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Panel 54. Re-ordering Care: Algorithmic Transformations of Medical Knowledge, Practice, and Governance

Convenors:

Benedetta Catanzariti, University of Edinburgh

Natalia-Rozalia Avlona, Københavns Universitet

Keywords: AI, algorithms, healthcare

Over the past decade, advances in algorithmic techniques have been wielded in a collective re- imagination of health and social care. These techno-optimistic visions typically include quicker and more accurate diagnostic techniques, totalizing - yet personalized - screening protocols, improved clinical workflows, and greater efficiency in resource allocation. Critical scholars have, however, raised a number of concerns around the deployment of these systems, including opaque and inaccurate diagnostic techniques; a neglect of domain expertise; implicit normative assumptions involved in applying generic machine learning models to highly specific, contextually dependent tasks; the entrenchment of off-the-shelf and proprietary tools within healthcare infrastructures; problematic reframing of notions of risk and liability in the effort to regulate algorithmic harm in clinical practice; and enhanced surveillance deriving from more pervasive data collection.

Against this critical backdrop, this panel invites contributions that help bring broader understandings of how algorithmic technologies (and their underlying politics and epistemologies) might be re- configuring medical knowledge, clinical practices, and notions of care, risk, and responsibility. Recent work in this area has indeed shown how the epistemic values and power imbalances embedded in the development of medical algorithmic tools can shape experts' enactments of care (Avlona and Shklovski, 2024). This panel invites contributions that explore similar and wider shifts and transformations of care practices brought on by algorithmic technologies. We welcome presentations that explore algorithmic deployment in relation (but not limited) to the following themes:

- epistemic transformations in medical knowledge and practices;
- ethical re-arrangements in care practices;
- re-organizations of work and labor relations in healthcare contexts;
- re-organizations of clinical spaces and temporalities;
- shifts and tensions within and across informational health infrastructures;
- transformations of notions of risk and medical liability upon the employment of algorithmic systems in clinical practice.

Ultimately, this panel aims to gather both empirical and theoretical analyses of the employment of algorithmic systems in the health service management and diagnostic decision-making, including the surrounding challenges, negotiations, conflicts, and frictions.

Reference:

Avlona, N. R. and Shklovski, I. (2024). Torquing patients into data: enactments of care about, for and through medical data in algorithmic systems. Information, Communication & Society, 27(4), 735–757.

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ID 749 - Epistemic and ethical impacts of the Transplant Benefit Score

Jamie Webb, University of Oxford

Keywords: algorithmic ethics, healthcare resource allocation, empirical bioethics

The Transplant Benefit Score (TBS) was introduced in the UK in March 2018 as a method of allocating livers for transplantation. The TBS is both far more algorithmically complex than the previous system and offers less clinician autonomy in allocation decisions, with livers being matched to particular patients from a national database. The TBS has been the subject of recent media attention, with pieces from BBC News and The Financial Times questioning its fairness and comprehensibility. This research project – which interviewed 29 patients and transplant staff on their perspectives on the TBS – is the first piece of in-depth qualitative research on the topic.

In this panel presentation I will focus on the epistemic impact of the introduction of TBS. This includes considering descriptive questions examined through the interview data. What were patients told about TBS? How far does the algorithmic complexity of TBS affect patient comprehension and understanding of how their prioritisation decisions are made? But it also requires considering the normative question: what would this information actually be for? It may seem that there is little use to providing patients information about an algorithm when that information does not directly relate to any clinical decision patients have to face, but this project reveals that picture is too simplistic.

Considering the epistemic impact of TBS also requires contextualizing the judgements participants made on the use of a complex algorithmic system in high-stakes resource allocation, with the epistemic and emotional uncertainties of the transplant system in which it is embedded. In particular, it requires thinking about human control and algorithmic autonomy, and how the interview project revealed points of human control in an algorithmic system.

Finally, it will challenge the simplistic notion that we should aim to promote trust in algorithmic healthcare systems, by pointing out ways in which warranted mistrust of algorithms can be advantageous: first, for staff in motivating improvements to the overall performance of the system, and second, for patients in motivating the contestation of inaccurate or biased decision-making. The findings of this project presented in this panel will be of interest to anyone considering the growing role of complex algorithmic systems in healthcare, including nascent machine learning technologies.

