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TINKERING WITH VULNERABILITY IN VIDEO CONSULTATION ENCOUNTERS IN DANISH GENERAL PRACTICE

by Johannes Van den Heuvel, Elisabeth Assing Hvidt, Janus Laust Thomsen & Camilla Hoffmann Merrild

Video consultations constitute an emerging technology in Danish general practice, offering new ways for physicians and patients to interact. Previous studies have shown video consultations to be time-efficient and revealed experiences of social and emotional distance between patients and physicians, potentially affecting their ability to address vulnerable issues. In this article, we explore the relationship between vulnerability and video consultation use through the lens of science and technology studies (STS). From this perspective, vulnerability is an enacted property that emerges and evolves through interactions between actors, i.e., within the network between patients, technology, and general practitioners (GPs). This is explored through ethnographic observation of video consultations in ten general practices across Denmark. We present four cases of video consultations to show how vulnerability is enacted within these encounters and to illustrate how its dynamic nature can be "tinkered with", i.e., adjusted and modified, through technology-mediated assemblages such as video consultations.

Keywords: Video consultations, telehealth, general practice, vulnerability, STS, care.

Author: Johannes Van den Heuvel, Postdoc,
Center for General Practice at Aalborg University and Department of Clinical Medicine, Aalborg University
Copenhagen Academy for Medical Education and Simulation (CAMES), Copenhagen, Denmark

Elisabeth Assing Hvidt, Associate Professor,
Department of Public Health, Research Unit of General Practice, University of southern Denmark

Janus Laust Thomsen, Clinical Professor,
Center for General Practice at Aalborg University and Department of Clinical Medicine, Aalborg University

Camilla Hoffmann Merrild, Associate Professor,
Center for General Practice at Aalborg University and Department of Clinical Medicine, Aalborg University

Introduction

Danish general practice and use of video consultations

In Danish general practice, as well as in general practice systems in the UK, the Netherlands, and Norway, patients are listed with a specific general practice clinic to ensure the continuity of care (Olsen et al., 2016), which has been shown to affect the patient's health conditions positively (Sandvik et al., 2022). As general practice is the gateway to the Danish healthcare system, there is a vast variation in reasons for contacts and patient needs. As in most Nordic countries, video consultations are a relatively new practice (Norberg et al., 2023; Persson et al., 2025). In Danish general practice, video consultation was implemented at the beginning of 2020 to prevent the spread of Covid-19 (Danske Regioner, 2020). Promoting video consultations from a temporary emergency tool to a more permanent option, video consultations were included in the collective agreement between The Danish Organization of General Practitioners (PLO) and the Danish regions (PLO & RLTN, 2022). According to the collective agreement, all GPs must provide video consultations as a service to patients from 2025 onwards (PLO & RLTN, 2022). However, following an initial rise in video consultation use during the pandemic, use rates have declined and are only slowly increasing again, with 1.4% of all patient contacts to general practice now video consultations (Jessen, 2025). The implementation of video consultations in general practice has given rise to reflections on how responsible care is provided and how so-called vulnerable patients (or patient groups) are met (Assing Hvidt et al., 2025; Grīnfelde, 2022), given that video consultations entail new possibilities and challenges regarding communication and presence (Grīnfelde, 2022; Pols, 2012; Wanderås et al., 2023). Vulnerability is not an easily identified or defined concept within the medical literature, and often relies on biomedical indicators (Hurst, 2008). Current discourses surrounding video consultations, both within the medical profession and in some academic literature on general practice, often adopt a biomedical perspective (Thiyagarajan et al., 2020; Wanderås et al., 2023) wherein vulnerability is understood in terms of individual competences and characteristics (Central Denmark Region, 2023). Our article challenges this perception by presenting a more nuanced understanding of vulnerability, of how it emerges and is relationally determined, and of how the relationship between patient, doctor, and video technology shapes the consultation process.

Research studies indicate that while patients experience video consultations as an efficient consultation form, they also experience the drawback of social distance between patients and GPs, potentially affecting their ability to address vulnerable issues (Kofod et al., 2024; Lüchau et al., 2023; Van den Heuvel et al., 2024). Little is known about how vulnerability is mediated by video consultations. In this study, we aim to explore the relationship between vulnerability and video consultation use. In the following, we outline how vulnerability has often been defined in static terms, then introduce our conceptualization of vulnerability within the constructivist tradition of Science and Technology Studies (STS).

