EXAMINING THE TIMELINESS OF CLINICAL DISCHARGE LETTERS: EVALUATING PROCESSES FOR DISPATCHING LETTERS WITHIN 24 HOURS

A sequential, explanatory, monocenter, cross-sectional mixed-methods study

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ABSTRACT

Introduction: Hospitals are mandated to report quality indicators to enhance healthcare quality and safety, including the timely dispatch of clinical discharge letters within 24 hours. This indicator is based on the Guideline for Information Exchange between General Practitioner and Specialist (HASP), crucial for patient safety and information transfer. Medisch Spectrum Twente (MST) continues to face significant performance gaps among departments, particularly in achieving the 90% standard for timely discharge letters. This study aims to analyse the underlying processes that influence timely dispatch of discharge letters within 24 hours across low, middle and high scoring departments and determine factors influencing the attainment or failure to meet the 90% guideline for dispatching clinical discharge letters within 24 hours.

Methods: A mixed methods study was conducted, collecting data through surveys and semi-structured interviews. Surveys were divided into four sections: (i) guideline adherence, (ii) barrier identification, (iii) quality evaluation, and (iv) potential improvements, primarily using a 5-point Likert scale. Semi-structured interviews covered (i) underlying processes, (ii) workload, (iii) barrier identification and (iv) (potential) facilitator identification. The target audience included healthcare professionals from low, middle, and high scoring departments involved in drafting and dispatching clinical discharge letters during the study period. The departments included based on performance differences and teaching/non-teaching status are neurology (low scoring, teaching department), pulmonology (middle scoring, teaching department), and urology (high scoring, non-teaching department). Survey data were analysed using R (version 2023.12.1 + 420) for numerical conversion, median calculation, interquartile range (IQR), and Fisher's Exact Test for P-values. Interviews, recorded via Teams, were transcribed and analysed in ATLAS.ti 23 using open, axial, and selective coding.

Results: The indicator 'dispatching clinical discharge letters within 24 hours' shows a low average of 59%. This study identified a significant association between experiences ($p = 0.002$), expectations ($p = 0.025$), and barriers ($p = 0.01$) and the timely dispatch of clinical discharge letters within the neurology, pulmonology and urology. The findings reveal that neurology, pulmonology, and urology each confront challenges and employ specific (potential) facilitators concerning clinical letters. In neurology, time constraints, timely preparation of discharge letters for patients transitioning to follow-up care facilities, and administrative burdens stand out as barriers. Implementing reminders in the Electronic Health Record (EHR) (HiX version 6.3 HF81.3 _ChipSoft B.V.) and distinguishing between urgent and non-urgent discharge letters are seen as potential facilitators. Pulmonology faces challenges including time pressures and challenges with HIX templates. Potential facilitators involve leveraging AI and enhancing patient data accessibility within HiX. Urology encounters uncertainties regarding discharge timing and the removal of discharged patients from admission lists. Facilitating measures such as AI for generating summaries in HiX and modern supervision are recommended. Overall, all departments stress the importance of refining the discharge letter workflow and utilising advancements in HiX, to enhance the timeliness of discharge letters across MST.

Conclusion: Despite current facilitators including preparing discharge letters at the start of admission and using department-specific templates, significant barriers remain in dispatching clinical discharge letters. These barriers include challenges with HiX, high administrative burden and time constraints. Implementing potential facilitators such as a reminder system in HiX and utilising AI for generating summaries is crucial. The dispatch of discharge letters will continue to pose challenges unless facilitators are implemented to streamline the process and achieve the established 90% guideline.

Keywords: Clinical care, hospital information transfer, Quality and Safety (Q&S), quality indicators, Q&S dashboards, clinical discharge letter, optimisation

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1. INTRODUCTION

Hospitals are mandated to report quality indicators, aiming to improve the quality and safety of healthcare services [1, 2]. One such indicator is the timely dispatch of clinical discharge letters within 24 hours, which is based on the Guideline for Information Exchange between General Practitioner and Specialist (HASP) [3, 4]. The aim of the HASP guideline is to establish clear agreements on when general practitioners (GPs) and specialists exchange information about a patient, and which specific data are shared. According to this guideline, clinical discharge letters must be sent to the GP within 24 hours post-discharge, and outpatient discharge letters within 5 days. For patients transferring to a follow-up institution, the discharge letters must be prepared and available at the time of discharge, with no 24-hour deadline applicable. This guideline aims to ensure continuity of care [3].

Key elements of an effective discharge letter include timely transmission, clear documentation of medical findings, accurate assessment of the illness, and clear recommendations for follow-up care [5]. Prompt and accurate dispatch of these letters facilitates a streamlined transition from hospital to home, helping to prevent readmissions and complications [6]. Despite the critical role of discharge letters, they are often inadequate in content and form [7]. To optimise care continuity and patient safety, improving the timeliness and quality of discharge letters is essential.

In 2022, Medisch Spectrum Twente (MST) implemented a quality dashboard, gaining insight into various indicators, such as dispatching clinical discharge letters [8]. Discharge letters are written in the Electronic Health Record (EHR), HiX (version 6.3 HF81.3 _ChipSoft B.V), which offers multiple HiX templates for healthcare professionals, for example concept and definitive clinical discharge letter [9]. Currently, 15 different quality indicators have been validated for daily practice, with departments in MST showing significant disparities in performance. Within MST, it is observed that the clinical discharge letter is a low scoring indicator. The standard set by MST is 90% [8].

The objective of this study is twofold: first, to analyse the underlying processes that influence timely dispatch of discharge letters within 24 hours across various departments, and second, to determine factors influencing the attainment or failure to meet the 90% guideline for discharge letters within 24 hours. The research question formulated to investigate this:

What underlying processes within MST influence the dispatch of clinical discharge letters within 24 hours, aiming to meet the established 90% standard of timely dispatching?

The sub-questions of this mixed-methods study are:

- What observable differences exist between departments regarding the performance of dispatching clinical discharge letters?
- What underlying processes and barriers contribute to potential delays in dispatching clinical discharge letters within 24 hours?
- What (potential) facilitators can be recommended to optimise the timely dispatch of discharge letters within MST, drawing insights from the best practices observed in high scoring department?

2. METHODS

2.1 DESIGN AND ETHICAL APPROVAL

A sequential, explanatory, monocenter, cross-sectional mixed-methods study was undertaken among healthcare professionals who utilised and/or were involved with the quality indicator 'Dispatch the clinical discharge letter within 24 hours'. This study was conducted in MST (Enschede, the Netherlands) between February and July 2024. Ethical approval was obtained from the hospital's Institutional review Board (K24-11).

2.2 IN- AND EXCLUSION CRITERIA

The target audience encompassed healthcare professionals involved in drafting and dispatching clinical discharge letters from a low (<70%), middle (70-89%), and high (>90%) scoring department in MST.

2.3 STUDY POPULATION

The departments included based on performance differences and teaching/non-teaching status were neurology, pulmonology and urology. Refer to Table 1 for the characteristics of the neurology, pulmonology, and urology departments.

TABLE 1: CHARACTERISTICS OF INCLUDED DEPARTMENTS

Department	Teaching/non-teaching	Performance
Neurology	Teaching	Low
Pulmonology	Teaching	Middle
Urology	Non-teaching	High

2.4 PRIMARY AND SECONDARY OUTCOME MEASURES

The primary outcome was to assess departmental processes in dispatching discharge letters within 24 hours, evaluating compliance with the 90% guideline. The secondary outcome was to identify performance gaps between low, middle, and high scoring departments in dispatching clinical discharge letters and determining barriers and facilitators for adherence to the guideline, along with improvement strategies.

2.5 RESEARCH COMPONENTS

The Quality & Safety (Q&S) dashboard provides insight into the performance of departments regarding the indicator for dispatching clinical discharge letters within 24 hours. The data utilised for this analysis was collected during January and February of 2024. This research consisted of two components: quantitative and qualitative. The study began with the distribution of surveys, conducted cross-sectionally. These surveys aimed to assess the processes related to dispatching clinical discharge letters. Subsequently, interviews were conducted with healthcare professionals, to further explore any uncertainties or ambiguities identified in the survey responses. The interviews also helped identify areas for improvement and optimise the underlying processes involved in dispatching discharge letters. In Figure 1, the mixed-methods structure is schematically represented.

