

COPD competencies. The study's observations revealed that municipal nurses were struggling when assessing patient data, as this new task required specialised, in-depth knowledge about COPD. Telecare was found to have forced the municipal nurses into specialist roles formerly belonging to hospital nurses.

The new requirements of these specialist roles affected the nurses' collaboration with GPs, as they required increased support from GPs for the legitimacy of their data assessment. The result was more intense collaboration between municipal nurses and GPs due to the significant increase of queries from municipal nurses. Moreover, collaboration itself became more professional because, through the use of telecare, the inquiries of the municipal nurses were more precisely formulated and supported by comprehensive knowledge and information regarding patients' conditions. One GP expressed how collaboration was professionalized as a result of telecare of the collaboration as follows:

"The municipal nurses can now deliver certain interesting observations of patients which I find useful. So, yes, telecare supports our collaboration."

The positive perception of collaboration after the implementation of telecare also resonated in the municipalities, as explained by a municipal nurse:

"Now I communicate more and better with the GPs because our communication has more substance than before. I get more professional inputs, which I would not have gotten from another nurse. So, yeah, I really appreciate it."

In several cases, intensified collaboration was recognised as a way of increasing quality of treatment for the involved COPD patients.

Collaborative efforts in relation to telecare were initiated solely by the municipal nurses, who were highly dependent on the GPs' medical expertise. From the GPs' perspective, they could solve tasks independently of the nurses, and furthermore, felt no obligation to collaborate with the nurses. This asymmetrical dependency left the municipal nurses in a vulnerable position, leading to frustrations with GPs that were unwilling to collaborate. Despite the seemingly subordinate position of the municipal nurses, however, they were able to challenge the GPs' position and authority in the decision-making process due to their newly gained knowledge about COPD and the patients' conditions which was gained through telecare.

Both the nurses and the GPs articulated underlying issues of interprofessional tension in the interviews and observations. The GPs expressed that the municipal nurses were controlling their work and questioning their decisions about the treatment of the COPD patients. Consequently, they felt that the municipal nurses were infringing upon their professional domain. As for the municipal nurses, they expressed a similar sentiment, though in a slightly different way. Some of the nurses had

experiences with GPs that suddenly became hostile and very protective of their status as clinical decision-makers. One of the nurses explained this hostility:

"I suggested another self-treatment plan to one of the GPs and this annoyed the GP. She wouldn't comply with my suggestion because, she said, 'I have the clinical knowledge and expertise in this field. I'm in charge and I decide how this patient is treated'. It was like she wanted to put me in my place."

The majority of the municipal nurses also spoke about how their new knowledge gave them greater influence in relation to the GPs in terms of treatment and in the clinical decision-making process. Regardless of these underlying issues and asymmetrical dependency relations, however, telecare supported the interorganisational collaboration between municipal nurses and GPs within the primary health sector by making the collaboration more professional.

### ***Collaboration between the Primary and Secondary Health Sectors***

In general, collaboration facilitated by telecare services among health care professionals from hospitals in the secondary health sector and the municipalities and GPs of the primary health sector was very restricted. The interviewed health care professionals from each of these areas characterised cross-sector collaboration as weak or non-existent. One hospital nurse discussed the weak ties between her and the GPs:

"I haven't been collaborating with the GPs at all in relation to telecare. (...) Actually, I don't find it necessary to collaborate more extensively with them. If they refer a patient to hospital treatment, well, then the referral is enough communication for us. What else do we need to collaborate about? So, our collaboration with the GPs can be characterised as non-existent."

No interdependencies between hospital nurses and GPs were acknowledged by all interviewees. Similarly, the lung physicians, for example, did not express any dependency on the GPs or the increased need for collaboration. In line with this statement from the hospital nurses nearly every GP was surprised to hear that the hospitals were a part of this programme even though it had been implemented for nearly six months at the time they were first interviewed. This clearly exemplified the non-existent collaboration between the hospitals and GPs. Similar to the hospital staff, none of the GPs expressed a need for greater or extended collaboration.

At the municipalities, the need for interorganisational collaboration with the hospitals was more pronounced. The municipal nurses expected better information flow and knowledge exchange with hospital staff to be one of the goals of telecare. However, these expectations were not met, as one of the municipal nurses explained: