

Pain, Price, and Prioritization: Valuing Migraine in a Cost- Conscious Healthcare System

A Study on the Valuation Process of Migraine Medication in the Norwegian
Reimbursement System

Marie Vistnes Hektner

Master of Technology, Innovation and Knowledge (TIK)

60 credits, Spring 2025

TIK Centre for Technology, Innovation and Culture

Faculty of Social Sciences



© Marie Vistnes Hektner, 2025

Pain, Price, and Prioritization: Valuing Migraine in a Cost-Conscious Healthcare System -
A Study on the Valuation Process of Migraine Medication in the Norwegian Reimbursement
System

MA Thesis, TIK Centre for Technology, Innovation and Culture, University of Oslo
<http://www.duo.uio.no>

Abstract

The introduction of Aimovig, the first preventive migraine treatment, into Norway's Blue prescription regulations ignited a significant discussion within the healthcare community and migraine treatment. Chronic migraines create a substantial burden for patients, and Aimovig offered hope by providing a preventive option that could alleviate pain and restore normal functioning. Nevertheless, its high price tag raised critical questions. Who should access this groundbreaking treatment, and how should its value be assessed clinically and economically? This discussion highlights the complexities of valuing treatments within a resource-constrained environment and the potential implications for patients.

Through the lens of Science and Technology Studies (STS), I analyze valuation practices through a mixed-methods approach integrating practice-oriented document analysis with qualitative interviews. I examine how these texts function as active devices influencing decision-making processes by reviewing key policy documents, health technology assessments, and reimbursement guidelines. Through interviews with policymakers, healthcare professionals, and patient representatives, I gather insights about their lived experiences related to these policies. This combined approach offers a comprehensive view of the formal structures involved and highlights the contested, dynamic nature of value as it is negotiated in daily practice.

By tracing Aimovig's journey through policy debates, clinical assessments, and economic constraints, this case illustrates how value in healthcare is not fixed but negotiated across multiple domains. Standardized assessment methods often marginalize subjective experiences and quality-of-life gains, shaping both access to treatment and the perceived legitimacy of conditions like migraine. Decision-makers acknowledged this gap but are bound by institutional frameworks focused on fairness and measurable evidence, creating a disconnect between what matters in lived experience and what counts in policy. The Aimovig case makes clear that how we judge value in healthcare is often up for debate, and that rigid, economically driven frameworks don't always capture what really matters. It shows why decisions about what to prioritize need to stay open to context, shaped by real-world ethical, political, and institutional concerns.

Acknowledgements

First and foremost, I would like to thank my supervisor, Marie Stillingen, for her thorough and insightful feedback throughout this project. I sincerely appreciate my informants for their time and the valuable insights they provided about the case.

A heartfelt thanks to *gjengen på TIK- lesesalen*. I honestly could not have asked for a better group of people to share deadlines and laughter with. Thank you especially to May-Britt and Maiken for their academic and mental support. Without you, these two years would not have been the same. I would also thank my family for always being there and helping with everything between heaven and earth, without ever asking for anything in return. Knowing you were there meant a lot.

And finally, this thesis is dedicated to my grandfather *for alltid å være nysgjerrig, støttende og oppriktig interessert i alt jeg gjør. Du har vist meg verdien av å lære, stille spørsmål og holde engasjementet oppe, uansett tema.*

Marie Vistnes Hektner

Oslo, May 2025

Table of Contents

1. Introduction.....	1
1.1 The Case of Migraine and Aimiovig.....	2
1.2 Valuation of Medicine in Norway.....	4
1.3 Structure of the Thesis.....	6
2. Theory	8
2.1 Science and Technology Studies.....	8
2.1.1 Valuation Studies – an Extension of Classical STS	9
2.1.2 Valuation Studies and the Making of Health: Life Science as a Site	12
2.1.3 Previous Research on Migraine	15
2.2 Valuography: A framework for Studying Changing Values in Migraine Medicine.....	17
3. Method	21
3.1 Choice of Case	21
3.2 Practice-Oriented Document Analysis and Interviews	22
3.3 Data Collection.....	24
3.3.1 Documents	24
3.3.2 Interviews	27
3.4 Methodological Concerns and Ethical Considerations	30
4. Analysis.....	32
4.1 Introducing the Controversy.....	32
4.2 Method Assessment of Aimiovig.....	35
4.2.1 Evaluation of the Data	37
4.2.2 QALYs as a Valuation Device	40
Concluding remarks	51
4.3 Valuation Through the Guidelines	54
4.3.1 The Guidelines.....	54
4.3.2 A Shift in the Guidelines	58
4.4 The Parliamentary Debate.....	64
4.4.1 Unfolding the controversy	72
4.4.2 The Boundaries of the Health Assessment	74
5. Conclusion	77
5.1 Critical remarks and suggestions for future research	80
References.....	81

1. Introduction

How do we value a disease? In light of the Norwegian welfare state, healthcare is supposed to be available for everyone, regardless of age, gender, and socio-economic status. As such, Norway has implemented a system of reimbursement. One of these systems is the Blue prescription regulations (from here on Blue prescription), where you only pay a deductible amount for treatment and medicine that are life essential. The state covers the remaining part. However, in practice, the process is not always as straightforward as implied here. Due to economic concerns from the state, not every medication or treatment can be reimbursed. This creates the question of prioritization within the Norwegian healthcare system.

As such, this thesis will explore how medicine is included in the reimbursement regulations in Norway. This study aims to understand better how the valuation process works in practice, what components are being valued, who takes part in this process, and how different actors shape an ongoing controversy. To study this, this thesis will focus on a new type of migraine medicine, Aimiovig, and how it is implemented in Norway's reimbursement system, the Blue prescription regulations. The case of Aimiovig is interesting to look closer at due to its central, contemporary, heated discussion within the media and Parliament.

The debate is mainly due to its high market price and increasing demand amongst migraine patients. However, the debate is much more nuanced than simply a question about "economic concerns versus patients' wellbeing." This debate demonstrates the complicated process of giving something intangible economic value and the implications of this process. This thesis aims to explore the following research questions:

How is the value of Aimovig constructed, negotiated, and contested across different institutional arenas in the process leading to its inclusion on Norway's Blue prescription regulation? And in what way does this method of assessment affect how a disease is valued?

1.1 The Case of Migraine and Aimiovig

Why do patients believe that the Aimiovig medicine is crucial to their wellbeing? Migraine is a debilitating neurological condition that affects billions of people worldwide. In Norway alone, 15% of the population experiences migraine at least once in their lifetime. While most people only experience migraine occasionally, for others, it develops into a chronic disease. Chronic migraine, in contrast to the occasional episodes, is categorized as a person experiencing at least 15 days of headache each month, of which eight are classified as migraine. The frequency of the migraine episodes causes patients to incorporate the pain and associated symptoms into their daily lives (Steiner & Stovner, 2023). The symptoms associated with migraine consist of a unilateral, pulsating, intense headache. In addition, people with migraine experience sensitivities to light, sounds, smells, and occasionally touch. Extreme nausea and throwing up are common symptoms (International Headache Society, 2023). A typical migraine episode can last from 4 to 72 hours, highlighting how no patient is the same and experiences the disease in different ways and severity.

Due to the complexity of migraine and its symptoms, it often remains underdiagnosed and undertreated in many settings. In many cases, this results in migraine patients not receiving proper treatment and being managed to deal with their symptoms with “over-the-counter” medication (Steiner & Stovner, 2023). Once a patient is formally diagnosed with migraine, a wider range of medicinal options becomes available. Medication for acute attacks is considered adequate for occasional migraine episodes (Waliszewska-Prosół, et al., 2023). However, the road to chronic migraine treatment is more complicated. Due to the frequency of the episodes, these patients often require preventative medication in addition to acute treatment.

While there were options available for treating acute migraine episodes, finding a preventive solution has remained a challenge for patients with chronic migraine. These patients have mainly been left to a trial-and-error approach to manage their condition. During this time, one have discovered alternative medications that has been proven somewhat beneficial as preventive medication. This has been blood pressure and epilepsy medicine. However, in 2018, this changed with the introduction of Aimiovig, an anti-CGRP treatment. Aimiovig was introduced to the Norwegian market as a novel preventive treatment for migraines, marking a breakthrough in migraine medicine (Norsk nevrologisk forening, 2018). The anti-CGRP

treatment addresses the underlying issue of migraine, acting as a preventive shield and reducing the frequency, severity, and duration of migraine episodes. This treatment provided the patients with fewer side effects compared to previous forms of preventative medication. As such, medicines like Aimiovig are reshaping how chronic migraine is managed (Torres-Ferrús, 2021).

While patients and doctors were eager to access Aimiovig, its high cost constituted a problem for regular patients. It was therefore considered crucial that the medication became part of the reimbursement regulations and more accessible. As a result, medication quickly became part of a debate over healthcare priorities. All medication has to go through a health technology assessment (from here on health assessment) to determine if Aimiovig should be included in the reimbursement system (Statens legemiddelverk, 2019). The health assessment ensures that public funds are allocated correctly, making it an issue of prioritizing. The Norwegian Medicines Agency (from here on the Directorate) performed the health assessment. During the health assessment of Aimiovig, the Directorate determined that the medication was initially considered to be too expensive to include in the reimbursement system. However, after price negotiations, the medication became available for reimbursement.

With Aimiovig available for reimbursement in 2019, demand for this medication increased significantly. As such, the cost of reimbursement for the state also increased and eventually led to a new discussion regarding availability. This discussion led to stricter criteria for patients receiving this medication. As a result, many patients lost access to Aimiovig and were forced back to an illness that affected their daily lives. The frustration among patients and experts caused a new public debate, and the case was brought up in Parliament again, where the controversy unfolded (Stortinget, 2022).

1.2 Valuation of Medicine in Norway

As medical needs grow more complex and new treatments continue to emerge, more pressure is put on the Norwegian healthcare system. With limited resources, it becomes necessary to make both strategic and ethical decisions about how care is prioritized and distributed. Prioritization is an essential strategy to ensure fair and effective allocation of these resources. Furthermore, some illnesses carry greater urgency or societal impact than others, making it important to assess which diseases deserve prioritized treatment within the public healthcare frameworks and the reimbursement system (Meld. St. 34 (2015–2016)).

As part of the reimbursement system, the Blue prescription is a central part of the Norwegian welfare state and its healthcare system. This policy defines which medications the government should subsidize. Through this, the Blue prescription determines which treatments are financially available to patients. Doing so is important in shaping how healthcare resources are distributed and who benefits from them. However, the Blue prescription is more than a logistical regulation to ensure that medication is accessible; it results from priorities and values within the Norwegian society. The inclusion or exclusion of specific treatments within the regulation reflects broader judgments about appropriate and necessary care. These decisions influence which medical services become part of everyday healthcare practice, which treatment patients can realistically access, and ultimately, which health outcomes are prioritized at a societal level. In other words, the Blue prescription system offers a window into how the state interprets public needs and determines whose health concerns are addressed most urgently.

At the core of the Blue prescription is a continuous act of valuation. Medications are evaluated through the health assessment, not only for their clinical effectiveness but also for their cost-effectiveness and assumed social benefit (Statens Legemiddelverk, 2019). This assessment is done by the Norwegian Medical Product Agency (from here on the Directorate). These different forms of value are negotiated and then translated into a standardized regulatory framework that formalizes which treatments are approved, under what conditions, and for whom. This process does not simply reflect existing values but actively shapes them. Therefore, it is not just a healthcare regulation but also a place where political, scientific, and moral perspectives come together to define the value of a disease.

Valuing a medical treatment is far from straightforward, as it is influenced by shifting priorities, competing perspectives, and limited resources. This complexity becomes clear when implementing Aimiovig on the Blue prescription. As a relatively new and expensive medication aimed at an undermedicated patient group, Aimiovig is both highly sought after by patients and economically challenging for the healthcare system to subsidize. This tension has caused conflicting interests and competing valuations among actors, including patients, medical professionals, and policymakers. These actors each bring different forms of knowledge, expectations, and priorities to the table. For patients, Aimiovig represents hope for relief and improved quality of life. For medical professionals, it offers potentially effective medicine for treating a difficult condition. Policymakers must make their discussion based on clinical benefits with broader economic sustainability in consideration. The case of Aimiovig makes the diffuseness of this process visible, where scientific evidence, personal experience, economic considerations, and ethical arguments are all in play.

Approaches from valuation studies and valuography within Science and Technology studies (STS) act as valuable starting point to trace how values change in practice. These approaches see values as dynamic and context-dependent, offering a nuanced understanding of how healthcare policies are shaped and why some treatments are prioritized over others. Therefore, the case of Aimiovig serves as a good entry point for examining healthcare governance in Norway. It highlights how scientific findings are translated into policy, how actors and regulatory frameworks shape decision-making, how societal values are embedded in what is ultimately considered legitimate care, and how these judgments are continuously challenged and redefined.

This thesis aims to contribute to a deeper understanding of these dynamics by studying the case of Aimiovig in Norway. Through interviews with experts and a practice-oriented approach to documents, this thesis seek to better understand how healthcare policies are shaped, contested, and established in Norway. This includes uncovering which perspectives and forms of evidence are prioritized. Furthermore, how ethical, medical, and economic considerations intersect. This allows for a critical reflection on the relationship between scientific knowledge, political decision-making, and societal values in ensuring fair healthcare. By doing so, it uncovers how medical, economic, and societal knowledge intersect in shaping healthcare policies and practices.

1.3 Structure of the Thesis

In Chapter 2, I present the theoretical framework of the thesis, positioning it within STS. I begin by outlining key STS concepts that inform my understanding of valuation. I then situate the thesis within research on healthcare regulation and pharmaceutical valuation. At the end of the chapter, I introduce the concept of valuography and explain how it will be used analytically to trace how medical value is produced and negotiated across different institutional settings.

In Chapter 3, I will describe my methodological approach, emphasizing practice-oriented document analysis and interviews. I'll then detail the design and execution of data collection, along with the limitations I faced during this process. Furthermore, this chapter outline my motivations for choosing this case, before ending with reflections around the ethical considerations of my methodological decisions.

Chapter 4 consists of my analysis, which is divided into four parts. The first part introduces the controversy surrounding Aimovig by presenting different perspectives from the leading actors, such as patients, medical professionals, and regulators. This establishes the foundation for comprehending the case and the valuation process, which will be detailed later. Part two examines the method assessment and how valuation is created. Here, I study the method assessment as a laboratory, a site where value is created. In this section, I will take a closer look at how different devices shape the value of Aimovig and how those changes occur throughout the method assessment. By studying the health assessment, I demonstrate what factors are considered during the evaluation and, ultimately, what is deemed valuable. In the third part, I examine the guidelines to determine which patients can receive Aimovig through the reimbursement system. Here, I demonstrate how the document is not a passive object but actively shapes the issue regarding the availability of the medicine. At the end of part three, I will study how the decision was made to change the guidelines and introduce new reimbursement conditions, which caused a public debate. In part 4, I will examine this debate in Parliament. Through studying governmental documents, I demonstrate how different opinions emerge and are negotiated within a political setting. This debate reveals how various actors frame the tension between clinical effectiveness, economic sustainability, and patient needs.

In Chapter 5, I will provide my conclusion. In this section, I will reflect on the lessons the Aimovig case offers regarding prioritization in the pharmaceutical industry and the greater implications of healthcare valuation, viewed through my methodological and theoretical perspectives. I will synthesize the research questions by exploring how the Aimovig case exemplifies the valuation process and emphasizes the vital role of health assessment within it.

2. Theory

Before turning to the specific case of Aimovig and its inclusion in the Blue prescription, it is essential to outline the theoretical devices guiding the analysis. This chapter presents the conceptual framework underpinning the thesis. It is divided into two sections. The first introduces the general theoretical orientation, situating the thesis within the field of STS, before bringing these approaches into conversation with literature on healthcare regulation and pharmaceutical value, with particular attention to how these perspectives shed light on the valuation of migraine and its treatments. At the end of the chapter, I go deeper into valuography and how I will use it as an analytical framework throughout the thesis.

2.1 Science and Technology Studies

This thesis is grounded in STS, which offers a valuable framework for understanding how scientific developments, such as new medicines, have become meaningful and legitimate in society. Rather than seeing science as a straightforward, objective path to truth, STS challenges this idea. Since its emergence in the 1970s and 1980s, the field has argued that scientific knowledge is shaped through practice. It is not developed in isolation but in and through social processes, material infrastructures, and institutional routines (Cozza, 2021). In this way, science becomes something situated, tied to power, language, and tools, not a neutral reflection of nature. Building upon this perspective, valuation studies extend the focus of STS by showing that values, like knowledge, are not simply discovered but are actively created, negotiated, and stabilized through concrete practices (Dussauge, Helgesson, Lee, & Woolgar, 2015).

One of the early and central contributions to this perspective was *Laboratory Life* by Bruno Latour and Steve Woolgar (1986 [1979]). They did not start with the assumption that scientific facts already existed. Instead, they asked how these facts came to be accepted. Their study showed that what we often take as objective knowledge results from careful negotiation, repetition, and credibility-building inside and beyond the lab. In other words, they argued that facts are not simply found; they are made (Latour & Woolgar, 1986). Scholars like Michel Callon and John Law further developed this line of thinking through what is now known as Actor–Network Theory (ANT). ANT takes the role of both humans and non-humans, such as researchers, technologies, policies, medications, animals, and data, seriously, as active participants in shaping knowledge and action. By studying these networks, which consist of

both social and technical elements, ANT demonstrated how these connections are built, maintained, and stabilized over time (Callon & Law, 1997, p. 174). Central to this approach is the principle of symmetry, which treats human and non-human actors as equally significant in shaping the outcomes. Through this lens, ANT examines how specific versions of knowledge or reality are constructed and gain stability (Callon & Law, 1997).

What brings these approaches together is a shared commitment to practice. Rather than focusing only on what people say or claim to know, STS looks closely at what people actually do, the routines, devices, and interactions through which knowledge is made. This shift in perspective changes the kinds of questions we ask. Instead of simply asking whether something is “true” or “effective,” STS invites us to look at how certain things come to be accepted as true, by whom, and under what conditions (Latour & Woolgar, 1986; Law, 2008).

2.1.1 Valuation Studies – an Extension of Classical STS

Since the 2010s, valuation has gained significant traction as a conceptual framework within STS (Asdal, Doganova, & Fochler, 2024). While classic STS had shown how facts are constructed, valuation studies explored how values are produced and stabilized in everyday practice. Here, one started to ask questions about how values are assigned, how rankings or indicators are built, and what happens when competing ideas of value come into conflict. A key moment in shaping this field was the launch of the journal *Valuation Studies* in 2013. In the opening editorial, Claes-Fredrik Helgesson and Fabian Muniesa (2013) laid out their vision for valuation studies. They described it as a broad, cross-disciplinary space that studies valuation as something active, not just a theoretical idea or fixed outcome. For them, valuation is a social practice performed and negotiated in concrete situations (Helgesson & Muniesa, 2013; Asdal, Doganova, & Fochler, 2024).

This draws upon John Dewey’s pragmatic view on values. He emphasizes that values are not fixed entities but are a result of a valuation process. Following this, Dussauge et al. (2015). argue that “we need to see values as depending upon and being enacted by a wide range of activities, where valuations of various forms are part of such activities” (Dussauge, Helgesson, Lee, & Woolgar, 2015, p. 7) By studying values as enacted rather than static, allows researchers to study how different values are connected to each other in practice, rather than

treating them as belonging to separate domains. This approach reveals the power struggles between different values, such as how some values become dominant, how boundaries between values are drawn, and how different values are balanced or kept separate. Through this, one can pinpoint where each value emerges from and, critically, whose values become important (Dussauge, Helgesson, Lee, & Woolgar, 2015).

Dussauge, Helgesson, and Lee (2015) further argue that adopting a pragmatist stance is especially useful for studying competing sets of values. It allows scholars to examine how different processes and orders of valuation articulate, coordinate, and sometimes conflict with each other. Moreover, it opens up inquiry into the technologies, devices, and organizational forms that help to produce, stabilize, or challenge different values.