Defining vulnerability

To understand the great variety within the term 'vulnerability,' we draw on a comprehensive definition of vulnerability as a potential for harm (Rossignol et al., 2014). Thus, within a healthcare context, this may be seen in a patient's susceptibility to somatic and mental disease and physical harm (Hurst, 2008). This potential differs depending on the situation and surroundings. Within vulnerability research, a multitude of more specific definitions depending on embedded values exist (Clark, B. & Preto, 2018; Hurst, 2008; Sossauer et al., 2019). In the biomedical field, the concept of vulnerability is often used to identify and protect those who require special consideration in their interactions with the healthcare sector. Historically, it has relied on extensive guidelines outlining which patient groups may be considered vulnerable (CIOMS, 2016). As an example, the Belmont report suggests 'racial minorities, the economically disadvantaged, the very sick, and the institutionalized' as potentially vulnerable groups (Department of Health & National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 2014). This framing of vulnerability in a general practice academic and clinical context frequently focuses on patient-based groups and lacks the situated and complex interplay between human and non-human actors (Clark, B. & Preto, 2018; Hurst, 2008; Sossauer et al., 2019). In a consultation, we do not encounter a group member; we encounter a person who is made patient through the context of general practice. In this study, we challenge the idea of vulnerability as a permanent, inherent patient characteristic or patient group membership, while maintaining its core definition as a potential for harm. Viewing vulnerability as situational and enacted, we highlight the significant but often overlooked care and vulnerability work in healthcare provision.

Vulnerability from a Science and Technology studies perspective

This article is written with a practice-oriented scope, theoretically grounded in concepts of tinkering and enactment, which has been significant within scholarly work on care (Mol, 2002; Mol et al., 2010). We wish to extend this theoretical understanding of care to include vulnerability, thereby exploring the ideals and forms of knowledge that arise from acting upon and tinkering with it. Within the STS perspective, it is argued that technology has agency (Latour, 1996; Law, 2008; Mol et al., 2010; Pols, 2012). Technology has the ability to negotiate and mediate aims (Latour, 1994), and video consultations in general practice have been shown to mediate the consultation towards aims of efficiency and control (Van den Heuvel et al., 2024; Van den Heuvel et al., 2026).

As we explore humane and non-humane actors alike, we use the concept of tinkering to describe the relational negotiation between them and how vulnerability moves back and forth between them in a continuous process (Knorr, 1979). It is a term originally used in STS to describe refined actions in negotiations or manipulations of equipment or materials to enable scientific progress (Knorr,

1979). We have moved the context from science creation to general practice, identifying multiple ways through which vulnerability is "tinkered with" in video consultations. This STS perspective allows us to examine how technologies, specifically video consultations, are entangled in enacting vulnerability.

We have specifically adopted the notion of "tinkering" from the STS-based care literature by Mol et al. (2020) to describe actions involved in constructing values. In our cases, we understand tinkering with vulnerability as the process through which constellations of actors are negotiated and realigned. Because being vulnerable is a stigmatizing label, we have found that most tinkering with vulnerability occurs through small acts of tinkering, which might appear indirect on the surface.

Understanding how vulnerability emerges is essential in understanding the kinds of vulnerabilities present in the clinical encounter. In this article we explore vulnerability in video consultations as enacted, by which we mean relational, acted out, and shared within the network between patients, technology, and GPs. Following this STS-framework, the actors can work together to generate vulnerability, often in unforeseen ways. Thus, we are concerned with vulnerability in its applied form and seek to identify practice-oriented concerns and the negotiations of vulnerability enacted through video consultations. In this article, video consultations are enacted at times as an actor and at times as a frame for other negotiations of vulnerability; this is contingent on the other actors in the network.

In the following, we present four video consultation cases in which different vulnerabilities are enacted. We explore *how vulnerability is encountered in video consultations in Danish general practice*. We do this by addressing how vulnerability is enacted, encountered, and tinkered with. But first, we will turn towards the methodology.

Methodological approach

DATA

The data originates from 10 different clinics. The first author followed and observed the full workdays of one key GP at each clinic, who acted as a gatekeeper and allowed access to each specific clinic (Clark, T., 2011). The analysis is based on 21 days of observational fieldwork and 63 specific observations of video consultations. The research was conducted between May 2022 and February 2023.

Clinic number	Region	Days	Number of video consultations	Clinic structure
Clinic 1	North Denmark Region	3	6	Group Practices
Clinic 2	North Denmark Region	2	0	Solo Practices
Clinic 3	Region of Southern Denmark	2	2	Group Practices
Clinic 4	Central Denmark Region	4	24	Group Practices
Clinic 5	Region of Southern Denmark	2	15	Group Practices
Clinic 6	Central Denmark Region	2	4	Group Practices
Clinic 7	Central Denmark Region	2	4	Solo Practices
Clinic 8	Region of Southern Denmark	2	5	Group Practices
Clinic 9	North Denmark Region	1	0	Group Practices
Clinic 10	Region Zealand	1	3	Group Practices
Total		21	63	

Table 1. Overview of observed clinics and number of video consultations

The data collection was inspired by focused ethnography (Knoblauch, 2001) and patch-work ethnography (Günel et al., 2020), entailing limited stays at each site and multiple sources of information. This study draws on a single source of collecting information, namely, field notes, incorporating observations on consultations and conversations on the subject. Knoblauch justifies short, focused ethnography through a detailed focus on a phenomenon and on a more recording-based, stringent data collection (Knoblauch, 2001) We have mainly adhered to the detailed focus on a phenomenon: Vulnerability.

The first author observed full days of consultations (physical, phone, email, and video consultations) and conversed with the treating GP throughout the day. Not all clinic visits involved direct observation of video consultations, but they all informed an understanding of video consultations and general practice. Video consultations remained a theme throughout all visits, as the GPs presented their daily routines and compared the observed consultations with the potential use of video. This data collection method was chosen to allow the exploration of practice-oriented elements.