2.5.1 Quantitative component

The survey was developed based on a literature review and insights obtained by consulting a Q&S policy advisor at MST and Ziekenhuis Groep Twente (ZGT), specialised in this quality indicator (Appendix 6.1). The sample size encompassed all healthcare professionals from a low, middle, and high scoring department within MST, who were chosen based on performance and their intrinsic motivation to participate in this study. The survey comprised a combination of structured multiple-choice questions and open-ended questions. The multiple-choice questions primarily utilised a 5-point Likert scale. Additionally, respondents had the opportunity to provide qualitative elucidation. Surveys were divided into four sections: (i) guideline adherence, (ii) barrier identification, (iii) quality evaluation, and (iv) potential improvements (Appendix 6.2). Two independent healthcare professionals reviewed the survey for content validity. The survey was conducted via Castor EDC and remained accessible for 24 days. Reminder notifications were sent to respondents seven and twelve days after dispatching the survey invitation.

2.5.2 Qualitative component

The semi-structured interview scheme was developed based on a literature review and survey findings covered (i) underlying processes, (ii) workload, (iii) barrier identification, (iv) (potential) facilitator identification. (Appendix 6.3). The interview sample was selected using purposeful sampling and the interviews were conducted in Dutch. Data saturation was reached after three interviews, and an additional three interviews were conducted for validation. Recordings were made using Teams, then transcribed, and coded in ATLAS.ti 23 [10]. A coding structure was developed by identifying common themes related to the sub- and research questions through open, axial and selective coding.

2.5.3 Statistical analysis

The statistical analysis started by converting the (Likert) categories into numerical data, allowing for the calculation of the median and interquartile range (IQR). A histogram was constructed to visualise the distribution of the data, revealing a non-normal distribution. The Fisher's Exact Test for nominal data was used to analyse categorical differences between departments from the survey, such as job function and level of guideline knowledge. Statistical analyses were performed using the R programming language (version 2023.12.1 + 420) [11] . A significance level of < 0.05 was used, and, where appropriate, a 95% CI was calculated. Additionally, thematic analysis was conducted.

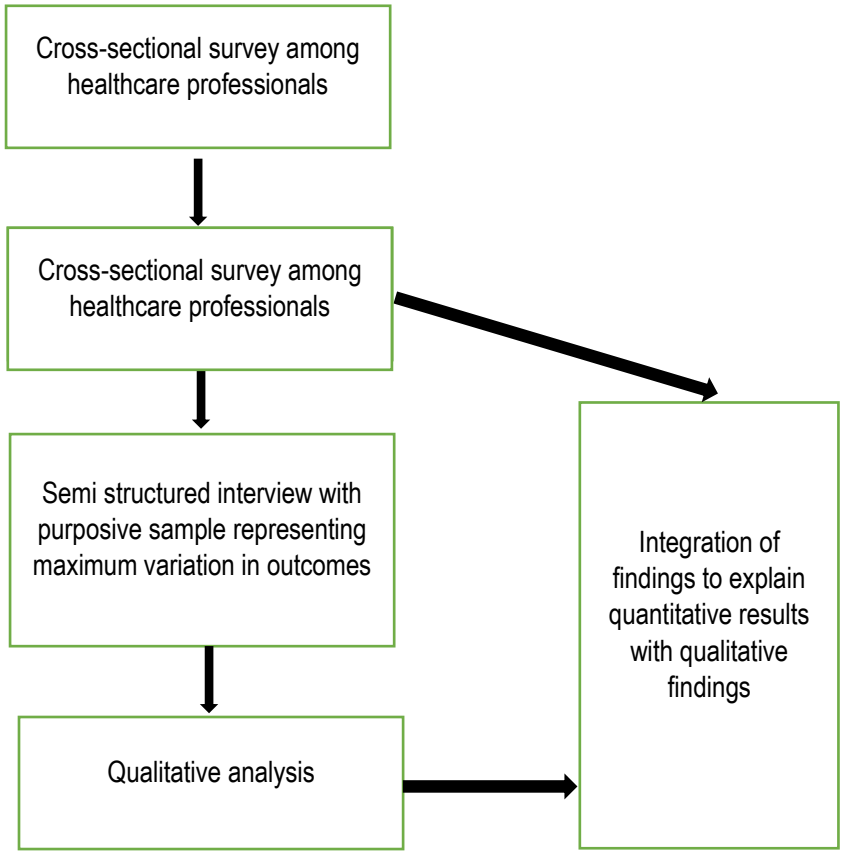


Figure 1: *Mixed-methods structure*

3. RESULTS

3.1 STUDY SAMPLE

A total of 58 participants were included in the study, comprising healthcare professionals specialising in urology (n=7), pulmonology (n=18) and neurology (n=33). Table 2 provides an overview of the participants.

TABLE 2: NUMBER OF PARTICIPANTS BY FUNCTION FOR BOTH STUDY PHASES

Profession	Total (n)	Physician (n)	ANIOS* (n)	Function AIOS**(n)	Other *** (n)	Response Rate (%)
Quantitative comp	23	15	4	2	2	39,7
• **Neurology**	9	8	1	N/A	N/A	27,3
• **Pulmonology**	11	4	3	2	2	61,1
• **Urology**	3	3	N/A	N/A	N/A	42,9
Qualitative comp	6	3	2	1	0	10,3
• **Neurology**	2	1	N/A	1	N/A	6,1
• **Pulmonology**	2	1	1	N/A	N/A	11,1
• **Urology**	2	1	1	N/A	N/A	28,6

*: Resident not in training
**: Resident in training
***: Healthcare professionals not categorized elsewhere, such as physician assistants.

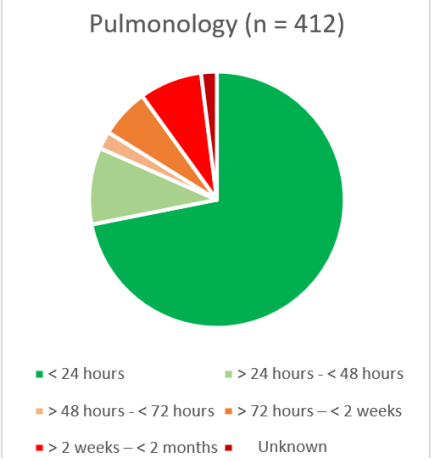
3.2 PERFORMANCE OF INDICATOR

In January and February 2024, 59.0% of discharge letters at MST were sent within 24 hours. Neurology achieved 38,1% on-time discharge letters, pulmonology 70.1%, and urology 84.6% [12]. Table 3 provides a schematic overview of the performance of clinical discharge letters within 24 hours in 2024.

TABLE 3: OVERVIEW INDICATOR CLINICAL DISCHARGE LETTER WITHIN 24 HOURS 2024

Department	**Letters < 24 hours** (n)	**Total letters** (n)	**Percentage** (%)
MST	2585	4379	59,0
Neurology	99	260	38,1
Pulmonology	289	412	70,1
Urology	137	162	84,6

The dispatch times of discharge letters are categorised into six intervals: within 24 hours, between 24 and 48 hours, between 48 and 72 hours, between 72 hours and 2 weeks, between 2 weeks and 2 months and unknown. Figures 2A to 2C illustrate these dispatch intervals for the urology, pulmonology, and neurology departments.



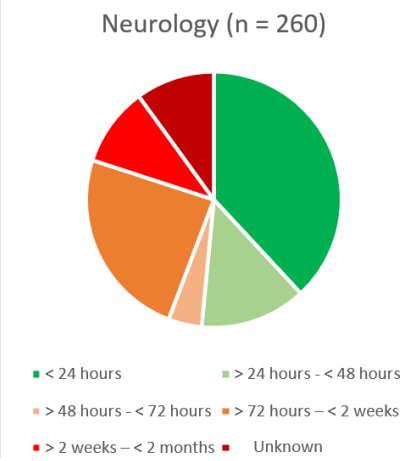


Figure 2A: *Timing of discharge letter Urology* Figure 2B: *Timing of discharge letter Pulmonology* Figure 2C: *Timing of discharge letter Neurology*

3.3 SURVEY OUTCOMES

3.3.1 Statistical analysis

In neurology, most participants were physicians (89%) and 22% had over 20 years of work experience. Pulmonology mostly comprised individuals with less than 10 years of practice (55%). In urology, 67% had 10-20 years of experience, and all participants were physicians (100%).

The survey questions primarily consist of Likert scale levels: (i) completely agree or always (ii) good or often (iii) neutral or sometimes (iv) disagree or rarely (v) strongly disagree or never. The barriers, optimisation strategies, and motivations response options can be found in the survey results (Appendix 6.2). Table 4 provides an overview for the median, IQR and P-value for each variable.