This turn to valuation is an extension of classical STS, emphasizing that value, like knowledge, is not simply discovered or measured but enacted through practice. Terms like “cost-effective,” “just,” or “innovative” are not neutral descriptors; they result from social, technical, and political work that legitimizes particular valuations in specific contexts (Muniesa, 2011). Valuation studies extend this insight by focusing on the devices and tools through which values are produced, stabilized, and made visible (Muniesa, Millo, & Callon, 2007; Asdal, 2008). This necessitates examining the instruments and practices involved in making things valuable, especially when the object of valuation is difficult to define or quantify. In the context of this thesis, this is particularly relevant: Migraine is often unpredictable, invisible, and deeply subjective. Its impact varies significantly across individuals, meaning that the value of migraine treatments must be continually negotiated rather than assumed.

One study that captures this dynamic well is Fourcade’s *Cents and Sensibility* (2011), which explores how economic value is attached to nature in different contexts. In the U.S., environmental valuation often relies on cost-benefit analysis, translating ecological damage into monetary terms. In contrast, European approaches can be more hesitant to assign prices to nature at all. Fourcade shows that valuation practices are shaped not just by economic logic but also by cultural norms and institutional settings. Her work demonstrates that valuation is never purely technical; it reflects and reinforces broader social and political structures (Fourcade, 2011, p. 1726). These insights are useful for considering health, where conditions like migraine similarly resist simple forms of measurement and standardization.

Nature has, therefore, become a key site for studying valuation devices in action, particularly where the valued object is elusive or contested. Research on tools like discounting (Doganova, 2018), environmental accounting (Asdal, 2008), and contingent valuation surveys (Doganova & Karnøe, 2015) shows how such instruments do not merely reflect value; they help create it. They foreground certain aspects while obscuring others, enacting specific versions of what is valuable. This performative understanding of valuation is central to this thesis. Like nature, migraine defies easy categorization. By examining the valuation devices used in healthcare, pricing models, regulatory devices, and clinical assessments, this project explores how treatments like Aimovig are made valuable through specific institutional and material practices.

In Doganova and Karnøe (2015), they draw upon Muniesa, Millo, and Callon (2007) and their study on market devices. Here, they define market devices as “material and discursive assemblages that intervene in the construction of markets” (Muniesa, Millo, & Callon, 2007, p. 2). In other words, these devices are combined with elements and ideas that actively shape how markets are built and function. These elements are both physical, such as technologies and pricing systems, and conceptual ideas, like theories and language. Doganova and Karnøe argue market devices “Thus play a key role in the “performative controversies” (2015, p. 23)

Another good example is MacKenzie’s (2009) work on carbon markets and the process of “making things the same.” They look at how the Global Warming Potential (GWP) metric was developed to compare greenhouse gases. This made it possible to trade emissions but also brought in a lot of assumptions about what counts as equivalent and who bears responsibility. This case shows how designing carbon markets is not just about measuring emissions but also about shaping what counts. The formulas and devices used to value greenhouse gases, like the Global Warming Potential (GWP) metric, do not simply reflect climate impact. Still, they help define what is seen as legitimate mitigation. MacKenzie’s (2009) study shows how these devices are part of political negotiations, not just technical solutions.

The articles presented above describe the use of different devices and how they are used in valuation practices. This demonstrated what Muniesa (2011) argues in their article “The flank movement in understanding valuation.” Drawing upon Dewey, Muniesa shifts the focus on valuation from questions about “what is value” to “how is value produced” (Muniesa, 2011). Here, they look at what devices, decisions, and actions play a part in shaping the process of valuation. This pragmatic way of studying valuation gives space to better understand the

underlying processes of how values are constructed, negotiated, and stabilized in different sites (Muniesa, 2011).

Earlier valuation studies provide valuable insights into how value is not merely measured but actively created, debated, and stabilized through practice. Whether the focus is on pricing nature or determining whose perspectives matter in urban planning, this literature demonstrates that valuation is deeply entangled with social dynamics, power relations, and institutional settings. It shifts our attention from what is valued to how valuation occurs, involving specific people, devices, and contexts.

Building on this foundation, the thesis engages valuation studies in a dialogue with healthcare research to explore how value is constructed and contested in medical decision-making. Instead of viewing valuation in healthcare as merely an economic exercise, the project emphasizes how ethical, political, and experiential considerations are embedded in the assessment and legitimization of treatments. By focusing on the case of migraine, the thesis examines how regulatory, clinical, and policy processes shape the value of new pharmaceuticals like Aimovig. This intersection raises several conceptual and empirical questions: How are competing forms of value, such as cost efficiency, clinical effectiveness, equity, and lived experience, negotiated across institutional settings? What valuation devices are utilized, and whose perspectives do they favor? Through this case, the thesis contributes to broader discussions on how healthcare systems navigate uncertainty and competing value claims in socially and politically contextualized ways.

2.1.2 Valuation Studies and the Making of Health: Life Science as a Site

The life sciences, encompassing fields such as biomedicine, pharmacology, and public health, have become central to studying how value is created (Dussauge, Helgesson, Lee, & Woolgar, 2015). In healthcare, valuation goes beyond cost or clinical efficiency. It encompasses ethical dilemmas, institutional routines, and the competing priorities of patients, professionals, policymakers, and the public. Despite the increasing use of standardized devices like cost-effectiveness analysis, what is considered valuable in this field remains highly contested. With its intricate entanglement of scientific knowledge, political regulation, and care practices, healthcare offers a particularly rich empirical landscape for examining how these tensions are

managed, negotiated, and, at times, challenged in practice (Dussauge, Helgesson, Lee, & Woolgar, 2015).

Zuiderent-Jerak and van Egmond (2015) explore how evaluative infrastructures in the Dutch healthcare system influence the valuation of medical interventions. Their focus is on the interplay between three key institutional mechanisms: clinical guidelines, health assessments, and reimbursement decisions. While each of these devices serves to evaluate medical practices, they do so by using different criteria and assumptions. For example, clinical guidelines might prioritize medical efficacy, whereas health assessments focus on economic cost-effectiveness, and reimbursement frameworks introduce institutional and policy considerations. When these infrastructures intersect, tensions arise, not because one is right and the other wrong, but because they enact different versions of what is valuable. The authors argue for a process of “disentangling” these value practices while recognizing the distinct logic each infrastructure brings and working toward better coordination. Their analysis underlines that value in healthcare is not singular but plural and situated.

A similar issue is addressed by Hauge (2016), who investigates how Norwegian hospitals navigate multiple, sometimes conflicting, valuation regimes. In her study, cost-effectiveness analysis, clinical judgment, and institutional priorities frequently collide. The result is not confusion but rather an ongoing process of negotiation. Hospital staff must constantly mediate between these frameworks, often resorting to what Hauge calls “organizational tinkering.” This involves pragmatic decision-making, sometimes formal and sometimes improvised. This allows hospitals to continue functioning despite these internal frictions. What emerges from this analysis is a picture of valuation not as a coherent, top-down process but as something worked out through everyday practices within institutions.

Kullenberg and Nelhans (2017) extend this discussion to the realm of social welfare by examining Swedish policy debates regarding how to assess the value of welfare programs. Their study highlights the ongoing controversy between using subjective experiences (such as self-reported well-being) and objective indicators (like cost or population-level health statistics) as valuation devices. Here, too, valuation is not merely technical; it is political. Different actors advocate for varying valuation methods depending on their interests, roles, and ethical orientations. This leads to public and policy-level debates about legitimacy: what kind of evidence counts, and who gets to decide? Their work demonstrates that valuation is not only

a methodological issue but also a deeply contested process of meaning-making and boundary-setting.

A particularly insightful contribution in this field comes from Liliana Doganova and Vololona Rabeharisoa, who have written on the valuation of health technologies (2024). In their recent work, “The Temporalities of Prices: ‘Value-Based Pricing’ in Pharmaceutical Markets,” they explore how value-based pricing introduces future-oriented logic into pharmaceutical markets (Doganova & Rabeharisoa, 2024). Through a case study of Zolgensma, a gene therapy priced at over \$2 million, Doganova shows that value-based pricing relies on projecting future therapeutic benefits to justify present costs. This forward-looking valuation strategy mobilizes devices like health economic models and long-term outcome estimates to anchor prices in anticipated utility. Yet, as Doganova and Rabeharisoa argue, this practice has significant epistemic and political consequences as it introduces uncertainty into the valuation process and shifts the balance of power toward actors able to frame the future effectively. In the context of Aimovig, similar temporal logic may be at play when actors justify reimbursement based on projected societal savings or long-term health improvements. This article thus deepens our understanding of how time and anticipation shape value in contemporary health systems.

In her article “Versions of Milk and Versions of Care,” Kristin Asdal explores the value of milk and how it is far from being a stable or self-evident substance. In some contexts, it is valued as a nutritional product essential to public health; in others, it is an economic commodity or even a symbol of national identity (Asdal, 2014). These different “versions” of milk are not just different interpretations; they are enacted through specific practices, infrastructures, and discourses. Through her article, Asdal studies how these documents establish connections between milk and certain values, such as health, care, or economic growth. In doing so, documents also produce a specific form of legitimacy around milk, thereby determining which version of it becomes dominant in a given institutional setting.

The article also pays attention to the institutional and political dynamics that shape these valuations. Government agencies, the dairy industry, and consumer organizations are all engaged in ongoing negotiations over which version of milk should be promoted. These negotiations are not just about health or taste, but they are about power, legitimacy, and control over how milk is valued and by whom. The article demonstrates that even something as seemingly mundane as milk is the subject of political struggle, shaped by competing interests

and institutional agendas. By tracing the ways milk is enacted in policy, science, and marketing and linking those enactments to broader notions of care, Asdal (2014) offers a model for how STS can approach valuation in everyday life. Her work highlights the importance of documents, practices, and institutional settings in shaping not only how objects are valued but also how they come to matter at all.

Building on a broader view of healthcare and the life sciences as disputed areas of value creation, the studies reviewed above, each located in various fields of the life sciences, highlight how valuation is influenced by institutional frameworks, epistemological beliefs, and political interests. Collectively, they show that value is neither fixed nor singular but is produced through negotiations among clinical practices, economic considerations, policy contexts, and public accountability. These studies also emphasize the importance of valuation devices, documents, and time perspectives in determining what is deemed legitimate or fundable in specific contexts (Asdal, 2014; Doganova & Rabeharisoa, 2024). Instead of presenting a unified model, they reveal a diverse landscape of sometimes conflicting valuation practices. This body of work creates opportunities for further investigation into how such tensions manifest in particular healthcare scenarios.

2.1.3 Previous Research on Migraine

While life science has become a key empirical field for valuation studies, migraine has received limited attention within this literature and STS more broadly. During the scoping of the field, I did not find many studies or articles that directly engage with migraines within valuation studies or STS. While valuation studies have become an important part of healthcare research, migraines rarely appear in this discussion. This absence reflects both a gap in the literature and a broader pattern. Even though migraines affect millions of people, they remain underexplored in the social sciences (Battista et al., 2023; Kempner, 2024).

A notable exception is *The Q(u)ALYfying Hand: Health Economics and Medicine in the Shaping of Swedish Markets for Subsidized Pharmaceuticals* by Sjögren and Helgesson (2007). Their study offers a rare valuation-centered perspective on migraine, focusing on how cost-effectiveness calculations and QALY metrics were applied in the Swedish Pharmaceutical Benefits Board's (LFN) reimbursement assessment. In health economics, QALYs are utilized. To evaluate and compare medical interventions by combining life expectancy estimates with a

quality of life. Migraine was one of two pilot cases used to trial this approach, making the study especially relevant for this thesis.

Sjögren and Helgesson show how migraines pose challenges to QALY-based evaluation. Although migraines don't shorten life, they can be extremely disruptive, painful, unpredictable, and hard to explain to others. Some of the early assessments produced negative QALY scores, implying that life with migraine was considered "worse than death." This result was considered both theoretically and politically problematic (Sjögren & Helgesson, 2007, p. 226). This points to a tension between lived experience and standardized valuation devices. Their analysis shows how economic devices like QALY do not simply measure value but actively shape what counts as valuable and how conditions like migraine are made visible to the healthcare system.

Other social science research on migraine has been conducted, but not from a direct valuation perspective like that of Sjögren and Helgesson. Instead, these studies have primarily focused on cultural framings and lived experiences. Kempner's book "Not Tonight: Migraine and the Politics of Gender and Health" (2024) and a recent meta-synthesis by Battista et al. (2023) are noteworthy in this regard. In Kempner's work, she examines how migraine has been historically trivialized and feminized. She argues that migraine has been marginalized not due to its rarity or severity but because of the way it has been framed as a condition affecting overly sensitive individuals, particularly women. Her work emphasizes the deep entanglement between cultural perceptions, scientific authority, and the production of medical legitimacy. Battista et al. (2023) focus on studies that investigate how people live with migraine. Their study captures the emotional and practical burdens of migraine, as well as the strategies patients use to cope with a largely invisible and often misunderstood condition.

Health Economic perspective on migraine valuation

While Sjögren and Helgesson (2007) provide a rare STS-informed look at how migraine is valued in reimbursement settings, most research on the value of migraine treatments stems from health economics and health technology assessment. This work often centers on cost-effectiveness, usually framed through QALYs, particularly in evaluations of newer CGRP-targeting drugs like Aimovig (Rand & Kesselheim, 2021; Kregting et al., 2024; Klimchak et al., 2024). These studies offer valuable insights into how value is calculated and compared, but

they largely treat valuation as a technical matter shaped by models, thresholds, and economic metrics.

A broader body of health assessment research points to tensions between formal economic models and other concerns that are harder to quantify, like fairness, uncertainty, and lived experience (Bryan, Williams, & McIver, 2007; Hashem, Calnan, & Brown, 2018; Sellars et al., 2024). Studies from the UK, Australia, and Canada demonstrate that while health agencies often encourage public or patient involvement, decision-making remains dominated by quantitative, model-based reasoning (Bryan, Williams, & McIver, 2007; Hashem, Calnan, & Brown, 2018; Sellars et al., 2024; Bidonde et al., 2021). Even though cost-effectiveness remains a key part of how decisions are made, studies from both Australia and Norway show that other concerns, like equity, severity, and public pressure, still play a role, just not always in ways that are clearly stated or formally included in the criteria (Sellars et al., 2024; Brendbekken, Robberstad, & Norheim, 2022). This creates a tension between the structured language of metrics and the messier realities of healthcare decision-making. Together, this literature shows that valuation devices like QALYs are designed to promote neutrality and comparability. However, in practice, they often coexist with political, ethical, and social pressures that complicate and sometimes challenge the appearance of objectivity.

While there is limited STS and critical social science research directly addressing the valuation of migraine treatments, the topic has garnered more attention in health economics and HTA. This literature raises important points, particularly regarding cost-effectiveness and decision-making, but often treats valuation as primarily a technical issue. This thesis aims to make a modest contribution by incorporating a social science perspective into this field. By drawing on valuation studies and STS, the goal is to critically examine how value is constructed, negotiated, and contested in healthcare while highlighting the social and political dimensions that are often overlooked in more technical approaches.

2.2 Valuography: A framework for Studying Changing Values in Migraine Medicine

One of the central motivations behind this thesis is to respond to the call articulated by Doganova et al. (2018) in their article “Five Years! Have We Not Had Enough of Valuation Studies by Now?” In that piece, the authors reflect on the development of the field and

explicitly argue for a deeper exploration of the interplay between valuation and politics. They emphasize that valuation processes are never neutral; they are shaped by power relations, institutional structures, and political considerations. This thesis takes up that challenge by investigating how Aimovig's value has been constructed and contested through multiple arenas, such as regulatory, clinical, and political. This thesis focuses specifically on how documents, actors, and institutions interact to define what is considered "worth" public funding in healthcare. It applies Dussauge, Helgesson, and Lee's concept of valuography to demonstrate that the valuation of Aimovig is not simply a matter of technical assessment but a process that is deeply embedded in political and institutional contexts.

The concept of valuography, introduced by Dussauge, Helgesson, and Lee in *Value Practices in the Life Sciences and Medicine* (2015), offers a useful way to examine how values are produced, contested, and stabilized in practice. Rather than treating values as static or universal categories, like efficiency, fairness, or cost-effectiveness, valuography focuses on how these values are enacted in specific settings. It shifts the question from "What is the value of this drug?" to "How is this drug made valuable, by whom, and through which practices?" This framework is especially relevant in healthcare, where decisions about which treatments to fund or prioritize often involve multiple, sometimes conflicting, value claims. In their framework, they lay out three concerns, or analytical approaches: "how stakes are made; the intertwining of values and the epistemic; and the relationship between economic and other values" (Dussauge, Helgesson and Lee, 2015, p.273). These analytical questions guide our attention to better understand how values are made.

How stakes are made

Valuography emphasizes that values do not pre-exist but are shaped through concrete practices, such as devices, documents, debates, and infrastructures. Drawing on a pragmatist tradition (Muniesa, 2011), it demonstrates how stakes are actively made, not simply given. What comes to matter, what is seen as urgent, legitimate, or worth acting on, Dussauge, Helgesson, and Lee argue, is shaped through these practices, often involving political struggle. Rather than assuming that valuation is neutral or coherent, valuography invites us to examine the multiple and sometimes conflicting values in any situation (Dussauge, Helgesson & Lee, 2015). This approach highlights how decisions that appear technical are, in fact, profoundly political, involving questions of power, legitimacy, and the shaping of futures.

The intertwining of value and the epistemic

A central insight in valuography is that knowledge production and valuation are deeply intertwined. In the life sciences, generating knowledge about diseases or treatments always involves prioritizing certain outcomes or risks. In healthcare decision-making, various value logics, including cost-efficiency, clinical effectiveness, ethical responsibility, and social justice, often coexist. Nevertheless, these logics do not always harmonize. An approach deemed economically valuable might clash with what is perceived as ethically or clinically suitable (Dussauge, Helgesson & Lee, 2015). Decision-making, then, often means navigating competing claims. Valuography helps trace how specific devices, such as cost-benefit analyses or clinical protocols, make certain values visible and legitimate while sidelining others. It raises important questions about whose standards shape these valuations and whose concerns are excluded. Legitimacy, in this view, is not just about facts or objectivity but about which values align with institutional routines. As a result, alternative forms of valuing, like patient experience or local knowledge, are often pushed aside, not because they lack reason but because they do not fit dominant frameworks in every situation (Dussauge, Helgesson & Lee, 2015).

The relationship between economic and other values

Valuography also highlights how economic reasoning often interacts with, and at times overrides, other ways of valuing. As Dussauge, Helgesson, and Lee (2015) argue, distinctions between economic and ethical values aren't natural; instead, they're produced through practice. What gets framed as an "economic issue," such as cost per QALY, could just as easily be approached through values like care or justice, depending on which devices and institutions are in play. Valuation practices do not just measure worth; they help stabilize certain concerns, like efficiency or budget control, while simultaneously pushing others, such as patient suffering or inequality, into the background. Valuography reveals how what appears rational or neutral is, in fact, shaped by political choices about which values count and which are excluded (Dussauge, Helgesson & Lee, 2015).

Tactical tips to engage with

Dussauge, Helgesson, and Lee (2015) offer a set of “tactical tips” for studying valuation in practice. These serve as practical starting points for tracing how values are made visible and contested in complex settings. In this thesis, I draw on two of these: studying devices and their construction and exploiting controversies (Dussauge, Helgesson & Lee, 2015). Studying devices means closely examining how policies, documents, and devices are constructed and utilized to embed certain values (Sismondo, 2010). Analyzing such devices helps trace how scientific knowledge is translated into policy and practice (Dussauge, Helgesson & Lee, 2015). Exploiting controversies allows us to investigate moments when values are unsettled and negotiated. Controversies reveal how values shift, how legitimacy is claimed, and how decisions are influenced by more than just evidence or efficiency (Dussauge, Helgesson & Lee, 2015).

By analyzing both valuation devices and moments of controversy, this thesis explores how Aimovig’s value was constructed, contested, and ultimately stabilized in Norwegian healthcare. This dual focus helps transcend formal economic arguments to encompass the ethical concerns raised by patients, clinicians, and other stakeholders. Valuography reveals the political dimensions of these processes. It demonstrates how decisions that seem technical are influenced by competing values, power dynamics, and institutional routines. What is deemed valuable is never neutral; instead, it reflects broader struggles over whose needs are acknowledged and whose concerns are marginalized. This approach encourages closer examination of the negotiations and exclusions that shape healthcare decisions in practice.

3. Method

In this chapter, I will outline my methodological approach to the project, as well as the methodological tools I used. Firstly, I will provide some insight into the choice of direction, reflecting on the background and motivation that led me to the case. Furthermore, I will present my two primary methods: practice-oriented document analysis and interviews. I will then discuss the data collection process, including how I planned and conducted the data gathering, reflections along the way, and how I processed the collected material afterwards. Finally, I will conclude the chapter by reflecting on the ethical aspects of my methodological choices and how these have influenced the thesis.

3.1 Choice of Case

Migraine have been a part of my life for as long as I can remember. Growing up in a family where severe headaches were common, I quickly realized that migraines weren't just "bad headaches"; they were disruptive. During an attack, the only option was to lie down in a cold, dark room and wait for the pain to pass. Since migraines were so common in my family, no one was shocked when I was diagnosed in 2020. But even with a diagnosis, things only got worse. Within a year, migraines weren't just an occasional struggle, but they started interfering with everything: my studies, my job, and my social life. I was eventually referred to a neurologist specializing in migraine, where I was diagnosed with chronic migraine. That opened up new treatment options for me, and I was able to start anti-CGRP treatment. While the medicine has not entirely gotten rid of my migraines, it has made them less frequent, less intense, and shorter. That alone has made a massive difference in my daily life.

At first, I was just grateful to have found something that worked. I didn't think much about the process behind getting access to the treatment, and I just assumed it was available to those who needed it. Then I started hearing stories about others with chronic migraine who weren't able to try the same medication as me, even though they were struggling just as much as I was. This made me curious about why that was the case, but I did not have a satisfying answer. This curiosity increased as I read news articles about the ongoing issue at the Parliament regarding the availability of anti-CGRP treatment.

When I started studying STS, I noticed the issue with new lenses. Medicine is not just about biology and clinical results; it also involves systems, policies, and values. A treatment is not automatically made available just because it works; rather, it results from a complex web of regulations, prioritization, and negotiations. As I explored valuation studies, my interest in these processes deepened. How do you take something as individual and unpredictable as a disease and fit it into a standardized system? Who decides what qualifies as a necessary treatment, and based on what criteria? What role do reports, expert evaluations, and official documents play in shaping these decisions? And perhaps most interestingly, what values and assumptions influence these decisions? These questions led me to the development of the case.

3.2 Practice-Oriented Document Analysis and Interviews

During the scoping process, I quickly realized that one method alone would not capture the case's complexity. I needed a dual approach that could uncover the formal structures behind health policy decisions and capture the real experiences of those living within these structures. It was not just about understanding the system, and it was about understanding the people it touches. A mixed-methods approach, combining practice-oriented document analysis with interviews, helps me capture these perspectives. While document analysis offers insight into regulations and institutional practices shaping decisions within the Blue prescription, interviews provide perspectives from key actors involved in or impacted by the regulation. This approach ensures that both policy-level and individual experiences are considered.

Practice-oriented document analysis, as explained by Asdal and Reinertsen (2022), is a methodological framework that emphasizes that “documents are both something textual and discursive and, at the same time, something ‘thingy’ and material” (Asdal & Reinertsen, 2022, p. 4). By studying documents as more than just pieces of paper, one can gain a better understanding of how these documents actively participate in shaping political and administrative processes. This approach allows for greater insight into the interplay between texts, actors, and institutional practices. In the case of Aimiovig, this understanding is crucial, as the Blue prescription is embedded in documents and regulations.

I have chosen to focus on two methodological moves: documents as tools and document as issues. This helps to narrow the scope of my data collection, making the research process more manageable, while still being able to answer the research questions. As Asdal and Reinertsen

explain, documents are “a material object that is prepared and employed in a specific way within the governing society” (Asdal & Reinertsen, 2022, p. 40). Documents are used by people for specific purposes to achieve particular end goals. This may vary from actor to actor, depending on their objectives. By treating documents as tools, I examine how they are utilized in decision-making processes, shaping policies, and structuring debates around Aimovig inclusion in the reimbursement system. Simultaneously, I will view documents as active participants in issue formation. From this perspective, documents are not just passive tools; they help structure and transform the very issues they are meant to address. By closely examining changes within documents and regulations, one can trace how the issue can evolve, sometimes drastically, while at other times over extended periods (Asdal & Reinertsen, 2022, p. 105). This dual focus ensures a balanced approach, capturing both the functional role of documents and their influence in shaping policy discussions.

To dig deeper into the Aimovig case, this study also employs qualitative interviews as a key method for data collection. While documents and policy texts are crucial for understanding the formal systems behind medication reimbursement, they do not fully capture how individuals on the ground actually interpret and utilize them. In this context, it became evident that different actors, whether policymakers, clinicians, or others, frame the issue and understand the purpose and use of the documents in varied ways. Therefore, it was important to converse directly with those who engage with these texts and decisions in practice. Through interviews, I can gain a clearer understanding of how these policies are implemented in daily routines, how individuals make sense of them, and what they believe these documents should ideally achieve. In other words, how actors make documents into tools (Asdal & Reinertsen, 2022)

As Kvale (2007) describes it, qualitative interviews aim to gather descriptions of the interviewee’s life world to understand the meaning behind their experiences (, Kvale, 2007, p. 24). This aligns well with the goal of this study, which is to explore how actors, including policymakers, patients, medical professionals, and interest organizations, engage with the Blue prescription in the context of Aimovig. Hearing their interpretations and stories sheds light on the complex and sometimes messy process of how policy plays out in real life. To obtain a broad range of perspectives, I reached out to key actors across the healthcare system whom I believed were important to the case. This included people working with method assessments at the Directorate of Medical Products, medical experts who were contacted as part of the assessment process, neurologists involved in research and patient care, and health advocates

from headache organizations active in political discussions. I did not limit the study to formal decision-makers but also included actors who influence how Aimovig is understood and debated in practice. I selected participants based on their roles and experiences to build a strong and relevant material for the study.

In short, these interviews provide a means to go beyond what is written in the documents and gain a more grounded understanding of how things actually work. They offer insight into how different actors navigate, interpret, and challenge policy in their everyday work. Paired with a practice-oriented approach to document analysis, the interviews enhance the analysis of the Aimovig case by highlighting how policy is shaped, applied, and experienced across different levels.

3.3 Data Collection

3.3.1 Documents

In order to understand the case, I began by broadly scoping the field through different types of documents, including research papers, parliamentary notes, regulations related to the Blue prescription system, and news articles. This initial scoping phase provided essential background information and context for understanding the Blue prescription, its underlying principles, and the decision-making processes it entails. At the same time, I gathered information on migraine and the evolution of its treatments over the years. By using a snowball method (Asdal & Reinertsen, 2022, p. 162), I continuously identified additional documents that proved valuable for my research.

The documents served multiple purposes, both as background information for understanding the broader context of healthcare policy in Norway and as primary sources for analyzing the decision-making processes and the values that shape them. The selection of material for this research was an ongoing, deliberate process. Given the large volume of relevant documents, I continuously narrowed down my dataset, focusing on those representing diverse perspectives and key moments in the policymaking process. This approach ensured that the material was both comprehensive and manageable, allowing for a thorough analysis of the case. I prioritized

documents that offered insights into the positions of key stakeholders, including policymakers, medical professionals, patients, and the pharmaceutical company.

In the following paragraphs, I will introduce the selected documents for analysis. To enhance clarity and ease of reference, each document will receive a new name. These new identifiers will facilitate distinguishing the documents from one another and will make the ensuing discussion more coherent.

Since my focus is on studying the controversy surrounding Aimovig, I started by examining documents where the debate was most visible. I analyzed the parliamentary debate regarding Aimovig, which was available on the official website of the Norwegian Parliament. I chose to examine “Parliamentary proposal” (Dokument 8:252 S (2021–2022)), “Letter from the Minister” (Helse- og omsorgsminister, 2022), and “Recommendation from the Health Committee” (Innst. 37 S (2022–2023)), as I found these documents particularly central to the discussion in parliament. These documents illustrate the values different actors hold in the conflict. This also enabled me to trace the entire decision-making process, from the initial proposals made by parliament members to the consultation responses and the final hearing in Parliament. The debate provided a clear view of the political discussions, revealing the underlying tensions and differing perspectives surrounding the inclusion of Aimovig in the Blue prescription.

Following this, I wanted to understand how the criteria for Aimovig were developed and the legal regulations that shaped these criteria. To achieve this, I turned to the method assessments carried out by the Directorate. For the method assessment, I chose to analyze the document “Health Assessment report” (Statens legemiddelverk, 2019) as this explains the Directorate’s thoughts on the matter and what evaluation they did, what they included and excluded in the valuation process. It provided insight into the rationale behind the decision to include the medicine in the Blue prescription. “National Budget” (Prop. 1 S (2019–2020)) and “Notice from the Minister” (Engeset, 2019) gave further information about the implementation of Aimovig regarding the budgetary restriction. Additionally, I chose to analyze “The Guidelines,” (Helsedirektoratet, 2023) and “The Updated Guidelines” (Statens Legemiddelverk, 2022) to track changes within the specific criteria for Aimovig. These documents have been important to illustrate how healthcare policy adapts and shifts in response to the public debate.

Tabel 1. List over Dokumenter

Document	Date	Author / organization	Description
Parliamentary proposal	May 2022	Marian Hussein, Kathy Lie og Lan Marie Nguyen Berg	Introduces the controversy to Parliament, raising concerns about mandatory treatment pauses for migraine patients receiving CGRP inhibitors. It challenges rigid time-based policies and calls for a more individualized, medically guided approach to continuing treatment
Recommendation from the Health Committee	Oktober 2022	Committee on Health and Care	Recommendation after discussion of the proposal within the committee. It questions whether standardized pauses serve the best interests of patients and highlights the potential risks of not allowing doctors and patients to decide treatment paths together.
Letter from the Minister	June 2022	Minister of Health and Care	Formal response to the proposal, defending the current system. The document emphasizes the need for treatment pauses, positioning them as part of broader clinical guidelines aimed at responsible use of public resources.
Health assessment report	June 2019	Statens Legemiddelverk	The full report details the clinical research, economic evaluations, and societal impacts considered in the health assessment, and it highlights important administrative factors that extend beyond clinical outcomes.
The Guidelines	December 2019	Directorate of Health	A document that outlines the specific conditions under which Aimovig can be reimbursed through the Blue prescription. It sets clear diagnostic and evaluation requirements for access, tightly framing who qualifies for support.
The updated Guidelines	March 2022	Statens Legemiddelverk	The document introduces the new reimbursement conditions. With stricter demands for headache diary documentation, mandatory evaluations of treatment effects, and enforced pauses at set intervals.
National Budget	October 2019	Department of Health and Care	The document includes the budgetary restrictions in regard of implementing Aimovig on the Blue prescription
Notice from the Minister	December 2019	Minister of Health and Care	The document is a statement from the Minister regarding the implementation of Aimovig on the Blue prescription.

To keep the analysis manageable, I made intentional decisions about what to exclude during the scoping phase. Firstly, news articles detailing patients' experiences were excluded from the analysis. While those sources could have contributed additional nuance and depth, it was necessary to set clear boundaries on the data material to maintain a manageable scope. Considering the data from the interviews, it was determined that they provided sufficient insight from the patient's perspective. Secondly, I decided to leave out documents related to high-frequency migraines. Patients with high-frequency migraine experience migraines and headaches 7-14 days a month (Camarota, et al., 2024). While this group of patients could offer an interesting perspective, I felt it was more important to focus on chronic migraine, as this patient group is currently eligible to receive Aimovig through the Blue prescription. Including documents related to high-frequency migraines would have broadened the scope of the research too much and shifted the focus away from the patient group most relevant to the controversy I am studying. Similarly, I excluded several news articles. Though they presented different viewpoints, many of these were already covered in the interviews I conducted. Excluding these sources helped avoid repetition and ensured that I stayed focused on the central research question without getting overwhelmed by excess data.

3.3.2 Interviews

When choosing whom to interview, I wanted to gather firsthand accounts from key actors involved in health assessments for migraine treatments, as well as individuals who understand how Aimovig works in practice. I decided not to interview patients directly, partly because of GDPR concerns and partly due to their limited understanding of the assessment process itself. Instead, details about the patients' experiences and how the medication is received are obtained through interviews with the medical professionals who prescribe it and are in daily contact with migraine patients. Ultimately, I interviewed five individuals who could help fill the gaps that documents alone could not address, particularly regarding patient perspectives and how the Blue prescription is implemented in practice. My interview subjects came from diverse fields, including neurologists, headache organizations, and representatives from the Directorate. I selected these fields because I believed they offered different viewpoints and could provide answers to questions that remained unaddressed in the written materials. These interviews also gave me a clearer picture of how documents are utilized and interpreted in the case.

The interviewees were contacted through mail. Two were contacted directly by me after doing research in the field. The other three were recruited through direct contact with an organization which further pointed me to a specific individual. Two of the interviews were conducted over Teams, while the remaining three were conducted in person. All the interviews lasted between 30-60 minutes. Digital recording was made using Nettskjema, which also generated automatic transcriptions. I reviewed and corrected the transcriptions while listening to the recordings, before translating them into English.

In the following paragraphs, I will present the informants with their technical background and relevance for this thesis, as well as provide them a code name that will be applied throughout the rest of the thesis:

Informant one: I first interviewed informant one (from here on referred to as “the Neurologist”). They worked as a neurologist and have conducted research on migraine and headache disorders both nationally and internationally. Through their work, they have been called in as an expert informant in health assessment on different occasions regarding migraine treatments, contributing clinical and scientific insights. The Neurologist was helpful in giving me a broader perspective in the purpose of health assessment and a deeper understanding of migraine as a societal issue.

Informant two: My second informant (from here on referred to as “the Researcher”) works at the Norwegian Senter for headache research (NorHead), where they conduct research on migraine treatment. The Researcher is also a neurologist who works closely with migraine patients to find optimal treatment strategies. They therefore have more practical knowledge of Aimiovig as a treatment. Through the interview, the Researcher gave me more knowledge about issues regarding treating migraine patients and what is hindering them. Furthermore, they gave me more information about how they work with the Blue prescription criteria and their perspectives regarding migraine treatments as a whole.

Informant three: Informant three (from here on referred to as “the Advocate”), works in an ideal patient organization for headache disorders. They work daily to increase awareness of migraine-related challenges and treatment access to both patients, as well as politicians and the general public. In the interview, the Advocate provided insight into patients’ relation to Aimiovig through the years and the political dimensions of migraine advocacy, including

government lobby efforts. Here I also got more insight into their perspective regarding the Blue prescription conditions.

Informant four: During my fourth interview with “the Specialist”, I got a more in depth understanding of how the method assessment works from an expert’s point of view. They work as a neurologist and through their work have participated in method assessments for migraine treatments, offering expert evaluations on treatment effectiveness and feasibility. In the interview, they helped close the gap about the role of experts during the method assessment and how their expertise is considered. I also got more insight in the shaping of policy and their perspective on how things should be done regarding the accessibility of the treatment.

Informant five: My last interview was with “the Evaluator”. They work at the Directorate, specializing in health technology assessments, including CGRP treatments. Their expertise includes the practical aspects of conducting health evaluations, the devices used in assessment processes, and the broader implications of cost-effectiveness considerations. Unlike clinicians, their perspective is primarily regulatory rather than medical. Through the interview the Evaluator could give me more insight in the devices used to conduct the method assessment and more specifically on how it is done in practice. They also gave a different perspective regarding how they value the process and the results.

The interviews were conducted through semi-structured interviews to allow for flexibility during our conversations. Although I researched both the topic and the interviewees beforehand, I wasn’t sure which direction the discussions would take. Using a semi-open format allowed me to follow unexpected leads and ask follow-up questions when something surprising came up. This approach also helped maintain a natural flow in the conversation (Kvale, 2007). I tailored my interview guide for each participant. For the Neurologist, Specialist, and Evaluator, I focused on direct questions about the health assessment process. For the Researcher and Advocate, I aimed to learn more about patient experiences with the medicine. Additionally, I asked the Neurologist, Specialist, and Researcher to compare migraine treatments and explain how Aimiovig differs from earlier options, while the Advocate and Evaluator provided insights into how they interpret and apply the law.

Table 2. List of interviewees

Informant	Background	Format	Duration
The Neurologist	Experience as an expert in method assessments Researcher within the field of migraine Contributed with clinical insight both nationally and internationally	Online via Teams	Ca. 25 min
The Researcher	Neurologist at the Norwegian Headache Center, Researcher within the field of migraine Excessive knowledge of CGRP treatment in practice	Online via Teams	Ca. 35 min
The Advocate	Representative from a headache advocacy group Insight into patients' relation to CGRP treatment Worked with migraine advocacy and government lobbying	In person	Ca. 60 min
The Specialist	Experience as an expert in method assessments Worked with the method assessment Neurologist and professor	In person	Ca. 60 min
The Evaluator	Representative of the Directorate for Medical products, specializing in health technology assessments, Practical experience of conducting health evaluations	In person	Ca. 50 min

The benefit of interviews is that they provide rich, detailed data that captures nuances not always evident in official documents or statistical analyses (Kvale, 2007). Furthermore, interviews allow for flexibility, enabling follow-up questions and clarifications to ensure depth in responses. However, interviews also have limitations. Responses can be influenced by personal biases, memory recall issues, or the interviewee's positioning within a specific institution or professional background (Kvale, 2007). Additionally, interviews rely on self-reported data, which may not always align with objective facts. I interviewed informants from diverse backgrounds to mitigate these limitations, ensuring multiple perspectives on the same issue. I also supplemented interview data with document analysis to cross-check information and identify patterns.

3.4 Methodological Concerns and Ethical Considerations

There are several ethical concerns that need to be considered before starting any research projects, especially when working with human participants and health-related topics. For this project, I have followed the ethical principles outlined by the National Committee for Research Ethics in the Social Sciences and the Humanities (NESH). One of the key principles is that researchers have a shared responsibility to promote ethical values through all parts of the

research process. That includes how we teach, supervise, and share our work (NESH, 2024). Since I'll be conducting interviews, I also applied for approval from SIKT, to make sure everything is handled in accordance with current regulations and guidelines. Since the interviews were conducted with actors involved in CGRP treatment and policy, not with patients, the data is not considered sensitive.

Everyone who participated in the interviews received clear information about the project in advance. They were asked to give their informed consent and were informed that participation is voluntary, and they can withdraw from the project at any time. The interviews were recorded, transcribed, and deleted after the project was finished. During transcription, I anonymized the data to ensure that the informants could not be identified. The data will be stored securely through UiO's OneDrive. I will also use Nettskjema for the interviews, which is integrated with UiO's systems and ensures that both collection and storage are managed properly.

In this thesis, I have used GPT UiO as a learning partner, which has helped me reflect on my thesis. It has been a source of inspiration in regard to structuring my thesis. I have not used ChatGPT to generate original text, analysis, research findings, or citations. All ideas, interpretations, and references to literature are my own. The AI was used only as an inspiration for language and editing to support my own academic writing process, in line with the University of Oslo's guidelines on transparency, critical reflection, and academic integrity (University of Oslo, n.d.).

When analyzing the data, I had to be aware of the potential bias my experiences might introduce. Since I have been diagnosed with chronic migraines and have benefited from anti-CGRP treatment, it is crucial to recognize how this could influence my data collection and interpretation. However, as Haraway (1988) argues, science is socially constructed, and personal experiences can play an essential role in knowledge production. Harding (1992) also contends that knowledge is shaped by the perspectives of its creators, and subjective knowledge should not be dismissed but acknowledged as part of the process. In this context, my personal experience adds a layer of insight that those unfamiliar with migraines do not possess. Nonetheless, it is vital to remain mindful of how this influences my analysis. Following Haraway's (1988) advice, I strive to recognize my positionality throughout the process to ensure that my personal bias is acknowledged but not concealed. This approach enables me to leverage my experience as a strength rather than a limitation in my thesis.

4. Analysis

This chapter explores how the value of Aimovig was constructed, negotiated, and contested across different institutional arenas in Norway after being introduced to the market in 2018. By closely analyzing the health technology assessment conducted by the Directorate, subsequent regulatory processes, and political documents from Parliament, I aim to show how Aimovig's value was not simply a product of clinical trials or economic evaluations. Instead, it was shaped through multiple valuation practices involving legal frameworks, devices such as QALYs, political debates, and interventions from medical experts and patient organizations.

Instead of just begin a technical evaluation, Aimovig's path through the Norwegian healthcare system illustrates the complexities of valuation, which is layered, dynamic, and often contested. Through tracing the journey through various institutional contexts, from health assessments at the Directorate to the establishment of reimbursement standards and parliamentary discussions, it becomes clear that value is not static but continually negotiated. This chapter utilizes Dussauge et al.'s (2015) valuography to explore how interests are created, how epistemic and economic rationales intertwine, and how participants position themselves within these negotiations. The analysis reveals the intertwining of economic, scientific, and ethical issues, highlights how valuation devices influence decisions, and demonstrates how the distinction between technical judgment and political priorities can become indistinct when high-cost medications are involved.

4.1 Introducing the Controversy

This part approaches the case of Aimovig as a controversy, not in the sense of public scandal, but as a productive moment of uncertainty, negotiation, and contestation over what counts as valid knowledge, legitimate treatment, and public value. As Sismondo (2010, p. 121) suggests, controversies allow us to trace how scientific knowledge and technologies are made and how claims are justified, challenged, and stabilized. They consider the devices actors use to argue for what is credible and valuable and how competing versions of science, economics, and ethics are negotiated in practice.

Migraine has long been characterized by uncertainty, both in medical and institutional contexts. Despite impacting a considerable segment of the Norwegian population and significantly diminishing quality of life, studying and treating it sufficiently remains challenging. As the Researcher noted, migraines exist “at the borderline of our understanding of the brain itself.” Although described for centuries, its fundamental causes are still not completely understood. The lack of precise biomedical understanding hinders the creation of treatments aimed at addressing the underlying causes of the condition instead of merely relieving its symptoms. (The Researcher).

In terms of treatment strategies, migraine care has traditionally been divided into two main categories: acute and preventive treatment. Acute treatments, such as triptans or painkillers, are taken during an attack to stop or reduce symptoms. Preventive treatments, on the other hand, are taken regularly over time to decrease the frequency and severity of migraine attacks. For many patients with frequent migraines, preventive treatment becomes crucial for maintaining any semblance of normal daily functioning. However, as the Researcher explained, the preventive medications available until recently did not actually develop with migraines in mind. Instead, drugs like blood pressure medications, antidepressants, and antiepileptic drugs were adapted for migraine use. These treatments often had limited success, and many patients either experienced little improvement or struggled with serious side effects. For some, preventive treatments were not a viable option at all.

The introduction of Aimovig marks a significant turning point in the treatment of migraines within the Norwegian healthcare system. For the first time, a preventive treatment has been developed specifically to target the underlying triggers of migraine. Aimovig functions by blocking the CGRP receptor, which plays a crucial role in migraine attacks, offering a more targeted and promising strategy for prevention. As the Researcher described, this shift has opened new possibilities in patient care and the scientific understanding of migraine itself.

This breakthrough also created a new sense of hope among patients. As the Advocate explained, Aimovig was initially received as “a tremendous source of hope” for those who had long struggled without effective options. Some patients experienced almost complete remission of their migraines, becoming what clinicians call “super-responders,” while many others saw a significant reduction in attack frequency and severity, even if complete relief remained rare.

For many, Aimovig and similar treatments changed the experience of living with migraine from one of constant management to something closer to normal life.

Yet transforming individual hope into public healthcare policy is not straightforward. The public healthcare systems in Norway are built around the principle of prioritization. With limited resources, not all treatments can be reimbursed through public funding. To ensure that resources are balanced between clinical benefit, financial sustainability, and societal need, Aimovig needs to go through a health assessment. The Directorate conducts this process, which operates within a set of laws and regulations that dictate what must be considered during an assessment (Statens Legemiddelverk, 2019). The evaluation of Aimovig was shaped by three main criteria: benefit, resource use, and severity. Benefits focus on improving patients' quality of life and life expectancy; resource use captures both the direct and indirect costs of the treatment; and severity assesses the seriousness of the conditions and the consequences of not treating it. These criteria must be assessed together rather than individually. (Statens Legemiddelverk, 2019).

These criteria are not merely technical guides. They reflect broader political and societal values regarding what should be prioritized within a universal healthcare system. As Fourcade (2011) reminds us, valuation practices are embedded in cultural and institutional contexts. What counts as valuable is not objectively given; it is shaped by regulatory norms and expectations. In this way, the assessment criteria set boundaries around what becomes visible, legitimate, and fundable through the Blue prescription.

However, prioritization creates tensions. While institutional frameworks must ensure fair and consistent allocation of resources, they can also come into conflict with the lived needs and expectations of individuals. The case of Aimovig makes this tension particularly visible. As demonstrated, patients and clinicians have given Aimovig a value that goes beyond the clinical terms but through personal experiences. Yet these individual experiences had to be translated into standardized valuation models, with a broader population to take into account.

This tension reflects a broader issue within healthcare valuation. As Dussauge, Helgesson, and Lee (2015) have shown, different value regimes, clinical, economic, and ethical, often coexist but do not always align. In the case of Aimovig, the patient's experience of suffering and relief had to be made legible within a bureaucratic framework designed to compare diverse

treatments according to uniform criteria. This mismatch reveals how prioritization processes, while necessary, also carry the risk of excluding needs that do not easily fit within standardized categories. The resulting controversy is not just about a single drug but about the broader political stakes of how value is defined and distributed in public healthcare. As Fourcade (2011) shows, valuation devices are never neutral; they embed particular visions of what is socially legitimate and economically rational. In Aimovig's case, the friction between individual medical hope and collective budgetary logic underscores the contested nature of prioritization itself.

In the following section, I explore how these tensions materialized in the Directorate's assessment of Aimovig. I focus on how the criteria of benefit, resource use, and severity were interpreted and applied and how this process involved not only scientific judgment but also practical, institutional negotiation. By doing so, I trace how Aimovig's value was not merely calculated but actively constructed through the very frameworks meant to standardize and stabilize decisions.

4.2 Method Assessment of Aimovig

This section examines the practical application of the prioritization criteria. Expanding on the broader discussion of valuation and controversy, I concentrate on the Norwegian Directorate's evaluation of Aimovig, exploring theoretical aspects and the actual health technology assessment process. By focusing on the interpretation of the criteria, benefit, resource use, and severity were interpreted in this particular case, the section highlights the practical judgments, negotiations, and decisions that determined Aimovig's eligibility for public reimbursement.

As demonstrated in the previous section, the criteria are the basis of the method assessment. While these criteria are designed to support consistent, evidence-based decisions, they also require interpretations (the Evaluator). As Asdal and Reintertsen (2022) argue, legal frameworks do not implement themselves, but they must be enacted through practical work. In the case of Aimovig, this meant that four case managers at the Directorate were tasked with reviewing submitted clinical trials, economic models, and contextual evidence and then determining how these aligned with the criteria. This work involves interpretation, adjustment, and navigating uncertainties along the way (The Evaluator). For example, a treatment that

provides minimal benefits but addresses a severely serious condition might still qualify for public funding. In contrast, a highly effective intervention for a less critical issue could be warranted if it shows cost reductions in other parts of the system (Legemiddelverket, 2019; The Evaluator). This adaptability allows the Directorate to consider complexity and context instead of depending strictly on fixed benchmarks.

In other words, through the practical work of the Directorate, these criteria were interpreted, translated, and turned into decisions. In this sense, the health assessment of Aimovig became a material and interpretive process in which documents, numbers, and judgments were actively assembled to generate a valuation outcome. The assessors needed to compile and analyze documents, data, and clinical results in a manner that is coherent within the wider healthcare landscape. By doing this, they were not merely adhering to procedures; they played a crucial role in defining Aimovig's value as both a patient treatment and a public investment.

In other words, through the practical work of the Directorate, these criteria were interpreted, translated, and turned into decisions. In this sense, the health assessment of Aimovig became a material and interpretive process in which documents, numbers, and judgments were actively assembled to generate a valuation outcome. The assessors needed to compile and analyze documents, data, and clinical results in a manner that is coherent within the wider healthcare landscape. By doing this, they were not merely adhering to procedures; they played a crucial role in defining Aimovig's value as both a patient treatment and a public investment.

From this perspective, the Directorate can be viewed as a kind of laboratory. This is not in the traditional scientific sense but in a space where evidence, judgments, and priorities are assembled, tested, and reshaped to fit public healthcare frameworks (Latour & Woolgar, 1986). Data must be interpreted, translated into national cost-effectiveness models, and positioned within assessments of public need and system sustainability. In this way, the Directorate operates as a knowledge-producing site. Not just evaluating facts but constructing them through socially organized practices.

Having established the Directorate as a site where value is created through careful interpretation and negotiation, I now turn to how this process unfolded in the specific case of Aimovig. In the following, I examine how the Directorate managed the studies submitted by Novartis and how the assessment of evidence became an active process of determining what

counted as relevant, transferable, and meaningful knowledge. This provides a concrete example of how valuation occurs in practice, not by simply measuring against fixed standards but by adapting, reshaping, and sometimes excluding knowledge to fit the Norwegian healthcare context.

To better understand how valuation practices unfold in the context of public healthcare decision-making, I visited the Directorate and conducted an interview with one of the evaluators directly involved in health assessments. This interview, together with the interview with the Specialist and the Health Assessment report, allowed me to follow the assessment process more closely, not only in terms of how it is formally structured but also how it unfolds in practice. At the time when Aimovig was assessed, the Directorate was known as the Norwegian Medicines Agency. It later changed its name to the Norwegian Medical Products Agency, but for the sake of clarity, I will refer to it as the Directorate throughout the analysis.

4.2.1 Evaluation of the Data

At the Directorate, this valuation work does not take place in a traditional laboratory with lab coats and microscopes. Instead, it occurs in an open office landscape, where case managers walk around in everyday clothes, coffee in hand, working through hundreds of pages of submitted material. Instead of conducting experiments, they analyze data provided by pharmaceutical companies like Novartis, which submitted a full dossier for Aimovig in September 2018. These documents included research results, clinical trial data, economic analyses, and health-economic evaluations related to chronic migraine.

At the Directorate, evaluators analyze the significance of the evidence submitted in practice. For Aimovig, this meant not only evaluating whether the company had provided data but also ascertaining the data's reliability, relevance, and suitability for the Norwegian context. Given that much of the economic modeling originates from pharmaceutical companies, the evaluators take on a filtering role, where they have to ensure the evidence is credible and meets national standards. This process extends beyond merely verifying figures; it also involves defining what qualifies as legitimate knowledge within the healthcare system (Legemiddelverket, 2019).

A crucial aspect of this process is determining transferability. As clinical studies are frequently conducted in international or commercial contexts, the Directorate needs to assess whether the

results are applicable to the Norwegian population (Legemiddelverket, 2019; The Evaluator). This requires careful examination of the study design: Who were the study participants? How was the benefit assessed? Which outcomes were prioritized? The Directorate evaluates these aspects against what is deemed meaningful and representative within Norwegian clinical practice. Thus, the Directorate essentially translates findings, judging whether externally generated knowledge aligns with Norwegian standards of validity and value.

This filtering process is evident in the chosen studies for assessment. Among the four clinical trials submitted, two were excluded by the Directorate because they did not align with Norwegian evaluation models. Variations in patient demographics, endpoints, or treatment protocols may have complicated the application of their results in Norway. This decision highlights the Directorate's proactive role in shaping the evaluative evidence. Some knowledge is prioritized, while other data is intentionally disregarded.

This decision is significant because it illustrates that valuation involves not just interpreting results but also establishing what constitutes evidence. The exclusion of two studies also means the omission of the patient experiences, treatment outcomes, and benefits those studies might have documented. At the same time, by choosing the remaining two studies, the Directorate confirms that these submissions better reflect the characteristics, needs, and expectations of the Norwegian migraine population. In summary, the evaluation process goes further than the application of criteria, but it involves assembling evidence that aligns with national standards, institutional practices, and local political accountability.

Clinical trials evaluating Aimovig have demonstrated a moderate but clinically meaningful effect in reducing migraine frequency, particularly among patients who have exhausted other treatment options. The studies forming the basis of the method assessment included participants with chronic and high-frequency episodic migraine, all of whom had previously tried between two and four preventive medications without success. During the trials, participants were required to document their headache patterns to measure treatment response. However, what counts as a successful response depends on how 'response' is defined. In Novartis' analysis, a patient was only considered a responder if they experienced at least a 50% reduction in monthly migraine days (MMD), which led to a responder rate of 31.97%. In contrast, the Directorate adopted a lower threshold of 30% reduction in MMD to define treatment response. Based on

this criterion, the Directorate calculated a responder rate of 47.14% for patients with chronic migraine and 40% for those with episodic migraine.

The shift in how treatment response was defined for Aimovig was more than a technical adjustment; it was a reflection of clinical experience in Norway. Rather than relying only on the pharmaceutical company's definition, the Directorate adopted a broader threshold that better reflected what many neurologists saw as meaningful improvements in patients' lives. This decision mirrored similar approaches in other countries, including the UK and Sweden, and signaled a different understanding of what should count as effective (Legemiddelverket, 2019). With a new response threshold set at 30% instead of 50%, more patients were classified as responders, which changed the interpretation of the clinical results. This directly influenced how the treatment scored under the benefit criteria. A lower threshold for what is considered a great responsibility made it easier to argue that Aimovig delivered sufficient clinical value to justify reimbursement.

In this way, the decision to lower the response threshold was not just a technical correction, but it was a value-laden move that shaped one aspect of how Aimovig was evaluated and legitimized. As the Neurologist noted, these decisions are as much about priorities and patient care as they are about data. Different thresholds produce different responder rates, affecting how the drug is perceived and who gains access to it. The evaluation and approval of Aimovig were not simply outcomes of scientific analysis but the result of complex valuation practices that negotiated what should count as effective, affordable, and fair in a publicly funded system. This process not only defines the value of Aimovig but also configures what it means to be a "treatable" migraine patient who counts as deserving of care. The use of conditional criteria, such as requiring failure of previous treatments or demonstrating a 30% reduction in monthly migraine days, is constructing a normative framework that categorizes the patient populations. These mechanisms of inclusion and exclusion are not purely clinical but are also shaped by cost-effectiveness thresholds, reimbursement policies, and the anticipation of budgetary impact.

What counts as sufficient benefit is the outcome of situated valuation work. Different definitions of response lead to different responder rates, which in turn impact reimbursement decisions and access to treatment. In this case, the evaluation and approval of Aimovig were simply the results of valuation practices that negotiated what should count as effective,

affordable, and fair within a specific public healthcare system. The selection and exclusion of studies is a clear example of what Dussauge, Helgesson, and Lee (2015) call the intertwining of value and the epistemic. Acts of knowing and acts of valuing happened together. At this moment, the Directorate's decisions about what counted as good enough evidence were inseparable from broader judgments about Aimovig's clinical value and its place within the public healthcare system. Scientific evaluation and economic-political valuation were not separate phases, but rather, they were intertwined in every judgment made about the data.

These devices show that valuation is not something purely subjective or free-floating. It is organized through specific numbers, standards, and comparisons, which channel and stabilize how value is constructed. Yet, even within these frameworks, there is room for judgment, negotiation, and interpretation. The exclusion of two studies and the reinterpretation of treatment response thresholds illustrates how the Directorate was actively involved in crafting the conditions under which Aimovig could be understood as a valuable, effective treatment. In this case, Aimovig appeared more effective and helped position it as a more valid and fundable treatment within the reimbursement system. In this way, the Directorate's health assessment laboratory emerges not as a place where neutral evidence is checked against neutral rules but as a site where the epistemic and the economic, the scientific and the political, are inextricably linked.

4.2.2 QALYs as a Valuation Device

A central component of the health assessment process, both in general and in the specific case of Aimovig, is the use of QALYs as a standardized measure for health benefits. As outlined in the method assessment for Aimovig (2019), QALYs offer a way to translate complex patient outcomes into a comparable framework that allows policymakers to prioritize between different treatments and conditions. In practice, QALYs combine length of life and quality of life. The idea is to adjust the number of years a person might expect to live based on the health status they experience, weighting states of illness or disability between 0 (equivalent to death) and 1 (perfect health). In this way, QALYs allow for a numerical representation of how diseases, treatments, and interventions impact people's lives, not just by extending life but by improving day-to-day functioning and well-being (Statens Legemiddelverk, 2019). As the Evaluator explained during our conversation, "If it's a disease that doesn't reduce life expectancy but severely affects the quality of life, it will reflect in the assessment, similarly to

a condition that shortens lifespan." This means that, in the case of migraine, QALYs aim to capture the disabling and often invisible impacts that patients live with, from constant pain to social withdrawal and loss of productivity, rather than simply counting years lived. In this context, Aimovig's value was framed not just by its ability to prevent death but by its ability to restore everyday functioning for people with chronic migraine.

In the evaluation of Aimovig, the Directorate incorporated data from clinical trials and patient surveys to estimate the treatment's effect on QALYs. By tracking these factors systematically throughout the treatment process, the studies provided data that could be quantified and compared across different treatments and different patient groups. Importantly, the assessment emphasized that migraines are conditions where the primary burden lies not in reduced life expectancy but in severe reductions in quality of life (Statens Legemiddelverk, 2019).

The use of QALYs in the assessment of Aimovig can be understood as a valuation device (Dussauge, Helgesson, and Lee, 2015; Muniesa, 2011). Far from being neutral, QALYs translate complex and subjective experiences, such as chronic pain, into standardized numerical values that enable comparison across diseases and treatments. In doing so, QALYs do more than measure health outcomes; they shape how value is recognized, legitimized, and made actionable within institutional decision-making (Helgesson & Muniesa, 2013). They frame which forms of suffering are acknowledged and which are marginalized. This standardization is not without exclusions, and these exclusions are shaped by broader ethical, political, and institutional contexts.

QALYs are central to the health assessment in Norway. Through the standardizations, QALYs make it possible to compare migraine with cancer. This comparability is essential in a publicly funded system where resources are limited, and trade-offs are unavoidable. It offers a way to justify funding decisions based on measurable outcomes rather than political pressure or public sympathy alone. By expressing treatment outcomes in terms of cost per QALY gained, the Directorate can weigh the relative value of interventions without privileging one disease area over another (The Evaluator). In this way, QALYs help ensure that decisions about public reimbursement are based on consistent and transparent criteria, allowing for rational prioritization in healthcare policy.

The evaluation of Aimovig illustrates both the strengths and limitations of QALYs as a valuation device. On the one hand, the device made it possible to quantify improvements in daily functioning and reduced pain, offering a rationale for public reimbursement. On the other, its structure narrowed the scope of what was counted. Broader social and economic consequences, such as lost productivity, long-term absence from work, or pressure on welfare systems, were left out, even though they were central to the lived experience of migraine, as emphasized by both evaluators and clinicians. This highlights a core tension in the use of standardized metrics in healthcare. While they provide a common language for decision-making, they also draw boundaries around what is made visible. In doing so, they help define what counts as value within the system, not just clinically but politically and ethically. The challenge is not only to improve these devices but to ask what kinds of lives they allow us to see and which they continue to keep out of view.

In sum, QALYs function as a key valuation device within the health assessment, by translating complex and often invisible forms of suffering into standardized, comparable units. By enabling comparisons between conditions, it provides a shared language for decision-making in a system where fairness, transparency, and efficient resource use are critical. In doing so, they not only help define what counts as a legitimate health gain but also support a policy framework where treatment value is grounded in consistent, measurable outcomes rather than external pressures or moral intuitions.

QALYs and the three criteria

In their assessment of Aimovig, the Directorate needed to understand just how debilitating chronic migraine is for patients and what kind of benefit the treatment could offer. To do this, they used QALYs to assess both the condition's severity and the medicine's expected. The analysis was based on clinical trial data and modeled on the average patient starting treatment in Norway, estimated to be around 42 years old. By comparing the quality of life of a typical 42-year-old with that of someone the same age living with chronic migraine, they calculated that patients without treatment would lose around 11 QALYs over their remaining lifetime. In other words, chronic migraine was seen to reduce a person's life expectancy in good health by about 11 years, a significant burden and enough to classify the condition as severe within the priority-setting framework (Statens Legemiddelverk, 2019).

Here, there is a clear example of how value and knowledge are deeply intertwined, what Dussauge, Helgesson, and Lee (2015) call "the intertwining of the epistemic and the evaluative." The seemingly technical task of calculating lost QALYs for chronic migraine patients was not merely about measuring pre-existing facts. Instead, it was a construction of a particular value for migraine within the Norwegian healthcare context. By operationalizing severity through the number of QALYs lost, the Directorate engaged in a process of both knowledge-making and valuation. The act of comparing the average health outcomes of a 42-year-old migraine patient with that of a "normal" 42-year-old Norwegian did more than produce a number. It produced a statement about the seriousness and urgency of chronic migraine as a public health issue.

The estimate that patients with chronic migraine lose around 11 QALYs became a key number throughout the rest of the assessment. It gave the Directorate a baseline for understanding the value of intervening. Based on this number, the Directorate estimated that Aimovig could benefit chronic migraine patients 4,7 QALYs (Statens Legemiddelverk, 2019). This helped show the drug's potential to improve patients' daily functioning and quality of life. It also made it possible to compare Aimovig not just to other migraine medications but to treatments for entirely different conditions. In this way, the 11-QALY figure worked as more than just a number. It helped stabilize the idea of chronic migraine as a serious condition, on par with or even more burdensome than other well-known chronic illnesses like arthritis or hypertension. So, while QALYs were used to compare clinical outcomes, they also played a role in shaping how suffering, benefit, and public value were understood and in deciding whether Aimovig was seen as a worthwhile investment in the healthcare system.

This becomes more evident when determining whether Aimovig offers enough benefits to justify its high price. The Directorate calculated that treating chronic migraine with Aimovig would cost about 880,000 NOK per QALY gained. However, to determine if Aimovig can be considered cost-efficient, one has to identify the patient group (the Evaluator). The population of the patient group can have something to say when calculating the resource use. If the patient group is large but the medication is inexpensive, the likelihood of coverage increases. The same applies when the drug is expensive but intended for a small patient group (The Evaluator). While Novartis came with an estimated patient population, the Directorate also consulted with clinical experts in the field in Norway. In the case of Aimovig, the Directorate consulted two medical specialists via email to help estimate how many patients in Norway might qualify for

the treatment. Once impartiality was confirmed, the experts were sent a set of general questions: How many people suffer from migraines? How many meet the criteria for chronic migraine? And how many might actually receive Aimovig, considering that patients first have to try and fail other preventive treatments? Their responses were combined with epidemiological data and existing research to inform the assessment.

In the report, the medical experts say that between 5,000 and 25,000 individuals in Norway (0.1%–0.5% of the population) may suffer from chronic migraine. Out of these, it was estimated that only 40% of these patients (approximately 2,000–10,000) would qualify for Aimovig treatment if the patients had already tried other preventive therapies. Here, one has included patients who try Aimovig but ultimately have to stop if they experience less than 30% improvement. In the end, the Directorate estimated that about 6,000 patients would require Aimovig in their analysis. These numbers are not fixed figures but negotiated assumptions which are based on in clinical consultation and data from the studies. These numbers were used during the cost-effectiveness analyses to determine if the medication was cost-efficient or not (Statens Legemiddelverk, 2019).

These are interpreted and negotiated assumptions constructed through consultation and expert interpretation. In this way, medical experts did not just provide clinical facts. They helped define the scale and scope of the treatment's relevance in the Norwegian healthcare system. At the same time, these assumptions shape the value of the medicine and the disease. These estimates contribute to constructing migraine not merely as a neurological disorder but as a condition worthy of treatment. As valuation studies suggest, value is enacted through such practices of qualification and quantification, where decisions about inclusion, thresholds, and eligibility actively shape the identity of the disease and its sufferers (Dussauge, Helgesson, & Lee, 2015). By identifying a specific population (6,000 patients) and associating this group with quantifiable loss and potential gain, the Directorate participates in a broader process of legitimizing chronic migraine as a public health concern. In doing so, it doesn't merely assess the value of Aimovig; it reinforces a narrative in which certain forms of suffering become visible, actionable, and worthy of investment. Such valuation processes not only inform reimbursement decisions but also shape public understanding of what counts as a legitimate illness and who qualifies as a deserving patient.

Furthermore, by including how many patients will start and continue treatment over time, they normalize certain expectations about patient behavior and institutional capacities. In doing so, they contribute to a broader discourse about whom migraine affects, how seriously it should be taken, and to what extent it needs public investment. In other words, valuation practices do more than just establish a medicine's price, but they help shape and justify collective decisions about which forms of illness and suffering deserve recognition and resources.

Limitations to the use of QALYs and method assessment

By combining the length of life and quality of life, QALYs provide a language to legitimize its inclusion in health technology assessments. When it comes to an invisible disease, such as migraine, it is essential to ensure legitimacy both in regard to the medicine and the patient's experience of pain. This supports earlier research by Sjögren and Helgesson (2007), which demonstrated that QALYs in Sweden brought attention to non-lethal but significantly disabling conditions, such as migraines, within policy discussions. Their analysis reveals that the implementation of QALYs did more than provide a technical means for comparison; it fundamentally altered the healthcare agenda by enabling the acknowledgment and action on chronic, subjective suffering. By standardizing QALYs, migraine was made "visible" to the government, shifting it from a historically neglected condition to one that could be evaluated alongside more traditionally recognized illnesses.

Yet, even as QALYs open up space for new kinds of health conditions to be recognized, they also introduce new forms of exclusion. As both the Neurologist and Advocate emphasized, QALYs offer only a partial representation of disease burden. They can register improvements in pain, social functioning, or anxiety, but they overlook more diffuse effects, such as long-term financial insecurity, loss of productivity, and pressure on welfare systems. In migraine, the direct medical costs are relatively low, but the indirect costs are substantial. People with chronic migraine often lose income, struggle to maintain jobs or education and require support from social services. These broader consequences are largely invisible in QALY-based assessments.

However, this standardization also introduces tensions. While it allows conditions like migraine to be taken seriously in policy terms, it also simplifies complex forms of suffering into numbers. As cases like Aimovig show, this can make certain impacts, like productivity

loss or social disruption, invisible in official assessments. So, while QALYs promote fairness by offering a shared language of comparison, they can also reinforce structural blind spots about what kinds of value matter most.

This limitation becomes especially clear when looking at how the burden of disease is framed. The Neurologist argue that “disease burden and economic loss, must be examined in different ways.” In the case of migraine, for example, the direct medical costs, such as medication and doctor’s appointments, are relatively low. What is far more significant is the loss of productivity, income, and social security costs due to people being unable to work. Yet, these broader economic effects are largely excluded from official assessments.

When asked why societal costs are not considered, the Advocate explained that Norway has a deliberate policy against including societal productivity losses in health technology assessments. The rationale is rooted in equality: “In Norway, everyone receives equal treatment, regardless of whether you are 4 years old or 85 years old.” Factoring in productivity would implicitly assign greater value to those in paid employment, thereby disadvantaging children, retirees, and others who are not formally part of the workforce. “I generally agree with that policy,” the informant said, “but I think there should be some exceptions.”

For them, migraine represents such an exception, a condition that affects a large portion of the population and has substantial societal costs. “Especially since the vast majority of people who get migraines are within... yes, it’s crucial... the working-age group,” they explained. “It’s primarily between 15 and 55 that most cases occur. These are the years when you’re expected to study, work, start a family, and function in a way that requires the most from you in life.” In their view, illnesses that disproportionately affect people in their most productive years should be considered differently, not to assign higher worth to these lives, but to acknowledge the very real impact such diseases have on society as a whole.

The Neurologist pointed out the ethical and political challenges of integrating productivity-based valuations into healthcare decision-making. “For example, if it’s a retired person or a child who has a headache, then it’s clear that the expenses aren’t that big, right? They do not receive any income from work.” In such calculations, people who are not formally productive, the elderly, children, and the unemployed appear to be “worth” less. Taken to its logical conclusion, this logic risks ranking individuals or social groups according to their economic

contribution, reinforcing inequalities along lines of class, gender, and age. “You just have to look at the purely human costs,” the informant concluded. “There is a great deal of agreement on that.”

However, as the Neurologist emphasized, the broader value of migraine treatment is difficult to capture within the existing assessment frameworks. Migraine, which affects around 15% of the population and disproportionately impacts people in their most productive years, has clear societal consequences when left untreated. As the Neurologist noted, “It’s your children’s teacher, the nurse who looks after your parents, the orthopedist who will operate on you, who is then gone.”. The Neurologist, however, points out that a line needs to be drawn somewhere. With the system today, they believe that by staying clear of emphasizing these broader societal contributions, the regulations avoid that kind of unfairness.

This demonstrates what MacKenzie (2009) suggests in their article regarding “making things the same.” The process of making diverse elements the same is not simply a technical task but a political one. Through this, one shapes how the market functions and what values they prioritize. My analysis demonstrates that applying QALYs in the case of Aimovig helped spark the controversy because it failed to capture what many patients and clinicians saw as the real, lived value of the treatment. The dissonance between these perspectives highlights how valuation is not just about evidence but also about whose experiences are legible within standardized models and whose are not.

While QALYs have helped make conditions like migraine visible within policy frameworks, they also introduce new forms of exclusion. The case of Aimovig demonstrates how standardized assessment devices can struggle to capture the full scope of what is at stake. My analysis highlights how valuation practices meant to ensure fairness often end up simplifying complex realities and sidelining some forms of suffering and costs. This reinforces MacKenzie’s point that making things the same is highly political and helps shape what and who is seen as valuable in public healthcare in Norway.

Medical professionals’ evaluation of Aimovig

Beyond numbers, medical experts also contributed to shaping the more human and contextual aspects of the health technology assessment. As the Specialist explained, they were given

access to the full draft report and invited to comment on how their input had been interpreted, as well as on the broader framing of the case. Although pricing and economic details were redacted, they could respond to clinical descriptions, assumptions about treatment effects, and the report's conclusions. This kind of feedback helped the Directorate ensure that the assessment reflected real-world clinical practice. Not just abstract models.

The Specialists highlighted both the promise and the limitations of Aimovig. On the one hand, CGRP inhibitors were described as the first class of drugs developed specifically for migraine prevention, an important breakthrough for patients with few effective options. On the other hand, they pointed out that many patients still benefit from existing, less costly medications such as beta-blockers or topiramate. From a clinical and societal perspective, they argued that while Aimovig is valuable, it should be used when other treatments fail, balancing innovation with responsible use of resources.

This reflects the broader role that clinical experts play. They help to ground health technology assessments in lived medical realities while also articulating how treatments should be positioned within ethical and economic frameworks. Their input helps frame which kinds of suffering are recognized, which trade-offs are reasonable, and what counts as appropriate care. While medical experts do not determine cost-effectiveness thresholds, their involvement helps ensure that assessments remain grounded in clinical realities. At the same time, their perspectives are shaped by their own specializations and experiences, meaning that expert input is also a site of potential tension, negotiation, and disagreement. At times, these discussions involve disagreement, which, as the Evaluator noted, “Often, we reach strong agreement on the case, but sometimes there are differences of opinion. It can be very engaging, and we will try to reflect those perspectives in the final report.” These moments of disagreement are not a flaw in the process, but a reminder that expert input is not neutral. It is shaped by different ways of understanding evidence, responsibility, and patient need. As such, clinical expertise do not just inform assessments, but they help define what kinds of care are seen as legitimate, and what trade-offs the healthcare system is willing to make.

Aimovig as a new medication

An important factor to mention is the fact that when the method assessment began in 2018-2019, many of the studies were still in progress. At the same time, were there not many patients

in Norway who had the opportunity to try the medication? The health assessment report showed that about 530 patients (p. 24) in Norway used Aimiovig in February 2019. Many doctors did not have much information about the medicine as well. The Specialist explained that at that point, “Aimiovig was something we had heard a lot about and began to be presented in big conferences, but other than that, we did not know much about it.” The fact that medicine was something that they did not know much about illustrates how value is constructed not only on documented evidence but also on reputational cues and future expectations. Even though the drug is new and experiences are limited, the presence of similar treatments on the market and existing knowledge about migraines provide a basis for inferring their potential benefits.

When I asked the Evaluator about the lack of information and how that would have an effect on the assessment, they explained that this is normal practice.

“the Directorate often valuate medicine that are new or rarely used on the market. With a lot of these medicines, there are limited experience with the effects. However, some drugs in similar medical groups are already in the market and other times one has to consider what is reasonable to expect for that type of condition. So even though it is the first medicine in its group, does not mean there is no knowledge on the condition.”

However, they do acknowledge that there is some uncertainty with new or rarely used medication. That is also something that is factored into the decision-making. In the end, when decisions are begin made, the Directorate have to assess how much one are willing to pay based on their confidence level in the data. “If the medicine’s effects turn out to be lower than anticipated, we still end up paying for it. So, there is a risk involved, and that is included in the decisions”. The uncertainty is not something foreign but an anticipated element of evaluating new medical products. In other words, they are essentially basing their decision on their confidence level in the available data.

The results of the method assessment

In its final assessment, the Directorate concluded that while migraine met the criteria of both severity and duration, the resource use associated with Aimiovig was not considered reasonably proportionate to its benefits, particularly in light of uncertainties in the clinical data and the

projected budget impact of approximately 209 million NOK (Statens Legemiddelverk, 2019, p. 29). The Directorate emphasized that while Aimovig showed a measurable treatment effect, the improvement was modest when weighed against the high cost. The evaluation also highlighted uncertainty around how well results from clinical trials would translate into real-world clinical effectiveness, as data on long-term outcomes was still limited at the time. The high price of the drug, combined with the estimated treatment population of around 6,000 patients, meant that the cumulative cost far exceeded the financial limits within which the Directorate could implement a reimbursement decision under the Blue prescription.

However, Novartis submitted new, confidential price offers during the health assessment, specifically for the chronic migraine subgroup. These revised offers led the Directorate to reassess the treatment's cost-effectiveness. According to the Directorate, under the new conditions, and when limited to patients with chronic migraine who had failed at least two other preventive treatments, the resource use could now be considered "reasonably proportionate to the benefits, given the severity and uncertainty in this patient subgroup" (Statens Legemiddelverk, 2019, p. 30). This subgroup framing was crucial: by narrowing eligibility, the Directorate could reduce expected budget impact and increase alignment between treatment cost and public value. The Directorate also noted that the modeling was updated to reflect revised assumptions, including adjustments to patient adherence and stopping rules (e.g., discontinuation if less than 30% improvement was seen), which further influenced the cost-effectiveness outcome (Statens Legemiddelverk, 2019, p. 28).

Although the medicine was re-evaluated, its cost still exceeded the authorized threshold set by the Directorate. As a result, the decision was escalated to the Ministry of Health and Care Services for further consideration. However, the Ministry also found the price too high and chose not to allocate funding for it at that time. Instead, the Directorate was tasked with initiating price negotiations or tenders, with the goal of making this type of medication available to Norwegian patients (Prop. 1 S (2019–2020)). This outcome led to frustration among many, especially patients who had long been waiting for access to Aimovig (Engeset, 2019). However, the negotiations eventually succeeded in reducing the price to a level the state considered acceptable. The Health Minister later emphasized that these negotiations were necessary steps in making the treatment available under the Blue prescription. As he explained, "This means that we can now say yes to new and effective treatment for the patients most

severely affected by migraine, without it coming at the expense of other important measures in the budget” (Engeset, 2019).

Concluding remarks

This case shows that the value of a drug like Aimovig is not simply the result of formal health technology assessments; it is shaped through a wider set of institutional, political, and social processes. While the Directorate provided a technical evaluation based on clinical trial data and health economic models, the Ministry’s final decision also reflected broader concerns. This includes what the public expects, how limited healthcare resources should be allocated, and how to respond to patient needs in a politically acceptable way. In this sense, valuation emerges not as an objective or neutral outcome but as a contested, situated, and socially embedded process. These tensions underscore that healthcare decisions are not made solely on the basis of evidence but also through the interplay of values, legitimacy, and institutional pressures.

This speaks directly to the first part of the research question, by showing how Aimovig’s value was constructed, negotiated, and at times contested across different institutional arenas. For the Directorate, value was primarily framed through cost-effectiveness, with QALYs and budget impact models used to determine whether Aimovig provided enough health benefit relative to its cost. These devices functioned as gatekeeping mechanisms, standardizing decisions across different treatment areas. However, while they may appear neutral and objective, such models are deeply embedded with assumptions about what counts as a health gain, whose wellbeing matters, and which outcomes are worth quantifying. The technical language of assessment thus conceals a host of normative judgments.

At the heart of this negotiation is a clash over epistemologies of value, what counts as legitimate knowledge in the decision-making process. On the one hand, health authorities like the Directorate adhere to a framework grounded in scientific evidence and economic rationality. On the other, patient organizations and political actors challenge this framing by pointing to what these devices overlook, such as the everyday disruptions, the stigma, and the long-term socio-emotional toll of living with chronic migraine. These critiques expose the limitations of a narrow evidence base and highlight how certain forms of suffering are rendered invisible when assessments rely too heavily on quantification. As Dussauge, Helgesson, and Lee (2015) argue, valuation is always intertwined with knowledge production. What gets measured and

validated is never a purely technical matter but always involves political and epistemic decisions.

This theoretical lens also allows us to explore the second part of the research question: how assessment methods influence how diseases themselves are valued. In many ways, the use of QALYs enabled migraine to be brought into comparison with other more traditionally recognized chronic conditions. This can be seen as a form of recognition; it allowed the condition to be translated into a shared metric that gave it visibility within the decision-making system. However, the same framework also excluded critical aspects of the illness experience, such as reduced work capacity, social isolation, and the stigma associated with a condition that is often invisible or misunderstood. These exclusions weren't just side effects, but they reflected deeper ideological commitments within the Norwegian healthcare system, particularly its strong emphasis on egalitarianism.

Norway's principle of equality, which underpins much of its health policy, seeks to avoid privileging one group of patients over another based on socioeconomic productivity. While normally very defensible, this commitment had the unintended effect of sidelining concerns that are highly relevant for a condition like migraine, which disproportionately affects people in their most economically and socially active years. In excluding productivity loss from its models, the system aimed to promote fairness, but in doing so, it arguably downplayed the broader societal burden of the condition. This is a good example of how methods of assessment do not only reflect value, but they actively shape which kinds of suffering are seen as legitimate and actionable.

This becomes especially clear when placed in a comparative context. In Sjögren and Helgesson's (2007) study of QALY implementation in Sweden, migraine was one of the initial pilot cases used to demonstrate how health economic devices could enhance prioritization efforts. There, QALYs were instrumental in recognizing the seriousness of migraine and integrating it into policy discussions. In contrast, in the Norwegian case, the very same devices, mobilized under a different institutional logic, functioned more as a filter, restricting the visibility of certain burdens. This comparison illustrates the broader point that valuation devices like QALYs are not inherently inclusive or exclusive, but their effects are shaped by the institutional and political contexts in which they are applied.

Aimovig's case also demonstrates that value is not static or pre-given, but it is constantly being recalibrated. The drug was initially seen as too expensive, with a cost per QALY estimate of around 880,000 NOK. But over time, this view shifted. New population estimates, changes to clinical response thresholds, expert re-evaluations, and price negotiations with Novartis all contributed to reshaping the drug's perceived value. These were not minor technical tweaks, they involved reinterpretations of what counted as benefit, how many people might be eligible, and what degree of improvement was worth paying for. In other words, value was co-produced through ongoing interactions between clinical evidence, economic modeling, institutional constraints, and political pressures.

Throughout this process, the Directorate functioned as more than just a regulatory body. It acted as a laboratory. In this space, value is not simply assessed but actively made. The Directorate selected which forms of evidence to prioritize, which assumptions to build into their models, and how to balance conflicting demands of cost control and patient advocacy. These were not just analytical decisions; they were acts of framing, shaping what kind of disease migraine is understood to be and what kind of treatment it deserves. Such choices carry significant ethical and political implications. They determine who gets recognized, who remains invisible, and what it means to be deserving of care in a publicly funded healthcare system.

So, by tracing Aimovig's journey through the Norwegian system, this chapter responds directly to the core research question. It shows that value is not something found or revealed through assessment but something that is constructed through legal norms, scientific models, and political negotiation. The decision to include the drug on the Blue Prescription list was not just about clinical effectiveness; it was about deciding whose suffering counts, which kinds of evidence are credible, and what forms of life are seen as worthy of public investment.

In the end, valuation is both an epistemic and ethical act. It draws boundaries between legitimate and illegitimate suffering, between conditions that are treatable and those that are not, and between people who are included in the healthcare system and those who remain on its margins. The Aimovig case makes it clear that health technology assessments do more than allocate limited resources. They help shape our collective understanding of what illness looks like, who is considered a valid patient, and how healthcare systems define their moral obligations.

4.3 Valuation Through the Guidelines

In the previous section, I examined how Aimovig and migraine were valued through the health assessment. Central to this process was how various factors were considered and how priorities such as clinical benefit, resource use, and severity were weighed against one another. In this part, I focus on how the valuation process continues beyond the formal health assessment. I explore how decisions about who receives treatment, under what conditions, and at what cost are shaped by economic models and broader clinical, ethical, and political considerations. Drawing on the concept of valuography (Dussauge, Helgesson & Lee, 2015), I examine how these values are enacted and negotiated in everyday healthcare settings. At the center of this ongoing valuation process is a key document: the reimbursement guidelines, which translate assessment outcomes into practice and actively shape access, responsibility, and accountability within the healthcare system.

4.3.1 The Guidelines

In this section, I move from the national decision to include Aimovig on the Blue prescription list to how that decision plays out in practice, more specifically, how it shapes access for individual patients. While the formal assessment determined that the drug could be publicly funded, it's through the clinical guidelines that this decision is put into action. These guidelines set out who can get the treatment and under what conditions, acting as a bridge between policy-level approval and the reality of prescribing the drug in everyday healthcare. Access to Aimovig through the Blue prescription is based on a structured and selective process aimed at making sure the treatment is both accessible and used in a cost-effective way. The criteria for who can receive the medication are laid out in a document I'll refer to as *the Guidelines*. These are based on the findings from the health assessment and reflect how the Directorate has evaluated the drug in terms of clinical benefit, resource use, and severity. In that way, the Guidelines can be seen as a result of the valuation process and how different aspects of the treatment have been weighed against each other. But they're more than just instructions. The Guidelines also carry ethical and economic judgments that shape who gets access to treatment and under what conditions. For both doctors and policymakers, they offer a clear framework that helps decide which patients are eligible and how public resources should be used. This helps ensure that access to expensive medications like Aimovig is based on evidence and

aligned with broader healthcare priorities (Statens legemiddelverk, 2019; Helsedirektoratet, 2023)

The Guideline provides a framework for how the process of receiving Aimiovig on the Blue prescription. The process begins with a consultation between the patient and a qualified medical professional, who is either a neurology specialist or a medical doctor within a public hospital, who, after consultation, can submit an individual application for reimbursement on behalf of the patient. The purpose of this is to ensure that the medication is prescribed only to those who need it the most. To achieve this, patients must meet a set of criteria that determine their eligibility. This statement sets a clear requirement for who can submit an application for Aimiovig. The application has to come from a neurology specialist or a doctor at a public hospital. By only allowing these two types of healthcare professionals to send in applications, the system makes sure people with the right expertise are in charge, which can limit misdiagnosis. At the same time, it limits the options for patients to receive the medication through their GP at their local medical center, making it less accessible for some patients and potentially extending the process.

According to the Guidelines, patients must have chronic migraine. This specification excludes high-frequent migraine, which limits the patient group. This decision was based on the results of the method assessment, which concluded that the benefit and severity of the disease did not exceed the resource use. On top of having chronic migraine, patients also have to try out a minimum of three different preventive treatments from eight different drug classes. This can include Beta Blockers (blood pressure medicine), Antidepressants (medication for depression and anxiety), or Antiepileptic drugs (epilepsy medication). The use of these medications must be documented as ineffective over a period of three months. This makes sure that patients try a wide range of other treatments first and potentially avoid unnecessary costs. If one of the treatments works, patients should stay on those instead of trying Aimiovig. In some cases, if a patient has not tried and documented different medications before going to a neurologist or doctor who can send the application, it will take a minimum of nine months for the patient to have tried the required medication before they can apply for reimbursement for Aimiovig. However, exceptions to this rule can be made if significant medical reasons prevent the use of medications from at least three of these drug classes. In cases where an exception is requested, the medical professional must justify the clinical reasoning for not trying out certain classes and must still demonstrate that at least one medication from each of the eight drug classes listed

is considered. This gives people the possibility to get the treatment they need while still keeping healthcare costs under control. Overall, these criteria ensure that Aimiovig is saved for those who have already tried other options so resources are used in the most effective way possible.

After the patients receive Aimiovig through the Blue prescription, they still need to keep a headache diary to track their symptoms, which will be evaluated and journaled every 12 weeks by their medical doctor. This not only ensures that the treatment is effective but also helps in tracking patients' progress over time. This documentation makes it clear that patients do not experience any effect from the treatment. If that is the case, they will lose their individual application. Through this, the system ensures that the treatments are given to those who need them and are effective, which prevents unnecessary spending on ineffective medication. At the same time, this creates some uncertainty in regard to documents.

The last criterion in the Guidelines is that the approval for reimbursement is limited to one year from the date of the application. In practice does this mean that the patient together with their doctor, needs to apply again after one year. This is another insensitive that makes sure that only those who need the medication, will receive it through the Blue prescription.

The Guidelines outlines a non-negotiable criteria set by the Directorate for application for the reimbursement system. In the Guidelines, it is "decided that the conditions are absolute.", implying no flexibility in the application process. If the required conditions, such as documented evidence of the patient meeting the criteria for treatment, are not provided, the application will be automatically rejected.

The Guidelines for the use of Aimiovig reflect the perspectives of the Directorate regarding the medication's clinical efficacy and the patient population who is most suitable for the treatment. These criteria are firmly grounded in evidence-based practice, as demonstrated in the health assessment, to ensure that the process of prescribing Aimiovig remains thorough and effective. The evaluation process is designed to continuously evaluate the effectiveness of the treatment. This not only ensures that the medication is begin used appropriately but also placed increased pressure on its accessibility. The system itself is structured to prioritize patients who truly need the medication, with criteria determining who qualifies for both initial treatment and continued access. This approach reflects the economic restriction associated with implementing a high-cost medicine, such as Aimiovig, in the public healthcare system. By ensuring that only those

with the most severe condition receive the treatment, the Guidelines try to balance between clinical benefits and, at the same time, begin cost-efficient to ensure that the delivery of medicine is in line with the main goal of the health assessment.

One of the primary functions of the document is its role as a device within the regulation. It establishes clear criteria for determining who can apply and receive the reimbursement. These conditions serve not only as a standard for assessing equal treatment but also to regulate the actions of healthcare providers and the treatment options available for patients within the healthcare system. By outlining the specific documentation that is needed to receive the reimbursement, the document actively shapes the space of action for healthcare professionals, influencing how they interact with patients and what kinds of records they must maintain to ensure ongoing access to the treatment. Additionally, the fact that applications without proper documentation will be rejected shows how the documents set clear limits on what is acceptable, making sure only patients who meet the exact requirements are eligible for reimbursement. The document also gives instructions to those who approve of the applications, giving them rather clear instructions on who should be included and who should not as long as those who have the criteria in the box can receive it. This structure essentially acts as a way to control how public healthcare resources are distributed. The document not only shapes how healthcare professionals work but also shapes the role of the patients. Through the documentation, the Guidelines push patients to take an active role in their treatment.

The document not only shapes how healthcare professionals work but also redefines the role of patients themselves. By requiring specific documentation, the Guidelines encourage patients to take an active part in managing their treatment, making them participants in the process of legitimizing care. This dual shaping of professional conduct and patient engagement reveals that the reimbursement guidelines for Aimovig are more than administrative instruments. They are active components in the production of value within the healthcare system. By applying the concept of valuation devices (Doganova & Karnøe, 2015), I show that the Guidelines do more than implement decisions made during the formal assessment. They *perform* those decisions in practice. They define what counts as legitimate treatment, who qualifies as a treatable patient, and under what conditions care can be delivered. In this way, the Guidelines shape the boundaries of public care and the distribution of responsibility, making them central to understanding how value is enacted in everyday healthcare settings. This helps reframe the

Guidelines as active participants of valuation, constantly involved in structuring access, accountability, and recognition within the Norwegian welfare state.

This aligns with Muniesa's (2011) argument that valuation is less about defining what value is and more about examining how value is produced through devices, decisions, and actions. The Guidelines take on precisely this role by embedding valuation into everyday healthcare practice. They translate abstract criteria, such as severity and clinical benefit, into concrete, verifiable conditions. Requirements like submitting a headache diary, demonstrating the failure of other preventive treatments, and documenting a 30% reduction in monthly migraine days serve to formalize eligibility. In doing so, the Guidelines construct a normative framework that governs access to publicly funded healthcare resources.

In short, the Guidelines are not just devices for regulating access, but they are performative devices that shape what is seen as legitimate healthcare, what kind of evidence counts, and which patients are rendered visible to the system. As Doganova and Karnøe (2015) argue, such devices do more than measure; they enact value, translating broader political and economic pressures into individualized, measurable conditions for care. In doing so, they help determine which forms of suffering are countable, which patients are considered cost-effective enough to treat, and ultimately, who is recognized as deserving within the healthcare system.

4.3.2 A Shift in the Guidelines

Following the Guidelines helps reveal how the controversy continued to unfold. While they were designed to control access and ensure cost-effectiveness, the guidelines ended up opening up more patients than intended. As mentioned before, the health assessment anticipated that around 6000 to 10.000 patients would qualify for Aimovig. However, once the guidelines were put into practice, many more patients met the criteria. This caused the costs of the medicine to increase beyond the budgetary constraints. Although the Directorate accounted for some degree of uncertainty in their original assessment, this does not mean that their calculations were entirely accurate. The estimates were based on assumptions about the size and characteristics of the patient population, assumptions that ultimately proved to be too narrow once the Guidelines were applied in real-world settings. As the Evaluator pointed out, this kind of outcome is not entirely unexpected. While the goal is always to make estimations as accurate

as possible, there is an inherent risk when a medication is introduced to the market, the real-world use of a medication can reveal patterns and patient behaviors that no model can fully predict.

As a result, in October 2021, the Department of Health and Care asked the Directorate to review the Guidelines (The Specialist). There was a need for new discussions after it became clear that prescription rates for Aimovig were much higher than expected. In response, the Directorate initiated a process to explore whether some patients could pause treatment to see if they could manage without it. When asked why this review happened, the Specialist answered it was purely due to the increased costs that came along with a greater patient group.

The Specialist explained that a working group was assembled to discuss this further. The focus of this group was the steep rise in prescriptions. However, they pointed out that this was something that had already been flagged during the initial method assessment. As the Specialist explained:

“This is still stated in the report today, although somewhat rephrased, noting that [the medical experts] believed the estimates from the pharmaceutical company, and, to some extent, the Directorate were too low. [The medical experts] were confident that more patients would both need it and that it would be prescribed more frequently than their projections indicated. [...] If you consider only the indication for chronic migraine, it’s likely that between 1 and 2 percent of the Norwegian population actually meets the criteria, assuming they don’t have to try other treatments first. But the numbers don’t add up.”

This resulted in a change in the reimbursement conditions, which came into action in April of 2022. Here, they added a new condition regarding a stop in treatment. It stated that after using the medicine for 18 months, the patient needed to stop the treatment for three months. The reasoning for this was to ensure that only the patients who truly needed the medicine received it. On top of this, there was a greater need to use a headache diary. Prior to receiving the medicine, the patient would need to document four weeks in advance where the patient is not using any other preventive medicine, to ensure that the number of headache days is correct. In addition to more documentation of the headache experienced. This included the intensity of the headache and categorization of the headache, either as a regular headache, migraine, or tension

headache. This headache diary would be the basis of the continuation of the treatment. If the patient does not experience more than 30% reduction of headache days, they no longer have the right to receive the treatment. The treatment stops can, in some cases, stop after four weeks if the patient experiences a significant increment in migraine if they develop to status myelogenous (continuous migraine for over 72 hours) or other "Compelling individual medical considerations" (Statens Legemiddelverk, 2022).

These updates go beyond technical tweaks. They also change how healthcare is felt and practiced. Patients are expected to become responsible, compliant figures who continuously track and prove that they still qualify. At the same time, clinicians take on more administrative roles, applying institutional thresholds rather than relying solely on their own clinical judgment

As Muniesa (2011) reminds us, valuation devices aren't neutral devices, but they help construct value by organizing decisions, routines, and expectations around institutional priorities. What we see in the Aimovig guidelines is a version of care that leans heavily toward control, cost-efficiency, and accountability while pushing more relational or ethical concerns, like ongoing suffering or long-term uncertainty, further into the background. So, rather than being just a technical fix, these guidelines show how valuation is deeply political. They help define what kind of care matters and what kind is allowed to fall away.

Furthermore, Muniesa (2011) points out that valuation practices do not simply measure value. They produce value by shaping and organizing reality to fit institutional goals. In this case, the reimbursement guidelines helped decide who would count as a "legitimate" patient eligible for publicly funded treatment. These changes were not just technical adjustments but a reformatting of what it meant to be a patient. Patients were now expected to be rational, compliant, and able to prove that they still needed the medication based on clear economic and clinical evidence.

The updated Guidelines marked a clear shift in how Aimovig is valued within the Blue prescription. While the medication was initially made available based on its clinical effectiveness and potential to improve the quality of life for patients with chronic migraine, the updated conditions, such as the mandated treatment pause after 18 months and the requirement for detailed headache diaries, reflect a shifting focus. Here, the concern is not only whether the

treatment works but whether its continued use can be justified economically. This dynamic reflects what Dussauge, Helgesson, and Lee (2015) describe in their analysis of valuation in the life sciences, which is that the boundary between economic and ethical values is not fixed or self-evident but is produced and stabilized through practice. In the case of Aimovig, the decision to introduce stricter criteria and proof of effectiveness reframes access not just as a question of clinical need, but as an economic issue. Patients are no longer seen only as recipients of care but as cost-bearing entities whose access must be continually evaluated against budgetary concerns. Clinical outcomes are only valid insofar as they can be measured, documented, and compared, aligning neatly with economic devices like cost-effectiveness models and QALY thresholds.

What gets prioritized here is efficiency, control, and accountability. These are values that are deeply tied to economic logic, and the goal is to ensure that public money is spent on treatments that deliver measurable returns. However, as valuography shows, emphasizing these values often comes at the expense of others. Concerns like the burden of chronic illness, unequal access to specialists, or the psychological toll of treatment discontinuation are rendered secondary, or invisible altogether. The practice of requiring a 30% improvement in headache days, for example, may stabilize treatment value in economic terms, but it also flattens the complexity of patient experience into a numeric threshold. In doing so, the policy sidelines more care-oriented values, such as trust, continuity, and individualized judgment.

Also, here, the updated Aimovig guidelines work as a valuation device. They do not just regulate access to care, but they actively shape what is seen as valuable within the healthcare system (Muniesa, Millo, and Callon, 2007). The revised version takes broader institutional concerns and turns them into clinical routines and eligibility rules. In this case, the concerns are around costs and budget sustainability. As Doganova and Karnøe (2015) point out, valuation devices do not just reflect value; they help make some futures possible by making certain forms of worth visible and workable while leaving others out. In this case, economic reasoning becomes built into the medical process, shaping ideas about who deserves treatment and on what terms. The futures made possible through the Guidelines are ones where cost-effectiveness is tightly coupled with clinical decision-making. Only those patients who fit within a clearly defined, economically rational category of “treatable” are granted access, effectively aligning medical worth with budgetary logic. At the same time, the Guidelines also promote a future where patients are expected to take an active role in managing and

documenting their own illness, reinforcing a model of responsibility and accountability within the healthcare system. For healthcare professionals, clinical discretion is reframed within administrative constraints, changing how care is delivered in everyday settings. However, this also means that certain futures are foreclosed, particularly for patients whose symptoms or life circumstances fall outside the standardized boxes. These individuals may be excluded not due to a lack of need, but because their situations do not register as legitimate within the valuation framework, the Guidelines create. In this way, the Guidelines not only prioritize treatment but actively shape the moral and economic boundaries of those who count as deserving patients in the future of public healthcare.

This shift is not just a matter of medical policy. It is an act of valuation, where decisions about who receives care and under what conditions are shaped by broader institutional logic. The updated Guidelines function as a valuation device that helps stabilize economic reasoning within clinical practice. They reframe the problem: not how to best care for patients with chronic migraine, but how to ensure that this care does not exceed the state's willingness to pay. As Dussauge, Helgesson and Lee. (2015) argues that what appears as a rational and neutral adjustment is actually a reordering of values. In this case, cost-efficiency becomes dominant, and ethical considerations like equity, suffering, and long-term care are subtly pushed aside.

Summary of the chapter

This chapter has explored how the value of Aimovig is shaped not only through formal assessment but also through its implementation in practice, specifically via the Guidelines. While the previous chapter focused on how value was initially established through prioritization criteria like clinical benefit, severity, and resource use, this chapter has shown how valuation continues beyond that point. Here, the Guidelines emerge as a central valuation device (Muniesa, Millo & Callon, 2007; Doganova & Karnøe, 2015), translating the conclusions of the health assessment into practical criteria that govern who can access the treatment, under what conditions, and for how long.

Rather than simply applying existing decisions, the Guidelines actively participate in shaping value. Through requirements such as specialist approval, failed prior treatments, and detailed documentation of effectiveness, they embed economic reasoning directly into the clinical

encounter. At first, these measures were intended to ensure that only the most severely affected patients would receive Aimovig. But in practice, more patients qualified than expected, which led to a significant increase in costs. In response, the Guidelines were updated in 2022 to include stricter controls, such as mandatory treatment pauses and tighter documentation protocols. These changes further institutionalized budgetary concerns and narrowed the definition of who is considered a “legitimate” patient.

Drawing on valuography (Dussauge, Helgesson & Lee, 2015), this chapter has shown how documents like the Guidelines do more than manage access. They shape how suffering is made legible and how worth is assigned. They make certain outcomes, behaviors, and patients visible to the system, while others are left out. In doing so, the Guidelines reflect not only clinical and administrative priorities but also political and economic decisions about what kinds of care are considered sustainable and justifiable. While they aim to balance treatment needs with system costs, this balance is fragile, constantly adjusted through institutional negotiations and shifting definitions of value.

What this analysis ultimately helps us understand is how the formal decision to fund Aimovig was only the starting point, but what actually happened unfolded through the implementation of the Guidelines. These documents did not simply apply the findings of the health assessment; they translated them into daily clinical routines that shaped how access played out for individual patients. By focusing on the Guidelines as valuation devices, it becomes clear that they did not neutrally carry out policy, they performed it. They made abstract concerns about cost-effectiveness, severity, and resource use into concrete, institutional practices that patients and clinicians had to navigate.

This contributes to understanding what *actually happened* by showing the controversy around Aimovig. The higher-than-expected number of patients, the cost overruns, the revisions in policy, was not a failure of prediction alone. It was the result of how valuation was structured and enacted through these documents. The Guidelines brought certain futures into being a future where patients had to prove their worth through documentation, where clinicians acted as gatekeepers within a tightly regulated framework, and where economic logic increasingly defined what counted as legitimate care.

By tracing how these decisions were made, implemented, adjusted, and justified, we see how value was not simply assessed once and for all, but continuously produced through institutional practices. This approach helps us move beyond a static view of healthcare policy as top-down decision-making. Instead, it reveals a dynamic, negotiated process where rules, documents, and people all participate in shaping healthcare reality.

4.4 The Parliamentary Debate

The previous chapter explored how Aimovig's value was shaped through the reimbursement Guidelines, first through their initial design and later through updates that introduced stricter access criteria. These changes were not only administrative but also shifted the underlying values guiding access to care. As Dussauge, Helgesson, and Lee (2015) argue, controversies often reveal the values at stake by making visible the tensions between competing forms of worth. In the case of Aimovig, the revised Guidelines, particularly the mandatory treatment pause and increased documentation requirements sparked frustration and concern among patients, clinicians, and advocacy groups. What had initially been framed as a technical adjustment quickly became a site of public disagreement? Therefore, this analytical part enters a new arena, the Norwegian Parliament, where the controversy unfolds further.

On Tuesday, May 19, 2022, Representative Kathy Lie from the Socialist Left Party took the podium in the Norwegian Parliament to present a representative proposal. She stated: "On behalf of the representatives Lan Marie Nguyen Berg, Marian Hussein, and myself, I will present a representative proposal to secure the rights of migraine patients who have received individual reimbursement for the use of CGRP inhibitors" (Dokument 8:252 S (2021–2022)). This proposal was a direct response to changes in reimbursement guidelines that had made it more difficult for migraine patients to access CGRP inhibitors. One of those patients, a politician within SV, brought up the issue within the party. The proposal called on the government to ensure that patients who had already been granted individual reimbursement for CGRP inhibitors would not lose access due to the revised guidelines.