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ID 680 - How AI-based technologies challenge existing care paradigms – the example of palliative care

Tabea Ott, Friedrich-Alexander-Universität Erlangen-Nürnberg

Keywords: palliative care, AI, total care, self-perception, quality of life

Palliative care is a fundamental component of healthcare, yet it faces new challenges as the medical field becomes increasingly technologized. Recent advancements, such as smart sensor technologies (SST) combined with artificial intelligence, promise improved diagnostics and treatment options. However, it remains unclear how these technologies challenge the foundational concepts and human-centred assumptions of palliative care – and, conversely, how palliative care might benefit from their integration.

This paper aims to explore the transformative impact of SST on palliative care, identifying both opportunities and challenges. Furthermore, it proposes normative criteria to guide the ethical application of these technologies. The ethical analysis is grounded in the principle of Total Care as defined by the European Association for Palliative Care (EAPC). By examining the underlying conceptions of humanity and the socio-ethical dimensions of Total Care through a phenomenological lens, the paper investigates how SST aligns – or conflicts – with these values.

The analysis unfolds in two key stages. First, it evaluates the advantages, limitations, and socio-ethical implications of integrating SST in palliative care, particularly in relation to the Total Care principle. Second, it derives ethical-normative requirements for the responsible use of SST in this sensitive context.

The findings highlight three critical challenges: (1) SST are inherently limited in their ability to capture the full scope of human experience, as their measurements often reduce complex phenomena to quantifiable data; (2) SST influence human agency and autonomy, affecting both patients and caregivers by potentially shifting decision-making dynamics; and (3) certain holistic aspects of the Total Care principle risk being marginalised as technology becomes more embedded in care practices.

To address these challenges, the paper proposes three normative criteria to ensure that SST contribute positively to human flourishing: (1) evidence and purposefulness, ensuring that technologies serve clear, beneficial purposes grounded in robust data; (2) autonomy, safeguarding the decision-making power and dignity of both patients and caregivers; and (3) alignment with the Total Care principle, maintaining a holistic, person-centred approach that honours the physical, psychological, social, and spiritual dimensions of care.

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ID 670 - Medical Normativities in Multi-modal Machine Learning - A Critical Analysis

Alex Campolo, Durham University
Sj Bennett, Durham University
Charlotte Högberg, Lunds Universitet
Benedetta Catanzariti, University of Edinburgh

Keywords: AI, algorithms, healthcare

Proponents of healthcare Machine Learning (ML) frame multimodal models as providing accurate forecasting of medical conditions, employing meteorological forecasting as an analogy. Medical researcher Eric Topol writes "Better warnings for extreme weather events such as hurricanes and cyclones will help save lives. The parallel in medicine is forecasting specific, actionable, high risk for individuals to prevent diseases or severe acute events" (2024). Alzheimer's disease (AD) is often presented as a candidate for such forecasts due to the complex and slow nature of its onset. In this paper, we examine the socio-material development of ML categorisations and inferences in AD, and reflect on how these can shape emergence of novel, idiosyncratic modes of healthcare organisation and governance. Specifically, we critically analyse the construction of machine learning models for the prediction of AD onset and symptomatology (e.g. Lee et al. 2024). Our focus is less on the accuracy of these predictions, rather, we draw on Mol's idea that "medicine attunes to, interacts with, and shapes its objects in its various and varied practices" (2003) to study how machine learning is altering practices of diagnosis and even the normativity of diseases like AD. By closely studying AD prediction models, we identify three significant points of transformation.

Firstly, we consider how different data types are integrated and transformed into a single predictive index. AD forecasting emphasizes the opportunity to identify predictive correlations that emerge from the integration of many different data modalities, from self-reports, to brain images, to electronic health records. This emphasis on integrating data sources may displace authority and expertise from healthcare practitioners to data and models. Instead of identifying the most significant visible or causal signs of disease (clinical markers), whose presence or absence determines a diagnosis, models produce combinations of predictive features which are said to be representative of prognostic longitudinal changes in patient symptomatology.