TABLE 4: DATA FOR PARTICIPANTS IN THE QUANTITATIVE SURVEY

Variable	Neurology (n=9) Median - IQR (P25, P75)	Urology (n=3) Median - IQR (P25, P75)	Pulmonology (n=11) Median - IQR (P25, P75)	P-value
Variables measured using Likert scale levels				
Expectations dispatching <24h	2 – 2, 3	2 – 1.25, 2	2 – 2, 2	0.025*
Performance	3 – 3, 4	2 – 1.25, 2.75	2 – 2, 3	0.088
Knowledge guideline	2 – 2, 3	4 – 2.5, 4	2 – 2, 3	0.371
Experiences dispatching <24h	3 – 2, 3	2 – 1.25, 2	1 – 1, 2	0.002*
Impact dispatching >24h	2 – 1, 3	4 – 2.5, 4	3 – 2, 3	0.08
Repair work	4 – 3, 4	4 – 3.25, 4	4 – 3, 4	0.917
Familiarity dispatching <24h	1 – 1, 2	1 – 1, 1	1 – 1, 1	0.174
Familiarity guideline	2 – 2, 4	3 - 1.5, 3.75	2 – 1, 4	0.977
Meet guideline	3 – 2, 6	3 – 1.5, 5.25	2 – 1, 2	0.326
Focus on quality	3 – 3, 4	4 - 1.75, 4	3 – 3, 4	0.289
Variables measured using a range of response options				
Barriers	1 – 1, 11	12 – 3.75, 12	1 – 1, 1	0.01*
Optimisation	1 – 1, 8	7 – 6.25, 7.75	3 – 1, 6	0.275
Strategy	5 – 2, 6	5 – 4.25, 5.75	2 – 1, 5	0.202
Motivation	2 – 2, 2	2 – 2, 2.75	2 – 2, 3	0.627

*: Significant variables

3.3.2 Guideline adherence

In neurology, respondents generally expected the discharge letter to be sent "Mostly" within 24 hours. The performance of neurology was perceived as neutral, with a majority indicating good familiarity with guidelines. Also in pulmonology, respondents expected that the discharge letter was sent 'Mostly' on time, with some rating the performance as good and indicating a solid understanding of guidelines. Urology exhibited varied responses: some respondents expected timely sending, with others rating the performance as good, yet indicating weaker knowledge of guidelines. Respondents noted that in neurology, the experience of sending discharge letters within 24 hours was consistent. In pulmonology, this was similarly frequent and in urology, it occurred most often.

3.3.3 Barrier identification

Neurology healthcare professionals identified a lack of time as the most common barrier, followed by staff shortage and communication issues. Additionally, a small number of respondents mentioned a lack of knowledge of guidelines as a barrier. In pulmonology, a lack of time was also noted as the primary barrier, followed by staff shortage. Additionally, respondents emphasised supervision as a crucial barrier and some respondents mentioned a lack of (patient) information as a challenge. Healthcare professionals in urology similarly reported a lack of time as the primary barrier. Responses regarding repair work varied, with some reporting occasional need for repair and others mentioning infrequent or no need for it.

3.3.4 Quality evaluation

In neurology, healthcare professionals demonstrated varying degrees of familiarity with the timely dispatching of clinical discharge letters. A majority were well-acquainted with the practice, while a smaller proportion indicated less familiarity. Responses regarding adherence to guidelines and quality focus within the department exhibited diverse levels of understanding and implementation. Pulmonology exhibited a consistent high level of familiarity among respondents regarding dispatching letters promptly. However, responses regarding guideline familiarity, adherence levels, and the frequency of quality focus showed considerable variability among professionals in this field. In urology, all respondents were uniformly knowledgeable about the necessity of dispatching letters within 24 hours. Nevertheless, there were differences in familiarity with guidelines, adherence levels, and the frequency of quality focus among healthcare professionals in this specialty.

3.3.5 Potential improvement identification

In neurology, respondents identified the implementation of automated systems as the most common optimisation strategy, followed by improved coordination and workflow procedures. Additional staff and enhanced discharge planning within 48 hours were also mentioned as means to streamline the process. Similarly, pulmonology employed comparable strategies such as the use of HiX templates and artificial intelligence (AI) to generate summaries. In urology, respondents indicated that HiX templates were utilised as strategies to promote optimisation.

3.4 INTERVIEW OUTCOMES

3.4.1 Underlying processes

Findings from the interviews revealed that in a non-teaching department, all authorised healthcare professionals are responsible for drafting discharge letters. Respondents indicated that in teaching departments, both ANIOS and AIOS are responsible for drafting discharge letters at the commencement of a patient's admission, although continuous updates are infrequently made. Prior to dispatch, these letters undergo a review and approval process by supervising physicians, which, while ensuring accuracy, can result in delays. Q: *"Tijdens supervisie kijk ik of de inhoud en conclusie klopt. Naar het beloop van goh klopt dat met wat er op de afdeling is gebeurd. Maar met name de conclusie, samenvatting en beleid."* The process begins at the start of the patient's admission when the discharge letter is initiated. Throughout the patient's stay, the letter should be regularly updated and maintained to ensure accuracy and completeness. Upon the patient's discharge, the letter is finalised and dispatched to the GP within 24 hours to comply with the HASP guideline. In Figure 3, the intended process for dispatching the discharge letter is schematically represented.

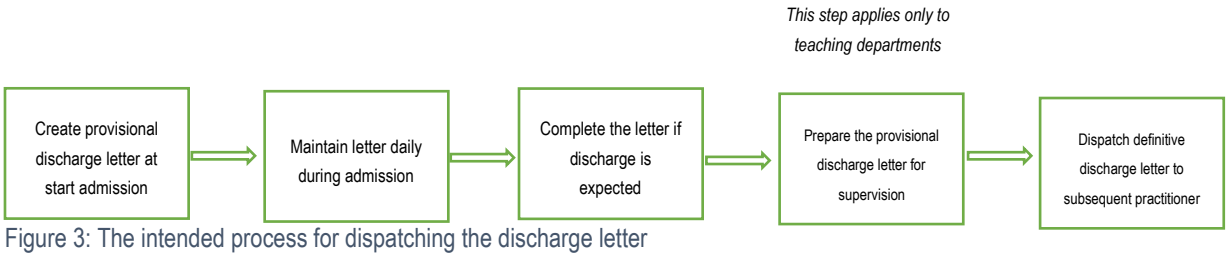


Figure 3: The intended process for dispatching the discharge letter

3.4.2 Workload

Neurology sends ten to fifteen discharge letters daily, each requiring fifteen minutes to ninety minutes to write. Urology sends five letters daily, taking about five minutes each. Pulmonology sends five letters daily, with writing times ranging from five to thirty minutes per letter. Teaching departments suspect non-teaching departments of writing overly brief discharge letters, potentially compromising quality. Q: *"Maar de urologie is het andere uiterste, die schrijft geen zak op. Totale desinteresse."* Non-teaching departments, in turn, suspect teaching departments of drafting excessively detailed letters that may overwhelm GPs. All interviewees were unfamiliar with the HASP guidelines and lacked awareness of the department's performance regarding dispatching clinical discharge letters. Q: *"Ik kreeg toevallig te horen dat we het goed doen, maar dat is niet iets wat ik wist."*

3.4.3 Barrier identification

From the interviews, it is evident that respondents from the neurology department have identified various barriers. At first, they find the total administrative burden within the neurology department to be excessively high. Q: *"Er zit bij ons een knelpunt om die aantal brieven binnen de aantal taken die we al hebben om optijd weg te krijgen."* Second, there is insufficient time to complete letters within 24 hours and to prepare these letters at the start of admission. Q: *"Een knelpunt is met name dat er te weinig tijd is om de brief tijdig klaar te zetten."* This creates the following barrier: delayed letter preparation requires extensive record searching for discharge information. Q: *"Maar als het een langere brief is die nog niet aangemaakt is en een langere opname en naar een verpleeghuis moeten zou het kunnen zijn dat je 1 uur tot 1,5 uur bezig bent met een brief omdat je alles moet opzoeken in het dossier."* Third, respondents noted delays as clinical and outpatient discharge letters are mixed during supervisor review, requiring vigilant filtering. Q: *"Soms zit er nog een afdelingsbrief in mijn correspondentiecontrole en die zit dan helemaal onderaan, tussen mijn polibrieven en dan zie ik in een keer nog een afdelingsbrief tussendoor en dan moet je net getriggerd zijn dat daar ergens nog een ontslagbrief in staat ipv van een polibrief. In dat traject kan nog wel een vertraging zitten."* Fourth, respondents noted significant barriers in timely preparation of discharge letters for patient transfers to follow-up institutions. Morning deadlines during handovers and rounds intensify pressure, while potential evening medical updates hinder finalisation. Q: *"Het grootste knelpunt zit het met name in de patienten die naar een vervolginstelling gaan. Dat is nog een grote druk dan die andere patienten die met ontslag gaan."*

