



FACULTEIT GENEESKUNDE EN
GEZONDHEIDSWETENSCHAPPEN

Studies on Communication Exchange in Healthcare in Flanders, Belgium

Peter Vermeir

2017

PROMOTORS

Professor Dr Dirk Vogelaers

Professor Dr Dominique Vandijck

Peter Vermeir

Doctoraatsthesis Universiteit Gent

Copyright © 2017

Niets uit deze uitgave mag worden veelevoudigd en/of openbaar gemaakt door middel van druk, fotokopie, microfilm, of op welke andere wijze ook, zonder voorafgaande schriftelijke toestemming van de auteur.

ISBN: 978-94-6197-534-8

Dit project werd mogelijk gemaakt door

UZ Gent - Dienst Algemene Inwendige Ziekten

De Pintelaan 185

9000 Gent

Tekening op de cover werd gemaakt door één van mijn zonen, Arne.

Arne heeft het Fragiele X-syndroom. Dit is de meest voorkomende genetische oorzaak van ontwikkelingsstoornissen en van een verstandelijke handicap.

Ons bijzonder kind

Een bijzonder kind....

Van de buitenkant zie je niets,

Maar aan de binnenkant is er iets,

Het is net of hij twee persoontjes is.

Soms is het goed en soms is het mis.

Andere mensen denken: dat is er een met pit.

De wereld zit voor hem moeilijk in elkaar,

Hierop reageert hij vaak.

Het zijn al die prikkels die het zo moeilijk maken,

Die in zijn hoofd de weg steeds kwijtraken.

Dan is hij boos op de wereld om hem heen.

En sluit hij zich af, is hij het liefst alleen.

Hij drukt zich dan uit in zijn eigen taal.

En dat maakt hem zo speciaal.

Onze zoon Arne

Studies on Communication Exchange in Healthcare in Flanders, Belgium

Promotor

Prof. Dr. Dirk Vogelaers

Department of Internal Medicine, section of General Internal Medicine, Ghent University, Belgium

Co-promotor

Prof. Dr. Dominique Vandijck

Department of Public Health, Ghent University, Belgium

Department of Business Economics, Hasselt University, Belgium

Member of the Doctoral Advisory Committee

Prof. Dr. Renaat Peleman

Department of Internal Medicine, Ghent University, Belgium

Prof. Dr. Rik Verhaeghe

Department of Public Health, Ghent University, Belgium

Members of the Examination Board

Prof. Dr. Kristiane Van Lierde, Chair of the Examination Board

Department of Speech, Language and Hearing Sciences, Ghent University, Belgium

Prof. Dr. Rudy Moenaert

TIAS School for Business and Society, University of Tilburg, Netherlands

Prof. Dr. Eric Mortier

Department of Anaesthesiology and Perioperative Medicine, Ghent University, Belgium

Prof. Dr. Mirko Petrovic

Department of Internal Medicine, section of Geriatrics, Ghent University, Belgium

Prof. Dr. Luc Vanden Bossche

Department of Physical medicine and orthopaedic surgery, Ghent University, Belgium

Prof. Dr. Guy Vanderstraeten

Department of Physical medicine and orthopaedic surgery, Ghent University, Belgium

Prof. Dr. Hester Vermeulen

Department of Nursing Sciences, Radboud University, Netherlands

TABLE OF CONTENTS

| | |
|--|-----|
| List of abbreviations | 7 |
| 1. General introduction and thesis outline | 9 |
| 1.1. Communication..... | 11 |
| 1.1.1. Healthcare communication | 11 |
| 1.1.2. Communication satisfaction | 12 |
| 1.2. The Healthcare provider perspective | 13 |
| 1.2.1. Job satisfaction | 13 |
| 1.2.2. Intention to leave..... | 15 |
| 1.2.3. Burn-out..... | 15 |
| 1.3. The patient perspective | 16 |
| 1.3.1. Changes in patients' roles | 16 |
| 1.3.2. Access to medical record..... | 16 |
| 1.3.3. The organizational perspective | 17 |
| 1.4. Outline of the thesis | 18 |
| References..... | 20 |
| 2. Aims and main research questions | 23 |
| 3. Communication in healthcare: a narrative review of the literature and practical recommendations | 27 |
| 4. Mutual perception of communication between general practitioners and hospital-based specialists | 67 |
| 5. Job satisfaction in relation to communication in healthcare among nurses: a narrative review and practical recommendations | 85 |
| 6. Intra-organizational communication satisfaction and job satisfaction among Flemish hospital nurses: an explorative multicentric study | 107 |
| 7. The patient perspective on the effects of medical record accessibility: a systematic review | 127 |
| 8. Patient perspectives on medical record accessibility and patient participation: a questionnaire survey..... | 159 |
| 9. Discussion and future perspectives | 173 |
| 9.1. Main findings..... | 176 |
| 9.1.1. Mutual Communication of GPs and specialists | 176 |
| 9.1.2. Communication satisfaction and job satisfaction among nurses | 177 |
| 9.1.3. Access to medical record by patients..... | 178 |
| 9.2. Strengths and limitations | 178 |
| 9.3. Practical implications and main recommendations | 179 |
| 9.3.1. Mutual communication between GPs and specialists | 179 |
| 9.3.2. Communication satisfaction and job satisfaction among nurses | 181 |
| 9.3.3. Patients' access to medical record | 182 |
| 9.4. Future perspectives..... | 183 |
| 9.5. Conclusion | 186 |

| | |
|--|-----|
| References..... | 187 |
| 10. Summary in English and Dutch..... | 191 |
| 11. Appendix..... | 199 |
| 11.1. Impact van communicatie tussen zorgverstrekkers op de kwaliteit van patiëntenzorg..... | 201 |
| 11.2. Communicatietevredenheid en jobtevredenheid bij intensievezorgenverpleegkundigen en de impact op burn-out en intentie tot verloop..... | 221 |
| 12. Acknowledgements and Curriculum Vitae..... | 237 |
| 12.1. Dankwoord..... | 239 |
| 12.2. Curriculum vitae..... | 243 |
| 13. Questionnaires used in articles..... | 257 |

LIST OF ABBREVIATIONS

| | |
|------------|---|
| ADL | activities of daily living |
| CC | communication climate |
| CoZo | collaborative care platform |
| CSQ | communication satisfaction questionnaire |
| GOP | general organizational perspective |
| GPs | general practitioners |
| HIC | horizontal and informal communication |
| HIPAA | health insurance portability and accountability act |
| HIV | human immunodeficiency virus |
| ICT | information and communications technology |
| IOM | institute of medicine |
| IPO | input-process-output |
| IQR | inter-quartile ranges |
| MBI | maslach burnout inventory |
| MeSH terms | medical subject headings |
| MQ | media quality |
| OI | organizational integration |
| PCPs | primary care physicians |
| PF | personal feedback |
| PHR | personal health record |
| REmp | relationship with employees |
| RSup | relationship to superiors |
| SBAR | situation, background, assessment and recommendation |
| SMART | specific, measurable, achievable, realistic, time related |
| Sumehr | summarized electronic health record |
| VAS | visual analogue scale |
| VBBA | (Dutch abbreviation) questionnaire on the experience and evaluation of work |

Chapter 1

General introduction and thesis outline

1. General introduction and thesis outline

1.1. Communication

“One cannot not communicate” is a frequent statement [1]. As every behavior is a form of communication, communication in the broader sense is omnipresent. There are different modes of communication, including verbal (face-to-face, telephone, radio, ...), non-verbal (body language, gestures, ...) and written communication (letters, books, e-mails, ...), as well as visualizations (graphs, charts, maps, ...) [2]. These can occur simultaneously.

Sender, channel and receiver are the main components of any communication process. The sender must encode the message into a form that is appropriate to the channel, and the receiver must decode the message in order to understand its meaning (Figure 1).

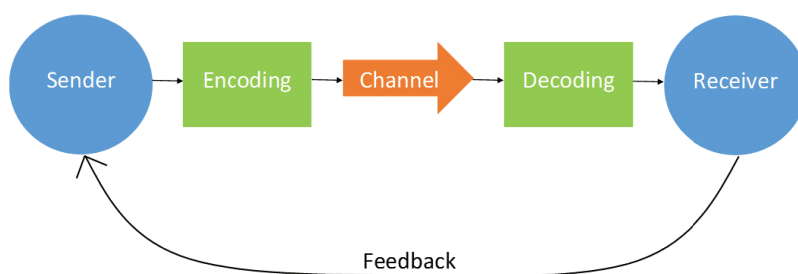


Figure 1: The communication process [3]

To obtain effective communication, the potential for misunderstanding should be minimized and potential barriers to this goal should be addressed at each stage in the process. Barriers may include, within a larger array, language difficulties, lack of attention of the receiver, different expectations leading to other perceptions, [4].

1.1.1. Healthcare communication

Health communication represents a particular domain of communication. It involves different people with different roles in the healthcare process, has distinct purposes and goals and uses various channels (Table 1) [5]. In this PhD, we will focus on the interpersonal communication of providers and patients.

| Aspects of health communication | |
|--|--|
| People | Patients Providers Professionals Policy makers |
| Purposes | Information dissemination Persuasion Education |
| Goals | Disease prevention Health promotion Policy development Business operations & management |
| Channels | Interpersonal communication Mediated campaigns Information systems |

Table 1: Aspects of health communication [5]

Health communication plays a significant role in patient care. Ever increasing importance is attached to health communication research. To offer top clinical and top referent care, effective and efficient communication between healthcare providers is required. As such, health communication may occur in multidisciplinary, interdisciplinary and transdisciplinary settings, dimensions that need to be addressed in research [5]. Furthermore, communication impacts all six healthcare quality domains, as defined by the Institute of Medicine: safety, timeliness, effectiveness, equity, efficiency and patient-centeredness [6].

The complexity in the healthcare sector is expanding, due to developments in science, knowledge and technology, and leads to increasing diversity and professionalization. As such, efficient and effective communication between medical professions is needed for the complex care provided by hospitals and healthcare organizations in general. However, there are barriers to simple and effective interprofessional communication. This can impact communication satisfaction of healthcare providers and patients, as well as quality of care and patient safety [5]. In addition, healthcare increasingly involves a team with different medical and paramedical professions beyond doctors and nurses, such as psychologists, physical therapists, ... further adding to the complexity of communication.

1.1.2. Communication satisfaction

The multidimensional construct of communication satisfaction was operationalized by Downs and Hazen in 1977. They identified eight factors: relation with employees, horizontal informational communication, relation with supervisor, communication climate, personal feedback, general organizational perspective, organizational integration and media quality. Those factors can be classified into three dimensions: perceptual or relational factors,

information flow factors and factors belonging to both categories. All eight factors are correlated to job satisfaction, intention to leave and burnout (Figure 2). Job satisfaction is also associated with both intention to leave and burnout.

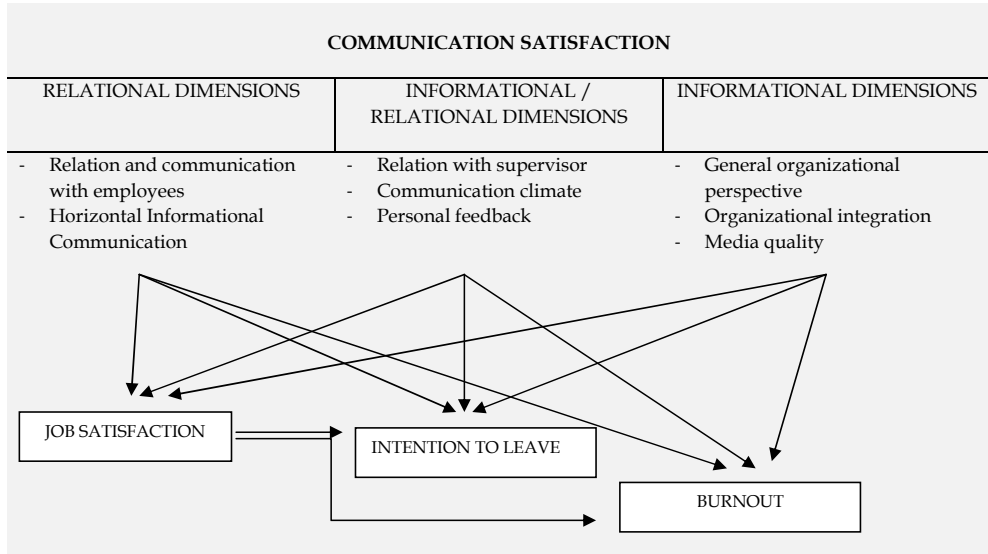


Figure 2: Conceptual framework of communication satisfaction dimensions and their relationships [7]

1.2. The healthcare provider perspective

1.2.1. Job satisfaction

Job satisfaction is the extent to which people like or dislike their job. However, job satisfaction does not only depend on its nature, but also on the expectations that individuals have of what their job should provide [8]. A recent survey among 61.168 European and U.S. nurses showed that 22% of Belgian nurses were dissatisfied with their job [9]. This is similar to Swedish (22%), Norwegian (21%) and Swiss (21%) nurses, worse than Dutch nurses (11%), and better than Spanish (38%), English (39%) and Greek (56%) nurses.

Job satisfaction is influenced by three types of variables: sociodemographic variables, work-related variables (status, autonomy, tasks, ...) and variables in the organizational environment (climate, supervision, interpersonal relations, ...). According to a meta-analysis, job satisfaction among nurses was most strongly related to stress (negatively) and commitment (positively). Communication with supervisor, autonomy, recognition, routinization and communication with peers were moderately related to job satisfaction [10].

Aspects of communication satisfaction are related to job satisfaction, as operationalized in figure 2.

According to Herzberg’s motivation-hygiene theory, factors that cause job satisfaction are different from those causing dissatisfaction [11]. ‘Hygiene’ factors are needed to avoid dissatisfaction but do not cause satisfaction. Factors leading to job satisfaction are called ‘motivators’. In other words, providing hygiene factors eliminates job dissatisfaction, while providing motivational factors creates job satisfaction (Figure 3).

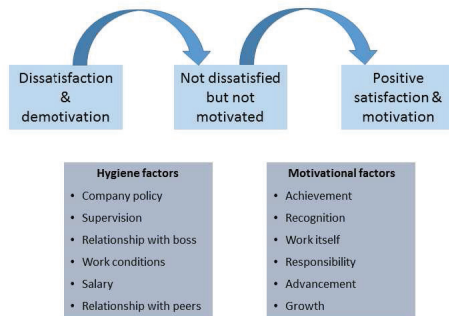


Figure 3: Two-factor theory (Herzberg) [12]

A second model describing job satisfaction is the Job Characteristics Model [13] (Figure 4). It identifies five key job characteristics: skill variety, task identity, task significance, autonomy and feedback, which determine three important mediators, namely meaningfulness of work, responsibility of outcomes and knowledge of results. These in turn contribute to a critical psychological state that determines outcomes, including motivation, performance, satisfaction and absenteeism/turnover. Therefore, it is hypothesized that, when an organization improves these core job dimensions, this will lead to a better work environment and higher job satisfaction [13].

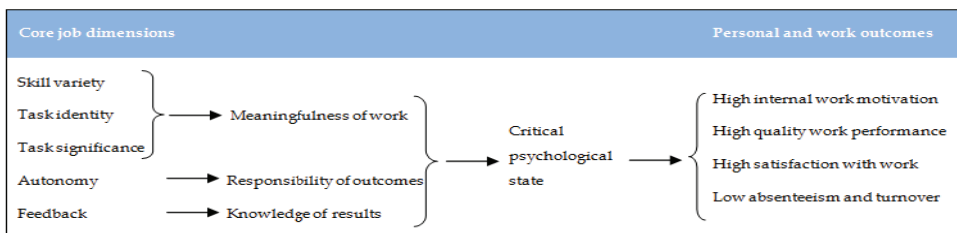


Figure 4: The Job Characteristics Model [13]

1.2.2. Intention to leave

Intention to leave (or turnover intention) refers to the conscious and deliberate willfulness to leave the organization [14]. Intention to leave precedes effective turnover, and both are strongly related [15].

In healthcare, recruitment and retention of nurses is a contemporary problem. High turnover should be avoided because of the generation of higher costs to the organization and less efficiency due to loss of experienced personnel. High turnover implies the need to recruit and educate new personnel. Moreover, the performance loss and lower efficiency prior to departure, with high absenteeism, is a major repercussion of turnover. This leads to higher work pressure, diminishes morale of the remaining staff and results in a vicious cycle of possible further turnover, and potential for increase in adverse patient outcomes [16, 17].

Intention to leave among nurses is related to affective concepts like job satisfaction, and to economic factors, as shown in Figure 5 [15]. A low sense of commitment to the organization also contributes to intention to leave [14].

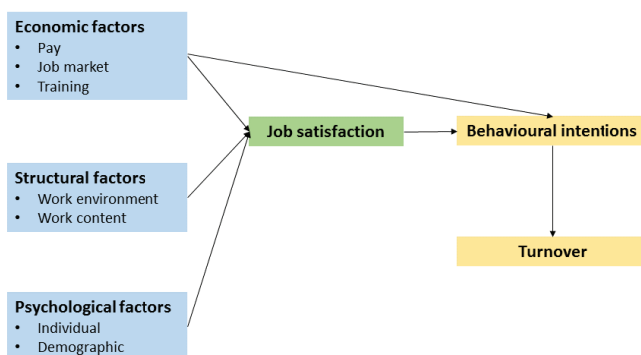


Figure 5: Model of turnover behavior among nurses [15]

1.2.3. Burn-out

As defined by social psychologist Christina Maslach, expert in burnout research, burnout is a prolonged response to chronic emotional and interpersonal stressors on the job, and is defined by the three dimensions of exhaustion, cynicism, and inefficacy [18]. Burnout is most frequently seen in human service occupations (social workers, nurses, physicians, teachers, ...). Emotional exhaustion is caused by the psychological and emotional demands of such occupations, characterized by high involvement. Cynicism, or depersonalization, is seen in excessive detachment towards people in a way to reduce the arousal associated with crisis

situations. Inefficacy, or feelings of low personal accomplishment, is related to learned helplessness, i.e. people develop symptoms of stress when their efforts fail, lose self-confidence and finally quit trying [19].

A second theory on burnout was developed by Demerouti and Bakker. This job demands and resources model [20] states that burnout is not specific to human service occupations. They use more general terms to describe the phenomenon. Job demands, such as physical workload and time pressure, are aspects of the job that require sustained physical and/or mental efforts. Too much demands can lead to exhaustion. Job resources, such as feedback, rewards, job control and participation, on the other hand, may contribute to achieving goals. As such they may reduce job demands, and stimulate personal growth and development. Absence of job resources can lead to disengagement [20].

1.3. The patient perspective

1.3.1. Changes in patients' roles

Traditionally healthcare itself operated and often still operates as a paternalistic hierarchical model. This is increasingly transforming into a participative model with the patient as co-actor. The patient and his family should be an integral part of the care team, co-determining health decisions and having corresponding responsibilities. Involvement of the patient in their treatment is increasingly important. Healthcare should be more patient-oriented and demand-driven. Patient-centered care is specifically defined as "care that is respectful of and responsive to individual patient preferences, needs, and values." [6] Within such a healthcare model, effective interprofessional communication as well as clear communication with the client and other stakeholders is required [21, 22]. Apart from the communication issues as such, patient involvement is one of the crucial challenges in healthcare.

1.3.2. Access to medical record

Sharing personal health records with patients is a way to facilitate the physician-patient communication and to inform the patient. The patient gains insight in his health state and this helps to make well-considered health-related decisions. Moreover, this results in a higher confidence in the physician, better adherence and less mistakes; and thus contributes to better outcomes and higher quality of care [23].

Overall, sharing medical information with the patient is not yet fully established in clinical practice. Some physicians assume that patients are not receptive to active involvement in their medical care or that patients may misinterpret or not understand the information [24, 25]. Many patients, on the other hand, wonder whether their health record would really contribute to better understanding of their health, instead of causing confusion [26].

1.3.3. The organizational perspective

Organizational communication can be divided into an internal (between employees) and an external (to customers, stakeholders, ...) component [27]. Internal communication helps to determine the organization's chance of success, through creating a positive sense of belonging and relationships characterized by commitment among the employees [28]. Benefits of good internal communication include improved productivity, reduced absenteeism, high quality of services and products and reduced costs [27]. External communication serves to maintain customer loyalty, which also determines the organization's success. 'Corporate reputation' - a stakeholder's evaluation based on experiences, communication about the organization's actions and a comparison with other rival organizations - is seen as a vital barometer of the organization's health and financial status [29, 30]. Furthermore, there is a link between external and internal communication, as the organization's values should be communicated internally towards employees, and then made visible to customers by both the organization and its employees [31].

Communication exchange in healthcare: what is already known or yet to be studied?

Deficiencies in written communication have been described in the literature, but their impact on the quality of care is not yet clearly outlined. Moreover, it is interesting to examine how health care providers perceive the quality of written information and which specific areas for improvement they identify.

Studies on job satisfaction on the one hand and communication satisfaction on the other hand among nurses have been performed in several countries and regions. However, the relation between the two concepts was not yet studied and results of such surveys have insufficiently been linked to management interventions leading to improved communication satisfaction, job satisfaction and associated outcomes.

Literature on medical record accessibility suggests positive effects, but the viewpoint of the patients should be further explored.

1.4. Outline of the thesis

We first assessed the quality of written communication in healthcare, the impact of communication inefficiencies and ways to improve written communication in healthcare, through a narrative review. On the basis of this literature review, recommendations were formulated.

Chapter 3: Communication in healthcare: a narrative review of the literature and practical recommendations. (Published in International journal of clinical practice 2015; 69: 1257-1267)

Second, we performed a questionnaire study on the perception of general practitioners and hospital-based specialists in Flanders of the quality of their mutual communication.

Chapter 4: Mutual perception of communication between general practitioners and hospital-based specialists. (Published in Acta Clinica Belgica 2015; 70: 350-356)

A second narrative review aimed to describe communication satisfaction, job satisfaction and their mutual relationship as well as their impact on turnover intention and risk for burnout in the nursing profession.

Chapter 5: Job satisfaction in relation to communication in healthcare among nurses: a narrative review and practical recommendations. (Accepted for publication in Sage Open)

The latter review was translated into practice through a multicentric questionnaire study which investigated the relationships between communication- and job satisfaction, intention to leave and burnout, among a large sample of Flemish hospital nurses.

Chapter 6: Intra-organizational communication satisfaction and job satisfaction among Flemish hospital nurses: an explorative multicentric study. (Accepted for publication in Workplace Health and Safety)

The following chapters are dedicated to the patient perspective on access to the personal medical file. A systematic review assessed the effects of access to the personal medical file on three dimensions: patient, patient-physician relationship and quality of medical care.

Chapter 7: The patient perspective on the effects of medical record accessibility: a systematic review. (Published in Acta Clinica Belgica , 2017; 72: 186 - 194)

In line with the approach in this thesis, this review is followed by a questionnaire study surveying the participative role of patients and the effect of accessibility to their own medical record in two different polyclinical samples.

Chapter 8: Patient perspectives on medical record accessibility and patient participation: a questionnaire survey. (Under review in International Journal of Clinical Practice)

References

- 1 Watzlawick P, Beavin Bavelas J, Jackson DD. Pragmatics of Human Communication. A study of interactional patterns, pathologies and paradoxes. New York: W.W. Norton & Company; 1967.
- 2 Largest healthcare services mergers/acquisitions in 2010. Completed or pending U.S. transactions ranked by the deal's price. *Modern healthcare*. 2011 Jul 18;41(29):34.
- 3 Mishra S. Shannon and Weaver Model Of Communication 2017 [cited 2017 16 January]. Available from: <https://www.businesstopia.net/communication/shannon-and-weaver-model-communication>
- 4 SkillsYouNeed. What is communication? 2016 [cited 2016 16 August]. Available from: <http://www.skillsyouneed.com/general/what-is-communication.html>.
- 5 Grant Harrington N. Health communication: Theory, Method and Application. New York: Routledge; 2015.
- 6 Institute of Medicine (IOM). Crossing the Quality Chasm: A New Health System for the 21st Century. Washington, DC: National Academy Press; 2001.
- 7 Vermeir P, Downs C, Degroote S, Vandijck D, Tობback E, Delesie L, et al. Intra-organizational communication satisfaction and job satisfaction among Flemish hospital nurses: an exploratory multicenter study. *Workplace Safety and Health* (Accepted for publication). 2017.
- 8 Lu H, While AE, Barribal KL. Job satisfaction among nurses: a literature review. *International journal of nursing studies*. 2005 Feb;42(2):211-27.
- 9 Aiken LH, Sermeus W, Van den Heede K, Sloane DM, Busse R, McKee M, et al. Patient safety, satisfaction, and quality of hospital care: cross sectional surveys of nurses and patients in 12 countries in Europe and the United States. *Bmj*. 2012;344:e1717.
- 10 Blegen MA. Nurses Job-Satisfaction - a Metaanalysis of Related Variables. *Nursing research*. 1993 Jan-Feb;42(1):36-41.
- 11 NetBMA Business Knowledge Center. Herzberg's Motivation-Hygiene Theory (Two Factor Theory) [cited 2016 12 august]. Available from: <http://www.netmba.com/mgmt/ob/motivation/herzberg/>.
- 12 Siddiqui F. Motivation - Frederick Herzberg's theory of Motivation 2014 [cited 2017 15 January]. Available from: <https://www.linkedin.com/pulse/motivation-frederick-herzbergs-theory-fareed>.
- 13 Hackman JR, Oldham GR. Development of Job Diagnostic Survey. *J Appl Psychol*. 1975;60(2):159-70.
- 14 Tett RP, Meyer JP. Job-Satisfaction, Organizational Commitment, Turnover Intention, and Turnover - Path Analyses Based on Metaanalytic Findings. *Pers Psychol*. 1993 Sum;46(2):259-93.
- 15 Irvine DM, Evans MG. Job satisfaction and turnover among nurses: integrating research findings across studies. *Nursing research*. 1995 Jul-Aug;44(4):246-53.
- 16 Coomber B, Barribal KL. Impact of job satisfaction components on intent to leave and turnover for hospital-based nurses: a review of the research literature. *International journal of nursing studies*. 2007 Feb;44(2):297-314.
- 17 Larrabee JH, Janney MA, Ostrow CL, Withrow ML, Hobbs GR, Jr., Burant C. Predicting registered nurse job satisfaction and intent to leave. *The Journal of nursing administration*. 2003 May;33(5):271-83.
- 18 Maslach C, Schaufeli WB, Leiter MP. Job burnout. *Annu Rev Psychol*. 2001;52:397-422.
- 19 Jackson SE, Schwab RL, Schuler RS. Toward an Understanding of the Burnout Phenomenon. *J Appl Psychol*. 1986 Nov;71(4):630-40.
- 20 Demerouti E, Bakker AB, Nachreiner F, Schaufeli WB. The job demands-resources model of burnout. *J Appl Psychol*. 2001 Jun;86(3):499-512.
- 21 Snyder CF, Wu AW, Miller RS, Jensen RE, Bantug ET, Wolff AC. The role of informatics in promoting patient-centered care. *Cancer J*. 2011 Jul-Aug;17(4):211-8.
- 22 Baxter S, Farrell K, Brown C, Clarke J, Davies H. Where have all the copy letters gone? A review of current practice in professional-patient correspondence. *Patient education and counseling*. 2008 May;71(2):259-64.
- 23 Parchman ML, Zeber JE, Palmer RF. Participatory decision making, patient activation, medication adherence, and intermediate clinical outcomes in type 2 diabetes: a STARNet study. *Annals of family medicine*. 2010 Sep-Oct;8(5):410-7.
- 24 Forsyth R, Maddock CA, Iedema RA, Lassere M. Patient perceptions of carrying their own health information: approaches towards responsibility and playing an active role in their own health - implications for a patient-held health file. *Health Expect*. 2010 Dec;13(4):416-26.
- 25 Frampton S, Horowitz S, Stumpo B. Patients first. Open medical records: allowing patients access to their records increases their satisfaction. So why are hospitals resistant? *American Journal of Nursing*. 2009;109(8):59-63.