Drawing on this, we examine the temporal nature of medical forecasting. The slow and gradual progression of AD is one of the many challenges of diagnosis. Therefore, in forecasting models, the goal is not a direct diagnosis per se, but rather a probabilistic attribution of an individual's risk for the eventual onset of AD. These scores could then inform who might be screened using more expensive or invasive measures.

We ask how these types of probabilistic measures temporally (re)organise risks. How are quantitative outputs and thresholds transformed into more meaningful qualitative outputs (e.g. "stable" vs. "progressive" forms of mild cognitive impairment (Lee et al. 2024, 4).

Finally, we note some changes in medical normativity that forecasting models enact. Medical sociologists have long contested narrow conceptualisations of dementia (Fletcher and Capstick 2023). Rather than drawing a statistical distinction between normal and pathological on a single functional measure (Canguilhem 1991), multimodal forecasting techniques seem to integrate heterogeneous normativities – a healthy brain, normal cognitive functioning, a normal medical history – into a normative probability measure. How can we unravel and even contest the distributed, probabilistic normativities of machine learning models?

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ID 203 - The Techno-Politics of Computing the Mind: Opening the Black Box of Digital Psychiatry

Katerina Sideri, Panteion University of Social and Political Science Athens Greece (Πάντειο Πανεπιστήμιο)
Niels Van Dijk, Vrije Universiteit Brussel

Keywords: Remote Measurement Technologies, Digital phenotyping, Blackboxing, Dissociations

Psychiatry has recently witnessed the launch of digital phenotyping as a new research agenda. According to digital phenotyping's hypothesis, data about a patient's daily behaviour can be continuously collected through wearable monitoring devices and used to build software that would send warnings of mental relapse or tailor treatment choices. The research is exploratory, and the claims upon which it is based are contentious. Drawing on interviews, we followed a research team that aspired to build a digital system that could send such warnings to patients with mental health disorders like depression and epilepsy. This enabled us to learn how a new instrument to measure mental function becomes constructed and what translations take place in this process. We paid particular attention to the role of patients as research collaborators. We also observed the frictions and debates in the research team between different mental health knowledge regimes, seeing them before they were black-boxed and lost from sight. We aimed to understand how actors anticipate software and data analytics to function alongside physicians and patients, as well as how different accounts reconstitute what counts as the "mental", "therapy," or the "social" itself. We discuss several "dissociations" that occur along the research trajectory regarding: less motivated and underrepresented patients, the role of clinical knowledge derived from patient self-reporting, and the social, political, and economic aspects of a patient's life affecting mental health. In this sense, we want to open the black box of this new behavioural technoscience.

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ID 341 - Attempting algorithmic embodiment: re-arranging diagnostic practices?

Justien Dingelstad, Erasmus Universiteit Rotterdam
Iris Wallenburg, Erasmus Universiteit Rotterdam
Claartje Ter Hoeven, Universiteit Utrecht
Francisca Grommé, Erasmus Universiteit Rotterdam

Keywords: Diagnostic practices, deep-learning algorithm, embodiment

We describe a 1,5-year participatory ethnographic case study of a deep-learning algorithm for tumour classification, developed by a radiologist in a Dutch academic hospital. The radiologist hoped to convince other neuro-oncology specialists of the algorithm's potential to diagnose brain tumours. To give the algorithm physical presence, she wanted someone to represent it's results in person during weekly interdisciplinary diagnostic meetings. She asked the first author to do so, knowing her interest in algorithmic work

practices as a social scientist. Subsequently, the first author was in the rather unique position to embody the algorithm, studying the question: what happens to interdisciplinary work practices if an attempt is made to integrate an embodied deep-learning algorithm into them?