The purpose of the Parliament is to represent the people, and the representative proposal is one of these devices they can use to ensure just that. In this process, the representatives shine a light on an issue and open it up for debate. Through this, representatives can draw attention to

specific challenges within society that may not yet be adequately addressed by existing policies or the government's agenda. These proposals often reflect grassroots concerns, expert input, or lived experiences that highlight gaps in current frameworks. The representative proposal thus functions not only as a formal legislative device but also as a means of agenda-setting and political signaling. Through this, the document is used both as a tool of governance and a tool of knowledge (Asdal & Reinertsen, 2020). On the one hand, it implements changes within the government. It opens up a discussion where the parties of parliament need to take a stand regarding the topic. Furthermore, it opens up the room for political debate for the public, interest organizations, and other actors who have something to say about the topic. It can also be seen as a tool of knowledge. Being taken up in parliament shines a light on an issue and gives more information about the topic, both to the parliament and the public in general. In this case, it gives insight into the consequences of the changes made and "forces" the parliament to acknowledge this knowledge and take a stand on it. Through this, the document makes the issue visible within the political sphere (Asdal & Reinertsen, 2022).

The Representative Proposal

Through the Parliamentary proposal, the issue goes from being a matter for bureaucrats, healthcare professionals, and patient advocacy groups into the formal arena of national politics. The proposal transformed anti-CGRP treatment from a technical problem about healthcare costs into a broader societal issue about patients' rights, welfare, and the role of the state in supporting people with chronic illnesses. In other terms, the proposal worked as a device, reformatting the issue to engage a different set of values and political priorities (Asdal & Reinertsen, 2022).

The core argument presented in the proposal centered around the lived experiences of migraine patients. It highlighted how the medicine had not only clinical effects but also deeply meaningful impacts on daily life, workability, and social participation. As the proposal put it, "Many people feel that the state here is afraid of overtreating a group of patients who may have become very ill because they have been undertreated all their lives. The patients are forced out of good times, out of work and social life and back into a dark bedroom with severe pain, because the state has to test whether the medicine works" (Dokument 8:252 S (2021–2022))

This framing shifts the stakes of the issue. It challenges the purely economic logic underpinning the new guidelines, which prioritize measurable cost-effectiveness over less tangible but no

less real dimensions of health and wellbeing. Instead, it emphasizes the intangible value that CGRP inhibitors bring and allowing people to reclaim their autonomy, maintain jobs, and live active lives. This broader value understanding goes beyond what QALYs and budget models can easily capture.

The proposal to go back to a more flexible and individualized approach to the Guidelines should be seen in light of this broader reframing. It was not just a technical suggestion but part of a political and ethical pushback against a system that appeared to prioritize cost control over care. The call to give clinical specialists more discretion was not only about medical judgment but about recognizing that standardized stopping rules often fail to reflect the lived realities of patients with chronic migraine. It challenged the idea that effectiveness can be fully measured through percentage reductions and time-limited trials. From this perspective, what mattered was not just whether the treatment worked according to predefined thresholds, but how it made life more livable for the individual. This push for discretion revealed a deeper tension in the system: Who gets to define what counts as meaningful improvement? The documents and the budget, or the patients and the doctors who witness the everyday impact of the treatment? In this case, the debate over stopping rules became a site where different ways of valuing health, suffering, and responsibility were brought into conflict, and where patients, for a moment, helped shift the terms.

This moment in the debate makes it clear that the disagreement wasn't just about treatment protocols but it was about values. The proposal and the stories behind it exposed a deeper question about how care should be structured and whose voices should matter in that process. In short, this episode shows how the valuation stakes are never only about technical efficiency. They are about whose experiences are counted, whose needs are prioritized, and how healthcare systems imagine their responsibilities towards citizens. The reimbursement guidelines, political reactions, and counterproposals demonstrate that economic and clinical values are deeply intertwined but often become tense. Valuation devices like reimbursement rules not only manage healthcare costs but also shape what kinds of lives are seen as worth sustaining with public resources.

Letter from the Minister

After the representative proposal was introduced in Parliament, highlighting patient concerns and advocating for a reversal of the new reimbursement guidelines, the Minister of Health and Care (from here on the Minister) at the time issued a formal response. This document was sent to the Committee on Health and Care Services and aimed to address the issues raised in the proposal. The committee consists of Members of Parliament from various political parties, who come together to discuss matters related to health policy (Stortinget, 2025). In the letter, the Minister defends the rationale behind the updated regulations and provides a detailed account of the government's reasoning. In doing so, the Health Minister's response became a central document in the political handling of the case, offering a contrasting valuation perspective grounded in legal, economic, and institutional principles.

The Minister's response to the parliamentary proposal makes it clear that the aim of the new, stricter reimbursement conditions is to protect formal equality within the healthcare system. The document emphasizes that access to treatment should not be influenced by a patient's productivity, socio-economic status, or age but must follow the legal principles of equal treatment embedded in Norwegian healthcare law (Helse- og omsorgsminister, 2022). In doing so, it directly responds to and pushes back against the proposal's emphasis on the intangible benefits of anti CGRP treatment, such as quality of life, work participation, and social connection. These more relational and experiential values are set aside in favor of institutional logics that prioritize predictability, standardization, and equal treatment based on uniform criteria.

Seen in this way, the document doesn't just express pre-existing values, it actively shapes what is seen as valuable. It organizes the issue around legal and economic principles and, in doing so, limits what kinds of patient experiences can count as legitimate within the system. As valuation scholars like Muniesa (2011) and Dussauge, Helgesson, and Lee (2015) point out, valuation practices are not only about measurement; they are about formatting reality in ways that stabilize specific priorities over others. Here, the Minister's document helps reassert a particular normative order, where equality is understood as the sameness of criteria, not responsiveness to individual circumstances. This reframing makes the political stakes of valuation visible: It's not just a matter of cost control but of deciding which forms of suffering, contribution, and recovery are worth investing public resources in.

Moreover, the Letter from the Minister draws on both national legal frameworks and international examples (other European countries' practices of mandatory treatment discontinuation) to format legitimacy. In valuography terms, it mobilizes comparative framing to show that the regulations are not arbitrary but anchored in broader, transnational valuation practices. This strategy helps to stabilize the regulations further, embedding them within multiple layers of justification, such as legal, clinical, international, and economic.

From a valuation studies perspective, this intervention demonstrates how healthcare policy is not merely about balancing clinical and economic data but about actively producing a vision of what public healthcare should be. The Minister's framing makes explicit that controlling access through economic reasoning, ensuring National Insurance funds are spent "correctly," is itself a moral and political act, not a neutral administrative task. It reflects what Muniesa (2011) describes as the pragmatic work of valuation, where orderings of the world are enacted through specific devices, logic, and practices.

In sum, the Letter from the Minister functions as a powerful valuation device. It actively rearticulates the meaning of equal treatment in the Norwegian healthcare system, frames anti-CGRP treatment primarily as an economic challenge to system sustainability, and legitimates the stricter reimbursement conditions through multiple justifications. It shows that valuation in healthcare is not only about balancing costs and benefits but about deciding whose experiences and futures are recognized, whose claims are legitimized, and which forms of evidence are deemed sufficient for public support.

Recommendation from the Health Committee

After its presentation, the representation proposal was referred to the appropriate parliamentary committee for further consideration. In this case, it was forwarded to the Health and Care Committee. They were responsible to gather input from various stakeholders, including healthcare professionals, patient advocacy groups, and government agencies, to assess the implications of the proposal. In the document, Recommendation from the Health Committee, they present their recommendations to what the Parliament before there is a voting over the proposal.

The majority of the committee supports removing the mandatory pause requirement (Innst. 37 S (2022–2023)). They argue that the treatment pauses violate patients' fundamental rights to individualized care, proper healthcare, and appeal rights. Forcing all patients to interrupt their treatment after a set period of 18 months is seen as unfair and medically unjustified, particularly because no comparable rules apply to other patient groups within the healthcare system. The committee emphasizes that healthcare decisions must prioritize clinical assessments made individually by treating physicians rather than rigid, bureaucratic rules that do not account for the diverse needs of patients.

Furthermore, the committee points out that the introduction of mandatory pauses has had significant consequences, both medically and socioeconomically, for patients living with chronic migraine. They criticize the process behind the new regulations, noting that patient organizations were not involved in the decision-making process, which undermines the legitimacy and democratic accountability of the changes (Innst. 37 S (2022–2023)).

While recognizing that long-term use of expensive medications requires oversight, the committee argues that monitoring and evaluation should happen through cooperation between patients and healthcare providers, not through an enforced discontinuation protocol. According to the committee, a healthcare system must trust clinicians' expertise and prioritize the well-being of patients above rigid economic concerns (Innst. 37 S (2022–2023)). In short, the document argues for a return to a more individualized and patient-centered approach in the regulation of CGRP inhibitors. It calls for the abolition of the mandatory pause, greater involvement of medical professionals and patient organizations in future policy changes, and a renewed focus on respecting the broader human, social, and medical value of continuous migraine treatment.

The committee's recommendation doesn't just express the views of most political parties. It also gives institutional voice to concerns raised by patient organizations, medical professionals, and others who felt excluded from earlier stages of the decision-making process. In this way, the document becomes a response to a broader frustration over how value had been defined in the previous guidelines. By gathering these perspectives, the recommendation helps reorganize the discussion around CGRP treatment. It doesn't introduce entirely new values, but it reshapes how existing ones, like clinical judgment, patient wellbeing, and economic sustainability, are weighed against each other. Through this, the document plays an active role in redefining

whose experiences are recognized and what kinds of care are considered legitimate within the public healthcare system. Rather than being just a statement of political agreement, the recommendation works as a kind of valuation practice in itself, one that shifts attention from strict cost-effectiveness back toward lived experiences and patient needs, even if those are harder to quantify. As Dussauge, Helgesson, and Lee (2015) suggest, valuation is not only about assigning value but about deciding what should be included in the conversation in the first place.

Interest organization and patients mobilize

The introduction of the 18-month treatment stop had a significant impact on both patients and healthcare professionals. Patients who had previously regained parts of their everyday lives, returning to work, maintaining social relationships, or simply experiencing fewer days in pain, were now required to pause treatment, not because it wasn't working, but because the new rules mandated it. For many, this meant a return to debilitating symptoms and a sense of being pulled back into the illness they had finally found some relief from. At the same time, doctors were placed in difficult positions. They had to follow a policy that required them to withdraw a medication they clinically believed was helping, even when there were no clear medical reasons to do so. These experiences, both clinical and personal, were largely absent from the original decision-making process. The treatment stop illustrates how the updated guidelines prioritized control and cost-efficiency over continuity of care and how this shift in valuation had real consequences for those living with chronic migraine. (The Advocate). The guidelines had been revised with a focus on cost and system efficiency, but the effects on everyday life had not been fully considered. As the impact of the changes became clearer, frustration grew among both patients and healthcare professionals. Their concerns were not just about access to a specific medication but about being seen, heard, and taken seriously, something they did not feel the new Guidelines did (The Advocate).

As the politicians prepared for the upcoming debate in Parliament, interest organizations and patients mobilized in the media to demonstrate the importance of the case. Stories began to circulate, highlighting what the updated reimbursement guidelines meant in practice. The Advocate explained that patients who had previously been able to function at work, maintain social lives, and manage their pain were now facing uncertainty and disruption. These firsthand

accounts helped frame the issue not just as a matter of healthcare regulation but as a question of everyday life, dignity, and well-being.

The Advocate was also actively working to lobby key actors within the Parliament. Through their work, they gathered firsthand knowledge that would help reverse the updated Guidelines. “We collected input from neurologists and others in the field to understand how these changes affected patients.” This information helped shape their formal consultation response and provided a factual foundation for public and political dialogue. For the Advocate, making this knowledge visible was essential, not just to inform policymakers but to ensure that both clinical expertise and patient experiences were acknowledged. Together, this helped lay the groundwork for ensuring that affected voices were heard and taken seriously (the Advocate).

When the updated guidelines introduced a mandatory treatment stop after 18 months, the meaning of Aimovig’s value shifted. What had started as a policy aimed at controlling costs quickly became something else entirely. For patients who had regained a sense of normalcy, returning to work, reconnecting socially, or simply managing everyday life, the treatment interruption felt like a step backward. Doctors, too, questioned the logic behind withdrawing a medication they saw as effective, especially when it led to a visible decline in their patients. These reactions sparked pushback. Through media coverage, interviews, and advocacy, both patients and clinicians drew attention to what they felt had been overlooked: the human impact of the decision. What was at stake was no longer just budgetary control but the ability to live with stability and dignity. These responses made visible a different way of valuing the treatment, one based not on abstract economic models but on lived experience, clinical judgment, and the everyday realities of chronic illness. As Dussauge, Helgesson, and Lee (2015) note, it’s often in moments of controversy like this that the underlying value conflicts in healthcare come to the surface. But here, it’s the patients and practitioners who show us what those stakes really look like.

The updated reimbursement guidelines for Aimovig laid the groundwork for the parliamentary controversy by prioritizing economic efficiency over patient experience. By introducing treatment pauses and stricter eligibility rules, the guidelines overlooked how the changes would affect patients' lives and doctors' clinical judgment. These new criteria framed value narrowly around cost-effectiveness while sidelining concerns about well-being, continuity of care, and trust. As a result, frustration built among patients and healthcare professionals, whose

perspectives had not been fully considered. This tension set the stage for broader political debate as the consequences of the guidelines became visible and were challenged through media, advocacy, and, ultimately, Parliament.

4.4.1 Unfolding the controversy

On November 10th, 2022, the Norwegian Parliament became the stage for a growing controversy that had moved far beyond technical healthcare policy. What had started as a change in reimbursement criteria for Aimovig was now a public debate. It had become about more than budgets or documentation. It was about what mattered in healthcare, whose experiences counted, and what values should guide decisions.

Inside the parliamentary chamber, voices from different parties came forward. Some emphasized the need to protect the healthcare budget and ensure consistent rules. Others spoke on behalf of patients, sharing stories of lives interrupted by pain and restored by the medication now at risk. For many in the room, this wasn't just a policy issue. It was personal. As the Advocate later put it: "We didn't actually have to argue much with the politicians because the politicians also have migraines. The advantage of this issue is that it resonates with a lot of people. Either they have it themselves, or they know someone who does."

Besides the arguments presented in the Letter from the Minister, the argument used by the authorities to defend the original regulation was that patients might continue using the medicine even if it no longer worked, wasting public money. But as the informant reflected, that line of reasoning didn't hold up under scrutiny:

"We thought that was a very poor argument. If you know people, you know that no one wants to stay on a medication they don't need. Most people are wary of medications, they prefer not to take anything unless absolutely necessary. People even stop taking medications they do need. So, to worry that people would take something that doesn't benefit them, just for the sake of it, is not how people work."

When the Parliament finally voted, the result wasn't all that surprising. A clear majority supported the proposal. The treatment pause was removed, and the updated guidelines were rolled back. This meant that patients who had lost access to Aimovig could now receive it again under the original conditions. But this wasn't just a technical change. It reflected a deeper shift. The debate had exposed a tension between economic priorities and ethical responsibility, between treating patients as numbers and seeing them as people with real, complex lives. The vote didn't just restore access; it reaffirmed the value of Aimovig, not only as a treatment but as something tied to broader ideas about care, trust, and what the healthcare system should stand for. At the same time, the case showed how valuation practices are embedded in broader political struggles.

At the heart of this valuation conflict lies the condition of migraine itself. The case also demonstrates that migraine itself is not just a neutral background condition, but something whose legitimacy is shaped by valuation practices. While clinicians and patients recognize chronic migraine as a serious and disabling illness, the formal assessment treated it as less severe than other conditions, and its subjective symptoms made it harder to capture through standard metrics. As seen in Asdal's (2014) work on milk, the value of an object, or a condition, is not given, but enacted through institutional documents, policy decisions, and the practices that link them to broader concerns like productivity or cost. The Blue prescription, then, does not just define the value of a drug, it helps determine what kind of suffering is recognized, and what kind is allowed to fall through the cracks.

Taken together, these dynamics point to a more complex understanding of how value is made in healthcare. This chapter illustrates how the Aimovig controversy can be understood through the lens of valuography by tracing how different values were constructed, negotiated, and contested across institutional documents, political arenas, and public debate. Drawing on the concerns raised by Dussauge, Helgesson, and Lee (2015), three key valuation dynamics become visible. Firstly, the stakes of the controversy were actively made through documentation and political action. What began as a bureaucratic update to reimbursement guidelines soon became a debate over dignity, access, and the kind of healthcare system Norway wants to uphold. Documents like the Representative Proposal and the Minister's Letter played crucial roles in defining what was at risk, whether it was budget sustainability or patient well-being. These texts did not merely reflect value conflicts, but they enacted them by foregrounding certain forms of suffering while backgrounding others.

Second, valuation and knowledge were deeply intertwined. The reimbursement guidelines operationalized a narrow form of knowledge - based on documentation, treatment pauses, and economic modeling. In contrast, patients, advocates, and some politicians emphasized experiential knowledge and clinical judgment. As the conflict unfolded, it became clear that different kinds of evidence, and different ways of knowing, led to different understandings of what was valuable. The debate wasn't just about what worked but about who gets to define what "working" means. And lastly, the relationship between economic and other values was central. The revised guidelines prioritized cost-efficiency and formal equality, while the counter-responses emphasized care, autonomy, and flexibility. These were not simply competing concerns but competing frameworks for deciding what counts as legitimate investment in health. The rollback of the updated guidelines marked a shift in dominant value logic from a narrowly economic rationale toward one that re-centered ethical and relational values.

In sum, this controversy shows that valuation is not a neutral or technical exercise. It is a political and moral process shaped by devices like documents, parliamentary procedures, and public narratives. The case of Aimovig reveals how valuation struggles are not just about cost or access but about what kind of healthcare future is being imagined, enacted, and defended.

4.4.2 The Boundaries of the Health Assessment

The treatment of migraines in Norway is at a turning point. Across interviews with neurologists, researchers, health professionals, and patient advocates, there is growing agreement that migraine is far more than a headache. It is a complex, often debilitating neurological condition that demands more personalized care, broader access to treatment, and deeper societal understanding. At the same time, these conversations surface a shared concern that existing models for assessing pharmaceutical value struggle to accommodate the clinical uncertainty and individualized responses that define migraine care.

One of the clearest challenges to standardized assessment is the unpredictable nature of treatment response. Clinicians report that while CGRP inhibitors have brought meaningful improvements for many patients, outcomes remain highly variable. As the Neurologist put it,

"We know the medications work, but we can't predict who they'll work for. It becomes a process of trial and error." This uncertainty complicates the work of the Directorate, whose frameworks depend on measurable averages and population-level effects to determine cost-effectiveness. These institutions operate under clear guidelines; in order to fund a new treatment through public reimbursement schemes, there must be documented clinical benefit proportional to the resource use and justified by the severity of the condition.

However, as both patients and advocates point out, these aggregated models do not always reflect what matters most in lived experience. Patient stories highlight how Aimovig and similar medications have enabled individuals to return to work, regain social lives, and reduce the burden of daily pain. These improvements, while hard to quantify in QALY calculations, are deeply significant. The Advocate argues that the system should make room for these kinds of effects, which speak to quality of life, even if they do not always show up in controlled trial data. As the Advocate noted, "When people have attacks, they disappear into a dark room. Only their partner or those they live with see it. This makes it difficult for others to truly understand the disease and how serious it is."

This divergence between measurable outcomes and subjective benefits complicates the work of health technology assessment. For decision-makers, standardization is essential for fairness, consistency, and transparency. However, as several informants point out, this often requires drawing hard lines in soft spaces. For example, current reimbursement rules distinguish between episodic and chronic migraine, offering access only to those with 15 or more headache days per month. As the Specialist noted, "Someone with 14 headache days a month isn't suffering any less than someone with 15. But 15 is the cutoff. That's arbitrary and driven by economics."

Despite these frustrations, the Evaluator points out that they are aware of the limitations of their models. One informant from the Directorate offered a reflective view on the balance between economic and patient-centered values:

"We have an internal motto that says, 'the patient in focus.' It reminds us that behind the data and statistics, which we naturally must focus on, are real people, a mother who might need to return to work or someone who wants to participate in an important family event like a confirmation. We remember that it's about patients, but at the same

time, there are many patients out there, and if costs were lower, more people could receive treatment. The question of evidence, and why the effect might not always be clearly reflected in the data, is something we continually reflect on."