26 Ferreira A, Correia A, Silva A, Corte A, Pinto A, Saavedra A, et al. Why Facilitate Patient Access to Medical Records. In: Bos B, Blobel B, editors. Medical and Care Compunetics 4. Amsterdam: IOS Press; 2007. p. 77-90.

27 Fosset JJ. Communication is the key to organizational success 2010 [cited 2017 26 January]. Available from: <http://thestrategiadviser.blogspot.be/2010/12/communication-is-key-to-organizational.html>.

28 Welch B, Jackson P. Rethinking international communication: A stakeholder approach. Corporate Communications: An International Journal. 2007;1:22-31.

29 Gotsi M, Wilson A. Corporate reputation: seeking a definition. Corporate Communications: An International Journal. 2001;6(1):24-30.

30 Dowling GR. Communicating corporate reputation through stories. Calif Manage Rev. 2006 Fall;49(1):82-+.

31 Hutton J. Making the connection between public relations and marketing. Journal of Communication Management. 1996;1:37-48.

Chapter 2

Aims and main research questions

2. Aims and main research questions

This thesis consists of three main topics, which were each time elaborated by means of a review article and an original research article. As such, the main research questions can be visualized in the following table.

| | Reviews | Research in Flanders |
|---|--|--|
| 1 | <ul style="list-style-type: none"> - How is the quality of medical letters? - What is the economic impact of communication inefficiencies in healthcare? - How can written communication in healthcare be improved? | <ul style="list-style-type: none"> - How do general practitioners and hospital-based specialists in Flanders perceive and evaluate the quality of their mutual communication? |
| 2 | <ul style="list-style-type: none"> - How is the relationship between communication satisfaction and job satisfaction in the nursing profession? - What is the impact of communication satisfaction and job satisfaction on turnover intention and risk for burnout among nurses? | <ul style="list-style-type: none"> - What is communication satisfaction among Flemish hospital nurses? - What are current levels of job satisfaction, intention to leave and risk for burnout among Flemish hospital nurses? - Is communication satisfaction related to job satisfaction, intention to leave and risk for burnout in this sample? |
| 3 | <ul style="list-style-type: none"> - What is the effect of access to the personal medical file on the patient, on the patient-physician relationship and on the quality of medical care? | <ul style="list-style-type: none"> - What is the perception in patients accessibility to their own medical record? |

Chapter 3

Communication in healthcare: a narrative review of the literature and practical recommendations

Peter Vermeir

Dominique Vandijck

Sophie Degroote

Renaat Peleman

Rik Verhaeghe

Eric Mortier

Giorgio Hallaert

Sabine Van Daele

Walter Buylaert

Dirk Vogelaers

Published in International Journal of Clinical Practice 2015; 69: 1257-1267

3. Communication in healthcare: a narrative review of the literature and practical recommendations

ABSTRACT

Objectives: *Effective and efficient communication is crucial in healthcare. Written communication remains the most prevalent form of communication between specialized and primary care. We aimed at reviewing the literature on the quality of written communication, the impact of communication inefficiencies and recommendations to improve written communication in healthcare.*

Design: *Narrative literature review.*

Methods: *A search was carried out on the databases PubMed, Web of Science and The Cochrane Library by means of the (MeSH)terms 'communication', 'primary healthcare', 'correspondence', 'patient safety', 'patient handoff' and 'continuity of patient care'. Reviewers screened 4609 records and 462 full texts were checked according following inclusion criteria: (1) publication between January 1985 and March 2014, (2) availability as full text in English, (3) categorization as original research, reviews, meta-analyses or letters to the editor.*

Results: *A total of 69 articles were included in this review. It was found that poor communication can lead to various negative outcomes: discontinuity of care, compromise of patient safety, patient dissatisfaction and inefficient use of valuable resources, both in unnecessary investigations and physician worktime as well as economic consequences.*

Conclusion: *There is room for improvement of both content and timeliness of written communication. The delineation of ownership of the communication process should be clear. Peer review, process indicators and follow-up tools are required to measure the impact of quality improvement initiatives. Communication between caregivers should feature more prominently in graduate and postgraduate training, to become engraved as an essential skill and quality characteristic of each caregiver.*

Message for the clinic

There is room for improvement of both content and timeliness of written communication. The delineation of ownership of the communication process should be clear. Peer review, process indicators and follow-up tools are required to measure the impact of quality improvement initiatives. Communication between caregivers should feature more prominently in graduate and postgraduate training, to become engraved as an essential skill and quality characteristic of each caregiver.

INTRODUCTION

In the evolution of medicine, an increasing number of patients, in particular with chronic disease or illness, is requiring treatment by healthcare providers from different disciplines [1]. Two major trends emerge. First, diagnostic workups and treatments are increasingly organized on an outpatient basis, and, second, especially treatment and care is shifting towards primary care. Both trends increase the need for sharing information between specialists and general practitioners (GPs) to ensure continuity of care, in an integrated transmural model [2–5]. The practice and delivery of healthcare is argued to be fundamentally and critically dependent on effective and efficient communication [6]. This is especially true for countries such as the UK, Denmark and the Netherlands, where GPs act as obligatory gatekeepers and the communication towards and from secondary care determines the smooth running of the healthcare system [7]. However, countries or healthcare systems without this obligatory gatekeeper function may be at higher risk for suboptimal communication between levels of care.

The aim of the present paper is to review the existing literature on quality, efficacy and impact of written communication in healthcare as well as of recommendations for improvement.

METHODS

The databases PubMed, Web of Science and The Cochrane Library were searched using the (MeSH) terms ‘communication’, ‘primary healthcare’, ‘correspondence’, ‘patient safety’, ‘patient handoff’ and ‘continuity of patient care’. The MeSH-terms were internally validated by the coauthors. Articles in this review needed to be [1] published prior to March 2014 and after January 1985, [2] available as full text in English, [3] categorized as original research, reviews, meta-analyses or letters to the editor. Database screening was closed 31 March 2014. Titles and abstracts were reviewed to verify these criteria. If all inclusion requirements were present or if this remained unclear, the articles were fully read. In case the full text revealed that not all requirements were present, the paper was excluded. Additional literature was obtained through searching references in the manuscripts (snowball method).

A framework with four categories was predefined: modalities of communication, deficits in communication, economic impact of communication inefficiencies and recommendations. An individual paper could be categorized into different fields. The review was further elaborated by addressing each category separately and rereading all articles that were relevant for that category.

RESULTS

The results of the search process are summarized in Figure 1. Out of a total of 5013 papers selected, 404 duplicates were removed. 4609 records were screened and 462 remained for full text screening. Finally, 69 articles were included in the review. The aim, setting, sample description, design, coverage of categories addressed within the review and main findings of these individual studies are summarized in the online supplement.

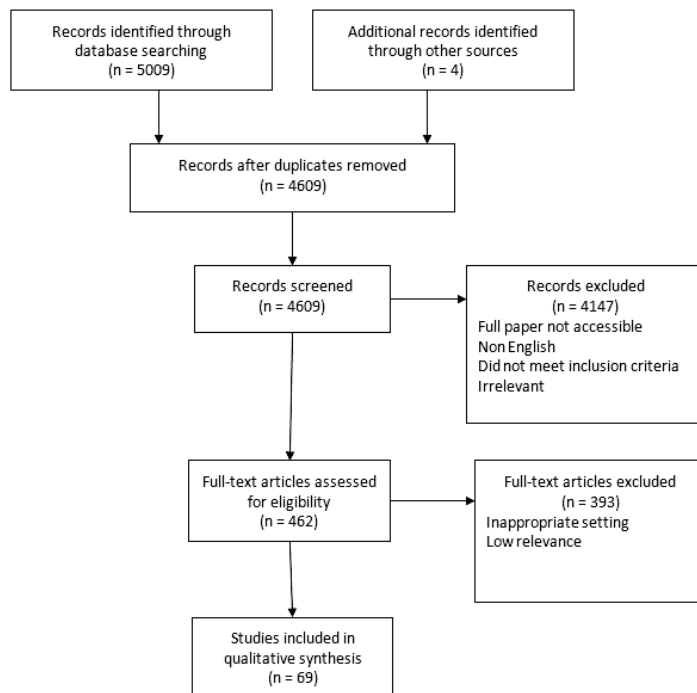


Figure 1: Review stages based on PRISMA flow diagram [8].

Modalities of communication

Although a review of the literature [70] revealed that face-to-face communication is recommended, in practice, written communication remains the most usual means of communication between healthcare professionals. Furthermore, there is a consensus about particular advantages of written communication over face-to-face communication.

Face-to-face communication is essential to get the full conversation. In face-to-face communication, all involved parties can not only hear what is being said but also they can see the body language and facial expressions that provide key information so they can better understand the meaning behind the words. In the past, this type of communication was only possible in person, but as technology advances there are more ways to have these face-to-face conversations [9]. Video conferencing is also a form of face-to-face communication, even though it uses technology to connect the participants. These forms of direct communication may in fact have decreased in the electronic communication age, favoring indirect rather than direct communication [10]. Rapidly delivered e-mail letters with a read confirmation may represent a good proxy to telephone or face-to-face contacts and have the advantage of traceability and consultation by third parties.

Written communication in the larger interpretation remains the most usual, and sometimes the only, means of communication between healthcare professionals [3]. The most frequently used forms of written communication are referral and discharge letters. Referral letters can be subdivided into three types: i.e. requests for a specific assessment or treatment, request for a second opinion and requests for mutual responsibility for the care of a patient [11]. Discharge letters on the other hand generally refer to patients discharged from hospital. However, the term is also used for other settings such as answer letters after a specialist outpatient visit without hospitalization. This in itself poses a problem of semantics and definitions, as the terminology of discharge letters seems not to have followed the shift towards mainly outpatient care.

Written communication certainly has its advantages. For instance, it can be used for future reference purposes and it can be easily and simultaneously distributed to the required number of caregivers involved in the care process [12]. They are not only a means of communication but can also serve as a medico-legal value [13]. Moreover, in the current electronic environment, written communication has evolved towards a more immediate medium and may therefore be preferred [14].

Letters also have an educational goal. They can provide extra information that can increase the understanding of the problem, its implications, the problems, and options in management or the prognosis expected [15]. Specialists 'teach' more in their letters than GPs [7] and it was found that one quarter of the specialists' letters had an educational value, as compared to 3% of GPs' letters [15].

Inefficiencies in written communication

There is a large body of literature on inefficiencies in written communication. Cross-sectional studies, performed in different countries and settings, show a unequivocal concordance in both perceptions of the ideal content of written communication and its current inefficiencies. Reviews align with these findings. This overall agreement enables drawing conclusions for clinical practice. In this section, on the one hand reports on subjective views of GPs and specialists setting out what they think letters should contain, and on the other hand reports with empirical data on the analysis of the content of actual letters are included [16].

Mutual perceptions in the triologue between patient, physician and society

General practitioners and specialists disagree about the quality of their mutual communication. Specialists mention GPs' referral letters to lack information. Furthermore, they feel that GPs insufficiently follow their specialist advice. GPs in turn mention that many of their questions are insufficiently addressed by the specialists. The latter does not correspond with specialist opinion in a cross-sectional study among a random sample of 550 GPs and 533 specialists selected from the Netherlands Medical Address Book [17] (Table 1). This study showed that GPs telephone accessibility is qualified as poor by specialists (32.8% agrees with 'GP can be easily reached'), while GPs consider their telephone accessibility as good (85.3% agrees). Specialists think poorly of the GPs' referral letter, as only 29.1% of specialists rate these letters as of good quality. Merely half of GPs feels their questions are addressed appropriately by the specialist, whereas specialists feel this number to be considerably higher. According to specialists, GPs often do not follow the advice given. GPs rate their compliance much higher. Less than a quarter of GPs feel specialist letters arrive on time, whereas specialists have a different perception. Both parties wish to receive feedback from each other, while in practice they hardly do so [17]. Overall, less GPs' letters are judged as being of excellent quality than specialists' letters (39.5% vs. 78.6%) [7]. GP letters were found to have inaccurate medication lists (drugs or doses) in 42% of the cases [18]. In a study from a single general hospital in Norway assessing referral and discharge letters, the Delphi

technique was used by two expert panels (each with one general hospital specialist, one GP and one public health nurse) using a standardized evaluation protocol with a visual analogue scale [19]. The panels assessed the quality of the description of the patient’s actual medical condition, former medical history, clinical signs, medication, activity of daily living (ADL), social network, need of home care and the benefit of general hospital care. This analysis revealed low consensus between health professionals at primary and secondary level and low quality of a majority of referral letters, considered as a health hazard. Overall, 20% of the discharge letters was missing vital medical information and less than half of the letters contained high-quality information on ADL, social network or need for home care. However, it seems that some specialists (11%) and GPs (28%), are also dissatisfied about their own letters mainly because of time constraints impacting on quality [10].

| GPs’ and specialists’ perception on aspects of communication (17) | | | |
|---|-----------|-----------------------|---------|
| | GPs agree | Specialists agree (%) | p-value |
| GPs telephone accessibility is good | 85.3 | 32.8 | < 0.001 |
| Referral letter of GP is of good quality | - | 29.1 | |
| Questions are addressed by the specialist | 50.0 | 87.5 | < 0.001 |
| GPs follow the advice given by the specialist | 92.2 | 49.5 | < 0.001 |
| Specialist letter is sent back in a timely manner | 22.5 | 61.8 | < 0.001 |

Table 1: GPs' and specialists' perceptions on aspects of communication [17]

Expectations on the modalities and content issues of communication may differ according to phases in particular diseases. This is indicated in an assessment on communication issues across the primary/secondary interface in ovarian cancer [20]. GPs and specialists also have different expectations on the content of cancer patients’ discharge letters, especially on psychosocial items [21].

In the modern relational personalistic ethical perspective, the patient viewpoint and experience of the collaboration between GP and specialists is at least as important as the perception of the healthcare professionals. To this purpose, a consumer quality index continuum of care has been validated for assessing patient’s experiences across the interface between primary and secondary care. This instrument consists of statements on GP approach, GP referral, specialist communication and collaboration between GP and

specialists and was shown to be a useful instrument to assess aspects of the collaboration between GPs and specialists from patients' perspective [1].

Relevance of communication items

Referral letters from GPs to specialists.

More than 20 years ago, Newton et al. questioned GPs and specialists on which items they considered important, revealing a high degree of consensus [16]. They also reported what the GP expects from the referral. These expectations are also described in Tattersall et al. [22], who, in contrast, found large differences between GPs and specialists concerning the information their letters should contain. A number of items are summarized in Table 2.

Letters from specialists and information that referring doctors want in reply letters

Content of referral letters and information that specialists want in referral letters

| Newton et al. (1992) | | Tattersall et al. (2002) | |
|--|---|--|---|
| Clinical content of general practitioner's letter: | | Clinical content of consultant's reply: | |
| <p><i>Medical information</i></p> <ul style="list-style-type: none"> Initial sentence stating reason for referral Outline of the history or statement of the problem Important medical history Findings on examination Findings on investigation Current medication Sociopsychological matters Known allergies | <p><i>Medical information</i></p> <ul style="list-style-type: none"> Reason for referral History of problem Medical history Clinical findings Findings on investigation / tests Current medication Sociopsychological matters Known allergies | <p><i>Medical information</i></p> <ul style="list-style-type: none"> Summary of the history Findings on examination Findings on investigation (including diagnosis where applicable) Management plan | <p><i>Medical information</i></p> <ul style="list-style-type: none"> Presenting history Medical history Drug history Social history Prognosis Side effects of proposed treatment Benefits of treatment Diagnosis/ staging of cancer Clinical findings Explanation of side effects Test results |
| <p><i>Patient/Family involvement</i></p> <ul style="list-style-type: none"> Whether or how the patient was involved in the referral decision What the patient or relative has been told What the patient or relative expects from the referral | <p><i>Patient/Family involvement</i></p> <ul style="list-style-type: none"> Whether patient was involved referral decision What patient/relative has been told What patient/relative expects from referral | <p><i>Patient/Family involvement</i></p> <ul style="list-style-type: none"> What the patient or relative has been told | <p><i>Patient/Family involvement</i></p> <ul style="list-style-type: none"> What the patient or relative has been told Family problems relevant to management Advice given about when to contact hospital |
| <p><i>Clinician expectations</i></p> <ul style="list-style-type: none"> What the general practitioner expects from the referral Whether new referral or re-referral | <p><i>Clinician expectations</i></p> <ul style="list-style-type: none"> What referring doctor expects from referral Whether new referral or re-referral Previous therapy/ interventions Provisional diagnosis Request for copy of consultation report Statement about expectation for return of patient | <p><i>Clinician expectations</i></p> <ul style="list-style-type: none"> Time to follow-up appointment Who saw the patient | <p><i>Clinician expectations</i></p> <ul style="list-style-type: none"> Further tests done or recommended Treatment / therapy recommended Follow-up Whether patient expected to return to specialist Reason for referral addressed Who saw the patient Role of referring doctor and specialist |
| <p>Administrative content of general practitioner's letter:</p> <ul style="list-style-type: none"> General practitioner's name, address and telephone number Consultant's name, department and address Patient's name, address, telephone number, post code, date of birth, sex, NHS number Date on referral letter | | | |

Table 2: content of referral letters

Hartveit et al. aimed at identifying the recommended content of referral letters from GPs to specialized mental healthcare by means of discussion groups. Seven headings were proposed: personal and contact information, introductory information (e.g. is the patient suicidal?), case history and social situation, present state and results, past and ongoing treatment and the professional network involved, the patient's assessment, the reason for referral. More specifically, as compared with other referral letters, in mental healthcare a stronger emphasis on the planned integrated care, the specialist's role and on the patient's involvement is recommended [23].

Jiwa et al. analyzed 350 referral letters for upper gastro-intestinal investigation from GPs and found that only few upper gastro-intestinal symptoms were included [24]. Furthermore, GP referral letters do not always include a specific question and when a question is formulated, it is not always addressed. This disables a real information exchange [25]. McConnell et al. performed an information audit of referral and reply letters in cancer care. Oncologists wanted to have more information about the patient's medical status, the involvement of other doctors and any special considerations. GPs preferred more information about the treatment plan, future management and expectations and psychosocial concerns. Referral letters about older patients were of low quality and only the actual medical situation was well described. Discharge letters did often not describe the functioning of the patient and the need for home care services, neither who was responsible for follow-up [19].

Answer letters, including discharge letters after hospitalization.

A review by Kripalani et al. addressed which information GPs rate as most important in a discharge letter to provide adequate follow-up: main diagnosis (lacks in 13–17.5%), physical findings (10.5–45.5%), results of investigations (38–65%), test results pending at discharge (65–88%), discharge medication (21–25%) and the reason for any changes to previous medication, details of follow-up arrangements (14–30%), information given to the patient and family (91–92%) [2]. The latter was also identified in an earlier study, in which was found that specialists only sporadically (< 20%) include such social information [26]. Wrong diagnoses have also been found, as well as discrepancies between the discharge summary and the take-home prescription (39%) [27]. Tattersall et al. compared the content of letters to the patients and letters to the referring physician. The latter were not well tailored to the referring physicians' needs and lacked information on recommended future tests, treatment options, side effects and prognosis [28].

Durbin et al. summarized fifteen audit studies on discharge or referral/consultation letters in mental healthcare [29]. The items were grouped into four domains: administrative details, patient details, clinical details and discharge/referral details. In discharge letters, clinical history, physical findings, test results and follow-up details were less reported. For referral letters, results were poorer: reason for referral was present in only 74% of the cases, 25% did not contain present complaints, urgency and risk information were rarely reported, only 26% reported about the information given to the patient and clinical information and diagnosis were unsatisfactory in many cases [29].

The readability level of letters was another issue raised. Letters of specialists would be too detailed and not enough structured (e.g. lacking headings, long paragraphs) [30,31].

Reasons for the poor content of written communication are also multifactorial: a lack of time to create notes [10], GPs may do not make a full assessment of the problems [24], GPs and specialists may use a different point of view [19], they may consider letters to have different goals (e.g. a tool for information transfer vs. archiving) [17], etc.

Timeliness

A considerable number of studies assessed timeliness of communication, either the subjective perception or real delays. It is clear that timeliness is a significant contributor to communication efficiency for all stakeholders.

Besides the unsatisfactory content of written communication, timeliness is another frequently reported problem. Tardivity of specialists' letters has been identified as a major complaint of GPs [20, 32]. Less than one quarter thinks the specialists' letters are delivered in time (as compared to 61.8% of the specialists) [17]. One week after discharge, 53% of the discharge letters reached the GP and approximately 11% never reached the GP [33]. Hence, patients often contact or see their GP before he has received the letter (16-53%), which means that patients are then the first to inform the GP about their hospitalization [2]. This delay can have multiple causes and occurs at different stages of the reporting process: the specialist can wait too long to draw up the letter (whether dictated or extracted from an electronic patient record); the administrative workup (e.g. typing the letter) and verification (finalized by signature) can add significantly to the final delay [20]. This could explain the perceptions of GPs and specialists about timeliness. For example, specialists report to answer GPs within 7 days, whereas GPs report receiving an answer within 7 days only in 36% of the cases [10].

Moreover, 4 weeks after the referral visit, 25% of the GPs had still not received an answer from the specialist [10].

Inefficient communication has several potentially negative consequences, for all involved in the healthcare process. Continuity of care, the connection of separate and discrete elements of care into a longitudinal process, suffers from inadequate communication. This applies especially to informational continuity, the reporting of adaptations in the chronic care process and their integration within a history of antecedents [34]. It is evident that information on prior events can influence current decisions on the patient's care and that the lack or incompleteness of such information can lead to (potentially) preventable adverse events and subsequent patient harm. As well, poor communication often causes several types of delays, such as in consultation response or acceptance of a referral, in diagnoses and treatment [29, 35]. As a consequence, patient safety may be compromised when the right information is not available to the right person at the right time (e.g. translating into inconsistent treatment plans and inadequate follow-up, medication errors and increasing polypharmacy) [29, 35, 36].

For healthcare providers, poor communication leads to additional workload as it decreases confidence in decisions [29, 37]. Last, patients can be confronted with having to repeat their stories, double tests, treatment delays and can receive conflicting information [29], which, in turn, may lead to decreased patient confidence and satisfaction [35, 38]. Several of these mechanisms additionally imply increased, unnecessary and avoidable costs, e.g. because of unnecessary repeat investigations [35].

Economic impact of communication inefficiencies

Although healthcare providers spend a significant amount of their time in communication, studies trying to quantify the economic impact of communication efficiencies are very scarce [6]. This lack in the literature is even more surprising when keeping in mind that communication influences patient safety [39].

Literature provides numerous examples of outcomes of poor communication with an economic impact. First, it leads to avoidable hospital admissions [19] and readmissions [40, 41]. Interventions to improve communication and coordination have been found to reduce hospital admissions [42]. Other avoidable healthcare expenditures can be seen in

unnecessary testing, polypharmacy inappropriate referrals and repeated referrals for problems which were not adequately addressed during the first visit [10, 35, 43]. But, and this comes on top of the economic impact, patient safety suffers from poor communication [36]. Residents considered communication difficulties as being the cause of the vast majority of medical mishaps [39]. Indeed, as 10% of the test results after discharge require action from the GP, but if these do not reach the GP (in time), there may be propensity to medical error [44]. The most striking results come from Australia. The study found that communication problems were responsible for 11%, inadequate skill levels of practitioners for 6% and inadequate resources for 4% of the adverse outcomes respectively [45].

In cancer care, three types of costs because of poor communication have been defined: the cost of psychological distress, the cost of unnecessary treatment and the cost of indirect system distress (e.g. distress by healthcare providers) [46].

Agarwal et al. propose a conceptual model of communication outcomes, shown in Figure 2.