Informed consent and ethical approval

The Danish Regional ethical committee has deemed that this research (2022-000764) does not require approval under Danish standards for qualitative data in healthcare, but research still needs to adhere to GDPR and general good research ethics.

All GPs gave informed written consent to the first author, allowing him to follow their work. All observed patients provided verbal consent to participate in the study. To avoid unnecessary interruptions during the patient's physical or video consultation, the GPs were prepared and tasked with informing the patients about the study and obtaining consent. This included introducing the first author, who was clearly visible during the video consultations. All patients had the option of having the consultation without observation and, thereby, not

participating in the study. A few patients opted out of observation of physical consultations, often in connection with more extensive examinations. No patients opted out of being observed during a video consultation. The GPs were instructed to opt out on behalf of the patient if they feared the patient would later regret participation and had only taken part to please their GP.

The first author collected all the data and was present at each clinic observing the daily work of healthcare professionals and their interactions with patients. Access was always agreed with a specific gatekeeper at each location (Clark, T., 2011) and, as such, this GP became the primary actor throughout the day. In rare instances, the first author also followed other GPs or clinic staff. This happened if the patient was deemed too fragile by the GP to be observed by a stranger or if other staff had video consultations throughout the day. This became a strategy to mainly protect patients. All consultations were documented through note-taking, which, if possible, was done throughout the consultation and developed within a week of the observation (Hammersley & Atkinson, 1995).

In collaboration with the GP, the first author was placed side by side with the patients, thereby avoiding attention throughout the consultation and indicating that this was primarily a consultation between the patient and the GP. This avoidance of attention was also attempted when observing video consultations. As the video was rather focused, this proved hard to emulate, and the first author sat behind the GP.

Observing one side of the screen

In exploring vulnerability in video consultations, we have chosen a specific setup that poses a methodological conundrum. Research shows that video technology mediates the consultation (Assing Hvidt et al., 2025; Van den Heuvel et al., 2024) and observing video consultations solely from a GP's consultation room therefore has a methodological effect. As video consultations are only used in 1.4% of patient contacts (Jessen, 2025), and are primarily used by patients to be more efficient and to gain control over their own time (Van den Heuvel et al., 2024, Van den Heuvel et al., 2026), we could not find a viable way to observe video consultations from the patients' side. Video consultations were often scheduled as same-day appointments, with significant variation in patient locations, leaving no time to arrange an observation.

During video consultations, the consultation room and the patient's location are connected via a digital representation of the other room. This representation is not a one-to-one copy of the other side. Hence, elements do not travel equally through this connection. The prerequisite of doing ethnography and qualitative research is acknowledging the researcher as the research instrument (Hammersley & Atkinson, 1995), and the placement of this instrument has an effect on the findings.

We here acknowledge the multiplicity of vulnerabilities as enacted realities. We adopt the ontology work of Annemarie Mol (Mol, 1998, 2002) which exists as a continuation of actor network-theories' approach to actors' agency and relation (Law, 2008). One way Mol describes the idea of multiplicity is: *"in practice the body and its diseases are more than one, but this does not mean that they are fragmented into being many"* (Mol, 2002, p. viii). We operate with the same understanding of vulnerability in the observed cases.

Under these methodological circumstances, we cannot fully observe vulnerability as it is enacted and especially as it is encountered on the patients' side. Our point is that the enactments of vulnerability we encounter, which are tinkered with, represent one side of the screen and should be understood as such when reading this article. We purposely use the word 'encounter,' not to diminish the relational understanding of enactment, but to demonstrate that these enactments are a condition of their surroundings on the GP side.

From other research, it is clear that video grants the patient control over which and how subjects are approached (Grīnfelde, 2022). This might also influence how patients choose to enact vulnerability.

Method of coding and analyzing the data

The data were coded in NVivo 14 and analysed abductively (Ryan & Bernard, 2003; Vila-Henninger et al., 2024), which combines bottom-up understandings and empirical field-site logic with theoretical understandings of vulnerability and local and empirical enactments over video in general practice. Our abductive analysis thereby employs both inductive and deductive coding, grounded in prior engagement with theory. Focusing on enactments as the expression of our thematic application of vulnerability, it could appear that we sway heavily toward a deductive approach with these pre-established elements. We argue, however, that our open mind regarding what is considered vulnerability, and how it is enacted, destabilizes this assumption. We have no predetermination of what vulnerability becomes or where, in the relation between patient, GP, and technology (or observer), vulnerability is enacted.

Presentation of data

The data are presented through selected observational cases that demonstrate the interconnectedness of vulnerabilities in video consultations. The cases show recurrent themes and patterns in how vulnerability manifests during video consultations. These cases were determined to be the most illustrative, as they encompass both common observations and distinctive enactments of vulnerability.

With the highlighted cases, we have chosen to showcase different ways through which vulnerability is enacted and entangled in video consultations. All these cases are uncommon in some aspects. Some cases have video as a clear co-creator of vulnerability. In contrast, other cases show that video consultations can also serve as a space to facilitate enacted vulnerability, otherwise primarily evident in a physical consultation. The cases are arranged in descending order (from most to least invisible) according to how visible the video technology becomes as an actor in the enactment of vulnerability.