This statement encapsulates the central dilemma. On the one hand, valuation must occur through systematic procedures to ensure equitable use of public resources. On the other, these procedures can obscure the individual impact of treatment, especially when that impact is personal, relational, or delayed. In other words, advances in precision medicine, better data collection, and more flexible reimbursement mechanisms could help align standardized models with individualized realities. As the Researcher put it, "We'll still make those accidental breakthroughs, but we're starting to see more precision. That's promising."

Until then, expanding access to high-cost treatments like Aimovig depends largely on two interlinked factors: cost and time. As the Evaluator explained, "Economically, costs are often the most flexible factor," meaning that with price reductions or new agreements, the thresholds for public funding could shift. Yet if prices remain high, broader access might have to wait until the patent expires. For Aimovig, that's not until 2037. From the Advocate's perspective, that timeline is too long: "We can't wait that long. So, there has to be an exception allowing us to consider the societal costs." This highlights a growing tension in the valuation of pharmaceuticals, between waiting for the system to evolve and demanding that it adapt to better reflect the needs of patients today.

In sum, this chapter illustrates how valuation is not only a technical process but a social and ethical one. Clinical uncertainty and individual variation do not just complicate pharmaceutical assessment; they challenge the very assumptions underlying what counts as value. As migraine treatment evolves, the challenge will be to build models of care and evaluation that remain accountable to systems, but responsive to lives.

5. Conclusion

This thesis aimed to answer how the value of Aimiovig is constructed, negotiated, and contested across different institutional arenas in the process leading to its inclusion on Norway's Blue prescription. In addition, it aimed to answer in what way this method assessment affects how a disease is valued. Through interviews with experts and conducting a practice-oriented document analysis, I have gained insight into the complexities of the case, enabling me to answer the research questions. By applying valuography as a framework, this thesis has demonstrated the different valuation aspects of the case of Aimiovig.

The analysis started with mapping out the case of Amiovig as a healthcare controversy shaped by different ideas about what makes a medicine valuable. By bringing in the views of regulators, doctors and patient advocates, it was demonstrated that the controversy were about what kinds of evidence counts, how much a treatment should cost and what outcomes matter most. These early insights showed how the controversy was driven by competing concerns from scientific uncertainty and economic pressure to patient needs and political responsibility. In that sense, the case of Aimovig demonstrated how healthcare debates are not only about medicine, but also about the deeper values that shapes decisions in a system where cost matters.

The second part of the analysis looked closer at how the value of Aimiovig was created through the health assessment and the use of QALYs and economic concerns. The findings showed that value is given to what the assessment concludes as most important. It is demonstrated that different aspects of Aimiovig are valued and emphasized in various, non-equal ways. In principle, all aspects should be equally emphasized, however, as illustrated in this thesis, the economic aspect is significantly considered as more important. As such, the economic concerns are central when determining the value of a medicine. Furthermore, it was highlighted how resources allocated by the state actively produce inclusion and exclusion and determine who qualifies for treatment and who is left on the sideline.

The Guidelines demonstrates that the valuation process did not stop at the health assessment. Instead, the Guidelines were shown to actively shape the controversy by reinforcing certain values over others, such as cost-effectiveness over lived experience, or population-level impact over individual benefit. In doing so, the Guidelines function not just as technical devices, but as political instruments that influence which treatments are deemed necessary, which patients

are prioritized, and how diseases like migraine are understood within a cost-conscious healthcare system. This further complicates the valuation process, revealing it as a dynamic interplay between evidence, policy, ethics, and power.

Part 4 of the analysis illustrated how the controversy of Aimiovig unfolds in practice in the Norwegian Parliament. It draws on the perspectives of various actors, politicians, patient advocates and health authorities, each bringing different perceptions and valuations to the debate over Aimovig's accessibility. The discussion reveals a complex interplay of conflicting values, with cost-effectiveness and budget constraints on one side and a strong emphasis on one patient group's wellbeing and quality of life. It also demonstrates how these values often come into tension, between individual needs and societal considerations. In doing so, the case of Amiovig shows that value is not fixed or singular but negotiated and contested across different institutional, political and personal domains.

The case demonstrated that value is dynamically made through interactions between scientific, economic, political, and social domains. It highlighted how institutions like the Directorate, economic instruments such as QALY calculations, political debates in the Stortinget, and advocacy from patient organizations, each contribute distinct stakes, priorities, and definitions of "worth." The case also highlighted how healthcare systems, while performing rationality, are fundamentally structured by political decisions about which lives, outcomes, and solidarities are prioritized. Moreover, the analysis illustrated that valuation devices, QALYs, Blue prescription guidelines, eligibility criteria, are not neutral devices. They mediate, stabilize, and frame what counts as legitimate knowledge and care.

Following valuation theory, the case captures how epistemic and economic rationalities are inseparably intertwined: clinical effects, quality of life, productivity, and monetary cost are co-constructed in the very process of determining Aimovig's inclusion into public healthcare. A key strength of this study lies in tracing these processes across multiple sites, weaving together technical assessments and political contestation. The study shows that healthcare valuation is not a purely technical, rational exercise but a dynamic, negotiated practice under conditions of uncertainty, resource constraint, and ethical tension. Importantly, it reveals that even "final" decisions, such as Aimovig's inclusion on the Blue prescription, are always provisional, remaining open to future revision as prices shift, social demands change, or new evidence emerges. As such, it answers to part one of my research question on how the value of Aimiovig

is constructed, negotiated, and contested across different institutional arenas in the process leading to its inclusion on Norway's Blue prescription.

The assessment of migraine treatments in Norway revealed how standardized evaluation methods shape the way a disease is valued, often in ways that fail to reflect patient experience. While clinicians and advocates increasingly recognize migraine as a serious neurological condition requiring personalized care, current health technology assessments rely on population-level data, cost-effectiveness models, and somewhat constraining thresholds. These criteria, as demonstrated, struggled to account for the clinical uncertainty and individualized responses common in migraine care. As a result, meaningful outcomes, such as returning to work, restoring relationships, or reducing daily suffering, are excluded from formal valuations, even though they are highly significant to patients. Decision-makers acknowledged this gap but are bound by institutional frameworks focused on fairness and measurable evidence. This creates a disconnect between what matters in lived experience and what counts in policy.

Ultimately, the method of assessment affected how migraine is valued by prioritizing standardized, quantifiable outcomes over personal and social dimensions of illness. This not only influences access to treatment but also shapes broader understandings of the disease's legitimacy and significance. Moreover, this case highlights a wider pattern in health policy, where assessment frameworks often struggle to accommodate conditions marked by variability, subjectivity, or long-term impact. In this context, personal experiences, functional improvements, and quality-of-life gains may be undervalued or excluded if they do not fit conventional evidentiary standards. In that way, Aimovig becomes a site where the politics surrounding standards are made visible and where the limits of economic standardization are actively contested. As such, the valuation of migraine reflects a broader tension in health assessment policy, one that is situated at the intersection of pain, price, and prioritization in a cost-conscious healthcare system.

5.1 Critical remarks and suggestions for future research

After completing this thesis, a few critical reflections have come to light regarding both the scope of the material and the choices made during the research process. One limitation that stands out is the lack of data between June 2019 and the formal policy decision by the Ministry of Health in December the same year. I now see that I could have explored the space between the Directorate and the Ministry in greater depth. This transitional period represents a potentially important site of negotiation and valuation that I was not fully able to analyze. Future research would benefit from a closer examination of this institutional interaction and how decisions evolve across such bureaucratic thresholds.

Another reflection that emerged throughout the process is how little is still known about migraine, both within clinical research communities and in the population more broadly. During the early phases of my research, I was genuinely surprised by how sparse the academic literature on migraine remains, especially compared to other chronic illnesses with similar societal impact. This thesis has aimed to give more space to migraine within valuation studies and STS, but it is clear that this is only the beginning. Migraine, with its complexity and variation, deserves more sustained scholarly attention.

One particularly important area for future research is the category of high-frequency episodic migraine. As mentioned in the methods chapter, I had to exclude this patient group from my analysis due to limitations in scope and access. However, this group sits in a grey zone between episodic and chronic migraine and often lacks the institutional recognition needed to receive adequate treatment. The classification of migraine types, and how those classifications affect access to treatment, is a highly relevant area to study. It not only has direct consequences for individual patients but also shapes broader policy decisions and funding priorities.

In sum, this thesis opens up multiple paths for future research, deeper institutional analysis of the policy process, expanded attention to understudied patient groups like those with high-frequency episodic migraine, and a broader effort to challenge the societal marginalization of migraine. Migraine is not just a medical condition but a complex social and political one, which is yet to be fully understood.

References

- Aamodt, A. H., Bjørk, M. H., Alstadhaug, K. B., Eldøen, G., Dueland, A. N., Poole, T., . . . Lundqvist, (2019, April 3). Practical management of headache. *Tidsskriftet for den norske legeforening*.
- Asdal, K., & Reinertsen, H. (2022). *Doing document analysis*. SAGE publications.
- Asdal, K. (2008). Enacting things through numbers: Taking nature into account/ing. *Geoforum*, p. 123-132.
- Asdal, K. (2014). Versions of Milk and Versions of Care: The Emergence of Mother's Milk as an Interested Object and Medicine as a Form of Dispassionate Care. *Science in Context*, p. 307-331.
- Asdal, K., Doganova, L., & Fochler, M. (2024). Valuation studies as a frame in STS. *Elgar encyclopedia of science and technology studies*, p. 79-86.
- Battista, S., Lazzaretti, A., Coppola, I., Maistrello, L., Rania, N., & Testa, M. (2023). Living with Migraine: A Meta-Synthesis of Qualitative Studies. *Frontiers in Psychology*, p. 1-20.
- Bidonde, J., Vanstone, M., Schwartz, L., & Abelson, J. (2021). An institutional ethnographic analysis of public and patient engagement activities at a national health technology assessment agency. *International Journal of Technology Assessment in Health Care*, p. 1-7.
- Brendbekken, A., Robberstad, B., & Norheim, O. (2022). Public participation: healthcare rationing in the newspaper media. *BMC Health Service Research*, p. 1-14.
- Bryan, S., Williams, I., & McIver, S. (2007). Seeing the NICE side of cost-effectiveness analysis: a qualitative investigation of the use of CEA in NICE technology appraisals. *Health Econ.*, p. 179-193.
- Callon, M., & Law, J. (1997). After The Individual in Society. Lessons On Collectivity From Science, Technology and Society. *Canadian Journal of Sociology*, p. 165-182.
- Cammarota, F., De Icco, R., Vaghi, G., Corrado, M., Bighiani, F., Martinelli, D., . . . Tassorelli, C. (2024). High-frequency episodic migraine: Time for its recognition as a migraine subtype? *Cephalalgia*, p. 1-23.
- Cozza, M. (2021). *Key Concepts in Science and Technology Studies*. Studentlitteratur.
- Doganova, L., & Rabeharisoa, V. (2024). The Temporalities of Prices: 'Value-Based Pricing' in Pharmaceutical Markets. *Economy and Society*, p. 183-204.
- Doganova, L. (2018). Discounting and the Market of the Future: On Uncertainty in Forest Management and Drug Development. I J. Beckert, & R. Bronk, *Uncertain Futures: Imaginaries, Narratives, and Calculation in the Economy* (p. 278-297). Oxford University Press.

- Doganova, L., & Karnøe, P. (2015). Building markets for clean technologies: Controversies, environmental concerns and economic worth. *Industrial Marketing Management*, p. 22-31.
- Doganova, L., Giraudeau, M., Kjellberg, H., Helgesson, C.-F., Lee, F., Mallard, A., . . . Zuiderent-Jerak, T. (2018). Editorial Note: Five years! Have we not had enough of valuation studies by now? *Valuation Studies*, p. 83-91.
- Dokument 8:252 S (2021–2022), . (2022, 05 19). *Representantforslag 252 S*. Stortinget: <https://www.stortinget.no/globalassets/pdf/representantforslag/2021-2022/dok8-202122-252s.pdf>
- Dussauge, I., Helgesson, C.-F., & Lee, F. (2015). Valuography. Studying the making of values. I I. Dussauge, C.-F. Helgesson, & F. Lee, *Value Practices in the Life Sciences and Medicine* (p. 265-283). Oxford University Press.
- Dussauge, I., Helgesson, C.-F., Lee, F., & Woolgar, S. (2015). On the omnipresence, diversity, and elusiveness of values in the life sciences and medicine. In I. Dussauge, C.-F. Helgesson, & F. Lee, *Value Practices in the Life Sciences and Medicine* (p. 1-28). Oxford University Press.
- Engeset, E. (2019, 12 5). *Migrenemedisinen Aimovig på blå resept*. Hentet fra Høyre : <https://hoyre.no/arkiv/migrenemedisinen-aimovig-pa-bla-resept/>
- Fourcade, M. (2011). Cents and Sensibility: Economic Valuation and the Nature of “Nature”. *American Journal of Sociology*, p. 1721-1777.
- Haraway, D. (1988). Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective. *Feminist Studies* , p. 575-599.
- Harding, S. (1992). Rethinking Standpoint Epistemology: What Is 'Strong Objectivity'. *The Centennial Review* , p. 437-470.
- Hashem, F., Calnan, M., & Brown, P. (2018). Decision making in NICE single technological appraisals: How does NICE incorporate patient perspectives? *Health Expert* , p. 128-137.
- Hauge, A. M. (2016). *Organizing Valuations: A Study of Multiple Valuation Regimes in a Hospital*. PhD Dissertation, Copenhagen Business School..
- Helgesson, C.-F., & Muniesa, F. (2013). For What It’s Worth: An Introduction to Valuation Studies. *Valuation Studies*, p. 1-10.
- Helse- og omsorgsminister . (2022, 06 08). *Dokument 8:252 S Representantforslag om å sikre migrenepasienter som har fått individuell refusjon ved bruk av CGRP-hemmere*. Hentet fra <https://www.stortinget.no/globalassets/pdf/innstillinger/stortinget/2022-2023/inns-202223-037s-vedlegg.pdf>

- Helsedirektoratet . (2023, 01 01). *Erenumab* . Helsedirektoratet :
<https://www.helsedirektoratet.no/rundskriv/kapittel-5-stonad-ved-helsetjenester/vedlegg-1-til--5-14-legemiddellisten/virkestoffer/erenumab>
- Innst. 37 S (2022–2023). (2022, 10 27). *Innstilling til Stortinget fra helse- og omsorgskomiteen*. Stortinget :
<https://www.stortinget.no/globalassets/pdf/innstillinger/stortinget/2022-2023/inns-202223-037s.pdf>
- International Headache Society . (2023). *1.3 Chronic migraine*. IHS Classification ICHD-3:
<https://ichd-3.org/1-migraine/1-3-chronic-migraine/>
- Kempner, J. (2024). *Not Tonight: Migraine and the Politics of Gender and Health*. University of Chicago Press.
- Klimchak, A., Sedita, L., Perfetto, E., Gooch, K., & Malone, D. (2024). Discriminatory Properties of the Quality-Adjusted Life Year Based Cost-Effectiveness Analyses for Patients With Disabilities: A Duchenne Muscular Dystrophy Case Study. *Value Health* , p. 1641-1647.
- Kregting, L., Peeter, N., Clarijs, M., Koppert, L., Korfage, I., & van Ravesteijn, N. (2024). Health utility values of breast cancer treatments and the impact of varying quality of life assumptions on cost-effectiveness. *International Journal of Cancer*, p. 117-127.
- Kullenberg , C., & Nelhans, G. (2017). Measuring Welfare Beyond GDP: 'Objective' and 'Subjective' Indicators in Sweden. *Valuation Studies*, p. 7–38.
- Kvale, S. (2007). *Doing interviews*. SAGE publications.
- Latour, B., & Woolgar, S. (1986). *Laboratory Life: The Construction of Scientific Life*. Princeton University Press.
- Law, J. (2008). On sociology and STS. *The Sociological Review* , p. 623-649.
- MacKenzie, D. (2009). Making things the same: Gases, emission rights and the politics of carbon markets. *Accounting, Organizations and Society*, p. 440–455.
- Meld. St. 34 (2015–2016). *Verdier i pasientens helsetjeneste - Melding om prioritering* .
<https://www.regjeringen.no/contentassets/439a420e01914a18b21f351143ccc6af/no/pdfs/stm201520160034000dddpdfs.pdf>: Helse- og omsorgsdepartementet.
- Muniesa, F. (2011). A flank movement in the understanding of valuation. *The Sociological Review*, p. 24-38 .
- Muniesa, F., Millo, Y., & Callon, M. (2007). An Introduction to Market Devices. *The Sociological Review*, p. 1-12.
- NESH. (2024). *Guidelines for Research Ethics in the Social Sciences and the Humanities*. National Research Ethics Committees.

- Norsk nevrologisk foreningen . (2018, 10 14). *Nyvinning innen migrenebehandling*. Hentet fra Den Norske Legeforeningen : <https://www.legeforeningen.no/foreningsledd/fagmed/norsk-nevrologisk-forening/aktuelt/2018/nyvinning-innen-migrenebehandling/>
- Prop. 1 S (2019–2020). (u.d.). *For budsjettåret 2020 - under Helse- og omsorgsdepartementet*. Hentet fra Helse- og omsorgsdepartementet: <https://www.regjeringen.no/no/dokumenter/prop.-1-s-20192020/id2671560/>
- Rand , L., & Kesselheim, A. (2021). Controversy Over Using Quality-Adjusted Life-Years In Cost-Effectiveness Analyses: A Systematic Literature Review. *Health Affairs*, p. 1-9.
- Sellars, M., Carter, S., Lancsar, E., Howard, K., & Coast, J. (2024). Making recommendations to subsidize new health technologies in Australia: A qualitative study of decision-makers' perspectives on committee processes. *Health policy*, p. 1-10.
- Sismondo, S. (2010). *An Introductoin to Science and Tecnology Studies*. Wiley-Blackwell.
- Sjögren, E., & Helgesson, C.-F. (2007). The Q(u)ALYfying Hand: Health Economics and Medicine in the Shaping of Swedish Markets for Subsidized Pharmaceuticals. *The Sociological Review*,, p. 215-240.
- Statens legemiddelverk. (2019, 06 12). *Hurtig metodevurdering ved forhåndsgodkjent refusjon §2 Aimovig (erenumab) til profylaktisk behandling av migrene*. Direktoratet for medisinske produkter : https://www.dmp.no/globalassets/documents/Offentlig-finansiering-og-pris/Metodevurderinger/A/Aimovig_migrene_2019.pdf
- Statens Legemiddelverk. (2022, 05). *Nytt om legemiddler: Behandling av kronisk migrene - CGRP-hemmere*. Direktoratet for medisinske produkter : <https://www.dmp.no/globalassets/documents/bivirkninger-og-sikkerhet/rad-til-helsepersonell/nyl/2022/nytt-om-legemidler-nr.5-2022.pdf>
- Steiner , T., & Stovner, L. (2023). Global epidemiology of migraine and its implications for public health and health policy. *Nature Reviews Neurology*, p. 109–117.
- Stortinget . (2025). *Helse- og omsorgskomiteen*. Stortinget : <https://www.stortinget.no/no/Representanter-og-komiteer/Komiteene/Helse--og-omsorgskomiteen/?tab=CommitteeProc>
- Torres-Ferrús, M. G. (2021, March 27). The impact of anti-CGRP monoclonal antibodies in resistant migraine patients: a real-world evidence observational study. *Journal of Neurology*, 268, p. 3789–3798.
- University of Oslo. (n.d.). *How to use AI as a student*. Retrieved 2025, from University of Oslo: https://www.uio.no/english/studies/resources/ai_student.html
- Waliszewska-Prosół, M., Straburzyński, M., Czapińska-Ciepiela, E., Nowaczewska, M., Gryglas-Dworak , A., & Budrewicz, S. (2023, April 23). Migraine symptoms,

healthcare resources utilization and disease burden in a large Polish migraine cohort.
The Journal of Headache and Pain volume.

Zuiderent-Jerak, T., Grit, K., & van der Grinten, T. (2015). Critical composition of public values: On the enactment and disarticulation of what counts in health-care markets. I. Dussauge, C.-F. Helgesson, & F. Lee, *Value Practices in the Life Sciences and Medicine* (p. 119-135).