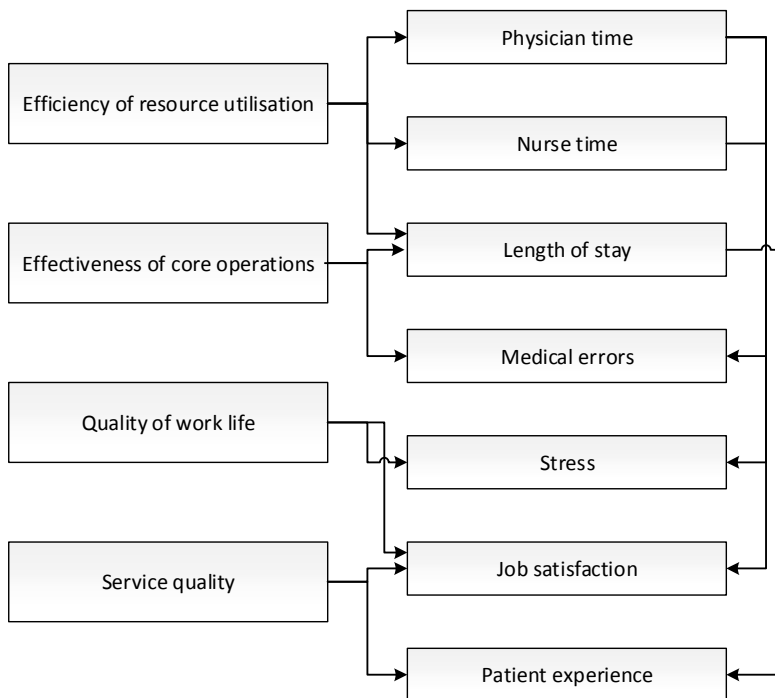


Figure 2: Conceptual model of communication outcomes in a hospital [6]

Hospital resources that should be efficiently used include physician and nurse time. A time-motion study reported that communication accounts for 24% of the work time of specialists [47]. Communication inefficiencies in the hospital setting for physicians are estimated to generate a waste of \$800 million annually. Hendrich et al. reported a breakdown of nurse activities, in which approximately 20.6% of each nursing shift was classified as 'care coordination' (i.e. communication with team members or other departments) and 6.6% as 'wasted time' [48]. The economic impact of communication inefficiencies in nursing practices is estimated at about \$4.9 billion per year. As a third factor influencing resource utilization, wasted costs because of poor communication leading hospital overstay, were estimated to be \$6.6 billion annually. The effectiveness of core operations is represented by the swiftness and safety of diagnostic and treatment processes, as ineffectiveness and errors will increase complication rates and lengths of stay. To this purpose, pathology adjusted length of stay and medication error rates are measurable process indicators. Quality of work life is also affected by communication, as reflected in stress and job satisfaction measures. Fourth, since healthcare is a service business, hospitals are service organizations and should provide service quality. Poor communication (e.g. patients not being timely informed about test results, delays in patient discharge, lack of information availability for the family of the patient, ...) affect patient experience.

In this model, tangible as well as less tangible outcomes are combined. Tangible outcomes, such as length of stay and wasted physician and nurse time, can be easily translated into monetary terms. Less tangible outcomes on the other hand, such as job satisfaction, have an economic impact through other processes. Job dissatisfaction leads to staff turnover as it represents an incentive to healthcare professionals for career moves. Therefore, increased costs are incurred for recruiting and training new employees with a learning curve, translating into less effectivity. Negative patient experiences with communication and service levels [49] will predispose to future choices for different hospitals and care organizations, turning away potential clients. Along the same line, referring physicians may switch specialists and hospitals because of poor communication [49]. These trends are likely to be reinforced by the increasing demand for transparency regarding effectivity in specific diseases and the use of social media.

In spite of this conceptualization, reported data on economic impact remain derived from and based on assumptions. In the USA, hospitals waste over \$12.4 billion per year because of

communication inefficiencies. More than half of that amount (53%) is because of an increase in length of stay, 40% is because of wasted nurse time and 6.7% because of wasted physician time. For a 500-bed hospital, annual losses because of communication inefficiencies are estimated to be \$4 million [6].

Recommendations to improve written communication

Structured letters

A well-supported recommendation is the use of structured referral and reply/discharge letters. Reply letters could, for example, contain a problem list, a management list and free text below. Structured letters take no longer to read and improve comprehension [50]. Using a template leads to higher quality and reduced length of discharge letters [51]. Structured letters are preferred by GPs, but only few specialists write structured letters [52]. GPs can partly influence this by putting specific requests in their referral letter, which could then be repeated in the reply letter, followed by specific answers [25].

This strategy can be facilitated by the use of health information technology, such as electronic patient records [53]. However, this method can still become more standardized and possibly also user-friendly by the use of structured instead of free text fields [54]. Effective health information technology could produce automatically structured computer-generated letters [30]. These letters are preferred by GPs because of higher scores on clarity and content [55].

However, standardization and user-friendliness often can be improved by the use of structured instead of free text fields.

There are nonetheless some pitfalls associated with structured letters. A referral template was developed by the Irish Health Information and Quality Authority and the Irish College of GPs, but was found to be rarely used by specialists [56]. They can result in extra workload for the physician because of long forms (to write and to read) [29]. The inclusion of a tick box for urgent referrals should also be well considered: there is a risk for overuse [57] and patients are not seen earlier [15].

Curriculum – feedback

Another strategy is the use of different forms of feedback. First of all, specialists can provide feedback on the referral letters. This improves the quality of referral letters and can make referrals more focused [58]. Of course, GPs can also provide feedback to specialists. Peer assessment is able to significantly improve the quality of the written communication between both parties [22, 59]. To facilitate feedback or peer assessment, specific tools could be used [3].

Feedback can also be introduced earlier, namely in the curriculum of medical students. Up till now, written communication is rarely addressed in communication courses [60]. Training sessions have showed to raise knowledge about written communication in healthcare, but should not be restricted to ‘knowing’ and ‘knowing how’ but should equally focus on ‘doing’ [60]. Improvement strategies outlined above (feedback, peer assessment, tool) could also be used during written communication courses.

Changing processes

A clear written communication between specialists and GPs is of great importance. But as Durbin et al. notice ‘changing clinical practice is difficult’ and therefore, multifaceted and broad interventions may be more effective than interventions with a very specific impact. In their review of audit studies in mental healthcare, a combination of guidelines, training and a structured form is proposed [29]. The use of computer-generated letters could also be considered a change to the earlier process of dictated letters. This results in a higher percentage of discharge summaries completed at 4 weeks and moreover, reduces the amount of omitted, essential items [61–64]. For GPs too, computerized referral systems could reduce their administrative work and could probably give the benefit to more timely communication [10].

Such tools could also contain a pharmaceutical decision-support system which could reduce mistakes in medication lists [18]. For dictated letters, a seemingly self-evident recommendation is to always read and sign them when they are ready, to avoid unintentional mistakes [65].

A suggestion to partly solve the timeliness problem is to give the letter to the patient (or give him a copy). As such, letters could sometimes sooner reach the addressee [2, 61, 66].

Discharge letters could for example be combined with a prescription form for take-home medication [67]. Another possibility is to share medical notes with patients, which allows patients to review the notes (project 'Open Notes') [68]. This change should, however, not be implemented without any restriction because it may lead to specialists omitting information in the letter in order not to distress the patient [69].

With the availability of different communication channels, these could be combined using respective advantages, such as direct telephone calls for urgent and essential communications, conferences for on line multidisciplinary assessments, involving GPs, backed up with formal written or electronic letters. The latter may serve as validation and referral documents of the former. Electronic communication often needs, in the absence of the direct telephone communication, an alert system, guaranteeing reception and rendering appropriate action by the receiver more likely. Improving interaction will lead to better results, such as better patient outcomes, better gatekeeping and standardization of work processes, as evidenced in the meta-analysis by Foy et al. [70].

A qualitative study in GPs confirms the above mentioned strategies: greater use of telephone, secretarial support, templates and delivery of the letters by the patient. In addition, nurse-led communications were proposed. They are also willing to reconsider electronic patient records so that GPs, or even patients, could also have access to it [20].

In contrast to other fields in medicine (such as in the treatment and prevention of blood stream infections [71] and other nosocomial infections, such as sepsis (Surviving Sepsis Campaign), there is no literature documenting the impact of a bundle approach assessing the specific impact of a selected number of interventions with process and/or outcome indicators. It is clear that communication in any healthcare setting may be the subject of such a bundle approach that would define priorities in an improvement program and render such an improvement initiative feasible in the field, against a jungle of recommendations.

Strengths and limitations of this review

This is a comprehensive review of the literature on written communication in healthcare, providing a multidimensional overview of this important topic. During the search for this review has screened a vast amount of the literature (over 4500 articles) across a number of databases. Clear and concrete ideas for improvement were proposed and explained.

CONCLUSION

In recent years, in many countries healthcare is experiencing a shift towards primary care, particularly driven by the growing number of chronically ill patients. At the same time, healthcare becomes more and more specialized and as such, communication between specialized and primary care is of paramount importance.

Poor communication can indeed lead to various negative outcomes: discontinuity of care, compromise of patient safety, inefficient use of valuable resources, dissatisfaction in patients and overworked physicians and economic consequences, often hidden. As written communication is still the most used form of communication between specialized and primary care, this review can be a guidance for improvements in this field.

There is a clear need for a structured approach, addressing both content (ensuring the required items, addressal of referral questions, diagnosis and management issues) and timeliness. This structured approach also includes clear delineation of ownership of the communication process. Peer review is needed to assess quality indicators in this respect in each particular care process component. Process indicators and follow-up tools are required to measure the impact of quality improvement initiatives, according to the SMART (specific, measurable, achievable, realistic, time related) principle [72]. Finally, communication between caregivers and the importance as well as quality, should feature more prominently in both graduate and postgraduate training, to become engraved as an essential skill and quality characteristic of each caregiver.

Additional table: overview of the included articles

| Authors and year | Reference | Aim of the study | Setting | Sample | Design | Main findings |
|--------------------------|-----------|--|--|---|---------------------|---|
| Adhyanan et al (2000) | [27] | To discover whether GPs are correctly notified of a patient's final diagnosis following hospital discharge | District general hospital (UK) | 200 discharges were studied (take home prescriptions and discharge summaries) | Observational study | Only 163 (81%) discharge summaries and 138 (69%) take-home prescriptions had the correct diagnosis; 24 (12%) take-home prescriptions did not have any diagnosis at all. In some cases the diagnosis differed between the discharge summaries and the take-home prescriptions. Only in 122 (61%) cases was the final diagnosis correctly documented in both instances. Communication regarding diagnosis in discharge letters is less than adequate. |
| Agarwal et al (2010) | [6] | To develop models for quantifying the economic burden on hospitals of poor communications | Hospital settings at a national level (US) | Key informants of seven hospitals (US) | Qualitative study | A conceptual model of the effects of poor communications in hospitals that isolates four outcomes: (1) efficiency of resource utilization, (2) effectiveness of core operations, (3) quality of work life, and (4) service quality, identifying specific metrics for each outcome. We developed estimates of costs associated with wasted physician time, wasted nurse time, and increase in length of stay caused by communication inefficiencies across all U.S. hospitals. U.S. hospitals waste over \$12 billion annually as a result of communication inefficiency among care providers. Increase in length of stay accounts for 53 percent of the annual economic burden. A 500-bed hospital loses over \$4 million annually as a result of communication inefficiencies. |
| Bado and Williams (1984) | [26] | To investigate the communication between specialist hospital departments and GPs | Specialist hospital departments and GPs (UK) | 97 GPs. The records of 68 patients were examined | Questionnaire study | Hospital letters covered technical topics well, apart from details of possible side effects, but did not do the same even for the two social topics that most doctors considered to be essential—namely, what patients have been told about their diagnosis and prognosis. Letters from hospitals to general practitioners cover technical topics well but should include more information relating to the social aspects of the patient's disease. |

| | | | | | | |
|------------------------|------|--|---|--|---------------------|---|
| Berendsen et al (2009) | [1] | To develop and to validate a questionnaire to measure patients' experiences of collaboration between GPs and specialists | Patients from medical specialists (The Netherlands) | 1404 patients | Validation study | The Consumer Quality Index Continuum of Care can be a useful instrument to assess aspects of the collaboration between GPs and specialists from patients' perspective. |
| Berendsen et al (2009) | [17] | How do GPs and specialists assess their mutual communication through telephone, letters and postgraduate courses? | GPs and specialists (The Netherlands) | 259 GPs and 232 specialists from the Netherlands | Questionnaire study | Both parties wish to receive feedback from one and other, while in practice they do so very little. GPs and specialists disagree on several aspects of their communication. They should compose a format for the referral letter and the specialist's report and discuss how to go about exchanging mutual feedback. |
| Bourguet et al (1998) | [49] | To examine the short-term outcomes of communication between family physicians and consultants during the referral process | 6 family practice centres (US) | 309 of 5172 patients were referred | Data card study | Primary care physicians can influence the likelihood of receiving feedback from a consultant by initiating communication with the consultant with the consultant. A referral wherein the physicians involved do not communicate with one another results in physician dissatisfaction. |
| Campbell et al (2004) | [13] | To explore the views of GPs and consultants on the desirability of defined items in the referral letters and replies | GPs and consultants (UK) | 360 GPs and 208 consultants | Questionnaire study | There may be regional variation around the country in the thoroughness of communication which doctors expect. GPs did not include important items in their referral letters. |
| Carney S.L. (2006) | [18] | To evaluate the quality of medication information in GP referral letters | Public hospital adult general nephrology / hypertension outpatient clinic (Australia) | 50 consecutive referral letters for new patients from 50 different GPs | Prospective study | Accuracy of medications taken and drug dose was respectively 63% and 84%, an overall accuracy rate of 58%. Complementary / over-the-counter medication documentation occurred in 26% of the letters. To avoid medical mismanagement, physicians must validate all GP medication lists regardless of their apparent comprehensiveness. |
| Delbanco et al (2010) | [68] | To gain evidence about the feasibility, benefits and harms of providing patients ready access to electronic doctors' notes | Diverse hospitals (US) | More than 100 GPs and about 25000 patients | Observational study | The hypotheses that will be tested based on results are: GPs overall will report improved patient-doctor communication, improved patient satisfaction and no increase in workload. Patients overall will report better understanding of their care and improved satisfaction with their doctors, will not have heightened anxiety or confusion about their health and care, and will demonstrate no change in how often they contact their healthcare team. |

| | | | | | | |
|-----------------------|------|---|--|--|------------------------------|--|
| Durbin et al (2012) | [29] | To review evidence on the quality of information transfer between GPs and specialist mental health professionals for referral requests and after inpatient discharge | / | 23 audit studies + 9 audit studies | Review study | Results indicated that rates of item reporting were variable. Within the limited evidence on interventions to improve quality, use of structured forms showed positive results. Follow-up work can identify a minimum set of items to include in information transfers, along with item definitions and structures for holding this information. Then, methodologies for measuring data quality, including electronically generated performance metrics, can be developed. |
| Epstein R.M. (1995) | [35] | To review communication between primary care physicians and consultants | / | / | Narrative review | The author provides an overview of communication problems between GPs and consultants, reasons for poor communication and possible solutions. |
| Farquhar et al (2005) | [20] | To describe GPs views of the communication issues across the primary / secondary interface in relation to ovarian cancer patients | The Cambridge Gynaecological Oncology Centre (UK) | 12 GPs + 30 hospital medical records | Qualitative study + audit | There is a need to develop and evaluate interventions aimed at improving the content and speed of communications between secondary and primary care. |
| Foy et al (2010) | [70] | To assess the effects of interactive communication between collaborating primary care physicians and key specialists on outcomes for patients receiving ambulatory care | / | Contextual, intervention, and outcome data from 23 studies were extracted. Study quality was assessed with a 13-item checklist. Main outcomes for analysis were selected by reviewers who were blinded to study results. | Review study / meta-analysis | Consistent and clinically important effects suggest a potential role of interactive communication for improving the effectiveness of GPs collaboration. |
| Francois J. (2011) | [3] | To develop an assessment tool for medical letters | Pilot-test by 10 family physician educators (Canada) | 10 family physician educators | Review study + pilot-test | The described tool appears to meet criteria for a good assessment instrument. |

| | | | | | | |
|----------------------------|------|--|---|--|--|---|
| Gandhi et al (2000) | [10] | To evaluate primary care and specialist physicians' satisfaction with interphysician communication and to identify the major problems in the current referral process | Academic tertiary care medical center (US) | 84 GPs and 405 specialists | Questionnaire study | Communication between GPs and specialists during the referral process is often inadequate both in terms of quality and timing, physicians are dissatisfied with the process, and physicians identify several important barriers to communication including time required to create adequate notes and redundant processes. Communication needs to be examined in greater detail to determine ways to improve it. Potential strategies include automating referral communication and letter generation through computerized referral applications. |
| Carasen and Johnsen (2007) | [19] | To assess the quality of the written communication between physicians and to estimate the number of patients that could have been treated at primary care level instead of at a general hospital | The city general hospital in Trondheim (Norway) | Referral and discharge letters for 100 patients above 75 years of age admitted to orthopaedic, pulmonary and cardiological departments | Delphi technique + standardised evaluation protocol with a visual analogue scale (two expert panels) | In this study from one general hospital both referral and discharge letters were missing vital medical information, and referral letters to such an extent that it might represent a health hazard for older patients. There was also low consensus between health professionals at primary and secondary level of what was high benefit of care for older patients at a general hospital. |
| GeekInterview.com (2011) | [12] | To provide background information about oral and written communication | / | / | Narrative review | This article is a consolidation of details to help the reader understand in detail about oral and written forms of communication. |
| Grol et al (2003) | [25] | To investigate the extent to which specialists' reply letters are related to the referral letters sent to them, and whether or not better referral letters produced better reply letters | GPs in Nijmegen (The Netherlands) | 637 referral letters from GPs and corresponding reply letters from medical specialists | Assessment by means of quality criteria | Letters can be improved, and specific requests by GPs were addressed explicitly by the specialists in only a limited number of cases. Better referral letters resulted only partly in better reply letters. A letter is considered to be of higher quality when a specialist commences a letter with a reference to the specific request by the GP. In conclusion, opportunities for optimal communication should be better used. |
| Haggerty et al (2003) | [34] | To review continuity of care | / | / | Multidisciplinary review | Continuity is the degree to which a series of discrete healthcare events is experienced as coherent and connected and consistent with the patient's medical needs and personal context. Continuity of care is distinguished from other attributes of care by two core elements-care over time and the focus on individual patients. Three types of continuity exist in all settings: informational, management, and relational. The emphasis on each type of continuity differs depending on the type and setting of care. |

| | | | | | | |
|---------------------------|------|---|---|--|-----------------------------------|--|
| Hartveit et al (2013) | [23] | To explore what information is seen as most important and should be included in referral letters from primary care to specialised mental healthcare | The Western Norway Regional Health Authority (Norway) | 4 mixed discussion groups | Delphi technique | Compared with general guidelines and guidelines for somatic care, the results of this study suggest that the referral letter to specialised mental healthcare should have a larger emphasis on the overall treatment plan, on the specific role of specialised healthcare in the continuum of care, and on patient involvement. |
| Hendrich et al (2008) | [48] | To document how nurses spend their time. To identify drivers of inefficiency in nursing work processes and nursing unit design. | US | 767 nurses of 36 medical-surgical units | Time and motion study | Nurses spend more than three-quarters of their time on nursing practice-related activities, but only 19.3% on patient care activities. Documentation (35.3%), care coordination (20.6%), medication administration (17.2%) and patient assessment / recording vital signs (7.2%) complete the nursing practice-related activities. 6.6% of their time is classified as 'waste'. |
| Hilton et al (2008) | [57] | To identify the proportion and appropriateness of referrals considered urgent by the referrer and to develop a set of criteria to guide what should constitute an 'urgent' referral | Referrals to mental health services (UK) | 100 consecutive referral letters to a community mental health team + expert panel of psychiatrists | Delphi technique | There was significant disagreement between the referrers and the assessing team as to which referrals required urgent attention. The findings justified the creation of guidelines, and this paper outlines a set of 12 criteria to guide what should prompt an urgent referral. This paper identifies a lack of consensus between referrers and members of the assessing team as to which referrals should be marked as urgent, and presents a set of guidelines that clinicians can refer to in order to help them to decide whether or not a referral should be urgent. |
| Jacobs and Pringle (1990) | [15] | To study delays between sending referral letters and the outpatient appointment and to assess the content of referral and reply letters, their educational value, and the extent to which questions asked are answered by reply letters | Orthopaedic teaching hospitals in Nottingham, Derby, and Mansfield (UK) | 16 consultant orthopaedic surgeons at five hospitals, comprising 288 referral letters with corresponding replies | Retrospective review of referrals | The potential for useful communication in the referral letter and in the reply from orthopaedic surgeons is being missed at a number of levels. The content is often poor, the level of mutual education is low, and the use of the referral letter to determine urgency is deficient. Most questions asked by general practitioners are not answered. |
| Jenkins R.M. (1993) | [43] | To assess the appropriateness of referral and the quality of the referral letter | District health authority (UK) | 12 specialists and 234 referral letters | Questionnaire study | The quality of information in general practitioners' referral letters needs improvement and a standardized referral pro forma, which includes the reasons for and objectives of the referral, may help. |

| | | | | | | |
|--------------------------------|------|---|---|---|--|---|
| Jiwa et al (2005) | [24] | To invite GPs to set standards for referral letters to gastroenterologists and to apply these standards to actual referral letters to one specialist gastroenterology unit | District general hospital (UK) | 350 consecutive letters and 102 GPs | Questionnaire study | This study reported a failure to meet "peer defined" standards for the content of referral letters set by colleagues in one locality. Referral letters serve many purposes, however, encouraging full documentation of specific clinical findings may serve to increase the pre-referral assessments performed in practice. |
| Jiwa M. and Dhaliwal S. (2012) | [37] | To explore if increasing the amount of relevant information relayed in referral letters between GPs or family physicians and hospital specialists helps in the scheduling of appointments for patients. | GPs and hospital specialists in Perth (Australia) | 104 referral letters | Retrospective review of referral letters | Standardising and using electronic communications to refer appears to facilitate rational scheduling of specialist appointments. Comprehensive referral may help to ensure that the right patients are seen by the specialist sooner rather than later. |
| Jiwa et al (2004) | [58] | To determine if written feedback about the contents of GP referral letters mediated by local peers was acceptable to GPs and how this feedback influenced the content and variety of their referrals | GPs in North Nottinghamshire (UK) | 26 GPs and their referral letters over 1 year | Non-randomised control trial | GPs welcome feedback about the details appearing on their referral letters, although peer comparisons may not always lead to changes in practice. However, in some cases feedback improves the content of GP referral letters and may also impact on the type of patients referred for investigation by specialists. |
| Kaelber and Bates (2007) | [36] | To provide an overview of six different ways in which health information exchange can improve patient safety | / | / | Narrative review | As more and more healthcare information becomes digital, the potential for health information exchange to improve patient safety will grow, and it is already robust. One challenge will be to develop healthcare systems capable of processing and utilizing the dramatic increase in information. Only then will the potential of improved patient safety through enhanced health information exchange be realized because we will have increased the percentage of time that the right information is presented to the right person at the right time so that the right healthcare decision can be made. |

| | | | | | | |
|-------------------------------|------|---|--|--|---------------------|--|
| Keely et al (2007) | [59] | To determine the feasibility and satisfaction of a peer assessment program on consultation letters and to determine inter-rater reliability between family physicians and specialists | Family physicians and specialists (Canada) | Nine internal medicine specialists/subs from two tertiary care centres submitted 10 letters with patient and physician identifiers removed. Two internal medicine specialists, and 2 family physicians from the other centre rated each letter | Questionnaire study | Consultation letter writing is an essential skill for practicing specialists. The lack of feedback and education during training, make it a good target for continuing professional development. Peer feedback and self-reflection resulted in long-lasting changes in some individuals. |
| Kendrick and Hindmarsh (1989) | [67] | To assess which type of hospital discharge report reaches GPs most quickly | Two group practices (The Weybridge practice and the Dover practice) (UK) | Discharge notes and typed summaries | Retrospective study | A discharge note that doubles as a prescription for drugs to be taken home, will reach the GP more quickly on average. Hospitals that use a separate discharge note should consider changing over to the combined discharge note and prescription form. |
| Kenny C. (1991) | [66] | To determine whether patients of GPs experienced any new problems regarding continuity of medication as a result of policy change | District Health Authority's hospital (UK) | Two random samples of patients who were discharged with up to 14 days supply of medication | Questionnaire study | There was no significant difference between a 14 and 7 day supply with regard to whether GPs received an initial discharge letter, the number of days the letter took to arrive at the GP's surgery, the necessity for further treatment, or problems encountered in the continuity of a patient's treatment. However there was a significant improvement in the quality of information on the new discharge letter as perceived by GPs. Provided the initial discharge letter has prescription details and is given to the patient to deliver to their GP, seven days supply of medication is sufficient. |

| | | | | | | |
|---------------------------|------|--|---------------------------------|---|---------------------|---|
| Kern et al (2009) | [54] | To search for quality metrics to evaluate the quality of electronic health records | US | 36-member national expert panel | Validation study | The novel set of 32 metrics is proposed as suitable for electronic reporting to capture the potential quality effects of electronic health records with health information exchange. This metric set may have broad utility as health information technology becomes increasingly common with funding from the federal stimulus package and other sources. This work may also stimulate discussion on improving how data are entered and extracted from clinically rich, electronic sources, with the goal of more accurately measuring and improving care. |
| Kripalani et al (2007) | [2] | To characterize the prevalence of deficits in communication and information transfer at hospital discharge and to identify interventions to improve this process | / | 1064 citations identified through initial electronic search 55 observational studies | Systematic review | Deficits in communication and information transfer at hospital discharge are common and may adversely affect patient care. Interventions such as computer-generated summaries and standardized formats may facilitate more timely transfer of pertinent patient information to primary care physicians and make discharge summaries more consistently available during follow-up care. |
| Lissauer et al (1991) | [62] | To compare computer generated and dictated discharge summaries | Maternity units (UK) | Discharge summaries of 133 babies admitted for intensive and special care | Retrospective study | Satisfactory discharge summaries for babies requiring intensive or special care can be generated with an on line computer system. |
| Mageean R.J. (1986) | [33] | To test the hypothesis that the letters from hospital medical staff about patients returning home after discharge from the hospital are adequate | Health centre in Liverpool (UK) | 79 discharge communications | Retrospective study | There is a need for improvement: hospital findings should be communicated rapidly and communication must be adequate. |

| | | | | | | |
|-------------------------|------|--|--|--|---------------------------------------|---|
| McConnell et al (1999) | [32] | To explore referral and reply letters of doctors in cancer care | Oncologists, surgeons and GPs in Sydney (Australia) | 28 semi-structured interviews with doctors 89 referral letters and 99 reply letters | Questionnaire study + interviews | Only four of 27 categories of referral information appear regularly (in > 50%) in referral letters. Oncologists want most to receive information regarding the patient's medical status, the involvement of other doctors, and any special considerations. Referring surgeons and family doctors identified delay in receiving the consultant's reply letter as of greatest concern, and insufficient detail as relatively common problems. Reply letters include more information regarding patient history/background than the recipients would like. Referring surgeons and family doctors want information regarding the proposed treatment, expected outcomes, and any psychosocial concerns, yet these items are often omitted. |
| Melville et al (2002) | [50] | To compare structured letters with conventional letters | UK | 32 GPs | Randomised controlled crossover trial | A structured letter takes no longer to read, is strongly preferred by GPs, and improves comprehension. It may also train the reader to read subsequent unstructured letters more effectively. |
| Moore et al (2003) | [41] | To determine the prevalence of medical errors related to the discontinuity of care from an inpatient to an outpatient setting, and to determine if there is an association between these medical errors and adverse outcomes | The medicine service at a large academic medical center, New York (US) | 86 patients who had been hospitalised | Retrospective study | The prevalence of medical errors related to the discontinuity of care from the inpatient to the outpatient setting is high and may be associated with an increased risk of rehospitalisation. |
| Moosbrugger M.C. (1988) | [5] | To comment on how to win or lose referral business in healthcare | Healthcare system (US) | / | Narrative review | Four recommendations: develop protocol to achieve timeliness and access. Energize primary care physicians to make referrals. Integrate physician research into your strategic planning process. Make physician relations an ongoing activity. |
| Murray et al (2003) | [69] | To audit how psychiatrists' practice is affected when letters are to be copied to patients | 2 general psychiatry outpatient clinics (one rural, one inner city) (UK) | 76 letters of new patients who attended two general psychiatry outpatient clinics | Questionnaire study | Sending patients a copy of the letter to the GP after a psychiatric consultation is valued and appreciated by patients; some doctors are, however, worried about distressing patients by what they write and consequently tend to omit information. Some training and reassurance about this practice may be needed before implementation. |

| | | | | | | |
|-------------------------|------|---|--|---|--|---|
| Myers et al (1999) | [31] | To develop a 34-item scale to assess the quality of residents consultation letters | GPs and specialists (Canada) | 600 GPs and specialists | Retrospective study | Overall quality of the letters was relatively low. There were several deficiencies that limit the ability of the referring physician to quickly find and analyse important information. Three of four learning objectives were completely met by at least half of the students and the exercises were rated as helpful. Students who attended the session scored significantly higher in a relevant knowledge test than non-attendees. |
| Nestel and Kidd (2004) | [60] | To assess the feasibility of a teaching session for second-year medical students aimed at raising their awareness of written communications in the context of healthcare | Medical school (UK) | 122 medical students | Teaching session, evaluation, knowledge test | A high degree of consensus exists among clinicians about the content of referral communications. Although doctors may still reject the concept of standardised communications, they have unambiguously endorsed a standard for communication that they can aspire to, and they are prepared to use it as a yardstick for their actual performance. |
| Newton et al (1992) | [16] | To canvass the views of all GPs and consultants on the content of referral letters and replies, the feasibility of standardising certain aspects of referral letters, and the use of communications data for audit purposes | Newcastle upon Tyne (UK) | 274 doctors (115 GPs and 159 consultants) | Questionnaire study | Hospitalists spent most of their time on indirect patient care activities and relatively little time on direct patient care. Hospitalists spent a large amount of time on communication, underscoring the need for hospitalists to have outstanding communication skills and systems that support efficient communication. Multitasking and paging interruptions were common. The inherent distraction caused by interruptions and multitasking is a potential contributor to medical error and warrants further study. |
| O'Leary et al (2006) | [47] | To evaluate the types and frequency of activities that hospitalists perform during routine work | Northwestern Memorial Hospital in Chicago (US) | 10 hospitalists | Observational time study | This study demonstrates poor compliance rates with the standardised referral form, which has implications for the accurate grading of referral letters received. |
| Oosthuizen et al (2014) | [56] | To determine the compliance rate of GPs with the Irish College of General Practitioners referral guidelines | Hospitals across Ireland | 100 referrals | Retrospective study | |

| | | | | | | |
|--------------------------|------|--|---|--|--------------------------------------|--|
| Peikes et al (2009) | [42] | To determine whether care coordination programs reduced hospitalisations and Medicare expenditures and improved quality of care for chronically ill Medicare beneficiaries | Sites in de Medicare Coordinated Care Demonstration (US) | 18 309 patients | Retrospective study + patient survey | Viable care coordination programs without a strong transitional care component are unlikely to yield net Medicare savings. Programs with substantial in-person contact that target moderate to severe patients can be cost-neutral and improve some aspects of care. |
| Pixy S. (2002) | [14] | To provide insights on the effects of computers on traditional writing | / | / | Narrative review | Even though the print model prevails, computers are still in development and the possibility of a concept change exists. Whichever model comes to be accepted will influence the practice and understanding of electronic writing. Going from a print to an oral metaphor will emphasize the importance of interactivity rather than the forms of traditional writing. |
| Preston et al (1999) | [38] | To discover the views of patients about their experiences across the interface between primary and secondary healthcare. | Three acute hospitals and one community health service in Leicestershire (UK) | 33 patients and 8 carers of patients with chronic conditions | A qualitative study | The concept of progress is central to patients' views of care. It involves both progress through the healthcare system and progress towards recovery or adjustment to an altered health state. Patients' views on how well they progress through the healthcare system may be an appropriate indicator for monitoring health service performance. |
| Prince and Herrin (2007) | [53] | To document on the development and deployment of technology that serves to enhance healthcare communications, efficiency, and patient safety | Trauma center (US) | / | Interventional study | Through the use of the new developed technology, the patient's need is supported, communication is automated, efficiency is maximized, data are gathered for improvement, and, when needs are met, both the patient and the staff are satisfied and organizational outcomes are improved. |
| Rao et al (2005) | [51] | To evaluate discharge summaries | Teaching hospital in New Jersey (US) | Summaries of 150 patients | Retrospective study | Considerable differences were found among raters, particularly in the evaluation of style. The average of the scores improved and dictation length decreased after introduction of a template. |

| | | | | | | |
|-----------------------------|------|--|--|--|-----------------------|--|
| Rawal et al (1993) | [52] | To investigate the attitude of GPs to a structured letter | GPs working in the catchment area of NorthMiddles ex Hospital NHS Trust (UK) | 100 randomly chosen GPs | Questionnaire study | We found that nearly all the general practitioners in our study preferred the structured letter but few hospital doctors wrote such letters. Writing structured letters requires discipline, but we think the effort is justified. Structured letters summarise cases better than do conventional letters. |
| Ray et al (1998) | [55] | To determine whether GPs prefer structured computer-generated or standard dictated outpatient clinic letters. | District general hospital in London (UK) | 93 GPs | Questionnaire study | GPs prefer structured computer-generated letters to unstructured dictated letters for patients referred to an open-access chest pain clinic. Computer-generated correspondence allows rapid feedback of information to the referring GP, one of the key requirements of open-access clinics. |
| Roy et al (2005) | [44] | To determine the prevalence, characteristics and physician awareness of potentially actionable laboratory and radiologic test results returning after hospital discharge | 2 tertiary care academic hospitals (US) | 2644 consecutive patients discharged from hospitalist services | Cross-sectional study | We conclude that patients are frequently discharged from hospitals with test results still pending, that physicians are often unaware of potentially important test results returning after discharge, and that some of these results require urgent action. |
| Sandler and Mitchell (1987) | [61] | To investigate how discharge summaries are best delivered to GPs | Hospital in Nottingham (UK) | 294 patients | Retrospective study | If all interim discharge summaries were given to patients to deliver communication between hospitals and general practitioners would be accelerated and considerable savings might be made. |
| Shere S. (2001) | [65] | To comment on dictated letters | / | / | Letter | Not reading and / or not signing one's dictated letters is dangerous for patient safety. |

| | | | | | | |
|--------------------------|------|---|--|---|---------------------|--|
| Smith and Holzman (1989) | [63] | To determine the effect of the application of a computer data base system to the generation of hospital discharge summaries | Department of Obstetrics and Gynecology at The Medical College of Georgia (US) | 103 patients discharged during the month of October 1985 served as controls for a comparable prospective group of 104 patients discharged beginning October 1, 1987 | Retrospective study | It may be difficult to quantitate improvement in quality of the data obtained for residency and departmental purposes, this reduction in delinquent charts alone may be sufficient to recommend the application of computer technology to this problem. |
| Solet et al (2005) | [9] | To give suggestions for improvement of physician-to-physician communication during patient handoffs | Indiana University School of Medicine's internal medicine residency (US) | / | Narrative review | The authors conclude that irrespective of local context, precise, unambiguous, face-to-face communication is the best way to ensure effective handoffs of hospitalised patients. They also maintain that the handoff process must be standardized and that students and residents must be taught the most effective, safe, satisfying, and efficient ways to perform handoffs. |
| Stalhammar et al (1998) | [21] | To examine how GPs and specialists assess the importance of different aspects of information regarding cancer treatment in the discharge letter from the hospital | Sweden | 204 GPs and 48 oncologists | Questionnaire study | The differences in self-evaluation and assessment of the other medical doctor groups evaluation of the content in a discharge letter, concerning cancer patients from hospital specialists to GPs, might reflect different professional strategies in cancer management and hamper the efficiency in the shared care of these patients. |

| | | | | | | |
|----------------------------|------|---|------------------------|---------------------------|---------------------|--|
| Starfield et al (2005) | [4] | To identify the mechanisms and further confirmation of evidence of primary care contributing to health systems and health | / | / | Narrative review | The evidence shows that primary care helps prevent illness and death, regardless of whether the care is characterized by supply of primary care physicians, a relationship with a source of primary care, or the receipt of important features of primary care. The evidence also shows that primary care (in contrast to specialty care) is associated with a more equitable distribution of health in populations, a finding that holds in both cross-national and within-national studies. The means by which primary care improves health have been identified, thus suggesting ways to improve overall health and reduce differences in health across major population subgroups. |
| Sutcliffe et al (2004) | [39] | To describe how communication failures contribute to many medical mishaps | Teaching hospital (US) | 26 residents | Qualitative study | The occurrence of everyday medical mishaps in this study is associated with faulty communication; but, poor communication is not simply the result of poor transmission or exchange of information. Communication failures are far more complex and relate to hierarchical differences, concerns with upward influence, conflicting roles and role ambiguity, and interpersonal power and conflict. A clearer understanding of these dynamics highlights possibilities for appropriate interventions in medical education and in healthcare organizations aimed at improving patient safety. |
| Tattersall et al (2002) | [22] | To provide suggestions to improve doctors' letters | / | / | Narrative review | There are clear advantages of having a structured format for referral and reply letters, including the use of headings to allow the reader to easily identify the information desired. |
| Tattersall et al (1995) | [28] | To survey referring GPs and specialists concerning their preferences To investigate the information content of letters | Australia | 55 GPs and 53 specialists | Questionnaire study | Letters sent by a consultant oncologist are not well tailored to the information needs of the referring clinician. Summary letters sent to patients may be modified to include information required by referring doctors. |

| | | | | | | |
|---------------------------|------|---|--|--|---------------------------|---|
| Thorne et al (2005) | [46] | To analyse the existing empirical literature which addresses the impact of ineffective communication between cancer patients and clinicians | / | / | Narrative review | On the basis of critical analysis of the limited empirical evidence that exists across a wide range of studies in related areas, the authors propose that the existential and material costs associated with poor communication in cancer care may well be considerable, and conclude with a call to mobilise a heightened enthusiasm for addressing the research challenges in this field. |
| Thorsen et al (2012) | [11] | To identify and describe GPs' reflections on and attitudes to the referral process and cooperation with hospital specialists. | 21 GP practices (Norway) | 31 GPs | Qualitative study | The referral process is essential for good patient care between general practice and specialist services. GPs consider referring as asymmetric and sometimes humiliating. The dichotomy between the wish for mutual dialogue and the convenience of using templates should be kept in mind when assuring quality of the referral process. |
| van Walraven et al (1999) | [64] | To compare discharge summaries created by voice dictation with those generated from a clinical database | Tertiary care teaching hospital in Ottawa (Canada) | 151 discharge summaries created by voice dictation and 142 discharge summaries from a database | Randomised clinical trial | The database system significantly increased the likelihood that a discharge summary was created. Housestaff preferred the database system for summary generation. Physicians thought that the quality of summaries generated by the 2 methods was similar. The use of computer databases to create hospital discharge summaries is promising and merits further study and refinement. |
| van Walraven et al (2002) | [40] | To determine if the delivery of hospital discharge summaries to follow-up physicians decreases the risk of hospital readmission | Teaching hospital in a universal health-care system (Canada) | 888 patients | Retrospective study | The risk of rehospitalisation may decrease when patients are assessed following discharge by physicians who have received the discharge summary. |
| Wasson et al (2007) | [30] | To assess whether a standardised, computerised clinic letter template could improve communication between the ENT emergency clinic and patients' GP | ENT emergency clinic (UK) | 72 GPs | Questionnaire study | The introduction of a simple, computerised clinic letter template improves communication with ENT emergency clinic patients' general practitioners. |

| | | | | | | |
|------------------------|------|--|--|-------------------------|---------------------|---|
| Westerman et al (1990) | [7] | To evaluate communication between primary and secondary care | GPs and an Amsterdam teaching hospital (The Netherlands) | 144 referrals | Retrospective study | Though in general intraobserver agreement on what constitutes a good letter was low, deficiencies were revealed in the quality of letters and there were delays in transmission and missed educational opportunities. |
| Zinn C. (1995) | [45] | To identify the causes of preventable deaths in Australian hospitals | 28 public and private hospitals in New South Wales and South Australia (Australia) | 14000 admission records | Retrospective study | The study found that communications problems were responsible for 11% of adverse outcomes, inadequate skill levels of practitioners for 6%, and inadequate resources for 4%. The study shows no difference between public and private hospitals in the incidence of adverse events. |

References

- 1 Berendsen AJ, Groenier KH, de Jong GM et al. Assessment of patient's experiences across the interface between primary and secondary care: Consumer Quality Index Continuum of care. *Patient Educ Couns* 2009; 77: 123-7.
- 2 Kripalani S, LeFevre F, Phillips CO et al. Deficits in communication and information transfer between hospital-based and primary care physicians: implications for patient safety and continuity of care. *JAMA* 2007; 297: 831-41.
- 3 Francois J. Tool to assess the quality of consultation and referral request letters in family medicine. *Can Fam Phys* 2011; 57: 574-5.
- 4 Starfield B, Shi L, Macinko J. Contribution of primary care to health systems and health. *Milbank Q* 2005; 83: 457-502.
- 5 Moosbrugger MC. Unclogging the physician referral network. Winning referrals requires research and tracking. *Healthc Exec* 1988; 3: 28-9.
- 6 Agarwal R, Sands DZ, Schneider JD. Quantifying the economic impact of communication inefficiencies in U.S. hospitals. *J Healthc Manag* 2010; 55: 265-81; discussion 81-2.
- 7 Westerman RF, Hull FM, Bezemer PD, Gort G. A study of communication between general practitioners and specialists. *Brit J Gen Pract* 1990; 40: 445-9.
- 8 Moher D, Liberati A, Tetzlaff J et al. Preferred reporting items for systematic reviews and metaanalyses: the PRISMA statement. *Ann Intern Med* 2009; 151: 264-9 W64.
- 9 Solet DJ, Norvell JM, Rutan GH, Frankel RM. Lost in translation: challenges and opportunities in physician-to-physician communication during patient handoffs. *Acad Med* 2005; 80: 1094-9.
- 10 Gandhi TK, Sittig DF, Franklin M et al. Communication breakdown in the outpatient referral process. *J Gen Intern Med* 2000; 15: 626-31.
- 11 Thorsen O, Hartveit M, Baerheim A. General practitioners' reflections on referring: an asymmetric or non-dialogical process? *Scand J Prim Healthcare* 2012; 30: 241-6.
- 12 GeekInterview.com. Understanding oral and written communication, 2011. <http://www.learn.geekinterview.com/career/communication-skills/understanding-oral-written-communication.html> (accessed 7 March 2014).
- 13 Campbell B, Vanslembroek K, Whitehead E et al. Views of doctors on clinical correspondence: questionnaire survey and audit of content of letters. *BMJ* 2004; 328: 1060-1.
- 14 Pixy Ferris S. Writing electronically: The effects of computers on traditional writing. *J Electronic Publ* 2002; 8: DOI: <http://dx.doi.org/10.3998/3336451.0008.104>.
- 15 Jacobs LG, Pringle MA. Referral letters and replies from orthopaedic departments: opportunities missed. *BMJ* 1990; 301: 470-3.
- 16 Newton J, Eccles M, Hutchinson A. Communication between general practitioners and consultants: what should their letters contain? *BMJ* 1992; 304: 821-4.
- 17 Berendsen AJ, Kuiken A, Benneker WH et al. How do general practitioners and specialists value their mutual communication? A survey *BMC Health Serv Res* 2009; 9: 143.
- 18 Carney SL. Medication accuracy and general practitioner referral letters. *Intern Med J* 2006; 36: 132-4.
- 19 Garasen H, Johnsen R. The quality of communication about older patients between hospital physicians and general practitioners: a panel study assessment. *BMC Health Serv Res* 2007; 7: 133.
- 20 Farquhar MC, Barclay SI, Earl H et al. Barriers to effective communication across the primary/secondary interface: examples from the ovarian cancer patient journey (a qualitative study). *Eur J Cancer Care* 2005; 14: 359-66.
- 21 Stalhammar J, Holmberg L, Svardsudd K, Tibblin G. Written communication from specialists to general practitioners in cancer care. What are the expectations and how are they met? *Scand J Prim Healthcare* 1998; 16: 154-9.
- 22 Tattersall MH, Butow PN, Brown JE, Thompson JF. Improving doctors' letters. *Med J Aust* 2002; 177: 516-20.
- 23 Hartveit M, Thorsen O, Biringe E et al. Recommended content of referral letters from general practitioners to specialised mental healthcare: a qualitative multi-perspective study. *BMC Health Serv Res* 2013; 13: 329.
- 24 Jiwa M, Coleman M, McKinley RK. Measuring the quality of referral letters about patients with uppergastrointestinal symptoms. *Postgrad Med J* 2005; 81: 467-9.
- 25 Grol R, Rooijackers-Lemmers N, van Kaathoven L et al. Communication at the interface: do better referral letters produce better consultant replies? *Brit J Gen Pract* 2003; 53: 241-9.
- 26 Bado W, Williams CJ. Usefulness of letters from hospitals to general practitioners. *Br Med J* 1984; 288: 1813-4.
- 27 Adhiyaman V, Oke A, White AD, Shah IU. Diagnoses in discharge communications: how far are they reliable? *Int J Clin Pract* 2000; 54: 457-8.
- 28 Tattersall MH, Griffin A, Dunn SM et al. Writing to referring doctors after a new patient consultation. What is wanted and what was contained in letters from one medical oncologist? *Aust N Z J Med* 1995; 25: 479-82.
- 29 Durbin J, Barnsley J, Finlayson B et al. Quality of communication between primary healthcare and mental

- healthcare: an examination of referral and discharge letters. *J Behav Health Serv Res* 2012; 39: 445-61.
- 30 Wasson J, Pearce L, Alun-Jones T. Improving correspondence to general practitioners regarding patients attending the ENT emergency clinic: a regional general practitioner survey and audit. *J Laryngol Otol* 2007; 121: 1189-93.
- 31 Myers KA, Keely EJ, Dojeiji S, Norman GR. Development of a rating scale to evaluate written communication skills of residents. *Acad Med* 1999; 74: S111-3.
- 32 McConnell D, Butow PN, Tattersall MH. Improving the letters we write: an exploration of doctor-to-doctor communication in cancer care. *Br J Cancer* 1999; 80: 427-37.
- 33 Mageean RJ. Study of "discharge communications" from hospital. *Br Med J* 1986; 293: 1283-4.
- 34 Haggerty JL, Reid RJ, Freeman GK et al. Continuity of care: a multidisciplinary review. *BMJ* 2003; 327: 1219-21.
- 35 Epstein RM. Communication between primary care physicians and consultants. *Arch Fam Med* 1995; 4: 403-9.
- 36 Kaelber DC, Bates DW. Health information exchange and patient safety. *J Biomed Inform* 2007; 40: S40-5.
- 37 Jiwa M, Dhaliwal S. Referral writer: preliminary evidence for the value of comprehensive referral letters. *Qual Prim Care* 2012; 20: 39-45.
- 38 Preston C, Cheater F, Baker R, Hearnshaw H. Left in limbo: patients' views on care across the primary/secondary interface. *Qual Healthcare* 1999; 8: 16-21.
- 39 Sutcliffe KM, Lewton E, Rosenthal MM. Communication failures: an insidious contributor to medical mishaps. *Acad Med* 2004; 79: 186-94.
- 40 van Walraven C, Seth R, Austin PC, Laupacis A. Effect of discharge summary availability during post-discharge visits on hospital readmission. *J Gen Intern Med* 2002; 17: 186-92.
- 41 Moore C, Wisnivesky J, Williams S, McGinn T. Medical errors related to discontinuity of care from an inpatient to an outpatient setting. *J Gen Intern Med* 2003; 18: 646-51.
- 42 Peikes D, Chen A, Schore J, Brown R. Effects of care coordination on hospitalization, quality of care, and healthcare expenditures among Medicare beneficiaries: 15 randomized trials. *JAMA* 2009; 301: 603-18.
- 43 Jenkins RM. Quality of general practitioner referrals to outpatient departments: assessment by specialists and a general practitioner. *Brit J Gen Pract* 1993; 43: 111-3.
- 44 Roy CL, Poon EG, Karson AS et al. Patient safety concerns arising from test results that return after hospital discharge. *Ann Intern Med* 2005; 143: 121-8.
- 45 Zinn C. 14000 preventable deaths in Australian hospitals. *Brit Med J* 1995; 310: 1487.
- 46 Thorne SE, Bultz BD, Baile WF, Team SC. Is there a cost to poor communication in cancer care?: a critical review of the literature. *Psycho-oncology* 2005; 14: 875-84; discussion 85-6.
- 47 O'Leary KJ, Liebovitz DM, Baker DW. How hospitalists spend their time: insights on efficiency and safety. *J Hosp Med* 2006; 1: 88-93.
- 48 Hendrich A, Chow MP, Skierczynski BA, Lu Z. A 36-hospital time and motion study: how do medical-surgical nurses spend their time? *Permanente J* 2008; 12: 25-34.
- 49 Bourguet C, Gilchrist V, McCord G. The consultation and referral process. A report from NEON. Northeastern Ohio Network Research Group. *J Fam Pract* 1998; 46: 47-53.
- 50 Melville C, Hands S, Jones P. Randomised trial of the effects of structuring clinic correspondence. *Arch Dis Child* 2002; 86: 374-5.
- 51 Rao P, Andrei A, Fried A et al. Assessing quality and efficiency of discharge summaries. *Am J Med Qual* 2005; 20: 337-43.
- 52 Rawal J, Barnett P, Lloyd BW. Use of structured letters to improve communication between hospital doctors and general practitioners. *BMJ* 1993; 307: 1044.
- 53 Prince SB, Herrin DM. The role of information technology in healthcare communications, efficiency, and patient safety: application and results. *J Nurs Admin* 2007; 37: 184-7.
- 54 Kern LM, Dhopeswarkar R, Barron Y et al. Measuring the effects of health information technology on quality of care: a novel set of proposed metrics for electronic quality reporting. *Jt Comm J Qual Patient Saf* 2009; 35: 359-69.
- 55 Ray S, Archbold RA, Preston S et al. Computergenerated correspondence for patients attending an open-access chest pain clinic. *J R Coll Physicians Lond* 1998; 32: 420-1.
- 56 Oosthuizen JC, McShane D, Kinsella J, Conlon B. General practitioner ENT referral audit. *Irish J Med Sci* 2015; 184: 143-6.
- 57 Hilton C, Bajaj P, Hagger M et al. What should prompt an urgent referral to a community mental health team? *Ment Health Fam Med* 2008; 5: 197-201.
- 58 Jiwa M, Walters S, Mathers N. Referral letters to colorectal surgeons: the impact of peer-mediated feedback. *Brit J Gen Pract* 2004; 54: 123-6.
- 59 Keely E, Myers K, Dojeiji S, Campbell C. Peer assessment of outpatient consultation letters—feasibility and satisfaction. *BMC Med Educ* 2007; 7: 13.
- 60 Nestel D, Kidd J. Teaching and learning about written communications in a United Kingdom medical school. *Educ Health* 2004; 17: 27-34.
- 61 Sandler DA, Mitchell JR. Interim discharge summaries: how are they best delivered to general practitioners? *Br Med J* 1987; 295: 1523-5.
- 62 Lissauer T, Paterson CM, Simons A, Beard RW. Evaluation of computer generated neonatal discharge summaries. *Arch Dis Child* 1991; 66: 433-6.

