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the case of Norway and China

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17. The interplay between doctors and AI: the case of Norway and China

Zongtian Guo and Roanne van Voorst

AI is reshaping how care is organized and decided, promising gains in efficiency and accuracy while raising questions about ethics, equity, and human–machine relations. We treat these as empirical problems rather than abstract assumptions, asking how such promises and dilemmas are worked out in practice. Research shows that perceptions of AI's value and risks differ markedly across cultural and institutional settings, highlighting its socially contingent character (Hagerty & Rubinov 2019). In medical contexts, challenges around privacy, accountability, and fairness are generated within everyday practice and governance structures, not just at the level of theory (Guan 2019). Moreover, even when "ethical AI" is invoked globally, its meaning is shaped by context: Fung and Etienne (2021) illustrate how China tends to frame AI in terms of efficiency and system-level pressures, while European settings foreground values of equity, patient rights, and welfare.

In this chapter, we argue that cultural contexts significantly shape how AI is perceived and utilized in healthcare, particularly in terms of what is considered ethical and useful. The way AI is imagined to address current or anticipated challenges in public healthcare reflects the broader healthcare context in the respective countries, which in turn influences how doctors interact with these technologies. What healthcare professionals find ethical or beneficial is deeply embedded within these culturally specific understandings of healthcare goals and the role of AI in achieving them.

For instance, in China, AI is predominantly viewed as essential for addressing systemic pressures, such as resource limitations and heavy workloads, by enabling practitioners to handle high patient volumes while maintaining diagnostic standards. This perspective is rooted in a broader cultural emphasis on collective efficiency and technological progress as solutions to societal challenges. In contrast, in Norway, the integration of AI tends to align with values of equity and sustainability, reflecting long-standing commitments to universal access and the preservation of the welfare state—imaginaries that have been widely discussed in anthropological and policy literature on Nordic healthcare (Guston 2014; Mol et al. 2010). Norway also faces long waits, regional variation, and bureaucratic frictions (Ringard et al. 2013), which shape imaginaries of AI as sustaining quality and fairness rather than fixing acute shortages. These values, however, are negotiated in practice.

Building on work that treats technologies as co-constitutive of social practice (Haraway 1988; Suchman 2007), we situate AI within local institutional orders rather than as neutral tools. Rather than cataloging technical capacities, we attend to how AI reconfigures relations of care and responsibility (Benjamin 2019; Eubanks 2018). This framing guides our analysis of clinicians' situated negotiations. Within this growing body of literature, two critical themes emerge that are of particular relevance for this chapter: first, the collaborative and interactive relationship between humans and machines in healthcare practices, where they shape and influence each other; and, second, the ethical considerations surrounding the integration of AI.

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Studies have emphasized that AI is not a neutral actor but is imbued with the values, assumptions, and biases of its designers and implementers (Guston 2014; Noble 2018; Verma 2019). These insights challenge simplistic narratives of technological progress, urging researchers to critically examine how AI is integrated into healthcare systems across diverse cultural and institutional landscapes. In this context, this chapter builds on the foundational works of medical anthropology, science and technology studies, and critical algorithm studies to interrogate the implications of AI in healthcare. By foregrounding the sociocultural dimensions of these technologies, the chapter aims to demonstrate how the use and impact of AI in healthcare are shaped by the specific cultural and institutional contexts in which it is embedded. In doing so, it highlights how AI reshapes care practices and ethical considerations in ways that are deeply influenced by local values, norms, and healthcare priorities.

While early work prioritized technical performance, recent scholarship addresses adoption and ethics. However, comparative, ethnographic accounts of clinicians' day-to-day negotiations remain scarce, particularly across different healthcare systems. Our chapter addresses this gap, as it is based on ethnographic fieldwork in hospitals in China and Norway, combining interviews and observations to capture clinicians' everyday negotiations with AI. Building on this foundation, the chapter explores how healthcare professionals in Norway and China perceive and engage with AI tools, and examines the ethical tensions that arise as these technologies become embedded in everyday clinical practice. We frame this inquiry within the anthropology of care, which emphasizes attentiveness, responsibility, and the relational labor of sustaining life (Mol 2008; Tronto 2020). In doing so, we also engage with debates on AI companionship and ageing (Coeckelbergh 2020; Peine & Neven 2021) and with critiques of the "AI for the good" paradigm (Floridi et al. 2018). Rather than treating our questions as universal, we approach them as situated and context-specific, showing how professionals negotiate AI within distinct institutional and cultural frameworks.

METHODS

This research is grounded in anthropological fieldwork conducted in China and Norway between January 2024 and June 2025. We selected these two countries because they represent contrasting healthcare governance models: Norway's decentralized welfare-state system emphasizes universal access and equity, while China's centralized system prioritizes rapid innovation to address large-scale systemic pressures. This contrast allows us to explore how different institutional frameworks shape perceptions of AI. In total, 25 interviews were conducted: 15 in China and 10 in Norway. The difference in numbers reflects both feasibility (greater access to interlocutors in the Chinese hospital where fieldwork was based) and the emphasis on depth rather than breadth in our comparative design. While not aiming for representativeness, these interviews provide insight into the situated ways professionals in both settings perceive and negotiate AI in healthcare. Each interview lasted approximately 40 to 60 minutes, was recorded with the consent of the participants, and was later transcribed and systematically analyzed. To ensure the privacy of our interlocutors and protect the confidentiality of the participating institutions, all participants and hospitals are kept anonymous.

During the fieldwork in China, we conducted research at a public hospital, focusing specifically on its cancer department to examine the integration of AI technologies, such as diagnostic imaging and treatment planning systems, which are increasingly utilized to enhance

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precision and efficiency in oncology care. The fieldwork aimed to capture the daily practices and experiences of healthcare professionals engaged in the adoption and application of AI tools. Semi-structured interviews were conducted with a diverse group of participants, including doctors, nurses, radiotherapists, and IT professionals. The interview questions were designed to explore their perceptions of AI technologies, the challenges they face in integrating these tools, and the ethical considerations arising from their use. This approach allowed for a balance between structured inquiry and the flexibility to explore emerging themes and participant-driven narratives. Moreover, observations were carried out in various clinical settings, documenting interactions between medical staff, patients, and AI-driven systems. These observations did more than provide contextual background; they offered insight into how technologies were embedded in the rhythms of everyday hospital life and how clinicians made sense of them in practice. For example, noting how radiologists gestured toward AI-generated outputs during patient rounds revealed how these tools were woven into professional interaction and decision-making. In Norway, a similar methodological framework was applied at a regional oncology department in Western Norway, where research centered on oncology and radiotherapy workflows. Here too, interviews and observations were carried out with clinicians and support staff, enabling a contrasting analysis of how different healthcare systems and sociopolitical imaginaries shape the adoption and integration of AI. By systematically observing interactions in both settings, we were able to trace not only shared experiences—such as clinicians' reliance on AI for routine tasks—but also divergences in how professionals negotiated its authority and integrated it into existing care practices.

Fieldwork in hospital environments focused on the workflows of doctors, nurses, and other medical staff as they interacted with AI systems within the constraints of their demanding schedules. Observations included shadowing radiologists during their interactions with medical imaging systems, noting how algorithmic predictions informed diagnostic decisions and treatment planning.[1] In some instances, clinicians gestured toward computer screens during patient rounds, referencing algorithm-generated recommendations, such as adjusting glucose levels or highlighting high-risk conditions. These moments provided insights into how AI is not only embedded in but also actively reconfigures clinical routines. Ethnographic observation revealed, for instance, that while AI tools streamlined repetitive tasks, their outputs were often paused over, debated, or adjusted during patient rounds—highlighting clinicians' supervisory role and the conditional nature of their trust in algorithmic recommendations. Such details, which might not emerge in interviews, illustrate how AI becomes part of the micro-dynamics of workflow: shaping the tempo of consultations, redistributing attention between screens and patients, and creating new forms of collaboration and hesitation in decision-making. In addition to these focused observations, much of the research involved watching the broader dynamics of hospital environments. Doctors and nurses were observed navigating between reception desks, patient rooms, and laboratories, often consulting digital devices as part of their workflow. In shared patient rooms, we observed clinicians gathering patient data and incorporating it into AI-powered systems, which then calculated diagnoses or treatment plans. However, the overwhelming busyness of the hospital staff was impossible to ignore; interviews were often delayed or interrupted as healthcare professionals prioritized their patients. This busyness illuminated a critical tension: while AI technologies are often heralded as solutions to systemic inefficiencies, their integration into daily practice must contend with the realities of an overstretched healthcare system.

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To respect the privacy of all parties, no patient data was recorded, and all identifying details of staff and hospitals have been anonymized. These observations reveal the dual role of AI in clinical settings—as a source of optimism for improving efficiency and precision, and as a practical tool that must fit into the complexities of human labor and institutional workflows. By documenting these interactions, the research highlights how AI's promises are mediated, challenged, and realized within the intricate realities of medical practice.