The algorithm temporarily became part of the collective diagnostic process, a ritual in which each specialist brings specific expertise (Carr, 2010). Neurologists first provide patients' symptoms, radiologists then show tumour size and location and present an initial diagnosis using MRI-images, and finally pathologists present a diagnosis based on tissue analysis. Afterwards, a collective interdisciplinary discussion unfolds. Whilst arriving at a final diagnosis is always a collective process, there is agreement that the pathological diagnosis is the 'gold standard' against which the other specialist's expertise is evaluated. Within this ritual, the algorithm's results – a diagnosis based on MRI-images - were vocalised by the first author, in third place after the radiologist's and before the pathologist's. This was a conscious choice of the radiologist, to immediately showcase the 'performance' of the algorithm. If the algorithm's diagnosis matched the pathologists', early on specialists showed enthusiasm, and even speculated about how the algorithm could become the new gold standard. Yet the algorithm often deviated, in which case specialists turned to the first author seeking explanations. The first author wanted to but could not provide answers due to the opaque, deep-learning nature of the algorithm. After 1,5 years, the presence of the algorithm did not re-organise the diagnostic meetings, rather left most specialists wondering what the algorithms' contribution had been or could be.

These insights tie into scholars arguing that expertise is 'done' collectively (Carr, 2010; Mol et al., 2010), through entanglements of material, corporal and sense-making activities (Gardner & Williams, 2015). We demonstrate that, even if embodied, deep-learning algorithms do not speak for themselves, complicating algorithms becoming part of complex, collective diagnostic practices. We argue there is a gap between AI-systems rooted in a Cartesian split between mind and body (Adam, 2002; Gardner & Williams, 2015) and the daily diagnostic practices of multidisciplinary meetings. These insights can provide lessons into how and why algorithms re-arrange diagnostic practices.

References:

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Mol, A., Moser, I., & Pols, J. (2010). Care in practice: On tinkering in clinics, homes and farms. Transcript.

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ID 880 - Passing the torch, keeping the trauma: how patients and kin experience transfers of responsibilities and information after ICD implantation

Mai Hartmann, IT-Universitetet i København
Jonas Fritsch, IT-Universitetet i København

Keywords: Algorithm, Healthcare, Affect, Cyborg, ICD

Implantable Cardioverter Defibrillators (ICDs) are sophisticated devices, that monitor the recipient's heart while wielding algorithms to detect and react to irregular rhythms and cardiac arrests with corrective shocks. Data reports are transmitted to monitoring clinics regularly and in case of dangerous activity. Tucked away in a subcutaneous chest pocket, with leads reaching the innermost chambers of the heart, this little machine promises to extend and save the lives of people with various cardiac conditions. Receiving an ICD is a simple operation, done with local anaesthesia and barring any complications, patients can leave the hospital within 24 hours. Most patients receiving an ICD do so after surviving a cardiac arrest. As such, this simple procedure often happens in a complex affective space, characterised by the trauma of a near-death experience and dissonance between the contrasting memory loss for the cardiac arrest survivor and the next of kin's vivid remembrance.

In this presentation, we introduce preliminary results from an observational study at an ICD clinic and four qualitative interviews with two individual ICD patients and with two ICD patients and their respective spouses. The main objective of this study was to gain an understanding of the affective spaces surrounding ICD patients and their next of kin immediately after an ICD implantation, how patients and kin navigate, experience and interact with informational structures in healthcare and finally the role played by algorithmic agents such as the ICD.

A preliminary analysis of the empirical data suggests that the monitoring and algorithmic agency of ICD devices redistribute responsibilities and response-abilities and change the structure and transfer of information amongst clinicians, patients and kin. The ICD patients themselves become nodes in an informational infrastructure, transmitting data they cannot themselves access or read. The patients and their kin only get insight into this data during ICD consultations, where they are also faced with their cyborg reality, as their primary interface with the hospital becomes a technician rather than a doctor. Upon implantation of the ICD a transfer of responsibility happens and how this transfer is experienced depends on each preceding history. For the wife who resuscitated her husband, this transfer is difficult to accept and requires time and repetition for the new status quo to settle in: "if he has another heart attack, the ICD will take over, you do not need to save him again". For the wife who did not witness her husband's cardiac arrest, this transfer of responsibility is differently felt, as the responsibility of resuscitating him moves from one "unknown" agent to another. Her worries are not centred on whether she can save him again, but rather if it happens again.

This empirical study is part of a larger project which aims to understand the affective spaces and collectives of care of ICD patients and their next of kin at different times in their patient journey and how to better and more carefully design for it.