Analysis

A new patient who no-shows for a video consultation

The present case demonstrates how video consultation can be a driving force in the enactment of vulnerability.

This observation occurred in a rural group practice, where the GP leads the clinic's use of video consultations. The clinic primarily uses the national app MinSundhed [MyHealth] for video consultations, with text messages as a backup when patients encounter technical difficulties, e.g., logging in to the digital waiting room. These difficulties are sufficiently common that the clinic systematically collects the patient's phone number when booking video consultations. This allows the GPs to call the patients who do not appear in the digital waiting room on time to guide them into video consultations. This practice already shows how the clinic has adapted to video consultations by adjusting the information they collect during booking. The following observation stems from one of those times when technical disruptions happen.

> *The GP calls the patient (p21) on the phone after having waited for him to show up in the digital waiting room. The patient asks what he can do for the GP, and the GP explains that they are actually supposed to have a video consultation now. There is a technical issue as the GP repeatedly tries to send a text message with a video link. The patient finally joins the video consultation on his smartphone. The patient explains that he does not remember making this appointment, appearing slightly confused. The patient says they can talk anyway. The GP mentions that the patient is new to the clinic, while the patient moves around and drums a little with his hands. The GP tells the patient to stop and to turn the phone horizontally.*
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> *The GP then returns to the fact that the patient is new, and it would therefore make sense if they looked at the patient's medical history. The patient begins to explain that he has had high blood pressure and has been treated for it for some time. The patient presents his blood pressure as "acceptable". The GP explains that the data on the patient's blood pressure shows that it is above the set limits, and the GP would therefore like to review the medication. The patient explains that he previously experienced his blood pressure being too high. This is referred to in the past tense. The patient explains that his blood pressure has come down quite a bit with the dosage he is taking now. The GP explains that the treatment is still not sufficient if the blood pressure is still above the set limits. Slowly, the conversation shifts as the patient presents a nervousness about the wear and tear on the kidneys because of the continuous medication intake. The GP explains that if there is to be kidney damage, high blood pressure would more likely be the cause. The conversation starts to go in circles and the sound suddenly starts to echo, causing some confusion. In addition, there is much reverberation. It is hard for the GP to say anything as he can hear himself with a delay over the video. One of the last things to get through the technical disturbances is the patient saying he does not want to be dizzy because of low blood pressure. The GP spends the last bit of time communicating that the patient should book a follow-up consultation in person.*
>
> *After the consultation, the GP reveals that he feels that he and the patient mainly talked past each other and emphasizes that this is why he prefers to see first-time patients in person. In a face-to-face consultation, it would have been a little easier to try to understand why the patient does not want to increase the dosage and repeatedly avoids the suggestion of a higher dosage.*

In the above case, it seems that the GP-patient relationship is at risk and is thus being enacted as vulnerable. Several factors contribute to the enactment of vulnerability in this situation. First, several technical disruptions happen. The link did not work at first, the phone was moved around during the consultation, and the connection was disrupted in the end. One of these issues, on its own, could be considered a nuisance, but the cumulative effect of all these technical issues impacts and enlarges other issues within the consultation. The ongoing need to tinker with the technology takes focus away from the consultation, and the GP and patient are unable to bring it back on track.

Secondly, the patient and the GP showed signs of negotiation, with varying degrees of awareness and opposite effects. The roles between the GP and the patient do not follow any previously observed pattern of a GP-patient relationship. All other observed consultations, regardless of medium, were booked with a purpose. Only by breaking away from the expected normative roles of patients and GPs, where patients seek help and GPs provide help, does it become visible how widespread this pattern is. The consultation above is being renegotiated because the patient has forgotten the consultation and is not currently seeking help. However, he grants the GP his time when called. The GP takes on the irregular role of both seeking answers and providing answers. At the same time, the patient is mainly passive and non-invested, which appears to be a discomforting challenge for the GP, as he tries to control the content and process of the consultation to avoid a wasted encounter.

Had the patient forgotten a physical consultation, this problem would not have existed. The patient would not have been contacted by their GP but would, at best, be contacted by the practice staff about rescheduling. This case builds on the technical possibility of still seeing a patient who forgets their consultation. The new opportunities afforded by this technology thus clearly shape this case. As a result, the GP has to extract a lot of foundational information, such as how to manage the patient's fear of kidney damage and dizziness, as it does not become available until later in the consultations.

The enactment of vulnerability is not only focused on the patient, the GP or the technology, but it is an assemblage of all actors. In this observation, the GP is perhaps the most challenged participant and the one pushed into a vulnerable position outside the conventional norms of patient-GP relations and interactions. This happens as

the GP tries to take on the task of making the video consultation work the way he wants. However, for the GP, attempting to make the video consultation function is almost a Sisyphean task, while it appears meaningless to the patient, who does not engage in the consultation. That is why the network connecting the new patient, the video technology, and the GP is perhaps the most central unit of analysis, as technical issues and role disruptions are straining relations among all of them.

