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How can eHealth benefit rural areas ? A literature study from Norway

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Problems adressed:

- If and how can telemedicine substitute, supplement and possibly strengthen the distribution of health care services in rural areas?
- How does local inhabitants use and look upon the solutions?
- How can eHealth counteract out-migration from rural areas?



How can eHealth benefit rural areas - a literature overview from Norway

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RESULTS – THE NORWEGIAN REPORT

I: Telemedicine for specialised medical services

II: Telemedicine for home based care

III: Internet and e-mail based solutions for patient self help

IV: Videoconference for distant teaching and cooperation

V: Electronic messages and patient record systems



I: Telemedicine for specialised services

- **Radiology:** less travelling, reduced staff meetings, shorter response time – satisfied patients & cost effective - good rural policy ...
- **Dermatology:** diagnosis given earlier, less need for patient leave work, better select before referring, skill enhancement of staff – and cost effective
- **Emergency service:** reduces time before *percutaneous coronary intervention*, goes directly to correct hospital ...
Between *emergency teams*: critical decisions made quicker - competence upgrading
- **Diabetes care:** *fundus photography* – easier accessibility (patient satisfaction), cost effective ... *bloodsugar readings from the childrens cellphone*: confidence ...
- **Dialysis care:** replaces communication previously via telephone and paper ... advice given with greater confidence ...
- **Hart murmur:** reduces patient travel, less time consuming, can be used on other rare medical contidions ...



II: Telemedicine for home based care

"Sesam Tromsø":

A telemedicine assisted wound clinic (sore treatment): discharge letters and lab. results sent electronic - nurses in municipality communicated with hospital transferring images and text:

time saved in general - electronic discharge letters is received earlier than in traditional practice ...

"Healthcare@home":

training and follow-up of patients with diabetes and chronic lung disease: patients use their own TV-set to communicate with helpers – high patient satisfaction ...



III: Internet and e-mail based solutions for empowerment

Self-help in psychiatry:

- gives more openness concerning psychological problems ...
- an important supplement to traditional therapeutic service ...
- easier to discuss sensitive problems online ...
- most patients confident ...

Message exchange between patient and physician:

- replaces some consultations and telephone inquiries ...
- patients and doctors were both positive to this mode of communication ...
- patients report benefit through greater self help ability ...



IV: Videoconference facilities for distant teaching and cooperation

Videoconference based cooperation in rural psychiatry:

- saved travel costs for the regional psychiatric team ...
- “early intervention” meetings that were easy to organise ...

Dental surgery education program on distance:

- students attending at remote location the same learning benefit as compared to traditional “face-to-face” education ...
- but - videoconference somewhat more challenging than the traditional way ...
- participants felt professionally challenged in a positive way ...



V: Electronic messages and patient record systems

- more correct and updated patients journal ...
- released secretarial resources for other tasks - have been delegated more interesting tasks ...
- faster and completed exchange of information, which in turn leads to faster follow-up of patients - in relation to time spent on the telephone and for filling out forms ...
- institutions avoid duplicating tasks due to less error in medical documentation ...
- But: there is still a way to go on integration between EPR and other documents –
In regard to volume the greatest potential lies on integration between referrals and discharge letters and EPR ...



Concluding remarks ...

- Access to healthcare is important for residents in rural areas
- Professionals feel more secure when supported by eHealth systems that facilitate second opinion from colleagues
- But the development and implementation of eHealth solutions is still in an emerging phase

Conclusion:

- eHealth is a relevant factor in counteracting out-migration !