- 63 Smith RP, Holzman GB. The application of a computer data base system to the generation of hospital discharge summaries. *Obstet Gynecol* 1989; 73: 803-7.
- 64 van Walraven C, Laupacis A, Seth R, Wells G. Dictated versus database-generated discharge summaries: a randomized clinical trial. *Can Med Assoc J* 1999; 160: 319-26.
- 65 Shere S. Not reading and signing letters you have dictated is dangerous. *BMJ* 2001; 322: 992.
- 66 Kenny C. Hospital discharge medication: is seven days supply sufficient? *Pub Health* 1991; 105: 243-7.
- 67 Kendrick AR, Hindmarsh DJ. Which type of hospital discharge report reaches general practitioners most quickly? *BMJ* 1989; 298: 362-3.
- 68 Delbanco T, Walker J, Darer JD et al. Open notes: doctors and patients signing on. *Ann Intern Med* 2010; 153: 121-5.
- 69 Murray GK, Nandhra H, Hymas N, Hunt N. Copying letters to patients. Psychiatrists omit information from letters when they know patients will be sent copies. *BMJ* 2003; 326: 449.
- 70 Foy R, Hempel S, Rubenstein L et al. Meta-analysis: effect of interactive communication between collaborating primary care physicians and specialists. *Ann Intern Med* 2010; 152: 247-58.
- 71 Blot K, Bergs J, Vogelaers D et al. Prevention of central line-associated bloodstream infections through quality improvement interventions: a systematic review and meta-analysis. *Clin Infect Dis* 2014; 59: 96-105.
- 72 Doran G. There's a S.M.A.R.T. way to write management's goals and objectives. *Manage Rev (AMA FORUM)* 1981; 70: 35-6

Chapter 4

Mutual perception of communication between general practitioners and hospital-based specialists

Peter Vermeir

Dominique Vandijck

Sophie Degroote

Dirk Ommeslag

Marc Van De Putte

Stefan Heytens

Jan Reniers

Ignace Hanouille

Renaat Peleman

Dirk Vogelaers

Published in Acta Clinica Belgica 2015; 70: 350-356

4. Mutual perception of communication between general practitioners and hospital-based specialists

ABSTRACT

Background: *Communication between general practitioners (GPs) and specialists is an important aspect of qualitative care. Efficient communication exchange is essential and key in guaranteeing continuity of care. Inefficient communication is related to several negative outcomes, including patient harm. This study aimed to investigate the perception of GPs and hospital-based specialists in Belgium of the quality of their mutual communication.*

Methods: *A cross-sectional study was conducted among GPs and specialists. Participants were asked to complete a validated questionnaire on several aspects of their mutual communication.*

Results: *Response rates of 17.9% (343/1.912) for GPs and 17.3% (392/2.263) for specialists were obtained. Both specialists and GPs qualify their mutual telephone accessibility as suboptimal. Specialists think poorly of the GP referral letter, in contrast to GP perception. Eighty per cent of the GPs feel that specialists address their questions appropriately; specialists have a similar perception of their own performance. According to 16.7% of the specialists, GPs not always follow their recommendations. Contrarily, GPs rate their compliance much higher (90.7%). Less than half of the GPs feel that the specialists' letter arrives on time, whereas specialists have a different and a more positive perception.*

Conclusions: *GPs and specialists disagree on several aspects of their mutual communication. These include the perception of accessibility, in both directions, and of the timeliness of written communication. Feedback is positively appreciated, again in both directions. Nevertheless, specialists feel that uptake of their recommendations is insufficient. Hence, there may remain significant room for improvement, which could contribute significantly to continuity of care and patient safety.*

ACKNOWLEDGEMENTS

We wish to thank all GP's and specialists who participated in this study. We would also like to thank the chief medical officers of the five participating hospitals and the following GP associations (number of members between brackets): Oost-Meetjeslandse Huisartsenkring (128), West-Meetjeslandse Huisartsenkring (58), Huisartsenkring Schelde-Leie (91), Huisartsenvereniging Gent (334), Oudenaardse Vereniging voor Omnipracticici (78), Huisartsenkring Merelbeke (29), Panacea (96), Huisartsenkring Wetteren-Wichelen-Laarne (50), Huisartsenkring Lochristi (15), Huisartsenkring Lokeren / Lochristi (31), Huisartsenkoepel Waasland (206), Vehamed (119), Huisartsenkring Aalst (129), Huisartsenkring Lede (18), Huisartsenkring Ninove-Geraardsbergen (58) en de Huisartsenkring Ronse (23).

The questionnaire was validated by the directors of 'Huisartsenkring Vehamed' (Bart De Letter), 'Huisartsenvereniging Gent' (Lily Willems), 'Huisartsenkoepel Waasland' (Benny Saeys), medical directors of Ghent University Hospital (Renaat Peleman) and General Hospital Sint-Blasius (Marc De Paepe) and one expert in patient safety (Dominique Vandijck).

BACKGROUND

An increasing number of, in particular chronically ill, patients are simultaneously treated by different healthcare providers [1]. The ongoing trends of increasing outpatient treatment and a shift towards primary care require frequent transfers of information and even shared responsibility for patient care between general practitioners (GPs) and specialists [2–4]. Good communication between different disciplines is essential in supporting this information exchange and is key to guaranteeing continuity of high-quality patient care [2]. According to Agarwal et al. ‘the practice and delivery of healthcare is fundamentally and critically dependent on effective and efficient communication’ [5]

However, literature suggests that communication in healthcare is often suboptimal and this deficiency may hamper patient safety [6, 7]. Previous research mainly focused on recommendations about content, rather than on the processes of communication [2]. As a consequence, literature on the perception or true nature of these processes is scarce. Farquhar et al. assessed GPs’ views on the format of communication by specialists and found that most problems relate to late delivery of reports [8]. A study assessing perceptions of both disciplines revealed different views on the main problems, with tardiness being a complaint among GPs, and poor GP phone accessibility, the main complaint among specialists [9].

This study aimed to investigate GP and hospital based specialist perception of their mutual communication in Belgium.

METHODS

A cross-sectional questionnaire study was performed among GPs and hospital-based specialists. The latter were reached through a multicentric design in five hospitals in Flanders (Dutch speaking part of Belgium): four general hospitals (O.L.V. Aalst; 844 beds, A.Z. Sint-Lucas Gent; 896 beds, Sint-Blasius Dendermonde; 441 beds and A.Z. Sint-Nikolaas Sint-Niklaas; 811 beds) and one university hospital (U.Z. Gent; 1062 beds). General practitioners were contacted through regional GP associations (listed with number of members in the acknowledgements). A validated questionnaire, used in the Netherlands [9] and adapted to the Flemish setting, was developed. Questions on administrative support and

preferred method of correspondence were added. Two separate questionnaires were developed for GPs and specialists, respectively. The questionnaire was revised and validated by three directors of GP associations, two chief medical officers and one expert on patient safety. The following sociodemographic data were collected: age, gender, length of practice experience, number of consultation days per week, being a trainer, place and mode of employment, type of practice, availability of administrative support. Different aspects of communication were assessed using a five-point Likert scale (ranging from completely agree to completely disagree) through 16 questions. Questionnaires were available online from February to April 2014.

Analyses were performed using SPSS 21 (SPSS, Inc., Chicago IL, USA). Subgroup analyses were performed for GPs and specialists and according to socio-demographic variables. For nominal and ordinal variables, chi-squared tests were used to identify significant differences. If appropriate, post hoc analyses were performed for significant differences. For continuous variables, Mann-Whitney U-tests were used to identify significant differences in distribution.

The ethical committee of Ghent University Hospital served as coordinating committee with approval of the ethical committees of all participating hospitals (reference UZG 2014/0108).

RESULTS

Respondent characteristics

From the 1912 and 2263 invited GPs and specialists, 343 and 392, respectively, participated to the survey (response rates: 17.9 and 17.3%). Respondent characteristics are summarized in Table 1. Differences in mode of employment, number of consultation days and type of practice reflect the current organization of healthcare in Belgium or are intrinsic to disciplines. Significant differences were observed in mean age, length of practice experience and availability of administrative support when comparing GPs and hospital-based specialists.

| | GP's (n = 343) n (%) | Specialists (n = 392) n (%) | p-value |
|---|----------------------------|-----------------------------------|---------|
| Age (mean) | 44.9 ± 13.5 | 39.5 ± 11.5 | <0.001 |
| Male gender | 192 (56.0) | 205 (52.3) | 0.318 |
| Disciplines | | | |
| Non-surgical | | 178 (45.6) | |
| Surgical | | 130 (33.3) | |
| Supportive | | 82 (21.0) | |
| Length of practice experience | | | < 0.001 |
| < 1 year | 31 (9.0) | 41 (10.5) | |
| 1-5 year | 47 (13.7) | 109 (27.8) | |
| 6-10 year | 38 (11.1) | 57 (14.5) | |
| 11-20 year | 65 (18.7) | 89 (22.7) | |
| > 20 year | 162 (47.2) | 96 (24.5) | |
| Number of consultation days per week | | | < 0.001 |
| 1 | 3 (<1) | 39 (9.9) | |
| 2 | 1 (<1) | 43 (11.0) | |
| 3 | 10 (2.9) | 65 (16.6) | |
| 4 | 52 (15.2) | 80 (20.4) | |
| 5 | 228 (66.5) | 152 (38.8) | |
| 6 | 49 (14.3) | 11 (2.8) | |
| 7 | 0 (0) | 2 (<1) | |
| Trainers employed in | 68 (19.8) | 65 (16.6) | 0.254 |
| University hospital | | 195 (49.7) | |
| General hospital | | 185 (47.2) | |
| Not applicable | | 11 (2.8) | |
| City area | 176 (51.3) | | |
| Rural area | 167 (48.7) | | |
| Mode of employment | | | < 0.001 |
| Paid employment | 57 (16.6) | 209 (53.3) | |
| Self-employed | 277 (80.8) | 175 (44.6) | |
| Both | 9 (2.6) | 8 (2.0) | |
| Type of practice | | | < 0.001 |
| Single handed | 160 (46.6) | 5 (1.3) | |
| Twin | 69 (20.1) | 5 (1.3) | |
| Health center | 112 (32.7) | 22 (5.6) | |
| Clinic | 2 (<1) | 360 (91.8) | |
| Administrative support | 157 (45.8) | 326 (83.2) | < 0.001 |

Table 1: Respondent characteristics

Mutual perception of communication between GPs and hospital-based specialists

Table 2 gives an overview of answers on specific statements regarding communication comparing GPs and specialists. The findings will be presented in the following paragraphs.

| | GP's agree | Specialists agree | p-value |
|---|----------------|----------------------|-----------|
| Telephone contact | | | |
| Specialist/I can generally be easily reached for colleague consultation. | 254/314 (80.9) | 335/356 (94.1) | p < 0.001 |
| I/GP can generally be easily reached for colleague consultation. | 334/337 (99.1) | 309/347 (89.0) | p < 0.001 |
| Written communication | | | |
| Generally, the GP's referral letter is qualitatively good. | - | 223/392 (56.9) | |
| The specialist/I answer(s) the question in the referral letter. | 272/310 (87.7) | 305/333 (91.6) | p = 0.108 |
| The specialist's/my report back to the GP is generally sent back in a timely manner. | 161/290 (55.5) | 270/330 (81.8) | p < 0.001 |
| Generally, the specialist's report is qualitatively good. | 293/343 (85.4) | - | |
| Generally, I/the GP follow(s) the recommendations made by the specialist in his report. | 311/326 (95.4) | 200/240 (83.3) | p < 0.001 |
| The information exchange between GP and specialist (for example on complex/chronic patients) could be improved by using a joint electronic medical file. | 269/304 (88.5) | 326/341 (95.6) | p = 0.001 |
| Feedback | | | |
| I appreciate feedback from the GP/specialist on my actions. | 311/319 (97.5) | 334/349 (95.7) | p = 0.205 |
| Exchange of professional expertise | | | |
| Specialists have to inform me/I have to inform GP's about new medical developments within their field of expertise about new medical developments within their field of expertise | 244/298 (81.9) | 293/328 (89.3) | p = 0.008 |
| GP's have to retrain periodically | 340/342 (99.4) | 358/364 (98.4) | p = 0.182 |
| GP's have to inform me/I have to inform specialists about new developments within primary healthcare | 230/284 (81.0) | 284/325 (87.4) | p = 0.030 |
| Specialists have to retrain periodically | 338/340 (99.4) | 376/380 (98.9) | p = 0.494 |

Table 2: Overview of statements and answers of GP's versus specialists

Contact by telephone

Frequency of mutual telephone contacts between GPs and specialists is summarized in Table 3. In general, both GPs and specialists are inclined to contact each other; however, a minority of specialists (7.7%) contact GPs less than once in 3 months by telephone. Non-surgical specialists and surgeons sought contact by telephone more often than supporting specialists ($P < 0.001$). Specialists working in a general hospital have more contact by telephone than those working in a university hospital ($P < 0.001$). Longer practice experience ($P = 0.004$) and older age ($P < 0.001$) are positively associated with more contact by telephone, both among GPs and specialists. General practitioners working in rural areas have less contact by telephone than GPs working in urban areas ($P = 0.015$). General practitioners–trainers are

more likely to have at least once a week telephone contact with a specialist ($P < 0.001$). More than three quarters of GPs were satisfied with specialist telephone accessibility, while 94.1% of the specialists state to have good telephone accessibility. General practitioners telephone accessibility was considered satisfactory by most of the GPs and 89% of the specialists agreed. Older specialists and specialists with longer practice experience had a worse evaluation of GPs' accessibility ($P < 0.001$ and $P = 0.001$).

| | GP to specialist n = 343 | Specialist to GP n = 392 |
|----------------|-----------------------------|-----------------------------|
| > once /week | 130 (37.9) | 158 (40.3) |
| once/week | 131 (38.2) | 131 (33.4) |
| once/month | 66 (19.2) | 58 (14.8) |
| once/3 month | 13 (3.8) | 15 (3.8) |
| < once/3 month | 3 (0.9) | 30 (7.7) |
| Never | 0 (0) | 0 (0) |

Table 3: Frequency of mutual telephone contact between GP's (to specialists) and specialists (to GP's) ($p < 0.001$)

Written communication (correspondence)

More than half of the specialists rated the GPs' referral letter as of good quality. Almost 90% of the GPs thought that the specialist correctly addressed the question raised in the referral letter. Only half of the GPs thought that the specialist's report was delivered on time, while 81.8% of the specialists perceived this report to be provided within an appropriate time span ($P < 0.001$). Older age is associated with GPs agreement with the timeliness of the specialist's report ($P = 0.001$). Most GPs (85.4%) thought that the specialist's report was of good quality. General practitioners and specialists disagreed on whether GPs adequately followed specialist recommendations ($P < 0.001$): almost all GPs stated that they followed these correctly (95.4%), but only 83.3% of the specialists agreed. Surgeons agree more than the other disciplines (84/90; 93.3% vs. 85/112; 75.9% non-surgical specialists and 29/36; 80.6% supportive specialists, $P = 0.004$).

Both GPs and specialists advocated the introduction of a joint digital medical record (88.5 and 95.6%), with specialists significantly more in favor ($P = 0.001$). Female GPs and specialists agree more than their male colleagues (296/338; 87.6% vs 299/ 397; 75.3%, $P < 0.001$). General practitioners working in a solo practice agree less than the other groups (108/160; 67.5% vs 60/69; 87.0% twin practice and 100/112; 89.3% health centre, $P = 0.001$).

In GPs, female gender and availability of administrative support are associated with a preference for electronic correspondence, in contrast to longer length of practice. In specialists, self-employment and employment in a general hospital are associated with preferring electronic correspondence, in contrast to university hospital physicians (table 4).

| | GP's agree n = 343 | Specialists agree n = 392 | p-value |
|---|-------------------------------------|--|----------------|
| Fax | 16 (4.7) | 51 (13.0) | < 0.001 |
| Regular mail | 166 (51.6) | 200 (51.0) | 0.875 |
| Electronic | 314 (91.5) | 304 (77.6) | < 0.001 |
| Preference for electronic correspondence | GP's | Specialists | |
| Gender | | | 0.024 |
| Female | 144/157 (95.4) | | |
| Male | 170/192 (88.5) | | |
| Administrative support | | | < 0.001 |
| Yes | 153/157 (97.5) | | |
| No | 161/186 (86.6) | | |
| Length of practice experience | | | 0.002 |
| < 1 year | 31/31 (100.0) | | |
| 1-5 year | 47/47 (100.0) | | |
| 6-10 year | 38/38 (100.0) | | |
| 11-20 year | 58/65 (89.2) | | |
| > 20 year | 140/166 (84.3) | | |
| Self-employment | | | 0.043 |
| Yes | 146/175 (83.4) | | |
| No | 152/209 (72.7) | | |
| Place of employment | | | 0.014 |
| General hospital | 156/186 (83.9) | | |
| University hospital | 141/195 (72.3) | | |

Table 4: Preferred communication channels among GP's versus specialists and subanalyses for electronic correspondence (percentages between brackets)

Feedback

The majority of both GPs and specialists appreciated feedback (Table 5). More than half of GPs (197/343, 57.4%) and specialists (233/292, 79.8%) never or less than once in 3 months received feedback on their actions. In general, little feedback was given: more than half of the GPs and one-third of the specialists never gave feedback. Specialists gave more feedback than GPs ($P < 0.001$). Supportive specialists received the least feedback ($P = 0.041$); 39/82, 47.6% never received feedback versus 57/178, 32.0% among internal medicine specialists and 41/130, 31.5% among surgeons.

| | GP's n = 343 | Specialists n = 392 |
|---------------------------------------|-------------------------------|--------------------------------------|
| Receiving feedback (p = 0.391) | | |
| > once /week | 20 (5.8) | 28 (7.1) |
| once/week | 23 (6.7) | 23 (5.9) |
| once/month | 60 (17.5) | 65 (16.6) |
| once/3 month | 43 (12.5) | 43 (11.0) |
| < once/3 month | 100 (29.2) | 96 (24.5) |
| Never | 97 (28.3) | 137 (34.9) |
| Giving feedback (p < 0.001) | | |
| > once /week | 14 (4.1) | 47 (12.0) |
| once/week | 14 (4.1) | 34 (8.7) |
| once/month | 32 (9.3) | 54 (15.1) |
| once/3 month | 32 (9.3) | 35 (8.9) |
| < once/3 month | 77 (22.4) | 82 (20.9) |
| Never | 177 (50.7) | 135 (34.4) |

Table 5: Frequency of receiving and giving feedback among GP's versus specialists.

Exchange of professional expertise

Less GPs than specialists would like specialists to take active part in increasing GPs' expertise (Table 3). Similarly, less GPs than specialists would like GPs to educate specialists on new developments within primary healthcare. Both GPs and specialists massively agree on the need to retrain periodically (> 90% agreement on all statements).

DISCUSSION

This study investigated the subjective perception of GPs and hospital-based specialists of their mutual communication. It demonstrates several dissociations in the subjective perception of GPs and hospital-based specialists in Belgium regarding their mutual communication. The major dissociations include timeliness of specialist's written correspondence, the quality of referral letters and telephone accessibility of GP. On the other hand, GPs estimated their main questions as adequately dealt with by the specialists report but specialists perceived an incomplete GP uptake of recommendations.

Our results show that GPs sought more contact with specialists than vice versa. Most likely, this is because in Belgium, although not an obligation, many patients are referred to secondary care by their GP. Referral is probably the main reason for GPs to seek contact by telephone with the specialist. Through this fast communication channel, they can outline the situation, verify the appropriateness of the referral and arrange an appointment for the patient [10]. Supportive specialists have the least contact with GPs, probably because they receive information from other referring specialists rather than the GP and report on a specific question with less direct involvement in patient care and through other channels. Age and length of practice experience positively influenced the frequency of telephone contact: a larger and more 'familiar' professional network in older and more experienced doctors could increase referral rates [10, 11].

Differences were found in the frequency distribution of mutual telephone contact, in particular demonstrating a minority of specialists almost never using this communication modality. However, its true significance or relationship with mutual perception was not assessed. It may be speculated that optimal implementation of written communication may substitute for or render unimportant additional telephone contacts. Moreover, current new technologies such as secured e-mail and sharing medical information (lab results for example) through eHealth (eHealthbox) could also be used instead of, or in parallel to telephone contact [12].

Further, contradictory results were found about the perception of mutual accessibility. Both groups have a positive rating of their own accessibility, while they are not satisfied with the accessibility of the other group. A Dutch study found similar results: GP telephone accessibility is qualified as poor by specialists (32.8% agrees with 'GP can be easily reached'), while GPs consider their own telephone accessibility as good (73.3% agrees) [9]. It may be necessary to provide practical arrangements about how and when doctors are available and in this respect it could be beneficial to use separate telephone lines for colleagues and patients and to provide fixed time slots for telephone calls [13, 14]. Doctors limit their accessibility, fearing for an imbalance between work, because of interference with the regular work schedule and maybe because of lack of specific remuneration [13]. The Flemish government acknowledges GPs accessibility problems and therefore recently provides financial support to employ administrative personnel or to establish medical telesecretariats [15].

Just over half of the specialists think that the GPs referral letter is of good quality. In the Netherlands, only 29.1% of specialists rated these letters as of good quality [9]. Other studies have investigated the content of referral letters and indeed, these often lack important information such as current medication, medical history or test results [6, 16–19]. However, the specialist's letter could also be improved according to the GPs, especially in timeliness. The problem of tardiness of specialists in answer letters and discharge letters has been documented in other studies [2, 8, 17]. Sometimes, answer or discharge letters do not even reach GPs at all [20, 21].

Almost 20% of the specialists state that GPs do not follow their recommendations. This may have different explanations. Recommendations may lack clarity or applicability in the psychosocial setting of an individual patient [2, 9, 22]. This may reflect the difference between the pathology-based approach of a specialist consultant and the patient-centered or even increasingly person-focused approach within primary care. Individual factors may not allow to follow all specialist recommendations. This does not equate unwillingness to follow recommendations in primary care but may be perceived as such by specialists. A separate in-depth study is required to disentangle these different motives for seeming non-adherence [23, 24]. More surgeons stated that GPs follow their recommendations, probably because post-surgical follow-up is more standardized, embedded in acute perioperative care and potentially less a field of expertise to GPs.

The quality of referral or answer/discharge letters could be improved by the use of structured letters with pre-fixed items [2, 25–27] or peer review [28, 29]. General practitioners as well as specialists would favor the use of a joint electronic patient file. General practitioners are even more positively inclined towards electronic correspondence, probably because they are the coordinators of medical care and therefore would benefit from a clear, complete and comprehensive patient file.

However, there remain challenges for electronic patient files and their implementation. E-health takes too much time; the electronic environment could interfere with the patient-physician relationship (especially when the physician has poor interpersonal skills [30]); managing information overflow is difficult; patient privacy must be protected and coordination of care is not yet facilitated enough because current fee-for-service

reimbursement encourages the documentation of billable events and not of care coordination [31,32].

Feedback between GPs and specialists is rare, although both groups would like to receive more feedback. Specialists give more feedback, reflecting the traditional educational hierarchy between GPs and specialists [33]. It seems that there is some disagreement between GPs and specialists on what and how GPs want to learn, i.e. GPs want to receive directly applicable information in an informal problem-oriented manner [33].

Both groups think that specialists can play a role in the permanent education of GPs, while GPs' possibilities to educate specialists are slightly less supported. The answer/discharge letter could be a possible means of education of GPs by specialists [34, 35].

Findings of this study could be the basis for future research. Qualitative research methods could be applied to gain more information on the dissociations in the subjective perception of GPs and hospital-based specialists regarding their mutual communication. However, it could be useful to objectively monitor communication practices among GPs and specialists. As such, the relevance and magnitude of the dissociations could be measured and it allows a benchmark for improvement strategies.

STRENGTHS AND WEAKNESSES

Some limitations should be considered in this study. First, this is a Belgian study, and findings and recommendations may be specific for Belgian healthcare. Second, the subjective perception of doctors about communication may differ from reality. We did not evaluate the communication among GPs and specialists. Third, the response rate was rather low probably due to the high workload of GPs and specialists. Nevertheless, a considerable absolute number of GPs and specialists took part. Another strength relates to the use of separate questionnaires for GPs and specialists adapted to their setting (e.g. socio-demographic data and wording of the statements). This increased user-friendliness for the participants.

CONCLUSION

General practitioners and hospital-based specialists disagree on several aspects of their mutual communication. These include the perception of accessibility, in both directions, and of the timeliness of written communication. The latter represents the major negative perception in GPs.

Feedback is positively appreciated, again in both directions, but fails to be achieved. Furthermore, specialists have the perception of insufficient GP compliance with their recommendations.

Hence, there may remain significant room for improvement in communication between GPs and specialists.