Respondents from the pulmonology department have identified multiple barriers. At first, they found that HiX does not effectively support the drafting of these letters due to outdated or incorrect information, requiring manual adjustments and increases the chance of errors. Second, it is often unclear within HiX whether the letter has already

been drafted, necessitating time-consuming checks. Third, discharged patients disappear from HiX's admission list, complicating the tracking of the letters. Q: "*Als er iemand met ontslag gaat, dan verdwijnt die persoon uit de opnamelijst. Dus als ik dat dan niet voor mezelf heb opgeschreven, dan gaat het niet gebeuren. Dus je kan het denk ik makkelijk vergeten en als je het druk hebt zie je het denk ik makkelijk over het hoofd."* Fourth, various sections in HiX templates do not function properly, necessitating extensive rework to ensure the letter's quality. Fifth, in pulmonology, HiX's 'summary' section is not utilised, where a daily form with a dedicated 'summary' box allows for easy updates and tracking. Misuse of the summary section in HiX results in daily new entries. Q: *"Dus die samenvatting is eigenlijk heel handig, maar dat kan bij ons dus niet en als je bij ons daarvoor de samenvatting gaat misbruiken. Dan komt dus elke dag in een naslag in HiX dat hele verhaal te staan en dat is super vervuilend en onhandig."* Sixth, respondents from the pulmonology department perceive the HiX templates as disorganised. Seventh, employees in pulmonology question the utility of composing discharge letters, uncertain about the thoroughness of review by GPs. Q: *"En op een gegeven moment als het allemaal zo lang duurt en zo'n gezeur is dan denk je ook een beetje van waar doe ik het nu voor? Wie leest nou die brief."*

The respondents from the urology department have identified three barriers. First, healthcare professionals are unaware of the patient's discharge timing. Q: *"Ja, wat soms lastig is als je visite hebt gelopen dat je nog niet weet of die met ontslag gaat. En dan zitten wij in de middag poli te doen en dan gaat zo'n patiënt verder ongezien, want die opdracht ligt bij de verpleging, indien zus en zo mag de patiënt naar huis, dan zie je niet altijd dat de patiënt ontslagen is en dan blijft de brief hangen. Dan staat die op concept, maar wordt die niet definitief."* Second, the finalisation of the draft discharge letters is often forgotten. Lastly, urology respondents mentioned discharged patients are removed from the list, requiring manual retrieval for letter verification. Q: *"Als er mensen uit de lijst van de kliniek verdwijnen kan je ze ook niet terugvinden."*

3.4.4 (Potential) facilitator identification

Within the neurology, pulmonology and urology departments, the following work agreements are established and seen as a facilitator: discharge letters should be sent to the GP within 24 hours, given to the patient immediately when transferring to another facility. Q: *"De werkafspraken zijn goed en voldoende."*

Neurology respondents mentioned multiple current facilitators. At first, they use department-specific templates for discharge letters. These templates enhance the quality and timeliness of discharge letter dispatch. Q8: *"Met een gestandaardiseerd sjabloon dan ben je eigenlijk zo klaar met de brief."* Second, respondents emphasised the importance of a 'keep' who assists with administrative tasks within the department. Q: *"We hebben hier een keep, dat is iemand die administratieve lasten wegneemt als die tijd over heeft".* Third, the respondents highlighted that quality meetings serve as a facilitator by keeping everyone focused on sending discharge letters within 24 hours. Fourth, from interviews with the neurology department, workshops were found ineffective due to A(N)IOS' prior experience with letter-writing in other clinics, rendering generic workshops inadequate. Therefore, personalised feedback from their supervisors is necessary to further enhance their skills. Q: *"Hier worden vaak wel semi-artsen aangenomen die zo goed worden bevonden dat ze ook goede ontslagbrieven of ANIOS die al 1 tot 1,5 jaar ergens anders hebben gewerkt."*

Neurology respondents also mentioned several potential facilitators. Firstly, they proposed sending urgent discharge letters within 24 hours and non-urgent ones within 48 hours to manage patient discharges. Additionally, they suggested implementing a reminder system in HiX for sending clinical discharge letters. *Q: "Voor mij zal het handig zijn als ik een soort van reminder krijg als ik zie, dus morgen voordat ik visite ga lopen moet ik deze defintief maken."* Moreover, a supervisor proposed automating clinical discharge letter approval by finalizing it the evening before discharge, potentially allowing automatic approval if no subsequent changes occur in the patient's record. Q: *"Soort van automatische reminder of als er niks verandert is en ik heb die brief savonds gezien dat er zonder mij die brief ook geaccordeerd kan worden."* Finally, neurology respondents are enthusiastic about automatically generating summaries, with AI.

Respondents from the pulmonology department mentioned several potential factors during the interviews. At first, they highlighted the need for more accessible discharge letters and a user-friendly timeline in HiX to swiftly locate relevant information. Second, respondents also indicated that reminders for sending the discharge letters, facilitated by HiX, would be beneficial. Third, the pulmonology department emphasised the utility of the summary feature,

already in use in various MST departments including in the intensive care unit (ICU). It provides a pop-up summary when opening the visit form, aiding in progress tracking. Q: *"Het was heel handig geweest als er in de dagelijkse visite formulier een kopje was, dat hebben ze bij de ic bijvoorbeeld wel, een soort schaduw schermpje een bespreking kan bijhouden."* Fourth, respondents from pulmonology expressed enthusiasm about leveraging AI to generate summaries. Q: (Denk je dat het automatisch genereren van samenvattingen in HiX met AI het proces zou bevorderen?) *"Dat zou nou echt een geweldig idee zijn."* Fifth, they also suggested incorporating the completion of discharge letters as an actionable item in the work list in HiX to serve as a reminder. Sixth, another potential facilitator mentioned was maintaining visibility of discharged patients whose letters have not yet been sent in the admission list within HiX. Q: *"Als er een overzicht is in HiX bijvoorbeeld met niet alleen de opgenomen patienten maar ook de ontslagen patienten per datum en als er dan per regel, dan kan je heel makkelijk zien wie er nog een ontslagbrief nodig heeft."*

From interviews with the urology department, several current facilitators have been identified. Respondents consider concise and clear letters as a facilitator, emphasising the importance of preparing the letter at the start of admission and maintaining it throughout the patient's stay. They also highlighted unsupervised drafting as a facilitator. Q: *"Ja, ik denk omdat wij niet doen aan supervisie op de afdeling. Dat is vaak, hoe vaker je het heen en weer gaat sturen tussen specialisten."* Non-teaching department identified modern supervision as a facilitator. In urology, supervision based on peer sampling, rather than training-specific oversight, was noted to improve letter quality and mitigate the disadvantages of current supervision methods within teaching departments. Q: *"De kwaliteit is op orde omdat we de brieven van elkaar ook zien. En dan koppel je feedback ook terug naar elkaar."* Real-time work is another facilitator they value, ensuring letters integrates seamlessly into their workflow.

Additionally, urology respondents suggest several potential facilitators. Respondents anticipate that using AI for summarising in HiX will save time. They also believe that monthly quality reporting and sharing healthcare professionals' or departmental performances could enhance timely dispatches by fostering greater accountability and engagement. Urology respondents indicate that incorporating discharge letter writing into HiX task lists and implementing reminders to finalise discharge letters in HiX are potential facilitators. Lastly, the urology department opposes extending the guideline, emphasising the need to focus on crafting shorter, more efficient letters within tighter timeframes. Q: *"Volgens mij moet je beter kijken naar hoe kan je in minder tijd een kortere, efficientere brief maken."*

Appendix 6.4 provides a schematic overview of all barriers and (potential) facilitators identified in this study.

4. DISCUSSION

In this mixed methods study, underlying processes, barriers, and (potential) facilitators influencing the timely dispatch of clinical discharge letters within 24 hours were examined, aiming to achieve the established standard of 90%. It has been revealed that the indicator 'dispatching clinical discharge letters within 24 hours' is a low scoring indicator, with an average of 59%. This highlights the organisation's need for process optimisation to enhance the indicator of clinical discharge letters within 24 hours.

