a difference in the quality of life?</td>
<td>Less Medication</td>
</tr>
<tr>
<td>Is there a Reduction in Duration of symptoms?</td>
<td>By 2 days</td>
</tr>
<tr>
<td>Is there a Reduction in Viral Shedding?</td>
<td>Yes + Less transmission</td>
</tr>
</tbody>
</table>

Time for a larger study with efficacy end points
ELVIS Kids in children (n=480):

We are looking for children who are healthy at the moment or have caught a cold in the last day to take part.

If you’d like to find out more go to:
www.elviskids.co.uk
or contact the ELVIS Kids study nurse on 07973 657457

Families completing the study will receive a £30 voucher to compensate for any inconvenience.

The average child gets 12 colds a year and the symptoms can last two weeks or more. There is no cure!

This usually means a lot of lost sleep, days away from nursery or school (and work for adults in the family).

The Children’s Hospital in Edinburgh are doing a study to see if using salt water nose drops helps children recover more quickly and less likely to pass on the cold to others.

You can sign up at any time to take part during your child’s next cold.

You only need to attend one appointment to sign up. Your child doesn’t have to attend.

Do you have a child under 7 years of age?

We need your help!

If you’d like to find out more go to:
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or contact the ELVIS Kids study nurse on 07973 657457

Families completing the study will receive a £30 voucher to compensate for any inconvenience.

Fed up catching colds?

The average child gets 12 colds a year and the symptoms can last two weeks or more. There is no cure!

The Children’s Hospital in Edinburgh are doing a study to see if using salt water nose drops helps children recover more quickly and less likely to pass on the cold to others.

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Midlothian Council

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Ethics Committee

Lothian GP’s

Participants

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Copan Italia – Santina Castriciano

Butterfly Films - Ryan

Edinburgh Clinical Trials Unit – Allan Walker and David Buchanan

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