

## Photo and video referral in the future Emergency Department ?

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**Background:** In the Danish health system, photo/video contact has been successfully utilized in the telemedicine treatment of patients. In the Sjælland Region patient referrals to the Emergency Department are based on telephone conversations with a Registered Nurse. Holbæk Emergency Department initiated a pilot study in 2019 with the objective of investigating the feasibility and potential of using photo/video as a tool in future referrals. Our hypothesis is that it can improve the referral process.

**Methods:** The pilot study is retrospective and the approach deductive. The inclusion criteria is patients with lacerations who have been referred to the Emergency Department (ED) from the Acute Phone. 12 patients participated and consented to having photos taken of their laceration on the arrival to the ED. Twenty-five experienced Registered Nurses from the 4 Acute Phone sites in the Sjælland Region participated. The study design is based on a control group and an investigation group. The control group is the 12 patient referrals to the ED based on the conversation on the Acute Phone. The investigation group is the 300 patient referrals provided by the retrospective review of the 12 patient photos by 25 Registered Nurses. In retrospective review the Registered Nurses either refer to the ED or own home treatment. The validation of referral with photo is investigated by measuring the congruity of the referrals in the investigation group. The potential is shown by comparing the referrals in the two groups.

**Results:** Out of 300 photo referrals, the congruity of the Registered Nurses' referrals shows an agreement of 95% and a deviation of 5%, which shows the validity. 4 out of 12 patients with lacerations would have been referred to home treatment in the investigation group, with a referral agreement of 93%. While all 12 patients as the control group were referred to the Emergency Department.

**Conclusion:** The results point towards a future process including photo/video contact, which will improve the ability of Registered Nurses' to provide appropriate referral and treatment instructions, and increase the number of patients referred to home treatment. Implementation of video contact on the Acute Phone starting January 2020, rolling out regionally in 2021.