A family with cultural differences and an infected child

The following case will show how the video consultation technology can add a layer of friction to existing predispositions, leading to misunderstandings that enable the emergence of vulnerability.

This case occurs in a group practice in a medium-sized Danish city. Video consultations are mainly established through the MinSundhed app. This clinic's most prevalent use of VCs was acute and subacute consultations, of which this case was also one.

> *The GP begins the consultation by sending a text message providing the video link. After a few moments, a family appears in the video consultation. The camera is handheld by what is later revealed to be a father, who is offscreen while he films a mother holding their child. The family quickly establishes that the conversation must be in English, although the family is not native English speakers. The GP resizes the video consultation tab, making it a small square on her screen that she can move up near her webcam. The parents describe how the child is ill with a fever and does not want to eat or drink. The GP summarizes small details when the parents pause their talking. The GP instructs the parents to be very insistent in giving the child water, small amounts at a time, and after hearing the parents' concerns she suggests the family come in for a physical consultation. The GP ask if they can be at the clinic in one hour or if tomorrow would be better. After the video consultation, the GP explains that the patient appears too unwell to be examined via video. Afterwards, the GP describes how it is always trickier with foreign parents. Even if they are good at English, there is just something culturally different that creates doubts in the GP's assessment of the described situations.*

In the above observation, the child is being enacted as vulnerable due to the illness state, which appears to be caused by a viral infection. Viral infections have the potential to be harmful. This enactment of vulnerability is relatively straightforward. However, we would also like to move on to the negotiation of family-based vulnerability.

An element of friction between the family and the GP is the understanding of the video consultation media. This way of filming the child - where someone offscreen recorded the mother and child simultaneously - was uncommon in the field observations, as also suggested by the GP's actions. The GP resized the tab with the video feed on her screen and moved it near her webcam. GPs commonly do this as a courtesy to mimic eye contact with the patient. By resizing to a smaller tab for the video feed, the GP can not expect to clearly see the family in the wide shot they produce. This indicates that the GP does not use the video media to gather visual information, as she does not take full advantage of the video feed. Here, there is an apparent disconnect between the information offered by the parent of the patient and the information needed by the GP, and vice versa. The family cannot see the attempt at eye contact when one person is filming while being off-screen. The act and care of tinkering demand a situated approach that considers local information. Neither participant adapt their approach to match the others' technology use.

The GP chooses not to examine visually via the video feed and instead asks the family into the clinic. This action can cause worry by seeming to indicate a greater need for care. After the consultations, the GP explained that giving the family multiple booking-option, thereby illumination the appropriate amount of urgentcy was presentet to avoid creating uncertainty, and that she decided to call them in due to the video technology's inefficiency in conducting a satisfactory examination of the child, although it was probably only a viral infection.

Here, we will continue with the same family as they arrive at the clinic for the follow-up physical consultation:

> *An hour later, both parents and the child are there, explaining everything again, including the suspected cause of the illness. The family was with another sick child yesterday and suspects the illness spread during that encounter. The GP explains that the incubation period for a virus infection would not match this. The GP further explains that the lack of food is not a problem, but rather, a lack of water is problematic. Therefore, they must force water in the child. The father explains that the child takes small sips. According to the GP, this is perfectly fine; they must do it regularly so that the child gets liquid.*

During the physical consultation, the father repeats the complete illness story of the child, possibly because he is uncertain how much of the initial story made it through the video format. Re-explaining the full context hints at a perceived underlying barrier in the former video consultation. The child's illness is not described in the same manner within the physical consultation as in the video consultation. A specific and significant difference is in understanding what "not drinking at all" means. By not acknowledging any water intake, the parents unknowingly presented the child as more ill in the video consultation than what was revealed in the physical consultation. Here, the parents present the child in a way that makes the GP encounter a straightforward vulnerability, caused by the potential worsening of the child's illness condition.

The initial encounter over video appears vulnerable and difficult for the GP to gauge because of cultural barriers, which adds to the complexity of the vulnerability. Here, abstract cultural differences are allowed to mediate the assessment of the child and expand the assumed potential for harm. In the end, the child is portrayed as

vulnerable due to miscommunication. The GP ascribes uncertainty to the language barrier and cultural differences. To add to the complexity of the enacted vulnerability, some of the challenges of being new parents are present in the way that the GP has to explain basic illness information, such as incubation time and how food is not essential at this stage. In this case, vulnerabilities were enacted and encountered in part because of video, cultural barriers, misunderstandings, and differences in understandings of health and illness. In other words, an assemblage of causes and actions went into making this encounter an enactment of vulnerability.

A patient who expresses a death wish

This case shows how vulnerability can be practiced and encountered in video consultations, with video only acting as the canvas for enacted vulnerability.

This observation takes place in a larger group clinic. In the clinic, text messages are systematically used to distribute video links. This video consultation is part of a series of regular consultations due to the patient's severe mental health issues.