Our study identified a significant association between experiences ($p = 0.002$), expectations ($p = 0.025$), and barriers ($p = 0.01$) and the timely dispatch of clinical discharge letters within the neurology, urology, and pulmonology. These results suggest that experiences, expectations, and barriers are likely determinants of the timely dispatch of discharge letters within these departments, emphasising the effectiveness of facilitators targeting these variables to improve compliance. The findings revealed that neurology, pulmonology, and urology each confront challenges and employ specific (potential) facilitators concerning clinical letters. Based on these findings, it is evident that departments scoring low, middle, and high all strive for improvements in the current process. Potentially, because included departments are eager to improve their presentation and recognise the importance of timely handover to primary care. In neurology, timely preparation of discharge letters for patients transitioning to follow-up care facilities and administrative burdens stand out as barriers.

Potential facilitators including implementing reminders in HiX and distinguishing between urgent and non-urgent letters are seen as potential facilitators. Pulmonology faces challenges including time pressures and challenges with HiX templates. Potential facilitators involve leveraging AI and enhancing patient data accessibility within HiX. Urology encounters uncertainties regarding discharge timing and the removal of discharged patients from admission lists in HiX. The main finding of this study is that all departments face HiX challenges and lack of time in composing discharge letters, possibly because the dashboard was recently implemented, previously lacking visibility into departmental performance on this indicator, and thus no prior research had been conducted. Potential facilitators such as AI for summary writing, peer supervision, and improved task integration in HiX are recommended. The study indicates that all respondents support a reminder system in HiX and the use of AI in letter writing, underscoring the need for an efficient process to reduce administrative burdens. Potentially, because professionals are intrinsically motivated to improve timely dispatch and actively engage in considering conditions, as evidenced by their participation in the study.

This study emphasised the importance of preparing discharge letters promptly at admission, aligning with findings from previous research that highlight the negative impacts of delayed dispatch on care continuity and access to post-discharge information [12]. Additionally, our study confirms real-time writing as a facilitator, consistent with prior research that enhances information transfer among healthcare professionals, benefiting patient care and satisfaction for both patients and GPs [13-18]. Respondents identified challenges with HiX, emphasising the implementation of reminders and AI for drafting and approval. This is an important finding because MST is considering piloting ChatGPT for generating discharge letters, potentially because best practices from other hospitals demonstrate its feasibility and to alleviate workload for healthcare professionals. This aligns with the study by Kripalani et al. on the benefits of computer-generated summaries for timely patient information transfer [19]. Elisabeth-TweeSteden Hospital (ETZ) and UMCG already employ AI for generating medical summaries within their EHR [20]. Research indicates that AI functionality can save up to 95% of preparation time and is at least as effective as doctors in terms of completeness, accuracy, timeliness and conciseness [20].

Non-teaching departments find teaching departments' discharge letters too long and detailed, while teaching departments criticise non-teaching letters as too short and poor quality. Potentially, because healthcare professionals have visibility in other departments' discharge letters. A possible cause of this could be a lack of knowledge about the criteria of the HASP guideline and insufficient understanding of what general practitioners prioritise in the letter. The HASP guideline prioritises timely over complete discharge letters to ensure continuity of care for GPs [21]. This lack of knowledge about the HASP guideline may contribute to the existence of overly lengthy letters that are sent late. Potentially, teaching departments may use the discharge letter as a summary of the patient's medical history in case of readmission, rather than just as a discharge letter. It has also been found that a checklist or structured procedures can aid in writing letters [18, 22]. This underscores the importance of using department-specific templates. Teaching departments struggle with HiX templates, unlike neurology, which uses

tailored ones. A notable finding is that non-teaching departments do not experience challenges with HiX templates. Potentially, because in this study the urology department primarily use the OR format and write shorter letters as they handle less complex diagnose.

MST aims to send 90% of clinical discharge letters within 24 hours, mirroring the standard set by UMC Utrecht. UMC Utrecht improved from sending less than 30% of letters on time in January 2021 to over 53% by December 2021 [23]. Similarly, Slingeland Ziekenhuis aims to dispatch 80% of discharge letters on the day of discharge, achieving 66% in late 2016 [24]. These examples show MST is not alone in facing timely letter dispatch challenges, questioning the feasibility of sending 90% of discharge letters within 24 hours. Two strategies are considered: reducing the 90% target or extending the 24-hour timeframe. The high scoring teaching department advises against extending the 24-hour norm, as it prevents real-time letter writing. Possibly because the urology lack visibility into the workload of other departments, where it is currently impractical to write letters in real-time, as it can take up to 90 minutes. In contrast, the low scoring teaching department suggests distinguishing between urgent (dispatching letters <24 hours) and non-urgent (dispatching letters <48 hours) letters as a facilitator. A notable, yet logical finding is that the high scoring department reports significantly fewer barriers compared to the middle and low scoring departments. Possibly, because the urology department has a lower workload and spends less time drafting letters. Consequently, the workflow is more efficient, allowing letters to be sent within 24 hours.

Previous research has demonstrated the impact of barriers, such as time constraints, on dispatching clinical discharge letters [25]. Consistent with these findings, our study revealed that barriers are statistically significant with respect to sending clinical discharge letters within the neurology, urology, and pulmonology departments. Potential facilitators focus on fostering modern supervision, improving HiX, and streamlining administrative tasks to address time constraints. This aligns with Van Seben et al.'s research advocating for the Transfer Intervention Procedure (TIP), which simplifies tasks for nurses and doctors during admission and discharge, emphasising standardisation and patient involvement. They recommend determining the discharge date within 48 hours after admission and communication of the discharge date with the patient [26]. This recommendation is relevant to our study, which finds that planning discharges within 48 hours is hindered by uncertainty about patients' discharge timing. To overcome this, continuous monitoring of patient status from admission and regular interprofessional communication are recommended. MST's research on predicting length of stay could also streamline discharge planning [27, 28].

Teaching departments receive personalised feedback on letters, while non-teaching departments use peer sampling. This contrasts with studies highlighting ANIOS and medical students' concerns about inadequate training in writing discharge letters [29, 30]. The current study recommends implementing interprofessional, modern supervision, which is supported by research by Shivji et al., demonstrating that simple educational sessions can lead to improvements in writing discharge summaries [31]. The conservative supervision at teaching departments may stem from experienced physicians accustomed to established practices, thereby resisting changes in supervision. Awareness of administrative burdens and potential relief can motivate adoption of these modern supervision methods. Despite departments using the HASP guideline for work agreements, none of the interviewees were familiar with this guideline, highlighting the need for more focus on quality of care and continuity awareness. Potentially, because healthcare professionals are often too occupied to allocate time for quality improvement.

4.1 STRENGTHS AND LIMITATIONS

This study's strengths lies in methodological diversity by employing both quantitative and qualitative approaches. Utilising mixed methods enhances the robustness and relevance of findings, particularly in exploring novel or complex aspects of medical education research [36, 37]. Additionally, this research provides practical implications for improving the timely dispatch of clinical discharge letters within MST. By identifying (potential) facilitators and barriers across teaching and non-teaching departments, MST can develop targeted interventions to enhance efficiency and effectiveness in this process. Another strength of this research is its content validity, which was enhanced by review from two healthcare professionals, thereby increasing the instrument's trustworthiness [32]. Lastly, this current study included departments with varying scores, enabling broader generalisation to all departments handling discharge letters. However, including only one department per category may heighten bias risk [33].

In this mixed-methods study, the sample was composed based on intrinsic motivation and guidance from the medical managers of the involved departments, ensuring the preservation of the inclusion and exclusion criteria and leading to valuable qualitative data collection [34]. However, this approach was chosen despite the risk of researcher and sampling bias [35], due to the difficulty in finding willing departments. These three departments operate on different performance scales, and both teaching and non-teaching departments were included. Given an average response rate of 48.4% [36], the response rate of this mixed-methods study, 39.7%, is low. Potentially, despite sending sufficient reminders, people prioritised other tasks over completing the survey. A low response rate could introduce non-response bias, and thus resulting in misleading information about the issues covered in a survey [37], but does not necessarily imply bias [33, 38]. Using the IQR for urology data, with only three respondents, is a limitation due to the small sample size, which may distort spread interpretation [39].

4.2 CONCLUSION

Despite current facilitators including preparing discharge letters at the start of admission and using department-specific templates, significant barriers remain in dispatching clinical discharge letters. These barriers include challenges with HiX, high administrative burden and time constraints. Implementing potential facilitators such as a reminder system in HiX and utilising AI for generating summaries is crucial. The dispatch of discharge letters will continue to pose challenges unless facilitators are implemented to streamline the process and achieve the established 90% guideline.