THEORETICAL FRAMEWORK

The integration of AI into healthcare has foregrounded critical ethical considerations, raising complex questions about fairness, accountability, and transparency in its development and application (Floridi et al. 2018). However, the discourse surrounding "ethical AI" is far from neutral or universal. Sharon's (2018) work offers a useful lens for examining how digitization of healthcare, including data sharing between healthcare institutions and corporations, is justified via specific narratives. For instance, the "market narrative" emphasizes cost-efficiency and economic benefits, and the "vitalization narrative" appeals through its emphasis on societal and individual well-being: "help them lead healthier lives" would be a typical slogan, indeed rather dominant among tech firms. While Sharon utilizes her analysis for a better understanding of how the industry justifies investments in technology and AI, we find the approach useful also for our study on the perceptions of clinicians on AI. Justifying narratives on why and when AI is useful and ethical, in the eyes of our respondents, help us understand how healthcare professionals in different cultural and institutional settings perceive and interact with AI tools, particularly in terms of their ethical considerations.

Ethics, as anthropologists have long argued, are neither fixed nor universal but are deeply embedded in cultural values, institutional arrangements, and sociopolitical contexts (Douglas 2003). This framework guided our research by prompting us to examine ethical tensions surrounding AI—including concerns over algorithmic bias, patient privacy, and the depersonalization of care—within the specific cultural and institutional contexts of Norway and China. For instance, Fischer (2006) highlights how the ethical dimensions of technology often reflect the priorities and assumptions of the societies that produce them, raising concerns about the global dissemination of "Western" ethical norms. Sharon's (2018) critique of digital capitalism provided a theoretical foundation for exploring how AI is framed and operationalized differently in these two countries, allowing us to identify the interplay between cultural narratives and healthcare practices.

The discourse of "ethical AI" in healthcare frequently invokes principles such as beneficence, non-maleficence, and justice (Beauchamp & Childress 1994). However, as Zigon (2007) and Fassin (2011) have pointed out, the application of these principles is rarely straightforward. This framework encouraged us to critically examine how ethical principles are reinterpreted and negotiated by healthcare professionals within their cultural contexts. These narratives influenced our methodological approach, as we sought to uncover how doctors' perceptions of, and adoption of, AI are shaped by broader societal discourses in their immediate professional contexts.

Moreover, the anthropological critiques of technocratic solutions, such as fairness metrics or transparency tools (Crawford et al. 2019), guided us in examining how AI's ethical challenges are embedded in power dynamics and sociopolitical contexts. Benjamin (2019) and

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Noble's (2018) critiques of algorithmic bias and structural inequality informed our analysis of how data-driven systems in healthcare might perpetuate disparities. Sharon's (2018) focus on the socioeconomic priorities embedded in AI's promotion further shaped our inquiry, prompting us to pay attention to the cultural and institutional narratives that healthcare professionals navigate in their daily practices.

This theoretical framework not only informed our methodological choices but also shaped the interpretation of our findings. It allowed us to connect the macro-level narratives of AI's role in healthcare to the micro-level practices and ethical considerations of individual healthcare professionals. By doing so, this research contributes to current scholarship by advancing a more nuanced understanding of "ethical AI" that situates ethical debates within specific cultural and institutional contexts. Furthermore, it addresses a key gap in the literature by highlighting the connection between broader healthcare goals, the imagined role of AI, and the everyday work of doctors. This anthropological perspective emphasizes the need to move beyond universalist ethical frameworks to consider the situated, relational, and contested nature of ethics in healthcare.

AI IN PRACTICE IN CHINA AND NORWAY

This section turns to the empirical cases to show how AI is taken up in clinical settings in China and Norway. By tracing how professionals negotiate and enact ethical concerns in everyday practice, we demonstrate that the meanings of "ethical AI" are not universal but shaped by specific sociopolitical and institutional contexts. Anthropological discussions of welfare states and state-led innovation provide critical insights into the divergent pathways through which AI technologies are adopted in Norway and China. These frameworks highlight the interplay between governance structures, cultural values, and technological ambitions in shaping healthcare systems. Situating the case studies within these contrasting contexts allows for a nuanced understanding of how governance structures and cultural values shape the integration of AI in healthcare.

China's healthcare system has long faced structural challenges, including an uneven distribution of medical resources and significant disparities in access to quality care. With healthcare spending constituting only 6.5% of GDP—well below the levels of many Western nations—the system is under immense pressure to serve a population that accounts for nearly one-fifth of the global total. These challenges are compounded by high misdiagnosis rates, averaging 30% and reaching 40% in some underserved regions. Against this backdrop, AI technologies have emerged as critical tools to improve diagnostic accuracy and efficiency.