References

- 1 Berendsen AJ, Groenier KH, de Jong GM, Meyboom-de Jong B, van der Veen WJ, Dekker J, et al. Assessment of patient's experiences across the interface between primary and secondary care: consumer quality index continuum of care. *Patient Educ Couns.* 2009;77:123-7.
- 2 Kripalani S, LeFevre F, Phillips CO, Williams MV, Basaviah P, Baker DW. Deficits in communication and information transfer between hospital-based and primary care physicians: implications for patient safety and continuity of care. *JAMA.* 2007;297:831-41.
- 3 Francois J. Tool to assess the quality of consultation and referral request letters in family medicine. *Can Fam Physician.* 2011;57:574-5.
- 4 Starfield B, Shi L, Macinko J. Contribution of primary care to health systems and health. *Milbank Q.* 2005;83:457-502.
- 5 Agarwal R, Sands DZ, Schneider JD. Quantifying the economic impact of communication inefficiencies in U.S. hospitals. *J Healthc Manag.* 2010;55:265-281, [discussion 81-82].
- 6 Durbin J, Barnsley J, Finlayson B, Jaakkimainen L, Lin E, Berta W, et al. Quality of communication between primary healthcare and mental healthcare: an examination of referral and discharge letters. *J Behav Health Serv Res.* 2012;39:445-61.
- 7 Epstein RM. Communication between primary care physicians and consultants. *Arch Fam Med.* 1995;4:403-9.
- 8 Farquhar MC, Barclay SI, Earl H, Grande GE, Emery J, Crawford RA. Barriers to effective communication across the primary/secondary interface: examples from the ovarian cancer patient journey (a qualitative study). *Eur J Cancer Care (Engl).* 2005;14:359-66.
- 9 Berendsen AJ, Kuiken A, Benneker WH, Meyboom-de Jong B, Voorn TB, Schuling J. How do general practitioners and specialists value their mutual communication? A survey. *BMC Health Serv Res.* 2009;9:143.
- 10 Hollins J, Veitch C, Hays R. Interpractitioner communication: telephone consultations between rural general practitioners and specialists. *Aust J Rural Health.* 2000;8:227-31.
- 11 Franks P, Williams GC, Zwanziger J, Mooney C, Sorbero M. Why do physicians vary so widely in their referral rates? *J Gen Intern Med.* 2000;15:163-8.
- 12 2014. platform e. Beveiligde elektronische brievenbus (Secured electronic mailbox) (eHealthBox)
- 13 Wong RK, Tan JS, Drossman DA. Here's my phone number, don't call me: physician accessibility in the cell phone and email era. *Dig Dis Sci.* 2010;55:662-7.
- 14 Wadhwa A, Lingard L. A qualitative study examining tensions in interdoctor telephone consultations. *Med Educ.* 2006;40:759-67.
- 15 Health AfCa. Support for GP's. 2015.
- 16 Carney SL. Medication accuracy and general practitioner referral letters. *Intern Med J.* 2006;36:132-4.
- 17 Gandhi TK, Sittig DF, Franklin M, Sussman AJ, Fairchild DG, Bates DW. Communication breakdown in the outpatient referral process. *J Gen Intern Med.* 2000;15:626-31.
- 18 Jenkins RM. Quality of general practitioner referrals to outpatient departments: assessment by specialists and a general practitioner. *Br J Gen Pract.* 1993;43:111-3.
- 19 Garasen H, Johnsen R. The quality of communication about older patients between hospital physicians and general practitioners: a panel study assessment. *BMC Health Serv Res.* 2007;7:133.
- 20 Wilson S, Ruscoe W, Chapman M, Miller R. General practitioner-hospital communications: a review of discharge summaries. *J Qual Clin Pract.* 2001;21:104-8.
- 21 Mageean RJ. Study of "discharge communications" from hospital. *Br Med J.* 1986;293:1283-4.
- 22 Tattersall MH, Butow PN, Brown JE, Thompson JF. Improving doctors' letters. *Med J Aust.* 2002;177:516-20.
- 23 De Maeseneer J, Boeckxstaens P. James Mackenzie Lecture 2011: multimorbidity, goal-oriented care, and equity. *Br J Gen Pract.* 2012;62:e522-4.
- 24 Boyd CM, Darer J, Boulton C, Fried LP, Boulton L, Wu AW. Clinical practice guidelines and quality of care for older patients with multiple comorbid diseases: implications for pay for performance. *JAMA.* 2005;294:716-24.
- 25 Melville C, Hands S, Jones P. Randomised trial of the effects of structuring clinic correspondence. *Arch Dis Child.* 2002;86:374-5.
- 26 Rawal J, Barnett P, Lloyd BW. Use of structured letters to improve communication between hospital doctors and general practitioners. *BMJ.* 1993;307:1044.
- 27 Ray S, Archbold RA, Preston S, Ranjadayalan K, Suliman A, Timmis AD. Computer-generated correspondence for patients attending an open-access chest pain clinic. *J R Coll Physicians Lond.* 1998;32:420-1.
- 28 Jiwa M, Walters S, Mathers N. Referral letters to colorectal surgeons: the impact of peer-mediated feedback. *Br J Gen Pract.* 2004;54:123-6.
- 29 Keely E, Myers K, Dojeji S, Campbell C. Peer assessment of outpatient consultation letters - feasibility and satisfaction. *BMC Med Educ.* 2007;7:13.
- 30 Frankel R, Altschuler A, George S, Kinsman J, Jimison H, Robertson NR, et al. Effects of exam-room computing on clinician-patient communication: a longitudinal qualitative study. *J Gen Intern Med.* 2005;20:677-82.
- 31 Bodenheimer T, Grumbach K. Electronic technology: a spark to revitalize primary care? *JAMA.* 2003;290:259-64.
- 32 O'Malley AS, Grossman JM, Cohen GR, Kemper NM, Pham HH. Are electronic medical records helpful for care

coordination? Experiences of physician practices. *J Gen Intern Med.* 2010;25:177-85.

33 Marshall MN. Qualitative study of educational interaction between general practitioners and specialists. *BMJ.* 1998;316:442-5.

34 Gagliardi A. Use of referral reply letters for continuing medical education: a review. *J Contin Educ Health Prof.* 2002;22:222-9.

35 Westerman RF, Hull FM, Bezemer PD, Gort G. A study of communication between general practitioners and specialists. *Br J Gen Pract.* 1990;40:445-9.

Chapter 5

Job satisfaction in relation to communication in healthcare among nurses: a narrative review and practical recommendations

Peter Vermeir

Sophie Degroote

Dominique Vandijck

An Mariman

Myriam De Veugele

Renaat Peleman

Rik Verhaeghe

Bart Cambré

Dirk Vogelaers

Accepted for publication in Sage Open

5. Job satisfaction in relation to communication in healthcare among nurses: a narrative review and practical recommendations

ABSTRACT

Worldwide, nurse shortage and high turnover rates are observed. Job satisfaction is a major determinant of retention and is influenced by intra-organizational communication and perceived communication satisfaction. This article presents a narrative review on communication satisfaction, job satisfaction and their mutual relationship as well as their impact on turnover intention and burnout risk in the nursing profession. A literature search was conducted in the databases PubMed, Web of Science and The Cochrane Library and 47 articles were included. Descriptive analysis identified different types of social networks in the healthcare workplace. There is a positive association between communication and job satisfaction among nurses, translating into decreased turnover intention and burnout risk.

Job satisfaction is required both for organizational stability as for co-guaranteeing patient safety. This will be best achieved through an organization-wide multimodal prevention and intervention program, aimed at optimizing different modalities of interprofessional communication, workload and job satisfaction.

Keywords: *burnout, communication, work satisfaction, interpersonal communication, patient safety.*

INTRODUCTION

Measures of effectiveness in nursing, such as job satisfaction, job performance and turnover, have been the focus of nursing-related research for the last 30 years. Such research has largely been driven by the need for hospitals to become increasingly competitive, often in response to a restriction of resources, creating new challenges in the workplace. Within the context of a worldwide nurse shortage and high turnover rates [1-4], improving nursing effectiveness remains an important goal [5, 6]. This global shortage is associated with a loss of experienced nurses, periods of poor staffing and overtime for remaining nurses, increased costs of recruitment and orientation of new nurses, and, most importantly, a potential increase in adverse patient outcomes [7]. Job satisfaction has been identified as a major determinant of nurse retention and performance [1]. Moreover, job satisfaction is influenced by the quality of intra-organizational communication and perceived communication satisfaction at different levels and for all types of employees within the organization.

AIMS

We aimed to perform a narrative literature review on job satisfaction in relation to communication satisfaction, with a specific focus on nursing professionals in hospitals.

METHODS

The databases PubMed, Web of Science and The Cochrane Library were searched using the keywords: 'communication', 'patient safety', 'job satisfaction', 'burnout', 'communication satisfaction', 'nursing' and 'nurse turnover'. The keywords were internally validated by the co-authors. Articles in this review needed to be 1) published between January 1st 1985 and October, 31st 2015 2) available as a full text in English 3) fall into one of the following categories: original research, reviews, meta-analyses or letters to the editor. Database screening was closed on November 26th 2015. Titles and abstracts were reviewed to verify inclusion criteria. If all inclusion requirements were present or if this remained unclear, the articles were fully read. If the full text revealed that all requirements were not met, the paper

was excluded. Additional literature was obtained through searching references in the manuscripts (snowball method).

A framework with five categories was predefined: inter-professional communication in healthcare, deficits in communication and influence on patient safety, communication satisfaction, job satisfaction and nurse turnover or burnout, and, finally, recommendations. Each individual paper could also be categorized into different fields. When conducting the review, each category was addressed separately and all articles relevant for a particular category were reread.

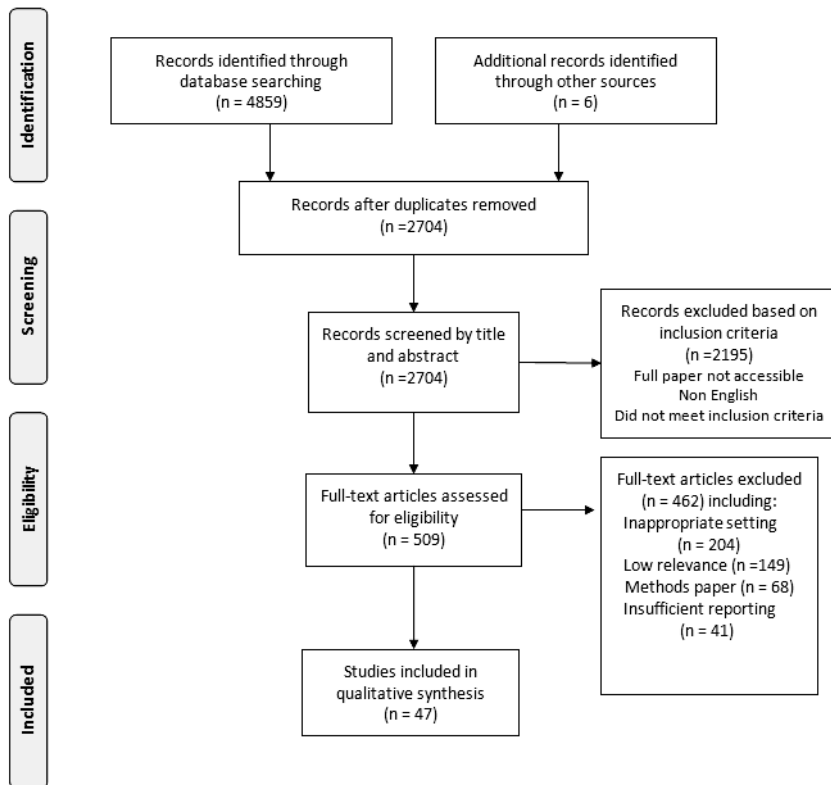


Figure 1: Review stages based on PRISMA flow diagram

RESULTS

The results of the search process are summarized in a PRISMA flow diagram (Figure 1). Out of a total of 4865 papers selected, 2161 duplicates were removed. 2704 records were screened, of which 509 remained for full-text reading. Of the 509, 47 articles were included in the review.

Interprofessional communication in healthcare

Within healthcare, much like any other work context, the behavior of each individual is influenced by the surrounding social network. This social network is important for the dissemination of information. Social networks are advantageous for people's career and job performance [6, 8].

Van Beek distinguishes three types of social networking in an organization: communication-, consulting- and trust networks [8]. The communication network consists of employees who discuss work-related issues on a regular basis. The advice or consulting network includes employees who are invoked to solve problems and exchange information. The trust network describes those who share and receive delicate or sensitive information in problem situations.

These networks are important for the provision of quality care to the patient. In this paper, we focus on the communication networks. Such networks are strongly related to job satisfaction. Nurses working in units with a close communication network are more satisfied with their work. In units with few employees, nurses are more likely to be satisfied with their work compared to units with many employees [8]. The quality of both communication and advice networks was negatively related to the number of nursing staff on units. Multilevel analyses showed that job satisfaction differed significantly between individual staff members and units and was influenced by the number of nursing staff.

Communication and advice networks were denser when more staff worked part-time. Furthermore, density of communication networks related positively to the age of the nursing staff.

The healthcare team is an intact group of caregivers who are motivated to communicate with each other about the care of the patients they are entrusted with. Poole & Real subdivided such care teams with regard to their purpose and function [9]. First, the ad hoc team is made up for a restricted period in order to solve a problem, after which it disappears. Second,

within a nominal care team, patients are referred by GPs to specialists and both offer independent care. Third, a unidisciplinary team consists of members of a single discipline. Fourth, a multidisciplinary team is composed of different disciplines working together, but the care they offer is sequential. Fifth, an interdisciplinary team is again composed of different disciplines, this time working interdependently, i.e., they work and communicate together about the patient’s care. Finally, in transdisciplinary teams this interdependent collaboration between different disciplines allows caregivers to transcend competencies in their own field and to benefit from the skills of the other disciplines involved the collaboration. These teams each have their own particular forms of communication. For caregivers, it is important to be able to identify with a type of team in order to know what the best way to communicate and to work efficiently and effectively is [9-13]. Nurses can belong to different types of teams with their particular modalities and requirements of communication.

To better understand communication within healthcare teams, the input-process-output (IPO) model of communication in care teams was developed and derived from the group perspective [9]. This ‘group dynamics perspective’ conveys understanding of how and why caregivers interact in certain ways and clarifies how teams function. The model describes communication structures (inputs) and processes. These in turn create outputs that can affect the results of the care teams [9, 10].

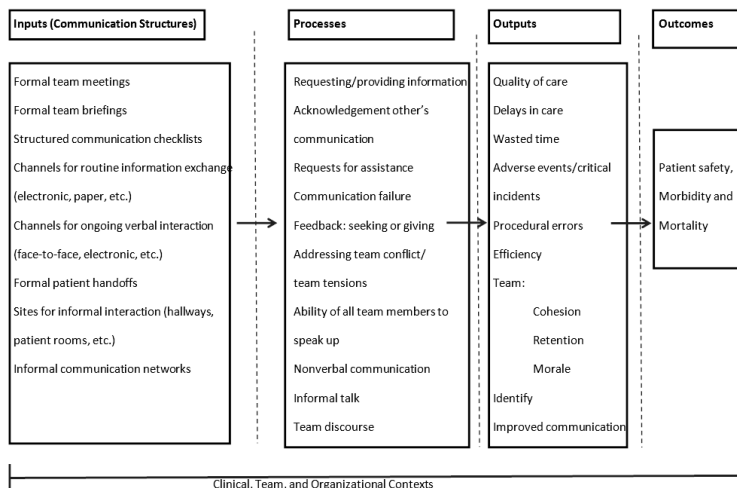


Figure 2: Input/Process/Output Model of Communication in Healthcare Teams [9]

Within healthcare teams deficient communication can arise from critical information not being communicated between team members, from conflicting relationships or a lack of clarity on roles and job descriptions. Misinterpretation of information can be caused by the use of different terminology or the provision of incomplete information. Although medical care is delivered by multiple team members, medical quality and safety has historically been centered on the performance of individual expert practitioners. Effective communication and teamwork is assumed, however formal training and assessment in these areas has been largely absent or underdeveloped. Recognition that the clinical care environment has become progressively more complex, combined with the inherent limitations of human performance, has spurred interest in applying the lessons of other high reliability industries to medicine. Many factors contribute to communication failures, which are the leading cause of inadvertent patient harm [14]. First and foremost, doctors and nurses are trained to communicate quite differently [15, 16]. Nurses are taught to be rather broad and narrative in their descriptions of clinical situations, whereas physicians need to be very concise, and quickly get to the “headlines”. Nurses often report that they are told during their education that they “don’t make diagnoses”. So in mutual contacts the doctors impatiently “wait to find out what the nurses want” [17]. In addition, the hierarchy within the team can also cause disturbances in communication. Leadership with strong authority often leads to less communication within the team. In contrast, leadership that is able to handle the hierarchy appropriately, by creating a trustworthy and secure environment, ensures faster communication and more participation within the team [18]. Inadequate or incorrect information during a shift handover may also cause communication problems. A final potential risk area for miscommunication involves any transfer of the patient from one care point to the other [19].

Deficits in communication and influence on patient safety

Effective communication and teamwork are essential to provide high-quality care and patient safety [20]. Poor communication can lead to various negative outcomes, such as discontinuity of care and compromise of patient safety. The complexity of medical care along with the limitations of human action reinforces the importance of standardized communication and a secure environment, in which team members can express their concerns about patient safety. In such an environment, members can speak freely and critical language can be used to create alertness and to avoid confusion [10, 18, 21].

Inter-professional teamwork is achieved by the interactive efforts of all team members involved through good communication and respect for the role of the other team members. There should be room for the contribution of each team member. Not only the technical skills of the team, such as knowledge and experience, contribute to improving patient safety; non-technical skills, such as communication, team size, the psychological mind-set and the way the team is run, can affect team performance. Despite the increased emphasis on these non-technical skills, communication problems remain a frequent cause of reduced patient safety [10, 18, 22, 23].

Communication takes place within and between systems, as exemplified in inpatient, transmural and outpatient care and within the chain of pre-, intra- and post-operative care. Communication may involve a large group of people such as surgeons, nurses, support staff, anaesthesiologists, etc... and include a range of critical issues, such as patient status, intraoperative events and care plan. Most communication deficits occur within a single department, but can also occur between departments and between different institutions. The majority of errors in communication result from verbal communication. Reducing the number of communication errors could significantly reduce the number of medical errors and hence increase patient safety [4, 17, 19, 24].

Medical errors, especially those caused by communication failures, are a pervasive problem in today's healthcare organizations. Studies in the surgical domain illustrate the prevalence of communication deficiencies in the perioperative period. In an observational study of 48 surgical cases with 421 identified communication events, one third were classified as "failures" [19].

An analysis by the Joint Commission for Hospital Accreditation showed that 70% of 2455 accidents in healthcare were caused by defective and faulty communication within a team [18]. Medical errors are predominantly the consequence of a system failure and cannot be reduced to an individual mistake. The majority of errors are made in high risk environments such as the trauma setting [22]. In the past, patient risks were attributed to the extent of the disease, comorbidities and the difficulty of the procedure, with negligible focus on the role of caregivers. In the past decade, this viewpoint has changed. With the growing importance of patient safety, the influence of the healthcare provider on health outcomes is emphasized. Experts argue that the quality of communication between healthcare providers and the environment determines medical errors [19]. These errors have the potential to cause severe

injury or unexpected patient death. In addition, communication problems have an economic impact and may result in decreased access to care [10, 18, 25].

Communication and communication satisfaction

In non-healthcare settings, communication has been studied as a contributor to job satisfaction and job performance [5]. By performing a factor analysis, Downs and Hazen [6] identified eight dimensions of 'communication satisfaction': (1) communication climate (general satisfaction with the communication environment), (2) supervisor communication, (3) media quality, (4) horizontal communication, (5) organizational integration (information relevant to performing job), (6) personal feedback, (7) organizational perspective (information about organization as a whole) and (8) subordinate communication (for supervisors only). Their 'Communication satisfaction questionnaire' is based on these dimensions. Two studies [5, 26] identified the first, second and sixth dimension as the strongest predictors of job satisfaction. The other dimensions were also associated with job satisfaction. Only the second and sixth dimensions were associated with job performance [5].

This positive association between communication satisfaction and job satisfaction has been demonstrated among nurses as well [27-30]. Communication satisfaction with one's supervisor has been shown to be associated with greater organizational commitment [28, 31], which in turn, is related to the prevention nursing turnover [32].

Job satisfaction, intention to leave and burnout

It is clear that communication impacts job satisfaction and that job satisfaction impacts nurses' turnover. Low job satisfaction can lead to a high turnover, which negatively influences quality of care. Moreover, this causes extra recruitment and training costs for the organization [28]. Furthermore, patient satisfaction is also influenced by nurses' job satisfaction. Specifically, high job satisfaction is associated with higher motivation, which in turn is associated with higher patient satisfaction about received care [33].

According to Maslow's needs theory, job satisfaction can be defined as a form of need fulfillment, as the match of personal needs to the perceived potential of the job for satisfying those needs or to the perception of rewards associated with the job. In contrast, Herzberg and Mausner's motivation-hygiene theory rather defines it as 'a function of satisfaction with the various elements of the job'. Each person experiences job satisfaction differently. This is highly dependent on intrinsic and extrinsic attributes. Concrete examples of intrinsic factors

are receiving recognition for one's work, responsibility, ability to make decisions, challenges, performances and self-actualization. Extrinsic factors include the behavior of executives, wages, organizational culture, working conditions (including sufficient time to perform tasks) and safety in the workplace [34]. In the theory of Spector, lastly, the focus is on the cognitive process: 'the affective orientation of an employee towards his job'. This can be seen as a global feeling, or rather as a related configuration of attitudes about different aspects of the job (e.g. appreciation, job conditions, pay, security, personal growth and communication) [14, 35].

Among nurses, intrinsic factors are especially important [28]. Nurses get their motivation from protecting the patients' lives and helping them to stay or to become healthy [12]. A review of the literature on job satisfaction among nurses revealed that interaction (with patients, colleagues and managers) is another important source of job satisfaction [36]. Adams and Bond observed that although nurses want autonomy, they also require the support of good interpersonal relationships [37]. Some studies focused on the importance of a good interaction with the management [38]. Probst et al observed that job satisfaction increases when supervisors communicate clearly, provide clear instructions and show appreciation for the nurses' work [28]. Others highlight the importance of good co-worker relationships [38, 39]. A meta-analysis of quantitative studies of nurses' job satisfaction dating from 1993 revealed, however, only moderate correlations between job satisfaction and communication with supervisors and peers [32]. Thirteen variables were frequently examined with relation to job satisfaction. Four of these were personal attributes or personality traits e.g., age, education, years of experience, and locus of control. The other nine were organizational features or job attitudes: stress, commitment, supervisor communication, autonomy, recognition, routinization, peer communication, fairness and professionalism. The variables exhibiting the strongest relationship with job satisfaction (correlation coefficients between brackets) were stress (.61) and commitment (.53). The following five variables were moderately related to job satisfaction. These were communication with supervisor (.45), autonomy (.42), recognition (.42), routinization (.41) and communication with peers (.36). Variables with small to moderate relationships were fairness (.30) and locus of control (.28). Age (.13), years of experience (.09), education (.07) and professionalism (.06) displayed limited correlations with job satisfaction.

A more recent cross-sectional study confirms that a high workload (due to low staffing) is related to stress, which in turn negatively related to job satisfaction [26]. In this study almost

50% of nurses were overworked, unsatisfied with their salaries, and experienced limited autonomy as well as inadequate communication with superiors. In another study, seven factors related to nurses' job satisfaction were identified: the ability to specialize in one's work, safety at work, relations with supervisors, work-life balance, relationships with other nurses, communication and wages [40]. Overall, this suggests that in order to retain nurses in their jobs there is a need for hospitals and government authorities to strive to implement strategies which decrease workload and empower nurses to control their practice. The formulation of such strategies requires insights into the mechanisms of job (dis)satisfaction.

The 'met expectations theory' is often used to explain job (dis)satisfaction. This theory states that individuals have certain expectations of a job. When these expectations are not met, individuals experience dissatisfaction [41]. However, this theory does not explain all the possible consequences of job dissatisfaction, such as staff turnover and turnover intention. Hence, a conceptual model explaining the relationships between job dissatisfaction and staff turnover is useful [42].

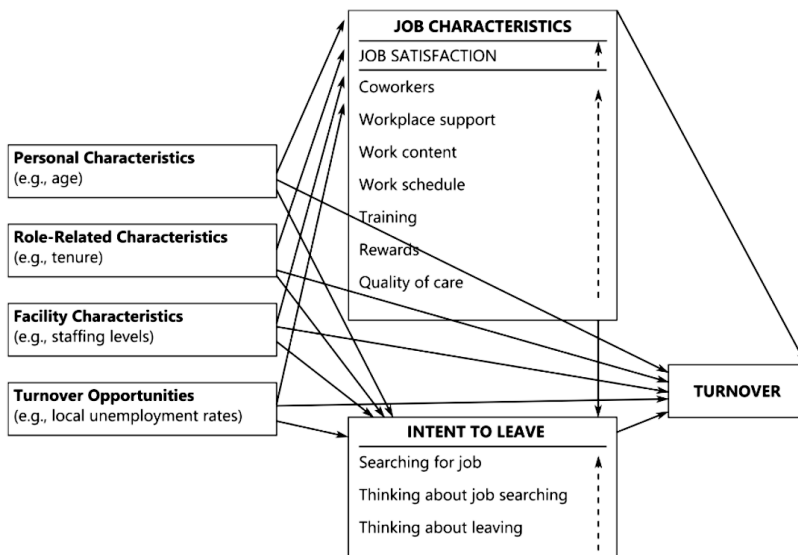


Figure 3: Proposed model for examining intent to leave and turnover of nurse aides [42]

According to this model, turnover intention is influenced by personal characteristics (age and gender), role-related characteristics, facility characteristics (staff level) and opportunities to change jobs. These four factors can influence job characteristics and intent to leave. The turnover intention consists of three phases: thinking about leaving, thinking about looking

for another job and actually looking for another job. In each phase, the turnover intention increases. In reality, nurses first experience job dissatisfaction and then proceed to these three phases [40, 42, 43].

Several studies measured the impact of job satisfaction on intention to leave and burnout. Cavanagh and Coffin have found that job satisfaction and job participation are important variables in the turnover process, and job satisfaction was correlated with intent to stay ($r=0.34$, $p<0.05$) [44]. A later study found an even higher correlation coefficient ($r=0.48$, $p<0.005$) between the two measures [43]. A meta-analysis in 2002 [40] identified job dissatisfaction as one of the strongest factors related to nurse turnover. Two more recent studies confirm this [12, 42]. Unsatisfied nurses reported to be strongly committed to the quality of care, which may be hampered by the experience of high workload [42, 45]. Kudo et al found that the relationship with supervisors is a crucial factor in job turnover. In addition, older nurses were less likely to leave the organization because they have acquired more responsibility, more involvement and more competencies to cope with problems [12].

Job dissatisfaction is also associated with burnout among healthcare staff [46, 47]. Burnout is a state of fatigue or frustration resulting from professional relationships that failed to produce the expected rewards [47, 48]. Job dissatisfaction has been found to be associated with each of the three dimensions of burnout, namely emotional exhaustion, depersonalization and diminished personal accomplishment [47, 48].