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ID 565 - From the 'end-of-the-bed-o-gram' to algorithmic medicine: reconfigurations of data practices, care and learning in critical care

Catherine Montgomery, University of Edinburgh

Keywords: Data practices, care, learning, critical care

'Data saves lives' is an oft-repeated slogan in the world of data-driven healthcare. In the field of critical care, it has also gained traction, refracted in one project's strapline, "Using data better saves critically ill patients' lives". The use of routine data to develop algorithms for risk prediction in this population is now well underway, with one tool already on the market and others in development, based on de-identified vital signs data from critically ill patients' bedside monitors. As large-scale data analytics make their way into routine care, it is salient to ask how the embodied and sensory dimensions of practitioners' work, and the total system of socio-material relations which characterises the intensive care unit (ICU), intersect with the embodied and sensory dimensions of data science work. How do clinicians in critical care decide how to treat their patients in the era of algorithmic medicine? Is the craft work of critical care changing with increasing digitisation and recourse to clinical decision support systems? What role do 'clinicians who code' play in this transformation?

These questions animate a year-long ethnographic study of the changing relations of data, care and learning in critical care in the UK. In this work, I take up care as an object of study, building on substantial work in STS, which, amongst other things, alerts us to the fact that "the ideal of good care is silently incorporated in practices and does not speak for itself" (Mol 2008). Dissecting the rhetoric of patient choice in healthcare, Mol's defining work on the logic of care demonstrates how good care has little to do with choice and everything to do with the ways in which knowledge and technologies are attuned to diseased bodies and complex lives. In the same way, the promise of data to 'save lives' presents us with timely questions about how exactly data and patients together are worked on and with, and in which ways they are cared for. What does care mean in the data-patient assemblage, which logics drive the practices that healthcare now adopts and how do they challenge the repertoires we have for thinking and talking about care? In this paper, I present preliminary ethnographic findings spanning both clinical spaces in the ICU and the academic spaces of medical informatics which start to answer these questions.

11 JUNE 2025 17.00 - 19.00 SESSION 2

ID 255 - Quantifying patient experience: The production of patient-centred metrics for algorithmically-driven analyses in remote clinical trials

Abby King, University of Edinburgh

Keywords: Metrics, algorithms, healthcare

This paper explores the process of producing patient-centred outcome measures for remote clinical trials and the ways in which this process is underpinned by particular power relations and forms of expertise that direct clinical knowledge and the provision of care.

Informed by an ethnography of a global tech company and the use of its bespoke application for measuring patients at a distance, this paper presents the processes of translation that underlie the production of these outcome measures. Through a fixed series of phases and protocols, patients are rendered knowable on the basis of algorithmic translations. Patient experience is produced, mutated into things that can be quantified and applied to algorithmic analysis, and ultimately transformed into outcome measures that inform clinical trials. This paper asks: what happens in this process of translation, in taking the precise, specific, qualitative narrative of patient experience and translating it into a different type of narrative, one that can be analysed by algorithms and that fits into the values and models underpinning clinical research?

There is a long tradition in the social studies of science of bringing into question processes of quantifica-

tion, of turning the nuances and complexities of social life into simplified metrics that can be organised into categories and packaged for transportation and comparison across contexts (e.g. Merry 2016). This movement from the qualified to the quantified, from the subjective to what is viewed as objective and impartial, is a tool of governance. Processes of quantification are embedded with forms of power, informed by particular configurations of expertise, and preference certain voices over others. They are complex and social, involving "assemblage[s] of human expertise and labour, relations, and infrastructures enacted through diverse care practices" (Avlona & Schlovski 2024).

This paper attends to the complex, social work this company does to actively transform patient experience into a format that can be measured and analysed quantitatively. It further attends to the work that this quantification does in the production of clinical knowledge, understanding of disease, and provision of care. Multiple actors from various disciplines – patients, patient advocates, data scientists, software engineers, compliance managers, user testing and configuration teams – come together at different points in these translations, bringing with them different forms of domain expertise, priorities, values, timelines, objectives, and understandings. Through mapping these translations and the articulations of people, technologies, and infrastructure, this paper argues that the process of making a patient-centred metric elicits a specific patient experience that is already guided by the values and power dynamics implicit in clinical research. The patient experiences within the translation process are not gathered. Rather, they are produced, existing only within the particular translation assemblage. What, then, do these patient-centred outcome measures assess? What forms of clinical knowledge do they produce? And who is cared for through these processes?