In urban hospitals, medical imaging represents one of the most prominent applications of AI. During fieldwork in a radiology department, for instance, doctors worked with an AI-driven diagnostic tool that processed and annotated complex medical images in under a minute. Radiologists then carefully reviewed these outputs, cross-checking the AI's findings with their own clinical judgments before finalizing diagnoses. On several occasions, they paused over ambiguous images, calling colleagues to the screen to compare interpretations. At one point, a senior radiologist pointed at a highlighted area and remarked that the AI had "seen a tumour where there is only shadow," before re-drawing the outline by hand. These small moments of hesitation and correction underscored both the attentiveness with which clinicians approached AI and the ways in which professional expertise remained central to

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patient safety. AI thus played a supportive role, speeding up repetitive tasks but always subject to human review and contextual interpretation.

Norway's healthcare system, known for its universal access and high standards, also faces mounting challenges, including long waiting times for some procedures, bureaucratic inefficiencies, and the increasing demands of an aging population. Although less stark than in China, regional disparities remain: access to specialized services can vary between urban centers and rural areas, shaping how and where AI technologies are first introduced. Within this context, AI has been incorporated to enhance clinical precision and operational efficiency. In recent years, it has played a transformative role in radiotherapy for breast cancer, particularly in the delineation of target areas and critical organs during treatment planning. Traditionally, preparing patients for radiotherapy requires meticulous contouring of anatomical structures using CT scans. This process, carried out manually by oncologists and radiologists, is both time-intensive and labor-intensive, often taking several hours per patient. With the introduction of AI-driven systems, this workflow has been significantly streamlined.

Fieldwork observations showed clinicians using AI-generated contours as an initial draft, which they then carefully reviewed and refined, drawing on their expertise and the specific needs of each patient. In one consultation, an oncologist deleted part of the AI's contour and laughed, commenting that the system "always draws too generously." Another paused for several minutes to explain to a junior colleague why preserving a small margin of healthy tissue around the tumor was crucial, even if the AI had suggested otherwise. This collaborative process balanced the speed of automation with human attentiveness to detail and patient well-being, reflecting how "ethical AI" was understood less as a technical principle and more as a relational practice of care, grounded in the welfare state's ethos of equity and transparency. Like their Chinese counterparts, Norwegian clinicians treated AI as a valuable but limited colleague: useful for efficiency yet always requiring expert oversight and adjustment. Despite the different healthcare settings, the two cases share important similarities. In both contexts, AI reduces the time required for labor-intensive tasks, enabling clinicians to accommodate more patients and allocate their expertise to complex decision-making processes. Most importantly, clinicians in both countries emphasized their supervisory role, stressing that AI tools assist but do not replace medical expertise. These findings highlight how AI adoption is not a neutral or universal process but one that is deeply embedded in the sociopolitical fabric of each healthcare system.

ANALYSIS

AI as Assistant

Observations and interviews highlight how AI tools are predominantly perceived as assistive technologies that enhance, rather than replace, human expertise. In both China and Norway, professionals consistently emphasized the collaborative nature of their work with AI, framing the technology as a valuable colleague that required supervision rather than a substitute for clinical authority.

In China, interlocutors repeatedly described AI as a tool that alleviated heavy workloads by automating repetitive tasks such as lesion detection and tumor delineation. One radiologist explained that AI was:

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> very useful, especially for the initial analysis of images. It helps us detect abnormalities quickly, which is essential given our patient load. But I always double-check the results—it's not perfect, and the responsibility still falls on me to ensure accuracy.

Another emphasized the time-saving dimension:

> Tasks like marking lesion boundaries used to take hours, but now AI does it in minutes. Still, it's just a tool. It can miss things or misinterpret patterns, so we always need to verify.

Such remarks resonate with anthropological perspectives on care as a practice of vigilance and attentiveness (Mol 2008), in which technology supports but cannot substitute the clinician's embodied responsibility. Here, AI companionship is not one of intimacy but of professional oversight, positioning the technology as a "junior colleague" requiring constant care itself. These reflections demonstrate how clinicians welcomed AI for efficiency.

Norwegian professionals voiced similar perspectives, particularly in radiotherapy. A radiotherapist described AI as:

> a game-changer for us. The software outlines target areas quickly, and most of the time, it's very accurate. But we always review and refine the contours. AI doesn't understand the nuances of each case—it's our job to make those decisions.