In 2012, an international study on patient safety, satisfaction and quality of care, [14], including 61.168 nurses, from the U.S. and Europe, showed high levels of job dissatisfaction, turnover intention and burnout. High rates of nurse burnout were found (ranging from 10% in the Netherlands to 78% in Greece), job dissatisfaction (ranging from 11% in the Netherlands to 56% in Greece), and intention to leave (ranging from 14% in the US to 49% in Finland and Greece). Among Belgian nurses in this sample, one quarter (730/2938) reported feeling burned out, 22% (630/3159) were dissatisfied with their job (ranking fifth on both parameters within the 13 European countries in this report). Even more nurses, 30% (934/3164) intended to leave their job in the next year.

Recommendations for improvement of communication and communication satisfaction as a prerequisite for increased job satisfaction

In order to prevent these negative outcomes described, inter-professional education which focuses on helping teams to communicate in appropriate and effective ways, is needed [10, 18, 24, 44].

“Team Strategies and Tools to Enhance Performance and Patient Safety”, abbreviated as TeamSTEPPS is an inter-professional communication training model widely used within health teams. This model was developed on the basis of empirical evidence and is the result of a collaboration between the U.S. Department of Defence (as part of their patient safety program) and the agency for healthcare, research and quality. The TeamSTEPPS program consists of three phases. The first step consists of an assessment of the communication needs. Second, training and exercises are performed in a controlled and simulated environment. In the final phase, the training program is implemented and maintained in the work situation [49].

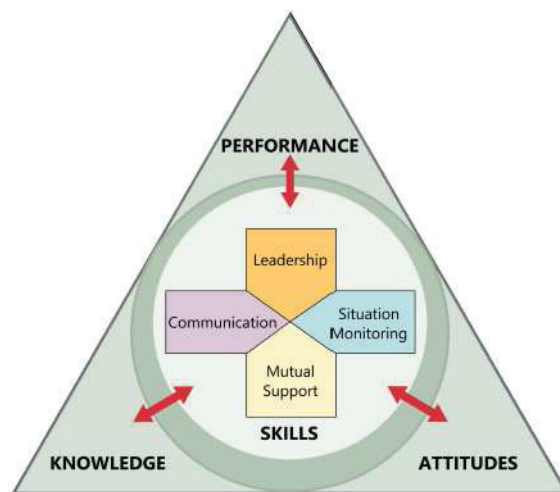


Figure 4: Team strategies and Tools to Enhance Performance and Patient Safety communications model [49]

Through this program, the competencies of leadership, situation monitoring, mutual support and communication, can be acquired. The training aims to increase mutual respect within a team and to improve the ability to act safely, regardless of the function or role within the team [49]. The effectiveness of this method was evaluated in 306 fourth-year medical, third-year nursing, second-year pharmacy and second-year physician assistant students with 149

students completing a 4 hour training with pre- and post- intervention assessments. The study demonstrated positive attitudinal and knowledge effects in a large-scale interprofessional TeamSTEPPS-based training involving these four student professions. Significant improvements were found for attitudes toward team communication ($p<0.001$), motivation ($p<0.001$), advocating for patients ($p<0.001$), utility of training ($p<0.001$) and self-efficacy ($p=0.005$). Significant attitudinal shifts for TeamSTEPPS skills included team structure ($p=0.002$), situation monitoring ($p<0.001$), mutual support ($p=0.003$) and communication ($p=0.002$) [10, 49]. TeamSTEPPS has been successfully adapted and used to improve patient safety through team training. The evidence indicates that team training increases communication and reduces error. Building a patient safety infrastructure helps sustain teamwork [49].

The errors committed by one or more team members need to be discussed openly and minimization needs to be avoided. This is not always guaranteed. Nevertheless, within the healthcare culture, the emphasis lies on quality of care and delivery of flawless performance. Learning from errors should become more embedded in healthcare delivery. If errors cannot be openly discussed, individuals experience stress and fatigue resulting in impaired memory and a limited ability to multitask [32].

According to Greenberg et al., three interventions exist to reduce communication errors [19]. The first is described as 'a set of triggers' (table 1). When a trigger from this list occurs, a nurse, or other team member involved in the care of the patient, is required to communicate the event with their colleagues. A second method is the use of a "read-back". This is the repetition of a previously written message, used for confirmation. Finally, protocols for shift handover and transfers are seen as a means to reduce communication deficits.

Leonard et al. consider the SBAR structure as a solution for such communication problems [18]. SBAR stands for Situation, Background, Assessment and Recommendation. 'Situation' examines what happens to the patient, 'background' investigates the clinical background of the patient, 'assessment' analyses the problem and 'recommendation' determines how the team could resolve the situation. By combining these four descriptions, a short and clear overview of the situation is given, and another caregiver can respond quickly. Leonard et al. also stress the importance of debriefing to avoid miscommunication and to increase patient safety [18]. Following a procedure or at the end of the day, a brief discussion is held on what

the team did well, what challenges arose and what should be handled differently the next time. A debriefing provides an opportunity to learn, for both the individual and the team.

| Change in location of patient | Patient visit to the emergency department Serious event | Staff concern |
|--|--|--|
| <ul style="list-style-type: none"> ▪ Admission or discharge from the hospital ▪ Transfer into or out the ICU | <ul style="list-style-type: none"> ▪ Unplanned intubation or ventilator support ▪ Cardiac arrest, new arrhythmia, or hemodynamic instability ▪ Development of substantial neurological changes ▪ Development of major wound complications ▪ Unplanned blood transfusion ▪ Medication or treatment errors requiring clinical intervention ▪ Invasive procedure or operation (by any service) | <ul style="list-style-type: none"> ▪ Concern by a trainee that a situation is more complicated than he can manage ▪ Request by nursing or another physician or family member that attending surgeon be contacted |

Table 1: Proposed Triggers Prompting Communication with the attending surgeon Currently Responsible for the Patient [19]

DISCUSSION

Job satisfaction is a complex phenomenon, as evidenced by the many related factors identified in the studies discussed. Hence, an organization cannot expect to achieve a significant impact with a single targeted intervention, which is not embedded in a multilevel strategy. Our recommendations on interventions and strategies are formulated in 'Relevance for clinical practice'.

This article presents a comprehensive review of the literature on job satisfaction in relation to communication among nurses and provides a multidimensional overview of this important topic. During the literature search across a number of databases, a vast amount of articles were screened. A limitation of this review is that it has not taken cultural and social contextual factors into account which may also influence job satisfaction.

Several recommendations can be drawn from the present literature review. They can be grouped into three clusters, namely addressing educational, psychological or organizational factors.

1) Recommendations addressing educational factors

- Implement simulation training of interprofessional teams as a first step in establishing improved communication skills within practicing clinical teams.
- Pay particular attention to situations that are especially vulnerable for or prone to communication breakdown, such as handoffs and transfers in care. These can be dealt with through trigger- or check-list structured protocolized approaches.
- Embed standardized tools and behaviors into the care process, such as the SBAR method (situation, background, assessment and recommendation), in order to improve safety. Many of the lessons demonstrating the value of such communication techniques have been learned in other high reliability industries over the last few decades, and they offer a valuable resource that can be adopted to present day medical care.

2) Recommendations addressing psychological factors

- Underline the importance of the psychosocial work environment and the relationship between burnout, role conflict, job satisfaction and psychosomatic health (problems) in healthcare staff.
- Acknowledge that cultural change is at the heart of this quest. This requires transforming care from the culture of the individual expert physician to a truly collaborative team environment. Differences in communication styles between physicians, nurses, and others hamper this aim. The complexity of the care system necessitates a change towards a culture of open communication and collaboration. Such change is essential for safeguarding clinical outcomes.
- Strive to improve work motivation by creating proper work environments that enhance autonomy and enable nurses to work as specialists. Work motivation can be increased by showing appreciation for work performed well. It is crucial that appreciation is expressed by both the general management as well as the direct leadership of nurse managers, who play a crucial intermediary role at the ward level.

3) Recommendations addressing organizational factors

- Acknowledge that improvements in this field should be a priority. The implementation of interventions which focus on the intrinsic values of nurses' can help to prevent job burnout, increase job satisfaction and reduce turnover. Information on the psychosocial work climate is necessary to provide a basis for such interventions. From a practical perspective, the issues addressed are central to changes in management practices in hospitals which should be an integrated part of ongoing reform.
- Create and maintain a work environment in which participative management thrives. This can be achieved by increasing empowerment, while reaffirming and strengthening the role as well as the skills of nurse leaders. Spur team development activities ensuring that team members value the importance of shared responsibility, communication, and collective decision-making, and have a good understanding of their respective roles.
- Aim to identify the factors involved within the particular organization and explore their relation with job satisfaction in order to support the development of management interventions.
- It is imperative that hospital management acknowledge the relevance of enhancing job and communication satisfaction to clinical practice and organizational integrity. Half of the nurses indicated being overworked and exhibited a risk profile for burnout and mistakes, in turn compromising patient safety. Management must provide positive leadership and understand the local issues that affect nurses in order to enhance nurse retention, reduce intention to leave and avoid nurse shortage.

In conclusion, this narrative review explored determinants of effective organizational communication and communication satisfaction, and the extent to which communication satisfaction and job satisfaction are related among nurses. Both are the result of a complex and multifactorial interaction, involving both internal and external factors. Job dissatisfaction is a reliable predictor of burnout and turnover intention. Achieving a balance is important for enabling job satisfaction which is required for both organizational stability and for guaranteeing patient safety. This can only be achieved through an organization wide

multimodal prevention and intervention program which aims to optimise different modalities of inter-professional communication, workload and job satisfaction.

References

- 1 Hayes LJ, O'Brien-Pallas L, Duffield C, Shamian J, Buchan J, Hughes F, et al. Nurse turnover: a literature review. *International journal of nursing studies*. 2006 Feb;43(2):237-63.
- 2 Kingsma M. Nursing migration: global treasure hunt or disaster-in-the-making? *Nursing Inquiry*. 2001;8:205-2012.
- 3 Schiestel C. Job satisfaction among Arizona adult nurse practitioners. *Journal of the American Academy of Nurse Practitioners*. 2007 Jan;19(1):30-4.
- 4 Gandhi S, Sangeetha G, Ahmed N, Chaturvedi SK. Somatic symptoms, perceived stress and perceived job satisfaction among nurses working in an Indian psychiatric hospital. *Asian journal of psychiatry*. 2014 Dec;12:77-81.
- 5 Pincus JD. Communication: key contributor to effectiveness—the research. *The Journal of nursing administration*. 1986 Sep;16(9):19-25.
- 6 Wagner JD, Bezuidenhout MC, Roos JH. Communication satisfaction of professional nurses working in public hospitals. *Journal of nursing management*. 2014 Aug 11.
- 7 Larrabee JH, Janney MA, Ostrow CL, Withrow ML, Hobbs GR, Jr., Burant C. Predicting registered nurse job satisfaction and intent to leave. *The Journal of nursing administration*. 2003 May;33(5):271-83.
- 8 van Beek AP, Wagner C, Spreeuwenberg PP, Frijters DH, Ribbe MW, Groenewegen PP. Communication, advice exchange and job satisfaction of nursing staff: a social network analyses of 35 long-term care units. *BMC health services research*. 2011;11:140.
- 9 Real K, Poole MS. Healthcare teams: Communication and effectiveness. In: Hompson TL, Parrott R, Nussbaum JF, editors. *The Routledge Handbook of Health Communication* (2nd ed). London: Routledge; 2011. p. 100-16.
- 10 Brock D, Abu-Rish E, Chiu CR, Hammer D, Wilson S, Vorvick L, et al. Interprofessional education in team communication: working together to improve patient safety. *BMJ quality & safety*. 2013 May;22(5):414-23.
- 11 Iseke A. The Part-Time Job Satisfaction Puzzle: Different Types of Job Discrepancies and the Moderating Effect of Family Importance. *Brit J Ind Relat*. 2014 Sep;52(3):445-69.
- 12 Kudo Y, Kido S, Shahzad MT, Shida K, Satoh T, Aizawa Y. Enhancing work motivation for Japanese female nurses in small to medium-sized private hospitals by analyzing job satisfaction. *The Tohoku journal of experimental medicine*. 2010 Mar;220(3):237-45.
- 13 Liu YE, While A, Li SJ, Ye WQ. Job satisfaction and work related variables in Chinese cardiac critical care nurses. *Journal of nursing management*. 2015 May;23(4):487-97.
- 14 Aiken LH, Sermeus W, Van den Heede K, Sloane DM, Busse R, McKee M, et al. Patient safety, satisfaction, and quality of hospital care: cross sectional surveys of nurses and patients in 12 countries in Europe and the United States. *Bmj*. 2012;344:e1717.
- 15 Debra L. The relationship between primary healthcare practitioners' job satisfaction and characteristics of their practice settings. *Nurse Practitioner*. 1991;16(5):46-55.
- 16 Amestoy SC, Backes VM, Thofehn MB, Martini JG, Meirelles BH, Trindade Lde L. [Conflict management: challenges experienced by nurse-leaders in the hospital environment]. *Rev Gaucha Enferm*. 2014 Jun;35(2):79-85.
- 17 Finn CP. Autonomy: an important component for nurses' job satisfaction. *International journal of nursing studies*. 2001 Jun;38(3):349-57.
- 18 Leonard M, Graham S, Bonacum D. The human factor: the critical importance of effective teamwork and communication in providing safe care. *Quality & safety in healthcare*. 2004 Oct;13 Suppl 1:i85-90.
- 19 Greenberg CC, Regenbogen SE, Studdert DM, Lipsitz SR, Rogers SO, Zinner MJ, et al. Patterns of communication breakdowns resulting in injury to surgical patients. *Journal of the American College of Surgeons*. 2007 Apr;204(4):533-40.
- 20 Vermeir P, Vandijck D, Degroote S, Peleman R, Verhaeghe R, Mortier E, et al. Communication in healthcare: a narrative review of the literature and practical recommendations. *International journal of clinical practice*. 2015 Nov;69(11):1257-67.
- 21 Kalisch BJ, Lee H, Rochman M. Nursing staff teamwork and job satisfaction. *Journal of nursing management*. 2010 Nov;18(8):938-47.
- 22 Courtenay M, Nancarrow S, Dawson D. Interprofessional teamwork in the trauma setting: a scoping review. *Human resources for health*. 2013;11:57.
- 23 Keith AB, Coburn AF, Mahoney E. Satisfaction with practice in a rural state: perceptions of nurse practitioners and nurse midwives. *Journal of the American Academy of Nurse Practitioners*. 1998 Jan;10(1):9-17.
- 24 Mrayyan MT. Jordanian nurses' job satisfaction, patients' satisfaction and quality of nursing care. *Int Nurs Rev*. 2006 Sep;53(3):224-30.

- 25 Thorsteinson TJ. Job attitudes of part-time vs. full-time workers: A meta-analytic review. *J Occup Organ Psych*. 2003 Jun;76:151-77.
- 26 Kaddourah BT, Khalidi A, Abu-Shaheen AK, Al-Tannir MA. Factors impacting job satisfaction among nurses from a tertiary care centre. *Journal of clinical nursing*. 2013 Nov;22(21-22):3153-9.
- 27 Manojlovich M, Antonakos C. Satisfaction of intensive care unit nurses with nurse-physician communication. *The Journal of nursing administration*. 2008 May;38(5):237-43.
- 28 Probst JC, Baek JD, Laditka SB. The relationship between workplace environment and job satisfaction among nursing assistants: findings from a national survey. *J Am Med Dir Assoc*. 2010 May;11(4):246-52.
- 29 Mokoka KE, Ehlers VJ, Oosthuizen MJ. Factors influencing the retention of registered nurses in the Gauteng Province of South Africa. *Curationis*. 2011;34(1):E1-9.
- 30 Squires JE, Hoben M, Linklater S, Carleton HL, Graham N, Estabrooks CA. Job Satisfaction among Care Aides in Residential Long-Term Care: A Systematic Review of Contributing Factors, Both Individual and Organizational. *Nurs Res Pract*. 2015;2015:157924.
- 31 Moideenkutty U, Blau G, Kumar R, Nalakath A. Perceived organisational support as a mediator of the relationship of perceived situational factors to affective organisational commitment. *Appl Psychol-Int Rev*. 2001 Oct;50(4):615-34.
- 32 Blegen MA. Nurses Job-Satisfaction - a Metaanalysis of Related Variables. *Nursing research*. 1993 Jan-Feb;42(1):36-41.
- 33 Tzeng HM. The influence of nurses' working motivation and job satisfaction on intention to quit: an empirical investigation in Taiwan. *International journal of nursing studies*. 2002 Nov;39(8):867-78.
- 34 Herzberg F, Mausner B. *The motivation to work*. 2 ed. New York: Wiley; 1959.
- 35 Spector PE. *Job Satisfaction: Applications, Assessment, Causes, and Consequences*. London: SAGE Publications; 1997.
- 36 Lu H, While AE, Barriball KL. Job satisfaction among nurses: a literature review. *International journal of nursing studies*. 2005 Feb;42(2):211-27.
- 37 Adams A, Bond S. Hospital nurses' job satisfaction, individual and organizational characteristics. *Journal of advanced nursing*. 2000 Sep;32(3):536-43.
- 38 Tovey EJ, Adams AE. The changing nature of nurses' job satisfaction: an exploration of sources of satisfaction in the 1990s. *Journal of advanced nursing*. 1999 Jul;30(1):150-8.
- 39 Price M. Job satisfaction of registered nurses working in an acute hospital. *British journal of nursing*. 2002 Feb 28-Mar 13;11(4):275-80.
- 40 Yin JC, Yang KP. Nursing turnover in Taiwan: a meta-analysis of related factors. *International journal of nursing studies*. 2002 Aug;39(6):573-81.
- 41 Best MF, Thurston NE. Measuring nurse job satisfaction. *The Journal of nursing administration*. 2004 Jun;34(6):283-90.
- 42 Castle NG, Engberg J, Anderson R, Men A. Job satisfaction of nurse aides in nursing homes: intent to leave and turnover. *The Gerontologist*. 2007 Apr;47(2):193-204.
- 43 Gauci Borda R, Norman IJ. Factors influencing turnover and absence of nurses: a research review. *International journal of nursing studies*. 1997 Dec;34(6):385-94.
- 44 Hayes B, Bonner A, Pryor J. Factors contributing to nurse job satisfaction in the acute hospital setting: a review of recent literature. *Journal of nursing management*. 2010 Oct;18(7):804-14.
- 45 Sellgren SF, Kajermo KN, Ekvall G, Tomson G. Nursing staff turnover at a Swedish university hospital: an exploratory study. *Journal of clinical nursing*. 2009 Nov;18(22):3181-9.
- 46 Piko BF. Burnout, role conflict, job satisfaction and psychosocial health among Hungarian healthcare staff: a questionnaire survey. *International journal of nursing studies*. 2006 Mar;43(3):311-8.
- 47 McHugh MD, Kutney-Lee A, Cimiotti JP, Sloane DM, Aiken LH. Nurses' Widespread Job Dissatisfaction, Burnout, And Frustration With Health Benefits Signal Problems For Patient Care. *Health affairs*. 2011 Feb;30(2):202-10.
- 48 Dolan N. The relationship between burnout and job satisfaction in nurses. *Journal of advanced nursing*. 1987 Jan;12(1):3-12.
- 49 Coburn A, Gage-Croll Z. Improving Hospital patient safety through teamwork: the use of TeamSTEPS in Critical Access Hospitals. Flex monitoring team, 2011.

Chapter 6

Intra-organizational communication satisfaction and job satisfaction among Flemish hospital nurses: an explorative multicentric study

Peter Vermeir

Cal Downs

Sophie Degroote

Dominique Vandijck

Els Tobback

Liesbeth Delesie

An Mariman

Myriam De Veugele

Rik Verhaeghe

Bart Cambré

Dirk Vogelaers

Accepted for publication in Workplace Health and Safety

6. Intra-organizational communication satisfaction and job satisfaction among Flemish hospital nurses: an explorative multicentric study

ABSTRACT

Intra-organizational communication affects job satisfaction and turnover. The goal of this study was to explore relationships between communication and job satisfaction, intention to leave and burnout among Flemish hospital nurses. A multicenter questionnaire study was conducted in three hospitals using the Communication Satisfaction Questionnaire, the Turnover Intention subscale of the Questionnaire on the Experience and Evaluation of Work and the Maslach Burnout Inventory. A visual analogue scale measured job satisfaction. The mean job satisfaction score was 7.49/10 (\pm 1.43). 6.9% of the nurses (93/1,355) showed a high intent to leave and 2.9% (41/1,454) (had a score indicative of burnout. All dimensions of communication were associated with job satisfaction. Low scores on any dimension of communication satisfaction were associated with higher intent to leave and indications of burnout, except 'relationships with employees'. Our findings support the need for management interventions enhancing efficient communication and ensuring high-quality care and patient safety.

Keywords: *communication satisfaction, job satisfaction, nursing, turnover intention, burnout, patient safety.*

BACKGROUND

In an era of resource limitations, nursing effectiveness is an important goal but is hampered by nurse shortage and high turnover [1, 2]. Job satisfaction is clearly related to improved performance, less turnover and decreased burnout and can be influenced by communication satisfaction.

Interprofessional teamwork is achieved through interactive efforts among team members on the basis of good communication and respect for each other's roles. There should be room for the contributions of each team member; not only do the technical skills of the team, such as knowledge and experience, contribute to improving patient safety, but non-technical skills, such as communication, team size, psychological composition and the way the team is run, can affect team performance. Despite recent emphasis on these non-technical skills, communication problems within healthcare teams remain a frequent cause of reduced patient safety [3, 4]. In an analysis by the Joint Commission for Hospital Accreditation, 70% of 2,455 adverse events in healthcare were caused by defective and faulty communication within a team [5].

These communication deficiencies can arise from critical information not being communicated between team members, misinterpretation of information or from conflicting relationships or unclear roles and job descriptions. These issues can result in medical errors and adverse health outcomes. In addition, communication deficiencies have an economic impact, including a lower quality and safety of care and less access to care [4, 6].

In non-healthcare settings, communication has been studied as a contributor to job satisfaction and job performance [7]. Others have found a positive association between communication satisfaction and job satisfaction among nurses [8]. In particular, communication satisfaction with one's supervisor has been shown to be associated with greater organizational commitment [9] and can prevent nurse turnover in healthcare settings [10]. Low job satisfaction can also lead to high turnover, which negatively influences quality of care. Moreover, this turnover causes additional recruitment and training costs for the organization [11]. Furthermore, patient satisfaction is also influenced by nurse job satisfaction. More specifically, high job satisfaction is associated with high motivation, which in turn is associated with high patient satisfaction about the received care [12]. Job dissatisfaction is also associated with burnout among healthcare staff [13].

PURPOSE

The aim of this multicenter study was to explore relationships between communication satisfaction and job satisfaction and intention to leave and burnout in a large sample of Flemish hospital nurses.

METHODS

Participants

Nurses with different backgrounds (registered nurses, midwives and executive nurses) were recruited to participate in a questionnaire study in three Flemish (Northern part of Belgium) hospitals, including one university teaching hospital and two general hospitals (Ghent University Hospital, 1,062 beds; AZ Groeninge, Courtrai 1,065 beds, Sint Vincentius, Deinze, 170 beds).

Procedure

All nurses in the three hospitals were reached through their head nurses and the nursing department. Questionnaires were distributed and completed between February 1st, 2015 and March 15th, 2015. The study was approved by the Ethical Committee of the Ghent University Hospital (central ethical committee number EC 2015/0052) and the local ethical committees of the two other hospitals. All potential respondents were informed about the study through an information letter.

Measurement

Data were collected by means of three instruments: the Communication Satisfaction Questionnaire (CSQ, [14]), the Turnover Intention subscale of the Questionnaire on the Experience and Evaluation of Work (Dutch abbreviation VBBA, [15]) and the Maslach Burnout Inventory (MBI; [16]). To measure job satisfaction, a visual analogue scale (VAS) was used. The first section of the questionnaire included sociodemographic and work-related questions (age, sex, degree, department, years of experience).

The CSQ was translated into Dutch. In a second step, an expert panel (consisting of nursing directors (n = 4), communication experts (n = 4), healthcare managers (n = 6) and head

nurses (n = 6)) adapted the questionnaire to the healthcare setting. Subsequently, the questionnaire was pilot-tested by 15 nurses, resulting in minor changes to the item formulation. The expert panel reviewed the questionnaire again, and a final version was approved. The CSQ consists of eight dimensions, each consisting of 5 items with Likert-scale scoring from 1 (very satisfied) to 7 (very dissatisfied). Hence, the CSQ provides individual item scores, with lower values indicating higher satisfaction. The following eight dimensions are included in the questionnaire: General Organizational Perspective (GOP), Organizational Integration (OI), Personal Feedback (PF), Relationship to Superiors (RSup), Horizontal and Informal Communication (HIC), Relationship with Employees (REmp), Media Quality (MQ) and Communication Climate (CC).

GOP concerns the broadest type of information about the organization as a whole. This dimension includes notifications about changes, the organization's financial standing, and the overall policies and goals of the organization. OI revolves around the degree to which individuals receive information about the immediate work environment so they feel they are a vital part of the organization. PF focuses on the adequacy of receiving an estimate of one's strengths and weaknesses in performance. All levels of the organization receive this information in some fashion, and PF is generally one of the most sensitive dimensions for participants. RSup includes both upward and downward aspects of communicating with superiors, with openness to ideas being a key variable. HIC concerns the degree to which horizontal and informal communication among non-hierarchical relationships is accurate and free-flowing. REmp focuses on management perceptions of their upward and downward communication and relationships with employees. MQ reviews reactions on the adequacy of important communication channels in keeping people informed. CC depicts the perceptions of the general atmosphere in which people work; it is often seen as a measure of the organization's health. Some descriptions of climate include formal/informal, closed/open, supportive/non-supportive, and individualistic/team-oriented.