11 JUNE 2025 17.00 - 19.00 **SESSION 2**

ID 505 - Datafication of nursing and its discontents (the case of implementing the Apotti system in Finland)

Eira Syvälähde, Helsingin yliopisto

Keywords: datafication, nursing practice, electronic health record systems

Apotti is an electronic health record (EHR) system used in the Uusimaa region of Finland. The system is based on structured records which aims to maximize the collection of big data, which is expected to bring long-awaited solutions for our health care system suffering from structural funding and efficiency issues. As such, Apotti reflects the paradigm of datafication, which means quantifying social reality into data to be later used in value-making purposes. This presentation focuses on the tensions emerging from increasing demands of quantifying nursing practice into discrete pieces of data (i.e., big data). Nursing is a profession relying on practices and knowledge operating beyond quantifiable grounds, and for this reason, attempts to define nursing and reduce its operations into discrete data might be problematic.

The material of this study consists of eight in-depth interviews of nurses using the Apotti system, collected during the year 2023. The analysis was done using theory-guided content analysis. As a theoretical framework, Hartmut Rosa's theory of social acceleration is used. According to Rosa, modernity is defined by acceleration in three domains: technological advancement, social change, and the pace of life. Rosa suggests that accelerated life leads to alienation, also in the context of care: the patient is fragmented into discrete pieces of parameters on which the health care staff focuses on under constant pressures of being efficient. Accelerated life roots back to the ethos of controllability which seeks to dominate the surrounding reality by technological and scientific processes. As such, for both datafication and controllability, value creation is linked to how successfully the surrounding reality becomes exploitable for humans.

The study shows that, contrary to the original promises of the Apotti system, the amount of data work in nursing practice has increased, adding pressure to already under-resourced work environments of nurses. Secondly, the data highlights "invisible" work that is not captured by the data. Thirdly, the medication process in Apotti is examined. Despite efforts to make Apotti's medication process robust, shifting decision-making from nurses to complex technological processes introduces new medication safety risks.

In short, the Apotti system has not lived up to its original promises of freeing up time for actual nursing practice, but rather has made the working environment of nurses more technical, complex and less patient-centred. Nevertheless, nurses resist the demands of quantifying their work by prioritizing patient care over data work. As a result, poor data collection compromises the overall quality of data in the Apotti system.

11 JUNE 2025 17.00 - 19.00 **SESSION 2**

ID 535 - Algorithmic care at a distance: reconfiguring nursing practices

Gigi Vissers, Erasmus Universiteit Rotterdam
Iris Wallenburg, Erasmus Universiteit Rotterdam
Rik Wehrens, Erasmus Universiteit Rotterdam
Petra Porte, Erasmus Universiteit Rotterdam
Jan-jaap Visser, Erasmus University Medical Centre

Keywords: AI, healthcare, nursing, algorithmic

Increasing comorbidity and needs of chronic care due to an aging population and a relative decline in workforce call for new ways of organising care. Digital health technologies, often AI-driven, are presented as solutions to this looming crisis healthcare systems are faced with. The promise is that they could allow for greater efficiency by, amongst other benefits, reordering care outside the hospital walls (Oudshoorn, 2008). However, structural embedding in workflows is often hard to achieve, and may require more work than the technologies intend to reduce or replace (Kusta et al., 2024). Complexities arise when care is transitioned from the hospital to the patient's home environment, requiring not only new ways of working and knowing, but also shifting responsibilities, changing relationships between (non)institutional actors and newly configured sociotechnical infrastructures (e.g. Moore et al., 2023).