Another emphasized that although AI:

> saves time and improves efficiency, it doesn't replace critical thinking. Our role is still central, especially when it comes to complex cases or patient-specific adjustments.

Like their Chinese counterparts, Norwegian clinicians stressed the importance of human judgment in tailoring AI outputs to patient needs.

Moreover, the trust professionals place in AI tools is conditional and context-dependent. Both Norwegian and Chinese practitioners acknowledged that while AI significantly reduces the time spent on routine tasks, it is not infallible. Errors, such as false positives or misinterpretations of complex patterns, are inherent in any system reliant on pre-trained algorithms. This awareness prompts professionals to engage critically with AI outputs, reinforcing the importance of their expertise in ensuring patient safety and care quality. The anthropological concept of "situated knowledge" (Haraway 1988) aptly describes this dynamic, as professionals rely on their embedded experiences and contextual awareness to complement AI's computational capabilities.

EMBODIED ETHICS

However, what professionals said in interviews did not always mirror what was observed in practice. This is a common challenge in qualitative research: self-reported accounts capture reflections but may not always align with behaviors. Observations revealed how ethical concerns about AI were enacted in embodied, often subtle ways. For instance, one Norwegian radiotherapist remarked with a smile that the system sometimes misidentified benign anomalies:

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> It's like a colleague who always needs supervision—you can't just trust it blindly.

In China, an oncologist recounted shaking their head when the AI suggested an unrealistic radiation dose, explaining how they had to adjust the recommendation manually:

> It's helpful most of the time, but you can't let it make the final call on its own.

Such anecdotes were mirrored in routine practices: radiologists leaning back from the monitor, folding their arms before accepting or rejecting an AI suggestion; clinicians quietly re-drawing contours when the system's outputs seemed inadequate. These embodied gestures—hesitation, correction, discussion—made visible the ways in which responsibility, accuracy, and patient safety were negotiated in real time.

Far from abstract principles, ethics emerged through the rhythms of clinical work, embedded in pauses, adjustments, and careful supervisory labor. These findings align with the anthropological perspective that emphasizes the co-constitutive relationship between humans and technology (Suchman 2007). They also speak to the growing discourse of "AI for the good," which frames AI as an inherently benevolent solution to systemic challenges (Floridi et al. 2018). Our cases complicate this optimism: while AI is valued for efficiency and precision, its integration generates new forms of labor, oversight, and ethical tension. By tracing how clinicians continually monitor, adjust, and even "care for" AI systems, we show how the paradigm of "AI for the good" obscures the situated negotiations and burdens that accompany technological adoption. Across both contexts, professionals repeatedly underscored AI's inability to incorporate contextual information such as patient history, lifestyle, or wider clinical priorities. This limitation necessitated a collaborative mode of practice: AI offered speed and consistency in handling repetitive tasks, while clinicians supplied the interpretive, ethical, and relational dimensions that the system could not capture. As one radiotherapist explained while adjusting contours, the ultimate responsibility was not only technical but moral: ensuring minimal harm to healthy tissues while preserving treatment efficacy.

In this sense, healthcare professionals acted as mediators between computational outputs and the lived realities of patients. They translated algorithmic results into actionable treatment plans, embedding them within a broader ethos of care that emphasized human judgment, empathy, and ethical responsibility. These findings underscore a shared understanding among Chinese and Norwegian clinicians.

CULTURAL CONTEXTS

The cultural contexts of each country play a significant role in shaping the perception and utilization of AI. In China, where resource constraints and heavy workloads are more acute, AI is widely conceptualized as an essential tool for mitigating systemic pressures, a perspective reinforced not only by healthcare professionals but also through government policies and state media discourse. Professionals described how AI enables them to manage high patient volumes while maintaining diagnostic standards, aligning with Sharon's (2018) "market narrative," which emphasizes efficiency and problem-solving. By contrast, in Norway, AI is integrated into a broader ethos of precision and long-term patient vitality, reflecting the country's commitment to equitable access and high-quality care for an aging population. This framing

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aligns with what Sharon (2018) points out as the "vitalization narrative," where AI is envisioned as a pathway to societal well-being and long-term sustainability.

Cultural differences influence how professionals adapt to AI. In China, where workloads are often heavier, AI is embraced as a practical solution to alleviate resource constraints. This sentiment was consistently expressed by all our interlocutors, who highlighted the immense pressure of managing high patient volumes and the long hours required to meet these demands. One doctor described AI as "a necessity, not a luxury," explaining how it helps prioritize tasks and streamline diagnostic processes in an environment where time is always in short supply. The work pressure was palpable during fieldwork in China; doctors frequently rushed past, with little time to pause for interviews. On several occasions, scheduled interviews were delayed for hours as clinicians attended to endless queues of patients. These observations underscored the intensity of their working conditions and the appeal of AI as a tool to ease these burdens.

