The effects of tele-consultation between discharged patients with COPD and a Hospital based nurse

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Background
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• Health system under pressure - elderly patients with chronic diseases as COPD
• COPD exacerbations constitute a heavy patient and societal burden
• Telemedicine consultation might be a solution
• Lack of insight into the effects of teleconsultations
Aim

Method
Objectives

To investigate the effects of real-time telemedicine video-consultation between hospital-based nurses and discharged patients with Chronic Obstructive Pulmonary Disease (COPD) with focus on readmission, mortality, economics, users perception and experience.
Method

✓ Intervention study with 100 patients
✓ Randomized Clinical Trial (RCT) with 266 patient – assigned 1:1 at two different Hospitals
✓ Questionnaire study
✓ Qualitative post-phenomenological analyse of empirical data from fieldwork
➢ Health economic analysis
Participants

• Patients discharged after admission with acute exacerbation of COPD (subacute)
• > 40 years of age (>70 years)
• Without very severe co-morbidity (most had co-morbidity)
• Gave informed consent
Teleconsultation

• Within 24 hours after discharge/1 week
• Daily real-time video consultation
• ½ hour per consultation
• Structured nursing
• Measurements
• Education
RCT results
<table>
<thead>
<tr>
<th>Results</th>
<th>Conventional (CT)</th>
<th>Tele-consultation (TVC)</th>
<th>Difference between groups</th>
<th>p-values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total readmissions</td>
<td>1.56</td>
<td>1.42</td>
<td>0.14</td>
<td>0.62</td>
</tr>
<tr>
<td>Total readmission days</td>
<td>6.37</td>
<td>4.94</td>
<td>1.43</td>
<td>0.24</td>
</tr>
<tr>
<td>Acute Ex. COPD readmissions</td>
<td>1.28</td>
<td>1.22</td>
<td>0.06</td>
<td>0.82</td>
</tr>
<tr>
<td>Acute Ex. COPD readmission days</td>
<td>5.16</td>
<td>3.88</td>
<td>1.29</td>
<td>0.23</td>
</tr>
</tbody>
</table>
Questionnaire
<table>
<thead>
<tr>
<th>Patient satisfaction</th>
<th>Yes</th>
<th>No</th>
<th>?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients felt more safe or safe with discharge</td>
<td>76</td>
<td>7</td>
<td>17</td>
</tr>
<tr>
<td>Used the equipment without help from anyone*</td>
<td>83</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>Could easily or with little difficulty make the TVC measurements work</td>
<td>98</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>The measurements made the patients feel more safe or no difference</td>
<td>93</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Found the number of consultations suitable**</td>
<td>88</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Will recommend that the TVC should be the usual care</td>
<td>95</td>
<td>0</td>
<td>5</td>
</tr>
</tbody>
</table>

*5 % some times with help; **5 % wants more consultations; ***20 % preferred both telemedicine and telephone calls
Qualitative findings
User aspects

Media training and education is required—it is a different kind of care, so it is important with education.

It is important to make sure that the patients data is kept secret, so a Safe and secure internet line is required.

It is elderly patients who is not familiar with technology, so it is important that the Telemedicine equipment is easily accessible.
Easily accessible

“It just works!

I press the button and we are connected”.
Both the patients and the nurses mentioned that it is important with (a feeling of) eye contact.

*It is a different kind of care, which is, as a nurse put it a more direct – a more intense communication between me and the other person on the screen*. And because you can’t use all your senses it is a very observant and communicative kind of care. Where you strengthen some of your other senses like the sight and listening and the communication.
The patients got a more active role in their own care and treatment and measure their own vital data and that seem to have empowered the patients.

It has shown that it is possible to create a close relation between the patients and the nurses through the screen. There seem to be a proximity - as one patient put it:

It is, of course important, that it is a secure way to give and to receive care for both the patients and the nurses.
“When she talks to me
I know I am in focus. And only me.
And that's probably what makes me
feel more safe. It must be that.
Sometimes I even forget the illness I
have and I just think we are two normal
people having a normal conversation”.

Conclusion
Conclusion

✓ Possible to use teleconsultation for patients with severe to very severe COPD. Patients likes and they want teleconsultation
✓ Not significant reduction in readmissions and mortality
✓ High technical functionality and usability is required-evaluate
✓ It seems that teleconsultations is a Qualified care – where there seems to be a certain kind of Digital proximity
✓ Changed the nurse’s professional role to be a manager of care
✓ The patient’s role changed to be more active and the patients seems to be empowered
✓ Now a running service – and other teleservices has been implemented
Questions