> *The GP begins the video consultation slowly with a question about the patient's current mental status. The patient (p13) explains that he is following a couple of courses about mental illness and employment. The patient explains that he likes the courses and that he gets a lot out of them. The patient speaks softly but enthusiastically about his experience with these courses, which he is taking with the aim of returning to the labor market. The GP reviews the patient's journal and asks whether he has lowered his dosage, as noted in the patient's journal. The patient says he did not have the guts; it was not worth taking the gamble. The conversation moves on as the GP looks at the patient's filled-out anxiety and depression forms on the same screen, jumping between tabs as he reads aloud. The GP, almost casually in a monotone and informal tone of voice, asks if the patient is suicidal. The patient explains that he has been struggling with these thoughts for a while. The patient explains that he has children and he knows the consequences. The patient goes on to say that a natural cause of death would not be bad. The GP asks if the patient has a concrete plan. He does! The patient would take opiates if he had to. He has contacts who can get it. The GP asks whether the patient has initiated the plan. The patient has not. The GP looks back and forth between the patient and the patient's chart. The GP asks directly, still unpretentiously and informally, if he should be afraid that the patient would take his own life. However, this question is asked while the patient is on the GP's screen as if his reaction is also part of the answer.*
>
> *No, he does not think so, as he gets a lot out of those courses. The second time the courses are mentioned, there is a little less animation in the voice, but it is still an immediate reaction. In conclusion, the GP suggests increasing the patient's medication dosage. The patient is content with this, and they arrange another video consultation to follow up.*

This observation stands out as unique, as death wishes are not commonly discussed through video consultations due to their high-risk status. This is the observation with the most significant potential for harm among all the observations, as the most serious outcome the patient faces is death. The patient's vulnerability is caused by a mental disorder, which enables a passive death wish. We observe the patient being accepting of the possibility of ending his life. The patient's vulnerability is thereby enacted and negotiated in the video consultation, to be handled in collaboration with the GP. We see clear signs of alignment between the GP and the patient's willingness to tinker with the patient's illness to find a solution that offers a higher quality of life.

Meanwhile, the GP gauges the patient's vocal responses and facial expressions on video throughout the conversation. The GP directly addresses difficult questions, doing so in a very informal manner. The GP switches continuously between tabs to check the patient's journal while stating rather than asking for certain information. This approach prevents the consultation from taking on a confessional tone. The video format thus appears to enact efficiency but with little influence on the vulnerability. During the consultation, the GP tinkers with the form to best support the patient's current mental health through informal, refined communication. By switching between tabs and timing this to see the patient's reaction, the technology allows the GP to gauge the extent of the vulnerability and act accordingly. The video feed seems essential only for a few select, precise moments, and when it functions, it requires no fixing and goes unnoticed.

We see the GP's behavior as an approach to care that builds on a professional acknowledgment of the patient's mental illness and with authoritative guidance through the issues. The GP is simultaneously refined in pressuring the patient and blunt in asking direct questions. The GP does not offer comfort, and the patient does not demand comforting words. The GP's constant tinkering with the patient's vulnerable mental state kept the conversation undramatic. This professional mode of care work is used to handle the vulnerability of a death wish without pushing the patient away during the consultation.

> *Later in the day, the GP and I discuss this consultation. The GP explains that on paper, the patient is highly suicidal, but after the conversation, he has a more nuanced view of the patient, as the GP believes that the patient had facial expressions that were dynamic and instinctive. The GP also explains that he intentionally tried to provoke the patient with the suggestion to increase the dosage of medication, as the patient historically wanted to taper off. The GP wanted to see if it created a reaction in facial expression and was surprised the patient was willing to up the dosage.*

We interpret this as a form of tinkering with the patient's mental state, in part to situate the patient's condition, as the GP anticipated a degree of resitance that could indicate that the patient had not reached rock bottom. To challenge the patient and encounter the full spectrum of vulnerability, the GP allows it to permeate the consultation, inviting more of it by challenging the patient. The

GP reserves this challenge for the end of the consultation, which could lead to a more dramatic consultation. A pushback against the challenge would intensify the moment, but also indicate a less vulnerable patient. Instead, they reach common ground in their shared wish to increase the dosage. Interestingly, the video, as an actor, demanded little attention. The video enabled a contact that the GP managed without any issues hindering the conversation, information, or care flow.

A patient, a daughter, and the social baggage

This case shows that using video consultations to address vulnerabilities also requires a shared goal; otherwise, tinkering with the diminished presence can be challenging.

The following observation, which occurred in the same large group clinic as above, illustrates a video consultation that shifted from a medication review to unplanned conversational therapy.

> *The GP and the patient greet each other briefly (p12). The GP asks how the patient is doing, and the patient quickly describes, while weeping, how she is in a mental void. The GP briefly asks if something has happened in her private life. The patient begins to explain that her daughter is moving. Half-crying, she goes on to explain that her daughter is an adult but has a mental illness, and the illness has prevented her daughter from packing in advance, even though she has mentioned it at every visit. The daughter has a hard time understanding deadlines, and it has been a huge task to help.*
>
> *The patient also clarified how she had previously been on medication and that she stopped when she started to feel better, but now she has had a mental relapse and has started taking her medication again.*

Here, we encounter vulnerability and a decline in the patient's health, presented through a specific emotional anecdote. In sharp contrast to the former case, the emotions, here felt by the patient, are thrust into the conversation. The patient presents herself as being in the void, which limits her ability to cope with the circumstances surrounding her, thereby linking medical and social vulnerabilities with her emotional disconnect. This void is understood as psychiatric and emotional vulnerability, entangled as the patient's mental state is under extreme pressure. Returning to the observation, the patient describes more of her health issues, and the GP attempts to encounter her vulnerability in a meaningful way.