In contrast, in Norway, the atmosphere in hospitals felt less hurried; doctors had more time to engage in interviews, though they still spoke of the mounting pressure to keep up with demographic shifts and new demands on healthcare services. Clinicians did not overwork, nor did they indicate in interviews that they felt too much work pressure. Professionals value AI primarily for its ability to enhance precision and save time, particularly as they navigate increasing demands from an aging population: in this imagination about AI, AI makes their work better, not necessarily less. Moreover, all interlocutors agreed that AI helped them work more efficiently, allowing them to manage their growing caseloads while maintaining high standards of care. One radiotherapist explained that AI:

> takes care of the routine work, so we can focus on the more complex cases.

These findings underscore the importance of contextual factors in shaping professionals' interactions with AI, offering insights into how these tools can be effectively integrated into diverse healthcare systems.

PRIVACY AND DATA

The integration of AI into healthcare systems in Norway and China has brought ethical tensions to the forefront, particularly concerning privacy, accountability, and the role of human oversight in decision-making. Observations and interviews highlight how these tensions manifest differently across the two contexts, shaped by the healthcare context in the respective countries. For instance, in Norway, the vast majority of interlocutors (9 out of 10) emphasized the importance of ethical AI, particularly in terms of patient privacy and data protection. One radiologist remarked:

> It's not just about what AI can do; it's about what it should do. We have to be cautious about how much trust we place in algorithms when patient safety is on the line.

This reflects a broader institutional priority in Norway to align AI implementation with stringent ethical standards and public trust. In contrast, in China, while ethical concerns were

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mentioned, they were often framed within the context of practicality and the urgent need to manage overwhelming workloads. One oncologist commented:

> We don't have the luxury to debate ethics endlessly. What matters most is that AI helps us handle the patient load and improves efficiency.

This pragmatic approach aligns with the institutional priority of alleviating resource constraints and meeting the demands of a high-volume healthcare system. These differences illustrate how cultural norms and institutional priorities shape perceptions of AI. In Norway, where governance structures emphasize transparency and patient rights, ethical concerns take center stage. Meanwhile, in China, the focus remains on practicality and efficiency, reflecting a healthcare system grappling with significant resource challenges. By contrasting these perspectives, this research underscores how the integration of AI is not only a technological matter but also deeply embedded in sociocultural and institutional contexts.

AI systems depend on vast datasets to perform tasks such as image analysis, diagnostic predictions, and treatment planning. These datasets, often comprising highly sensitive patient information—including imaging records, diagnoses, and personal health histories—raise significant ethical and practical concerns about data storage, usage, and governance.

Observations and interviews conducted during this chapter reveal that while healthcare professionals appreciate the functionality of AI, they express growing unease about how these tools handle data privacy in both countries. In Norway, several interlocutors explicitly raised concerns about the security of patient data in AI systems. One radiologist remarked:

> We trust these tools to assist us, but who oversees the data once it's in the system? That's always in the back of my mind.

Another Norwegian professional pointed to recent discussions among their peers about the risks of outsourcing data storage to third-party companies, adding:

> We've heard of breaches in other sectors—it makes you wonder how safe patient data truly is.

All of our Norwegian interviewees were clearly aware that their data would be transferred to another Scandinavian country, namely Sweden.

In China, concerns about data privacy were also present but were often overshadowed by the immediate need to manage high patient volumes. One oncologist acknowledged:

> There's always a risk with data being stored online, but right now, the bigger challenge is using AI to reduce wait times and improve outcomes.

Despite this prioritization of efficiency, a few Chinese healthcare professionals expressed discomfort about the lack of transparency in how data is used or shared. For instance, one participant shook their head while discussing a recent hospital policy requiring all patient data to be integrated into AI systems, saying:

> We follow the rules, but we don't really know where this data goes.

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Data privacy in China is a particularly complex issue due to the country's governance structure and state-led innovation model. AI systems are frequently developed and deployed under national policies that prioritize technological progress and centralized control. Healthcare professionals often find themselves at the intersection of these priorities, voicing concerns about the transparency of data usage. As one Chinese radiologist noted: "We are told that the data helps improve AI performance, but we don't always know where it goes. There's limited communication about how long it's stored or whether it could be shared with other institutions." Most of his colleagues expressed similar concerns, reflecting a shared apprehension about the lack of clarity regarding data governance in AI systems. These professionals emphasized that while they relied on AI to enhance efficiency, they felt excluded from discussions about how sensitive patient information was managed, creating a sense of mistrust toward institutional processes.