Building on an ethnographic case study of a telemonitoring centre in a Dutch hospital, we explore the reorganisation of care for nurses who remotely monitor chronic patients. This centre is a key example of how digitally mediated forms of care are not only reconfiguring nurses' professional identities, but also the content of their work and the broader organisation of care. Previously working at the bedside of patients, these nurses now use a digital application to monitor patients and more particularly their 'symptoms' remotely from a small office space at the far end of a hospital corridor. Performing routine tasks based on questionnaire data and AI-driven smart alerts, the materiality of care differs significantly from the physical care nurses usually engage in at the patient's bedside. Hence, nurses need new digital expertise and abilities to interact with patients and their health data, now primarily basing their judgements of good care on quantified metrics of health and illness - replacing 'hands on' knowledge with digital skills. Remotely enacted care simultaneously redefines the roles of patients, who must assume a more active role in their care process. Monitoring and controlling data being shared and fed to the algorithm raises ethical questions about the location of responsibilities and accountabilities.

Delivering algorithmic care thus calls for a reshaping of the organisation of care and consequent roles for nurses and other actors involved in these monitoring centres. Our analysis focuses on the specific ways in which nursing and organisational work becoming reconfigured in the telemonitoring centre, how their knowledge practices change in such algorithmic forms of care, and how new forms of 'good care' emerge. We situate the implications of our findings in existing theories on the sociology of digital health. By examining how nurses take on new organisational and algorithmic responsibilities, this study contributes to discussions on the evolving transformation of work and the tensions that arise in algorithmic-driven healthcare.

11 JUNE 2025 17.00 - 19.00 SESSION 2

ID 507 - “People person is more important than to have a big fat degree”: An Ethnographic Account of Algorithmic Homecare Assistance

Eliana Bergamin, Erasmus Universiteit Rotterdam
Iris Wallenburg, Erasmus Universiteit Rotterdam

Keywords: Homecare, Algorithms, Emotions, Efficiency, Artificial Intelligence

AI and algorithm-powered technologies are entering the healthcare field also at the level of homecare services. With an increasingly aging population and the predicted scarcity of medical personnel in the coming years, algorithm-driven solutions bear the promise of alleviating overworked staff, increasing efficiency and accuracy, and overall improving healthcare practices and results. This paper draws on an ethnographic study that investigates the impact of remote technology integration in homecare provision, with a focus on a Netherlands-based healthcare company's utilisation of remote care assistance, through the use of algorithms and AI tracking tools.

Over the course of three months, one of the researchers immersed themselves in the company's operations to explore how technology affects relational and empathic care dimensions. The company offers a series of algorithm-driven devices to care receivers in homecare settings, designed to substitute for nurses delivering in-home care. These technological implementations, spanning from sleep to insulin trackers, from smart scales to pill-cases with opening sensors, from fall detection devices to smart clocks and tablets, aim at reducing or completely substituting the presence of nurses in homecare setting. Central to these technological implementations is the replacement of face-to-face empathy provision from nurses with 15-minute online weekly coaching sessions, labelled as the “empathy of the week”, that home-cared clients are supposed to receive. These sessions, delivered remotely by new professional figures called “coaches”, represent a tangible reflection of the reconfiguration of healthcare practices due to algorithmic mediation. The company's overarching goal is to optimize care delivery by reducing or removing nurses' in-person interaction time, prioritizing efficiency, which include care receivers' empathic engagement. The study reveals a complex interplay between technological advancements and caregiving principles, highlighting the entanglement of relational and empathic practices with efficiency-driven approaches. The “warm” care delivered by coaches through empathy sessions mixes itself with the “cold” care of the screens and sensors that mediate this new practice (Neves et al., 2024; Pols, 2012).

The paper explores how the materiality of AI and algorithm-powered technologies in homecare practice come to shape new paradigms of care, where digital-human efficiency-driven mechanisms are applied to non-quantifiable, embodied aspects of care, such as empathy and compassion. While the importance of emotional labour is taken into account and accommodated into a new practice, this new practice is shaped by a very tangible understanding of the concept of efficiency. Empathic connection is neatly packaged in 15-minutes online calls, outsourced to non-healthcare trained figures, and detached from its original embodied nature, following the same paradigm that pushes technological development in healthcare. At the same time, the expertise of healthcare professionals is substituted by the entanglement of coaching sessions and interpretations and data outputs – where the latter come to assume a relevant role and power in this new care setting (Weiner et al., 2020). The study offers an empirical glimpse into how, through algorithmic mediation, care practices are expanded and reshaped, leading to the creation of new actors and the reconfiguration of empathic encounters.