> *The patient explains that she rarely sees daylight and often isolates herself. The GP suggests eating three times a day, seeing sunlight daily, and sleeping as much as needed. The GP also wants to know about the patient's sleep routine. The patient breaks down again after some dialogue about sleep. The patient explains that she wants to take half a pill extra when she feels so bad.... The patient returns to discussing the adult daughter and explains that the daughter is aware of her condition. She has not been able to be honest about the moving process, because it would make the daughter feel guilty. The patient starts crying again. The GP tries to move the conversation back to her sleeping problems. The crying disappears when the conversation moves away from the daughter or the complexity of being in a void. The patient participates in the dialogue when it concerns practical tasks. However, her facial expressions are limited when the conversation is practical. The conversation returns to the move and how there are still boxes everywhere. The GP says bluntly: You have to let your daughter spend a year if that is what it takes. The patient admits that the unpacking is perhaps mostly her own need. The GP reminds the patient to take it easy and get the hang of the essentials first.*

Surprisingly, during the above consultation, there was a rapid emotional progression from the initial greeting to a highly emotional state in which the patient was crying in front of the screen. Video consultations enable patients to discuss serious issues from the comfort of their own homes (Kofod et al., 2024). This security might allow for this patient's emotional approach to the consultation. As a polar opposite to the former case, this encounter with vulnerability seemed unfocused, and the potential for harm is not transparent. The patient describes her emotional vulnerability through an episode outside of the consultation. The patient is ashamed of the living situation of her adult daughter, as she considers living with many moving boxes as abnormal. This could be construed as a form of social vulnerability, as the daughter lives outside social norms, but it is unclear what kind of harm the daughter or the patient could face by living like this.

The vulnerability of the void and the patient's mental state seems to be tethered to a potential for the current harm to continue rather than an escalation or the emergence of new harm. The GP keeps attempting to steer the conversation onto elements within his biomedical domain, such as test scores and sleep routines. In this, we see attempts from the GP to untangle the mental and the emotional enactments to allow for tinkering with the mental state. According to the GP, this is done by getting the hang of the essentials. However, the conversation keeps returning to the patient's social and family life as the patient is currently cultivating emotional turmoil by staying with her vicarious shame, which could put her in harm of continuing in her mental void. The patient thereby enacts her own vulnerability or, to some degree, actual emotional harm.

Experiencing a diminished sense of presence between GPs and patients is a common, though not universal, phenomenon (Kofod et al., 2024; Van den Heuvel et al., 2024); therefore, we cannot determine whether this particular patient experiences it. However, it may help explain the unfortunate act of staying with her trouble, as the comfort of home allows for emotional expression while simultaneously limiting the GP's ability to tinker with or navigate the consultation amid emotional turmoil. In this observation, the video does not take center stage; it is a barely noticeable actor, but it operates in the background and affects both the GP's and the patient's capabilities.

Using general practice as an emotional outlet was not uncommon, in our observations, but we have chosen to highlight this case

because it rarely occurred in the observed video consultations. While uncertainty and uncontrolled emotional dialogue are often avoided in video consultations, our point is that video can be used to encounter similar cases of vulnerability as in physical consultations. By showing an example of how vulnerability, not directly enacted by video, can be encountered in a video consultation, we show the practicality of video consultations and their range of uses and challenges among patients and GPs.

Discussion of Enacted Vulnerability

In this paper's final part, we would like to discuss the relevance of establishing enacted vulnerability as a theoretical and empirical concept in general practice and video consultations - and beyond.

Taking video consultations as our point of departure, we wish to move away from a biomedically informed and reductionistic understanding of vulnerability. We wish to define *"vulnerability (...) as an identifiably increased likelihood of incurring additional or greater wrong"* (Hurst, 2008, p. 191) As we have shown, harm does not relate solely to health, illness, or group belonging; instead, vulnerability is situated and dynamic. In Isabella Scheibmayr's work on organizational vulnerability, she has summarized feminist philosopher Judith Butler's conceptualization of vulnerability as follows:

> *Both universally shared and individually experienced. Vulnerability in this notion is decidedly not conceptualized as a negative: it is a relational human condition, shared by all humans and defined by its unavoidability. At its most basic core, vulnerability is concerned with the potentiality of harm instead of considering only materialized levels of injustices. (Scheibmayr, 2024, p. 1387)*

We largely agree that vulnerability is the potential for harm and, therefore, an unavoidable condition. In our work, we also show how the enactment of vulnerability can be necessary and thereby something other than negative, like when the GP tries to challenge the patient with a suicidal wish. Where we would like to expand this perspective from Butler's understanding of vulnerability is on the notion of it being solely human and only something experienced. Throughout the analyses, we have displayed how the vulnerability is, to a greater degree, something that is practiced and shared between humans and non-humans (technologies). With this in mind, we focus on tinkering with vulnerability through a constructive STS lens inspired by ANT, as technologies and the networks connecting patients and GPs can also be harmed, strained, or broken.