This contrasted with the findings in Norway, where healthcare professionals also expressed concerns about data transparency but framed them differently. There, the majority of interlocutors (8 out of 10) were particularly focused on how patient consent and data security were integrated into AI policies. One Norwegian radiologist commented: "We are careful with patient data because privacy is central to our practice. It's always a discussion—how do we use AI ethically without compromising trust?" Unlike their Chinese counterparts, Norwegian professionals seemed more assured that their concerns were being addressed within a governance framework, even though challenges remained.

These findings highlight a shared tension across both contexts: while AI is valued for its functionality, it also brings unease about how sensitive patient data is managed and secured. This tension is shaped by differences in institutional priorities, with Norwegian professionals focusing on ethical concerns and Chinese professionals prioritizing efficiency under resource constraints.

This ambiguity is compounded by the lack of informed consent mechanisms. In many cases, patients are unaware that their medical data is being used to train AI algorithms, raising ethical questions about autonomy and ownership. The opaque nature of data governance policies can erode trust, not only between patients and AI systems but also between patients and healthcare professionals who serve as intermediaries in this process. This reflects broader anthropological critiques of data ethics in technology-driven societies, where control over personal information often becomes a site of power imbalance (Eubanks 2018; Zuboff 2023).

In Norway, the ethical discourse around data privacy is framed within a more robust regulatory context. As a welfare state with strong commitments to transparency and individual rights, Norway enforces stringent data protection laws that ensure patients are informed about how their data is used. The General Data Protection Regulation provides a legal framework that prioritizes consent, access, and accountability, offering patients the right to know how their information is processed. However, even in this highly regulated environment, healthcare professionals face challenges. One oncologist explained:

> We are careful to explain to patients how their data is used, but the systems we rely on are not always straightforward. We depend on third-party AI providers, and while we trust them, there's always the question of how secure the data really is once it leaves our institution.

This concern mirrors sentiments expressed by Chinese healthcare professionals, who also acknowledged uncertainties around data security and transparency. However, the framing of

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these concerns differed slightly. In Norway, the emphasis was on maintaining patient trust and ensuring ethical data practices within an institutional framework. Professionals were more likely to reflect on how these uncertainties could be addressed through dialogue with AI providers and policymakers. In contrast, Chinese interlocutors were more focused on the practical implications of data use within a high-pressure healthcare system. As one radiologist in China remarked:

> We don't have the luxury to think too much about data security—it's important, but our priority is getting through the patient load.

While they acknowledged similar concerns about where data goes after being processed by external providers, these concerns were secondary to the immediate need for AI to optimize workflows and reduce strain on resources.

ALGORITHMIC BIAS IN CHINA

Another ethical tension pertains to algorithmic biases and equity. The issue of algorithmic bias in AI systems poses significant ethical challenges for equitable healthcare delivery, particularly in culturally and institutionally diverse contexts such as China and Norway. AI technologies are designed to improve efficiency and accuracy in clinical practices, but their reliance on training datasets introduces the risk of perpetuating systemic biases. These biases, often embedded in the data, disproportionately affect marginalized groups and can exacerbate existing inequities in access to and quality of care.

In China, the urban–rural healthcare divide provides a stark backdrop for examining algorithmic biases. AI systems are predominantly developed using datasets sourced from large, well-funded urban hospitals, which have the infrastructure and patient volume necessary for data collection. As a result, these algorithms are often optimized for urban populations, leaving rural patients at a disadvantage. One healthcare IT professional highlighted this disparity during an interview: "AI works very well in cities where the technology is deployed and the data is representative. But in rural areas, the medical conditions and patient demographics are different, and the AI doesn't always perform as accurately."

This discrepancy underscores how algorithmic biases in China can reinforce existing healthcare inequalities. Patients in rural areas, who already face limited access to medical resources, are further marginalized when AI technologies fail to account for their specific needs. During fieldwork, clinicians repeatedly noted that algorithms often flagged cases in ways that did not match the clinical realities of patients in smaller hospitals, particularly when dealing with conditions linked to localized environmental or lifestyle factors. This gap reveals how the promise of AI to "solve" inefficiencies is unevenly realized, privileging those already served by better-funded urban infrastructures.