4.3 RECOMMENDATIONS

Based on the findings, recommendations have been formulated to improve the dispatching process:

Recommendations for both teaching and non-teaching departments

HiX enhancements:

- Coordination with HiX's application and functional management teams:
    - Coordination with HiX's application and functional management teams is necessary for implementing HiX improvements and start pilots.
- Reminder system and visibility of patients without discharge letters:
    - Implement HiX reminders to notify the attending physician and assistant if a discharge letter isn't sent within 12 hours and ensure patients without discharge letters remain visible on the admission list.
- Implementation of internal AI for summaries and department-specific templates:
    - Coordinate with the functional and application managers of HiX to determine the feasibility of implementing AI for generating summaries. Design and implement department-specific templates according to HASP guidelines.
    - Additionally, MST must address ethical concerns such as patient privacy, data security, and obtaining consent for using ChatGPT versus internal EHR systems [40, 41].
- Collaboration with other (Santeon) hospitals to enhance processes and strengthen HiX integration:
    - Collaboration with other (Santeon) hospitals, who experiences difficulties in dispatching clinical discharge letters, is crucial to investigate improving the EHR's role and best practices to enhance discharge letter efficiency.
- Appointment HiX ambassadors:
    - Two HiX ambassadors per department are responsible for liaising with the functional and application managers to implement improvements in HiX.

Work protocols:

- Creation of discharge letters at the start of admission:
    - Allocate a minimum of 2 minutes during the initial patient rounds for creating discharge letters in HiX.
- Monthly departmental performance presentations:
    - Advisor Q&S is posting monthly presentations on the intranet to review departmental performance concerning discharge letters.

Recommendations for teaching departments

- Adoption of modern supervisory:
    - Transition to a modern supervision approach that includes sample based supervision of discharge letters and fosters reciprocal feedback between physicians and assistants.
- Differentiation of letters:
    - In low and middle scoring teaching departments, distinguish between urgent (dispatch < 24 hours) and non-urgent (dispatch < 48 hours) discharge letters. Coordinate criteria with the department to determine when a letter is classified as urgent or non-urgent.
    - Lowering the 90% aim is not recommended, given that many letters in low scoring departments are sent between 72 hours and 2 months or are of unknown status. Extending the timeframe to 48 hours could increase the number of letters sent within 24-48 hours and reduce those sent between 72 hours and 2 months.
- Delegation of discharge letter approval:
    - Establish a protocol for assistants to autonomously approve discharge letters post-supervisor approval and in the absence of medical changes.

4.4 IMPLICATIONS

4.4.1 Practical implications

Timely dispatch of clinical discharge letters within 24 hours is crucial for care continuity and communication with primary care providers. Implementing the recommendations would advance MST's innovation, emphasising AI utilisation and collaboration with other hospitals and departments for best practices sharing. Adhering to stringent data privacy, maintaining accurate records with AI, and empowering assistants with letter approval post-supervisor endorsement would reduce administrative burdens. Enhancing HiX with timely reminders could streamline processes, ensuring fewer delays in letter dispatch. Coordination with application and functional management is pivotal for effective HiX improvements.

4.4.2 Implications for further research

Future studies should focus on the following:

- *Qualitative research on the alignment of discharge letters with the content criteria of HASP guidelines.*
  Research should assess current adherence to the HASP guideline criteria, particularly examining whether extensive time spent on lengthy discharge letters compromises quality standards, and if concise letters can maintain equivalent quality, given the lack of uniformity within MST departments regarding discharge letter completeness and quality.
- *Mixed-methods study investigating the readiness and feasibility of implementing modern, interprofessional supervision.*
  Based on this study's findings, recommending modern supervision, further research is needed to assess resistance and prerequisites for implementing this innovative approach in teaching departments, which currently rely on traditional feedback methods.
- *Quantitative research on the satisfaction level among GPs.*
  Quantitative research in Twente will survey GPs to assess their satisfaction with current discharge letters and determine their information priorities. The study aims to refine HASP guideline criteria and enhance HiX templates for improved efficiency and time management.

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6. APPENDIX

6.1 INTERVIEW WITH QUALITY AND SAFETY ADVISOR

Motivatie/reden voor aanpak in ZGT:

- In 2017 is het beleid gestart vanuit het toetsingskader Tijdelijke Overdracht, echter waren er geen cijfers beschikbaar op dat moment.
- De focus lag op ontslag binnen 24 uur na klinisch ontslag.
- Een dashboard werd opgebouwd en er werd intensief op gestuurd, vooral omdat het percentage aanvankelijk erg hoog lag en er een vergoeding aan gekoppeld was voor vakgroepen die boven de 80% scoorden.
- In 2023 werd de vergoeding stopgezet en daalde het percentage.
- Problemen ontstonden onder andere doordat klinische opnames niet altijd als zodanig werden geregistreerd, bijvoorbeeld bij patiënten die voor chemotherapie werden opgenomen voor slechts één nacht.
- Inefficiënties werden geconstateerd, zoals het filteren van klinische opnames zonder bijbehorende brief en het gebruik van ongeschikte sjablonen, wat resulteerde in veel knip- en plakwerk.

Aanpassingen in het proces:

- Verbeteringen werden doorgevoerd in sjablonen, waarbij specifieke elementen zoals de kwetsbare ouderenscore behouden bleven.
- Onderzoek gedaan naar wat de huisarts als meerwaarde zag in de brief, inefficiënties uitfilteren.
- Er werden richtlijnen ingesteld voor het opstellen van brieven door artsen-assistenten, met een controlemechanisme om de kwaliteit te waarborgen. Elke arts-assistent moet aan het begin 10 ontslagbrieven schrijven die worden gecontroleerd door de supervisor. Als een brief niet goed is, moet de brief opnieuw, aan de hand van feedback, worden ingeleverd. Als dit proces is afgerond mag diegene zelf zijn brieven autoriseren en sturen en wordt dit ook aangegeven in Leerplein.
- Afdelingssecretaresses kregen nieuwe taken toegewezen, waaronder het actief monitoren en verzenden van brieven.
- Bij vakgroepen met weinig klinische opnames werd vaker gekozen voor poliklinische brieven, dit gebeurt gelukkig niet heel vaak, ongeveer 5 keer per jaar.

Verbeteringen aan de ontslagbrief binnen 24 uur:

- Er werd gestreefd naar tijdige en volledige ontslagbrieven, met aandacht voor de specifieke behoeften van elke patiënt.

Resultaten van deze verbeteringen:

- De resultaten waren wisselend tussen verschillende afdelingen, afhankelijk van het specialisme.
- Specialismen zoals longgeneeskunde, neurologie en chirurgie presteerden over het algemeen goed.
- Geriatrie werd geprezen voor tijdige en kwalitatief hoogwaardige brieven, ondanks minder opnames.

Prestaties van de verschillende afdelingen:

- Het prestatieniveau varieerde per specialisme en werd opgenomen in maandelijkse rapportages.
- Het gebruik van PowerBI gaf medisch managers inzicht in prestaties en verbeterpunten.

Sturing van het proces:

- Sturing vond plaats vanuit de coöperatie medische staf en kwaliteitsafdeling, waarbij afdelingssecretaresses een rol speelden in het dagelijkse proces van controle en verzending van brieven.

Motiverende factoren:

- Extrinsieke motivatie, zoals vergoedingen, bleken effectief, maar ook het streven naar een soepel proces en goede inhoud van de brieven motiveerden specialisten.
- Duidelijke sjablonen en transparantie werden genoemd als stimulerende elementen.

Kwaliteit van de brieven:

- Hoewel de volledigheid werd nagestreefd. Toen we HiX standaardcontent nog niet hadden konden ze een voorlopig ontslagbericht sturen. Heel veel specialisten zagen dat als de ontslagbrief. Kwam er daarna geen definitiebericht achteraan. Met HiX standaardcontent is dat er niet meer, dan is een goede aanvulling nodig.

Advies aan MST:

- Implementeer extrinsieke motivatie zoals vergoedingen.
- Vereenvoudig het proces met duidelijke sjablonen.
- Zorg voor transparantie via dashboards en blijf het onderwerp bespreken in ALV's en maandrapportages.

Tips voor verdere onderzoeken:

- Onderzoek de bronnen van motivatie.
- Analyseer het dagelijkse proces en identificeer knelpunten.
- Onderzoek mogelijke verbeteringen, zoals het schrijven van brieven tijdens de opnameperiode en het effect van secretariaatswerk.

6.2 SURVEY

Start:

Beste respondent,
Hartelijk dank voor uw deelname aan dit onderzoek. Uw bijdrage is van grote waarde. Deze enquête is anoniem en zal ongeveer 10 minuten van uw tijd in beslag nemen. De verzamelde gegevens zullen worden verwerkt voor een adviesrapport in het kader van procesoptimalisatie rondom het verzenden van de klinische ontslagbrief binnen 24 uur. Drukken op 'doorgaan' houdt in dat u akkoord gaat met het verzamelen van de door u ingevulde gegevens en dat deze gegevens mogen worden vertaald naar een resultatensectie van afstudeeronderzoek van een student Master Health Sciences.