By conceptualizing vulnerability as an enacted practice, and linking it to care as a practice, we have illustrated how vulnerability emerges within human-technology-entangled relations. We argue that nothing is inherently vulnerable without it being enacted as such within relations between human and non-human actors. Accordingly, our understanding of vulnerability draws on enactment elements from the STS literature on care. The care literature often focuses on the actions involved in creating and tinkering with existing care, while paying less attention to who performs these actions (Mol, 2008). Naturally, the actors are mentioned, since care cannot exist without them. In our work, we place greater emphasis on the emerging sites of vulnerability, showcasing how they are enacted, encountered, and sought to be mitigated. To accomplish this, we first directed our attention to the actors who enacted vulnerability before dissecting the specific forms that this vulnerability took.

In our cases, we have described how vulnerability can result from complex enactments involving many entangled actors. An example could be the above observation of an ashamed mother. The shame and emotional harm are mixed in with psychiatric illness, which makes for a complex consultation and enactment of vulnerability. While complex, the enacted vulnerabilities still originate from somewhere and something. The only problem with the complexity of some vulnerabilities is that video consultations have been shown not to lend itself well to this complexity (Lüchau et al., 2023; Van den Heuvel et al., 2024; Wanderås et al., 2023) and our academic knowledge of these entanglements remains limited.

Exploring enacted vulnerability enables us to engage in discussions about the limitations and contexts of using video consultations. If vulnerabilities were left as an underlying biomedical concern, our analysis would primarily focus on the effectiveness of diagnosing and treating illnesses through video consultations. Instead, our analysis centers on exchanging health information, feelings, and concerns in a digital meeting; this entails constant tinkering with the elements that enact vulnerability with the intent to minimize the potential of harm over time. Our example of technology use in a specific Nordic healthcare setting shows how general practice is organised around continuity of care (Sandvik et al., 2022). This foundation enables ongoing adjustments to the consultations we observe and document.

No potential for harm – whether physical, social, emotional, or psychiatric - is irrelevant in a professional meeting between GP and patient, even when it appears through small acts of tinkering aimed at engaging with and caring for vulnerability. Following Mol, we might describe good care as; *persistent tinkering in a world full of complex ambivalence and shifting tension* (Mol et al., 2010, p. 14)

This article shows situations of persistent tinkering, as the opposite would mean harm. This confirms our understanding of vulnerability as closely related to care and care work. All vulnerabilities can be cared for, and all care work can be linked to a form of vulnerability.

Conclusion

In video consultations, vulnerability is enacted within the network between patients, GPs, and the video technology. We have presented four cases that show different ways in which vulnerability emerges and is enacted in these encounters. Video consultations can be the driving force in enacting vulnerability, as seen in the first case. Video can also take part in adding another layer of friction to already existing predispositions, potentially causing misunderstandings that lead to the emergence of vulnerability, as showcased in case two.

In other instances, video consultations are more or less invisible in relation to the vulnerability enacted in the consultation. By tinkering with the circumstances and the technology, vulnerability can be encountered unproblematically in video consultations, as seen in case three.

Using video consultations to engage with vulnerabilities also requires a shared goal; otherwise, tinkering across the diminished presence becomes challenging, as seen in case four. In some cases, the problem emerges outside the consultation and its network but is nevertheless encountered, enhanced, and tinkered with within the video consultation. Vulnerability and its enactments are often complex, and this complexity can sometimes bring vulnerability at odds with video consultations. The purpose of enhancing our sensibility towards emerging vulnerability in video consultations is to ease the acceptance of ongoing tinkering with vulnerability as an essential way of caring.

Author description

Johannes van den Heuvel is a Postdoc at the Copenhagen Academy of Medical Education and Simulation. He has a background in Techno-anthropology and general practice research. His work focuses on medical anthropology and healthcare technologies researching the negotiation and mediation of technologies and digital tools in healthcare settings.

Elisabeth Assing Hvidt is an associate professor at the University of Southern Denmark, Research Unit of General Practice. She has a background in sociology of religion and works at the intersection of the health sciences, the humanities, and the social sciences, studying relational dynamics in healthcare and the ways digital technologies and AI shape care practices, and the experiences of patients and healthcare professionals.

Janus Laust Thomsen is a general practitioner, Professor, and Director of the Center for General Practice at Aalborg University. His research spans primary care, quality improvement, and health services research, with particular focus on patient-centered care, digital health technologies, clinical decision-making, and the organization of general practice.

Camilla Hoffmann Merrild is an anthropologist and Associate Professor at the Center for General Practice, Aalborg University. She works at the intersection of medical anthropology, primary care, and critical public health. Her research focuses on how families living in socially disadvantaged situations interact with health care systems, with particular attention to the ways symptom experiences and diagnostic practices are shaped and negotiated.

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