From an anthropological perspective, this rural–urban bias illustrates how datasets embody structural inequalities in their very composition. As scholars such as Eubanks (2018) and Noble (2018) have argued, data systems often reproduce existing social divisions rather than neutralize them. In the Chinese context, the emphasis on rapid technological deployment in urban centers reflects a state-led innovation agenda that prioritizes national competitiveness but risks deepening internal disparities. The reliance on urban datasets not only limits the

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accuracy of AI for rural populations but also raises questions about whose lives and health are deemed legible to the system and whose remain peripheral.

ALGORITHMIC BIAS IN NORWAY

These challenges manifest differently in Norway, where practitioners the country's relatively homogenous population and well-developed healthcare system might suggest fewer opportunities for bias; however, interviews with practitioners revealed subtle yet significant challenges. A radiologist explained: "AI systems are trained on datasets that don't always reflect the diversity of our patient population. For example, cases involving rare conditions or minority groups might be underrepresented, which means the AI might not perform as well in these scenarios."

This observation highlights the limitations of current AI training methodologies, which often prioritize efficiency over inclusivity. In Norway, where healthcare equity is a core value, such biases are viewed as a direct threat to the system's commitment to providing high-quality care for all patients. Practitioners mitigate these risks by exercising caution and critical oversight, ensuring that AI outputs are contextualized and validated against broader clinical knowledge.

The anthropological critique of algorithmic bias extends beyond technical limitations to question the cultural and institutional structures that shape AI development. As Noble (2018) and Benjamin (2019) argue, algorithms are not neutral tools; they are products of the societies that create them, reflecting existing power dynamics and value systems. In China, the prioritization of urban centers for technological deployment mirrors the broader focus on state-led innovation and economic development. In Norway, algorithmic biases challenge the healthcare system's ethos of equity, prompting practitioners to advocate for more representative datasets and transparent development processes. Ultimately, the discussion of algorithmic biases and equity underscores the broader ethical imperative to ensure that AI technologies do not exacerbate existing disparities but instead contribute to more just and inclusive healthcare systems. As the cases of China and Norway demonstrate, the integration of AI must be approached with an acute awareness of its sociocultural and systemic implications, ensuring that technological advancements serve as tools for equity rather than instruments of exclusion.

CONCLUSION

This chapter has explored the integration of AI into healthcare systems in China and Norway, examining professionals' approach with these tools and the ethical tensions that emerge in their adoption. By applying Sharon's framework of the "market" and "vitalisation" narratives (Sharon 2018), this chapter demonstrates how imaginaries surrounding AI in healthcare are not neutral but embedded in broader socioeconomic and political discourses. In China, AI is often framed through an efficiency-driven logic that aligns with systemic pressures, while in Norway, ethical debates around AI reflect a stronger emphasis on patient rights and transparency. These contrasting narratives resonate with Sharon's justifications, showing how AI's perceived value is shaped by specific institutional and cultural priorities rather than by universal ethical principles.

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The case studies illuminate both opportunities and challenges: AI speeds up imaging and radiotherapy yet is always subject to human review. Clinicians in both countries stressed AI complements but does not replace their expertise, reaffirming the indispensability of human oversight—a perspective that aligns with anthropological critiques of technological determinism (Latour 2012; Suchman 1987). Whether or not this is a feasible idea is discussed elsewhere (van Voorst 2025).

The chapter also reveals tensions around privacy, data governance, and bias, which take different forms in China and Norway. These concerns show how ethics are shaped by institutional contexts rather than universal principles. These findings reiterate the importance of situating ethical considerations within specific cultural and institutional contexts, reflecting the anthropological view that ethics are socially constructed and contested (Fassin 2011).

In conclusion, AI's integration is not universal but embedded in institutional contexts. Our two hospital cases illustrate how imaginaries of efficiency and equity are locally enacted, and how disparities shape their rollout—starkly in China, more subtly in Norway. The comparison shows that "ethical AI" cannot be defined as a universal checklist but emerges in practice, through clinicians' supervision, adjustments, and care. This perspective complicates the rhetoric of "AI for the good," highlighting instead the situated, labor-intensive, and ethically complex work of integrating AI into healthcare.

Our findings are based on two specific hospital sites and should not be read as representative of China and Norway as a whole. Rather, they illustrate how broader imaginaries and institutional logics are interpreted, negotiated, and enacted in particular contexts. The same goes for what is considered an ethical way of collaborating with AI. As this chapter demonstrates, the practical working of AI technologies in healthcare depends not only on their technical capabilities but also on their alignment with broader ideas about its role within current or anticipated problems in healthcare.

NOTE

1. These observations were conducted during fieldwork undertaken in China only.

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