Algemene vragen:

- Bij welke afdeling bent u werkzaam?
    - Neurologie
    - Urologie
    - Longgeneeskunde

- Wat is uw functie?
    - Verpleegkundige (specialist)
    - Arts
    - AIOS
    - ANIOS
    - Anders:……..

- Hoe veel jaren werkervaring heeft u?
    - <10
    - 10-20
    - >20

Bewustwording

- Hoe vaak worden ontslagbrieven binnen 24 uur na ontslag verstuurd op uw afdeling?
    - Altijd
    - Meestal
    - Soms
    - Zelden
    - Nooit

- Hoe denkt u dat uw afdeling presteert binnen deze indicator?
    - Heel goed
    - Goed
    - Neutraal
    - Slecht
    - Heel slecht
- Geef toelichting

- Hoe bent u op de hoogte van de richtlijn 'Verzending van de klinische ontslagbrief naar de huisarts binnen 24 uur'?
    - Heel goed
    - Goed
    - Neutraal
    - Slecht
    - Heel slecht

- Verzend u zelf ontslagbrieven altijd binnen 24 uur naar de huisarts?
    - Altijd
    - Meestal
    - Soms
    - Zelden
    - Nooit
    - Heb ik geen invloed op

Barrières

- Wat zijn volgens u de belangrijkste redenen voor eventuele vertragingen bij het opstellen/versturen van ontslagbrieven binnen 24 uur?
    - Gebrek aan tijd
    - Gebrek aan personeel
    - Gebrek aan kennis voor het opstellen van de brief
    - Gebrek aan kennis van de richtlijn
    - Post wordt niet verzonden in het weekend
    - Technische problemen
    - Logistieke problemen
    - Gebrek aan informatie dat nodig is om de brief te kunnen schrijven
    - Communicatieproblemen tussen verschillende zorgverleners
    - Terugsturen ontslagbrief voor feedback (opleiding specifieke vereisten)
    - Gebrek aan duidelijke procedures binnen de afdeling
    - Andere redenen, namelijk:……..
- Geef eventueel toelichting

- In hoeverre zijn zorgverleners zich bewust van de impact van vertragingen bij het opstellen en versturen van ontslagbrieven?
    - Heel bewust
    - Bewust
    - Neutraal
    - Niet bewust
    - Helemaal niet bewust

- Hoe vaak moet u herstelwerk verrichten door het sturen van onvolledige of vertraagde ontslagbrieven?
    - Heel vaak
    - Vaak
    - Neutraal
    - Niet vaak
    - Helemaal niet vaak
    - Nooit
- Zo ja, kunt u deze problemen beschrijven?

Kwaliteit

- Bent u bekend met het versturen van de ontslagbrief binnen 24 uur?
    - Helemaal
    - Een beetje
    - Neutraal
    - Niet echt
    - Helemaal niet

- Bent u bekend met de nationale richtlijnen voor inhoud en structuur waar de ontslagbrief aan moet voldoen?
    - Helemaal
    - Een beetje
    - Neutraal
    - Niet echt
    - Helemaal niet

- In hoeverre vindt u dat de huidige ontslagbrieven voldoen aan de nationale richtlijnen voor inhoud en structuur?
    - Helemaal
    - Een beetje
    - Neutraal
    - Niet echt
    - Helemaal niet
    - Geen idee

- Hoe vaak wordt er binnen uw afdeling gestuurd op de kwaliteit en tijdigheid van het versturen van ontslagbrieven binnen 24 uur?
    - Dagelijks
    - Wekelijks
    - Maandelijks
    - Zelden
    - Nooit

Bevorderingen

- Op welke manieren denkt u dat de processen met betrekking tot het opstellen en versturen van ontslagbrieven binnen 24 uur kunnen worden geoptimaliseerd?
    - Implementatie van geautomatiseerde systemen voor ontslagbrieven
    - Verbeterde coördinatie tussen zorgverleners
    - Duidelijkere werkafspraken op de afdeling
    - Meer training en educatie van het personeel
    - Meer personeel
    - Implementeren van ontslagplanning binnen 48 uur
    - Implementeren van ontslaggesprekken 12 tot 24 uur voor ontslag
    - Anders, namelijk:……..
- Geef toelichting

- Welke strategieën zouden volgens u kunnen worden geïmplementeerd om de kwaliteit, tijdigheid en inhoudelijke eisen van ontslagbrieven te verbeteren?
    - Regelmatige audits en feedbacksessies
    - Gebruik van de juiste HiX sjablonen voor standaardisatie
    - Gebruik van computer gegenereerde samenvattingen
    - Verbeterde samenwerking tussen verschillende afdelingen
    - Invoering van kwaliteitscontrolemechanismen
    - Andere strategieën, namelijk:…….
- Geef toelichting

- Wat motiveert u om tijdig en volledig ontslagbrieven op te stellen?
    - Extrinsieke beloningen zoals vergoedingen
    - Streven naar een soepel proces en goede inhoud van de brieven
    - Intrinsieke motivatie om de patiëntenzorg te verbeteren
    - Anders, namelijk:…….
- Geef toelichting

- Heeft u nog andere opmerkingen of vragen met betrekking tot het verbeteren van de kwaliteitsindicator klinische ontslagbrief binnen 24 uur?

Dank u voor uw tijd en bijdrage aan dit onderzoek. Uw feedback is zeer waardevol voor het verbeteren van de zorgkwaliteit van MST!
Staat u nog open voor een interview om verder te praten of heeft u nog vragen? Stuur dan een mail naar nena.vandiermen@mst.nl

6.3 INTERVIEW SCHEME

Inleiding:
Dag, mijn naam is Nena van Diermen. Ik ben gezondheidswetenschappenstudent aan de Universiteit Twente en ik doe onderzoek naar de onderliggende processen van het verzenden van de klinische ontslagbrief binnen 24 uur. Wat is uw naam?

Wat fijn dat u wil meewerken aan het onderzoek. Om de deelname officieel vast te leggen zou ik u graag willen vragen een formulier te ondertekenen, waarin u aangeeft dat u voldoende op de hoogte bent van wat deelname inhoudt. In dit formulier staat onder andere dat u toestemming geeft voor het gebruiken van uw antwoorden, maar dat wij deze vertrouwelijk zullen behandelen. Dat betekent dat wij alle gegevens over uw naam en die van andere personen weglaten in de uitwerking van de resultaten. Als u ermee akkoord gaat wordt er een audio-opname van het interview gemaakt. Deze opname en transcripten worden veilig opgeslagen binnen MST. Het interview wordt woord-voor-woord uitgeschreven, maar dit zal volledig anoniem zijn. De audio-opname wordt verwijderd zodra de transcripten zijn uitgeschreven. Het transcript bevat dus geen herleidbare gegevens naar de respondent, zoals namen. Het interview duurt ongeveer 30 minuten. U kunt op elk moment stoppen met het interview. Gaat u hiermee akkoord met het informed consent en heeft u nog vragen? Goed, dan zet ik nu de opname aan.

Audio opname wordt gestart en respondent wordt gevraagd om toestemming te herhalen

Dus u gaat akkoord met het informed consent en met de opname van het gesprek?

Is het zo duidelijk? Heeft u op dit moment nog vragen aan mij?
Dan ga ik nu beginnen met het werkelijke interview.

Kern:

- Dagelijkse proces en verzending van ontslagbrieven:
    - Hoe ziet het dagelijkse proces eruit voor het opstellen en verzenden van ontslagbrieven binnen uw afdeling?
        - Welke verantwoordelijkheden liggen in dit proces?
        - Welke functies/rollen zijn hier verantwoordelijk voor?
    - Wat is de workload? Hoe veel brieven worden er dagelijks verstuurd?
    - Welke knelpunten zie je in dagelijks proces?
        - Waarom wordt dit ervaren als een knelpunt?
    - Welke controles vinden plaats voordat de brief wordt verzonden?
    - Welke randvoorwaarden zijn er nodig binnen het proces om de brieven tijdig te kunnen versturen?

- Werkafspraken en planning:
    - Welke werkafspraken worden momenteel gehanteerd voor het tijdig versturen van ontslagbrieven?
    - Waarom zijn deze werkafspraken mogelijk niet voldoende?
    - Worden deze werkafspraken voldoende nageleefd?
    - Wat zou er volgens u kunnen worden toegevoegd aan de huidige werkafspraken?

- Sjablonen en richtlijnen:
    - Maak je gebruik van sjablonen in HiX?
        - Waarom wel/niet?
        - Welke sjablonen?
    -

  - Welke sjablonen voldoen wel/niet aan de HASP-richtlijn?
  - Wat moet er in HiX aangepast worden om sneller inhoudelijk goede brieven te kunnen schrijven?

- Tijdverspilling en administratieve taken:
  - Hoe kan het proces van supervisie voor het sturen van een brief verbeterd worden?
  - Hoe kunnen we de hoeveelheid administratieve taken verminderen om meer tijd vrij te maken voor het opstellen van ontslagbrieven?

- Sturing op kwaliteit en tijdigheid:
  - Waarom wordt er volgens de enquête zo weinig gestuurd op kwaliteit en tijdigheid van het versturen van brieven?
  - Is er volgens u meer behoefte aan sturing vanuit leidinggevende op dit gebied?
  - Zou meer sturing op kwaliteit en tijdigheid het percentage van tijdige brieven kunnen verbeteren?
  - Is er ook op andere manieren contact met eerste lijn in het kader van overdracht?
  - Wat zorgt ervoor dat de kwaliteit van de brief op orde is?
    - Welke gegevens moeten er minimaal in de brief staan om een kwalitatief goede brief te krijgen?

- Implementatie geautomatiseerde systemen:
  - Hoe kan de implementatie van geautomatiseerde systemen bijdragen aan het tijdig versturen van de klinische ontslagbrief?
  - Welke randvoorwaarden zijn nodig binnen de afdeling voor de implementatie van geautomatiseerde systemen?

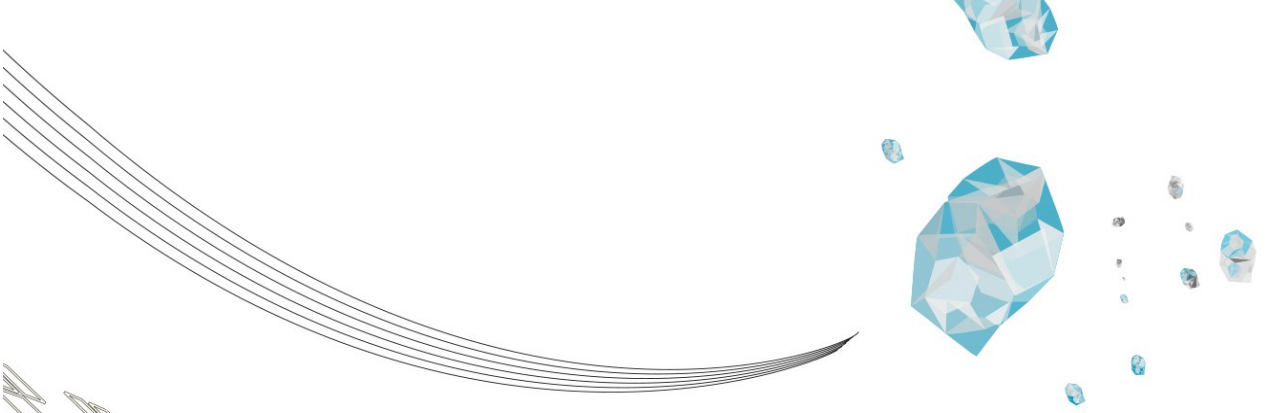
- Gebruik van computer gegenereerde samenvattingen:
  - Wordt er momenteel al gewerkt met AI voor het genereren van samenvattingen?
  - Welke specifieke informatie zou geautomatiseerd moeten worden in de samenvattingen?

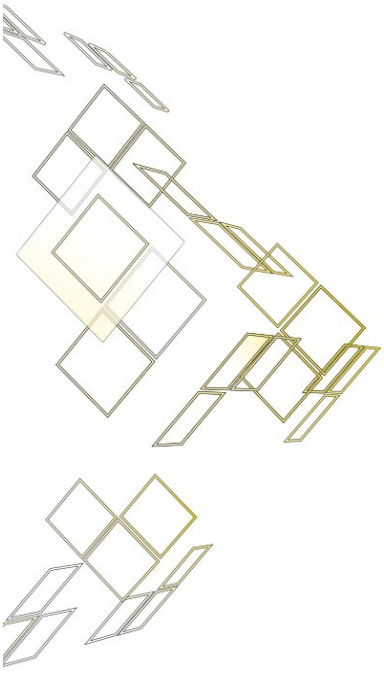
- Motivatie en intrinsieke motivatie:
  - Hoe kunnen we streven naar een soepel proces en goede inhoud van brieven bevorderen?
  - Wat adviseert u om de motivatie voor het tijdig versturen van brieven te verbeteren?
    - Helpt het om brieven op te delen in urgent en niet-urgent, waarbij de urgente brieven binnen 24 uur verstuurd moeten worden en niet-urgente brieven binnen 36-48 uur?
      - Hoe kan dit werken?
    - Helpt het om brieven binnen 24 uur alleen in conceptversie te sturen en later de definitieve brief?
      - Hoe kan dit werken?
  - Hoe denkt u dat dit probleem het beste kan worden opgelost?

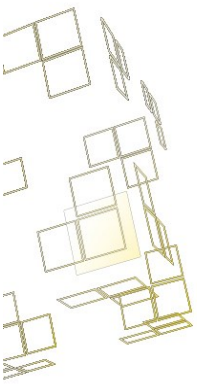
6.4 OVERVIEW BARRIERS AND (POTENTIAL) FACILITATORS

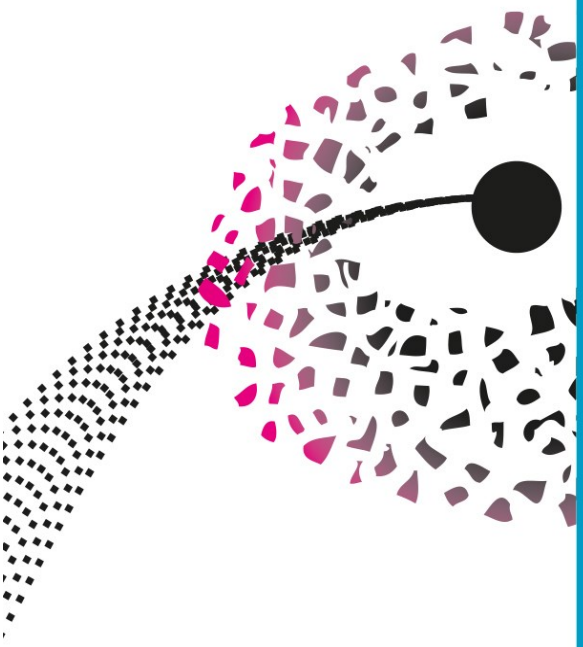
TABLE 5: OVERVIEW BARRIERS AND (POTENTIAL) FACILITATORS

		Department		
Method		Neurology	Pulmonology	Urology
Survey	*Barriers*	Lack of time Staff shortage Communication issues Lack of knowledge of guideline	Lack of time Staff shortage Supervision Lack of (patient) information	Lack of time
	Potential facilitators	Automated systems Improved coordination and workflow <48 hours discharge planning	HiX templates AI	HiX templates
Interviews	*Barriers*	High administrative burden Time constraints Letter is not prepared at start of admission Time-consuming record search Morning approval pressure for discharge to another facility Clinical and outpatient discharge letters are intermingled in HIX	HiX does not facilitate writing discharge letter Outdated, unnecessary or incorrect information in pre-filled letters in HiX Not clear in HiX If te letter is created Patients disappear from admission list Section in HiX templates do not work 'Summary' section in HiX is underutilized Insufficient appreciation for the effort HiX templates are disorganized	Discharge data is unknown Forget to finalize discharge letter Patients disappear from admission list
	Current facilitators	Department-specific templates 'Keep' performing administrative tasks Quality meetings		Concise and clear letters Preparing letter at start of admission Maintain letter during admission Unsupervised drafting Peer, sampling 'supervision' Real-time writing
	Potential facilitators	Distinguish between urgent and non-urgent letters Reminder system in HiX Automatic approval discharge letter after no medical changes AI Quality meetings	Letters more accessible Visible timeline in HiX of admission Reminder system in HiX Use summary option in HiX AI Add writing discharge letters in worklist in HiX Visibility of discharged patients in the admission list within HiX	AI Monthly quality reports Sharing performances Add writing discharge letters in worklist in HiX Crafting shorter and efficient letters Reminder system in HiX









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