An exploratory factor analysis of the CSQ evaluated the reliability of the multidimensional nature of the questionnaire [17]. For data analysis, the answers 'very (dis)satisfied', '(dis)satisfied' and 'rather (dis)satisfied' were grouped, and the category 'indifferent' remained as supplied. To calculate the number of (dis)satisfied or indifferent nurses for the eight dimensions, the averages of the five corresponding items were used. Additionally, the means and standard deviations of each item were calculated (range: 1-7).

The Turnover Intention subscale of the VBBA assesses the intention to search for another job and/or leave the organization in general and in the coming year. This subscale consists of 4 yes/no items. 'Low turnover intention' was defined as < 2, 'average turnover intention' as 2 and 'high turnover intention' as ≥ 3 positive answers.

The Maslach Burnout Inventory measures three aspects of burnout syndrome: emotional exhaustion, depersonalization ('cynicism') and personal accomplishment ('competence').

Job satisfaction was measured with an unmarked VAS from 0 to 10. A score of 5 was set as the cut-off score for job (dis)satisfaction.

Statistics

Analyses were performed with the SPSS statistical package (version 22.0). Descriptive analyses are reported as numbers and percentages, means and standard deviations, and medians and inter-quartile ranges (IQR) where appropriate. Bivariate analyses were performed to identify differences between groups (χ^2 for categorical variables, Mann-Whitney U test to compare continuous variables between two groups, Kruskal Wallis test to compare continuous variables between more groups). Post-hoc analyses were performed by interpreting the standardized residuals of χ^2 tests or by pairwise comparisons after Kruskal-Wallis tests. Significance was set at $p \leq 0.05$.

RESULTS

Reliability of the CSQ

An exploratory factor analysis confirmed the multi-dimensional structure of the CSQ's individual-level variables with reliable scales for the eight dimensions. Cronbach's alpha values are presented in Table 1.

| FACTOR | CRONBACH'S α |
|---|---------------------|
| Factor 1 'General organizational perspective' | 0.874 |
| Factor 2 'Organizational integration' | 0.761 |
| Factor 3 'Personal feedback' | 0.857 |
| Factor 4 'Relation with supervisor' | 0.942 |
| Factor 5 'horizontal informational communication' | 0.859 |
| Factor 6 'Media quality' | 0.879 |
| Factor 7 'Communication climate' | 0.889 |
| Factor 8 'Relation with employees' | 0.799 |

Table 1: Cronbach's Alpha Values of the Dutch Version of the CSQ

Respondent characteristics

Out of a total of 3,371 nurses approached for participation, 1,454 completed the questionnaire, resulting in an aggregated response rate for the three hospitals of 43.2%. In Table 2, the participants' characteristics are listed. The majority were female (87.0%), and the mean age was 40.23 ± 10.99 years. Most of the participants were ward nurses (79.6%), and 64% had a bachelor's degree. The average work experience was 17.09 ± 11.20 years. More than half of the participants worked full-time, 22.4% worked 80% of full-time, and 8.9% worked half-time.

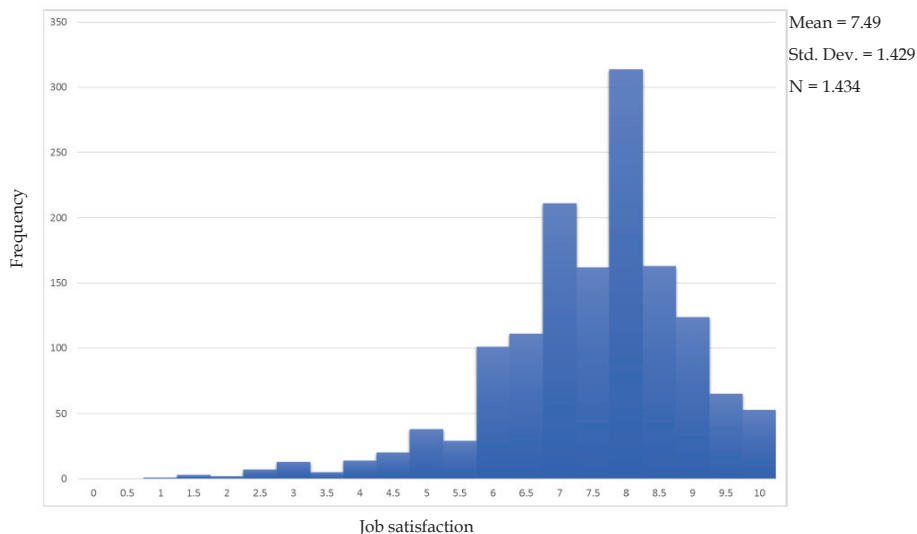
| | N | % |
|-----------------------------|-------|-------|
| Hospital (n = 1,452) | | |
| University hospital | 891 | 61.4 |
| General hospital 1 | 160 | 11.0 |
| General hospital 2 | 401 | 27.6 |
| Sex (n = 1,435) | | |
| Male | 186 | 13.0 |
| Female | 1,249 | 87.0 |
| Age (mean and SD) | 40.23 | 10.99 |
| Function (n = 1,448) | | |
| Ward nurse | 1,153 | 79.6 |
| Staff function nurse | 5 | 0.3 |
| Specialist nurse | 47 | 3.2 |
| Social nurse | 10 | 0.7 |

| | | |
|--|-------|-------|
| Psychiatric nurse | 11 | 0.8 |
| Midwife | 99 | 6.8 |
| Head nurse | 94 | 6.5 |
| Care manager/head of nursing | 5 | 0.3 |
| Other | 24 | 1.7 |
| Department (n = 1,419) | | |
| Surgery | 247 | 17.4 |
| Internal medicine/geriatrics | 368 | 25.9 |
| Mixed | 62 | 4.4 |
| Critical care | 302 | 21.3 |
| Psychiatry | 20 | 1.4 |
| Medico-technical department | 102 | 7.2 |
| Polyclinic | 73 | 5.1 |
| Maternity/pediatrics | 130 | 9.2 |
| Other | 115 | 8.1 |
| Educational level (n = 1,430) | | |
| Certified nurse | 373 | 26.1 |
| Bachelor's degree | 915 | 64.0 |
| Master's degree | 103 | 7.2 |
| PhD degree | 1 | 0.1 |
| Other | 38 | 2.7 |
| Years of experience (mean and SD) | 17.09 | 11.20 |
| % Employment (n = 1453) | | |
| 50 | 130 | 8.9 |
| 60 | 28 | 1.9 |
| 70 | 21 | 1.4 |
| 75 | 136 | 9.4 |
| 80 | 326 | 22.4 |
| 90 | 43 | 3.0 |
| 100 | 767 | 52.8 |
| Other | 2 | 0.2 |

Table 2: *Participants' Characteristics*

Job satisfaction

Within the entire group, the mean job satisfaction score was $7.49 \pm 1.43/10$ (median = 8, IQR 7-8.5) (Figure 1). A total of 103/1,436 (7.2%) nurses had a score ≤ 5 , indicating job dissatisfaction.



Figuur 1: jobsatisfaction

Dissatisfaction was associated with the type of department in which the nurses worked. Significantly more nurses working in outpatient clinics were dissatisfied compared to other departments ($p = 0.012$). Secondly, more nurses working part-time were dissatisfied than full-time nurses ($p = 0.004$). Third, an association between job dissatisfaction and years of experience was demonstrated, as dissatisfied nurses reported significantly more years of experience ($p = 0.026$).

Communication satisfaction

Table 3 lists the distribution of satisfaction categories for the eight dimensions of the CSQ. The average scores for each item of the CSQ for all participants are shown in an online supplement. Nurses were most satisfied with the extent to which their supervisor trusted them (2.59 ± 1.24) and least satisfied with information on the organization's financial standing and the accomplishments and/or failures of the organization (4.09 ± 1.25 and 4.09 ± 1.20). Supervisors were more likely to be dissatisfied with the information overload they faced (4.12 ± 1.32).

| Items | Satisfied | Indifferent | Dissatisfied |
|--|-----------|-------------|--------------|
| General organizational perspective | 38.8 | 31.3 | 29.9 |
| Organizational integration | 68.5 | 19.5 | 12.0 |
| Personal feedback | 60.6 | 20.0 | 19.3 |
| Relation with supervisor | 73.5 | 13.9 | 12.5 |
| Horizontal informational communication | 58.8 | 25.4 | 15.7 |
| Media quality | 53.2 | 25.6 | 21.1 |
| Communication climate | 50.3 | 26.1 | 23.5 |
| Relation with employees | 57.9 | 25.6 | 16.5 |

Table 3: Percentage of Nurses Classified as Satisfied, Indifferent or Dissatisfied, per Dimension

Turnover intention

Overall, most nurses showed a low intent to leave (811/1355; 59.9%), while almost seven percent (93/1355; 6.9%) showed a high and one third (451/1355; 33.3%) showed an average intent to leave.

Burnout

Among all participants, 41/1,454 (2.9%) had a score on the Maslach Burnout Inventory indicative of burnout. Differences between the hospitals were not significant ($p = 0.148$).

Overall, 21.9% (313/1430) of the nurses had low scores on the subscale 'personal accomplishment'. Emotional exhaustion and depersonalization were less frequently problematic (18/1,430, 12.4%, and 153/1,432, 10.7%, respectively).

Associations

All dimensions of communication satisfaction were significantly correlated to job satisfaction (all $p < 0.001$, 'Relation with Employees' = 0.005, Table 4). All dimensions were also associated with turnover intention (all $p < 0.001$), except for 'relationships with employees' ($p = 0.225$). Scores on the communication satisfaction dimensions were lowest among nurses with high intent to leave. Finally, all dimensions of communication satisfaction were associated with indications of burnout (all $p < 0.001$), except for 'relationships with employees' ($p = 0.391$). Scores on the communication satisfaction dimensions were higher (hence indicating dissatisfaction) among nurses with indications for burnout.

| | GOP | OI | PF | RSup | HIC | MQ | CC | REmp |
|-------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Correlation | 0.307 | 0.426 | 0.435 | 0.442 | 0.456 | 0.396 | 0.454 | 0.210 |

Table 4: Correlations between CSQ Dimensions and Job Satisfaction

General Organizational Perspective (GOP), Organizational Integration (OI), Personal Feedback (PF), Relationship to Superiors (RSup), Horizontal and Informal Communication (HIC), Relationship with Employees (REmp), Media Quality (MQ), Communication Climate (CC).

DISCUSSION

Main findings

This study on communication satisfaction and job satisfaction in Flemish hospital nurses demonstrated overall high levels of job satisfaction and a wide range of communication satisfaction scores. The different dimensions of communication satisfaction correlated with job satisfaction, and low levels of job and communication satisfaction were associated with higher levels of intent to leave and burnout, respectively (Figure 2).

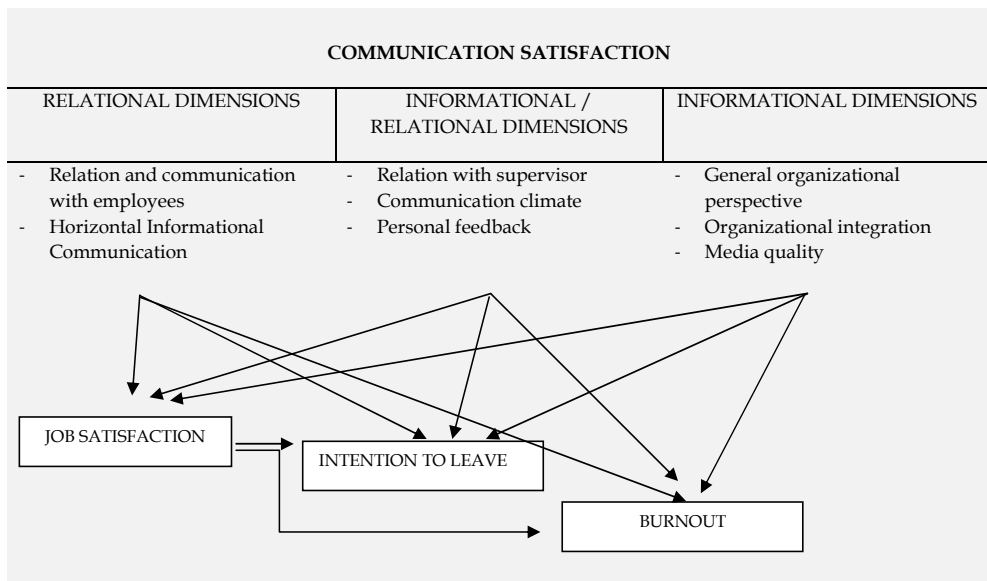


Figure 2: Conceptual framework of communication satisfaction dimensions and their relationships

The average job satisfaction score was 7.5/10; comparisons with international samples are shown in Table 5 and substantiate similar scores in different time periods and different

healthcare settings. Only 7.2% of our sample indicated job dissatisfaction compared to 22% in the subset of Belgian nurses within a large European study and 24% in the United States [18, 19]. Differences in methodology (namely a VAS with a cutoff score in the present study compared to a simple dichotomous question in the 2 other studies) may explain the differences reported.

| Authors | Scores |
|-------------------------------------|---------------|
| Debra, 1991 [20] | 8.1/10 |
| Keith, Coburn and Mahony, 1998 [21] | 7.4/10 |
| Misener and Cox, 2001 [22] | 7.3/10 |
| Schiestel, 2007 [23] | 7.8/10 |
| Dunaway, 2008 [24] | 7.7/10 |
| Gandhi et al., 2014 [25] | 8.1/10 |

Table 5: *Job Satisfaction Scores among Nurses in Other Studies*

In our study, nurses working in outpatient clinics were more likely to be dissatisfied. We speculate that this finding is due to relocation of nurses who could no longer fulfill the physical requirements of hospital wards to polyclinics. However, the mental requirements of polyclinical work are often more challenging and the job content is different, as it is more difficult to establish a true and long relationship with patients due to either a single contact, shorter contact times or a combination of both. Less interaction could decrease nurses' feelings of personal accomplishment and hence job satisfaction [26, 27]. Lastly, constant collaboration with other healthcare professionals (e.g., physicians, paramedics) can lead to a diminished feeling of autonomy, which can be demanding for nurses working at polyclinics [28, 29].

Nurses working part-time were more likely to be dissatisfied. Previous research on part-time employment and job satisfaction among employees in general is contradictory, with inconsistent results ranging from a negative association [30], a lack of any association or a positive association [31]. Job discrepancies, i.e., mismatches between job characteristics and employee preferences and abilities [30], may account for differences in job satisfaction. These differences could be due to less involvement with the hospital or the department or receiving less information on patients [32].

Thirdly, dissatisfied nurses had more years of experience. In a meta-analysis, years of

experience alone did not influence job satisfaction. Instead, years of experience is likely associated with (the perception of) a current higher workload than that in the initial career phase, and a higher (perceived) workload induces stress, which negatively influences job satisfaction [10].

Communication satisfaction was rather poor, with a wide range between 38.8% to 73.5% satisfaction indicated by nurses on the different subscales. The general organizational perspective was the most problematic subscale, along with media quality and communication climate, which indicates that communication in the organizational context of the hospital is insufficient. This result is similar to the findings of a recent study among South African nurses on communication satisfaction [33]. However, it is noteworthy that 25-30% of the nurses were indifferent about communication in the organizational context, which may represent a particular concern regarding organizational involvement. The relationship with a supervisor, on the other hand, was positively appreciated: 65.2% to 81.8% of the nurses were satisfied with this item, which was significantly better than the score reported in public hospitals in South Africa (48.5% to 59.2%) [33]. Satisfaction with supervisor communication was previously found to positively influence overall job satisfaction [11, 34]. In the present study, communication satisfaction was lowest in the university hospital, possibly due to the slower and more cumbersome communication structures within the larger hospital and the larger distance between the employees and the management of the hospital.

Turnover intention among the participants was lower than in previous research among nurses [18, 19] and may be related to the high levels of job satisfaction and communication satisfaction observed in the present sample.

Finally, symptoms of burnout were examined. Slightly less than 3% of the participants had scores indicative of burnout. This percentage is lower than the 25% self-reported feelings of burnout in Belgian nurses [18] and 22% estimated burnout reported in a large U.S. study [19]. However, it should be noted that methodological differences hamper a true comparison between these studies.

STRENGTHS AND LIMITATIONS

This study is the first to investigate communication satisfaction among nurses on such a large scale. The multicenter design enabled obtaining a large sample and permitted comparisons among hospitals. By including questions on turnover intention and burnout, we were able to collect information on two relevant topics in present-day nursing. Another strength of this study was its usefulness for management purposes. Detailed information could be generated on communication satisfaction that may serve to guide communication improvement interventions.

However, the limitations of this study should also be acknowledged. The most important limitation is the fact that not all nurses participated. Because we do not have information on the non-responders, we cannot exclude selection bias. Moreover, we did not include a benchmark with other sectors.

CONCLUSION

This study demonstrated high levels of communication and job satisfaction in a large sample of Flemish hospital nurses, as benchmarked against other hospital settings. Compared to the literature, low intent to leave and burnout were documented in the current study. Moreover, job dissatisfaction was associated with polyclinical work, part-time employment and longer work experience. Communication satisfaction was associated with job satisfaction, intent to leave and burnout. Areas for improvement on different dimensions of communication satisfaction were identified. Hence, a strategy for structured and preemptive enhancement of different dimensions of communication within the hospital organization from the working floor to the top and back seems warranted.

IMPLICATIONS FOR NURSING MANAGEMENT

- Nurses with higher communication satisfaction experience higher job satisfaction.
- There is a direct link between supervisor communication and nurses' trust in their supervisors.

- Nurses view their relationship with their managers as an important factor in their overall sense of job satisfaction.
- An open communication climate is advocated, facilitated by supportiveness, involvement in the decision making process, trust and confidence.

References

- 1 Hayes LJ, O'Brien-Pallas L, Duffield C, Shamian J, Buchan J, Hughes F, et al. Nurse turnover: a literature review - an update. *International journal of nursing studies*. 2012 Jul;49(7):887-905.
- 2 Kingsma M. Nursing migration: global treasure hunt or disaster-in-the-making? *Nursing Inquiry*. 2001;8:205-2012.
- 3 Courtenay M, Nancarrow S, Dawson D. Interprofessional teamwork in the trauma setting: a scoping review. *Human resources for health*. 2013;11:57.
- 4 Vermeir P, Vandijck, D., Degroote, S., Peleman, R., Verhaeghe, R., Mortier, E., Hallaert, G., Van Daele, S., Buylaert, W., Vogelaers. Communication in healthcare: A narrative review of the literature and practical recommendations. *International journal of clinical practice*. 2015;69:1257-67.
- 5 Leonard M, Graham S, Bonacum D. The human factor: the critical importance of effective teamwork and communication in providing safe care. *Quality & safety in healthcare*. 2004 Oct;13 Suppl 1:i85-90.
- 6 Brock D, Abu-Rish E, Chiu CR, Hammer D, Wilson S, Vorvick L, et al. Interprofessional education in team communication: working together to improve patient safety. *BMJ quality & safety*. 2013 May;22(5):414-23.
- 7 Pincus JD. Communication: key contributor to effectiveness—the research. *The Journal of nursing administration*. 1986 Sep;16(9):19-25.
- 8 Manojlovich M, Antonakos C. Satisfaction of intensive care unit nurses with nurse-physician communication. *The Journal of nursing administration*. 2008 May;38(5):237-43.
- 9 Moideenkutty U, Blau G, Kumar R, Nalakath A. Perceived organisational support as a mediator of the relationship of perceived situational factors to affective organisational commitment. *Appl Psychol-Int Rev*. 2001 Oct;50(4):615-34.
- 10 Blegen MA. Nurses Job-Satisfaction - a Metaanalysis of Related Variables. *Nursing research*. 1993 Jan-Feb;42(1):36-41.
- 11 Probst JC, Baek JD, Laditka SB. The relationship between workplace environment and job satisfaction among nursing assistants: findings from a national survey. *J Am Med Dir Assoc*. 2010 May;11(4):246-52.
- 12 Tzeng HM. The influence of nurses' working motivation and job satisfaction on intention to quit: an empirical investigation in Taiwan. *International journal of nursing studies*. 2002 Nov;39(8):867-78.
- 13 Piko BF. Burnout, role conflict, job satisfaction and psychosocial health among Hungarian healthcare staff: a questionnaire survey. *International journal of nursing studies*. 2006 Mar;43(3):311-8.
- 14 Downs CW, Hazen MD. A factor analytic study of communication satisfaction. *Journal of Business Communication*. 1977;14(3):63-73.
- 15 van Veldhoven M, Meijman TF. Het meten van psychosociale arbeidsbelasting met een vragenlijst: de vragenlijst beleving en beoordeling van de arbeid (VBBA). Amsterdam: NIA; 1994.
- 16 Maslach C, Jackson SE, Leiter MP, Michael P, Schaufeli WB. *Maslach Burnout Inventory*, 3rd ed. Palo Alto, CA: Consulting Psychologists Press;1996.
- 17 Tavakol M, Dennick R. Making sense of Cronbach's alpha. *Int J Med Educ*. 2011 Jun 27;2:53-5.
- 18 Aiken LH, Sermeus W, Van den Heede K, Sloane DM, Busse R, McKee M, et al. Patient safety, satisfaction, and quality of hospital care: cross sectional surveys of nurses and patients in 12 countries in Europe and the United States. *Bmj*. 2012;344:e1717.
- 19 McHugh MD, Kutney-Lee A, Cimiotti JP, Sloane DM, Aiken LH. Nurses' Widespread Job Dissatisfaction, Burnout, And Frustration With Health Benefits Signal Problems For Patient Care. *Health affairs*. 2011 Feb;30(2):202-10.
- 20 Debra L. The relationship between primary healthcare practitioners' job satisfaction and characteristics of their practice settings. *Nurse Practitioner*. 1991;16(5):46-55.
- 21 Keith AB, Coburn AF, Mahoney E. Satisfaction with practice in a rural state: perceptions of nurse practitioners and nurse midwives. *Journal of the American Academy of Nurse Practitioners*. 1998 Jan;10(1):9-17.
- 22 Misener TR, Cox DL. Development of the Misener Nurse Practitioner Job Satisfaction Scale. *Journal of nursing measurement*. 2001 Spring-Summer;9(1):91-108.
- 23 Schiestel C. Job satisfaction among Arizona adult nurse practitioners. *Journal of the American Academy of Nurse Practitioners*. 2007 Jan;19(1):30-4.
- 24 Dunaway LJ. *Job Satisfaction Among Nevada Nurse Practitioners: ProQuest*; 2008.
- 25 Gandhi S, Sangeetha G, Ahmed N, Chaturvedi SK. Somatic symptoms, perceived stress and perceived job satisfaction among nurses working in an Indian psychiatric hospital. *Asian journal of psychiatry*. 2014 Dec;12:77-81.

26 Kudo Y, Kido S, Shahzad MT, Shida K, Satoh T, Aizawa Y. Enhancing work motivation for Japanese female nurses in small to medium-sized private hospitals by analyzing job satisfaction. *The Tohoku journal of experimental medicine*. 2010 Mar;220(3):237-45.

27 Lu H, While AE, Barriball KL. Job satisfaction among nurses: a literature review. *International journal of nursing studies*. 2005 Feb;42(2):211-27.

28 Adams A, Bond S. Hospital nurses' job satisfaction, individual and organizational characteristics. *Journal of advanced nursing*. 2000 Sep;32(3):536-43.

29 Finn CP. Autonomy: an important component for nurses' job satisfaction. *International journal of nursing studies*. 2001 Jun;38(3):349-57.

30 Iseke A. The Part-Time Job Satisfaction Puzzle: Different Types of Job Discrepancies and the Moderating Effect of Family Importance. *Brit J Ind Relat*. 2014 Sep;52(3):445-69.

31 Thorsteinson TJ. Job attitudes of part-time vs. full-time workers: A meta-analytic review. *J Occup Organ Psych*. 2003 Jun;76:151-77.

32 Ferrazzo M, Filippi M, Meneghetti G, Palese A. Determinants of the choice of part time employment and nurses' satisfaction: a multicentre descriptive study. *Assist Inferm Ric*. 2012 Oct-Dec;31(4):207-13.

33 Wagner JD, Bezuidenhout MC, Roos JH. Communication satisfaction of professional nurses working in public hospitals. *Journal of nursing management*. 2015 Nov;23(8):974-82.

34 Grieshaber LD, Parker P, Deering J. Job satisfaction of nursing assistants in long-term care. *The Healthcare supervisor*. 1995 Jun;13(4):18-28.

Chapter 7

The patient perspective on the effects of medical record accessibility: a systematic review

Peter Vermeir

Sophie Degroote

Dominique Vandijck

Hanne Van Tiggelen

Renaat Peleman

Rik Verhaeghe

An Mariman

Dirk Vogelaers

Published in Acta Clinica Belgica, 2017; 72: 186-194

7. The patient perspective on the effects of medical record accessibility: a systematic review

ABSTRACT

Background: Healthcare is shifting from a paternalistic to a participatory model, with increasing patient involvement. Medical record accessibility to patients may contribute significantly to patient co-management.

Objectives: To systematically review the literature on the patient perspective of effects of personal medical record accessibility on the individual patient, patient-physician relationship and quality of medical care.

Methods: Screening of PubMed, Web of Science, Cinahl and Cochrane Library on the keywords 'medical record', 'patient record', 'communication', 'patient participation', 'doctor-patient relationship', 'physician-patient relationship' between January 1, 2002 and January 31, 2016; systematic review after assessment for methodological quality.

Results: Out of 557 papers screened, only 12 studies qualified for the systematic review. Only a minority of patients spontaneously request access to their medical file, in contrast to frequent awareness of this patient right and the fact that patients in general have a positive view on open visit notes. The majority of those who have actually consulted their file, are positive about this experience. Access to personal files improves adequacy and efficiency of communication between physician and patient, in turn facilitating decision-making and self-management. Increased documentation through patient involvement and feedback on the medical file reduces medical errors, in turn increasing satisfaction and quality of care. Information improvement through personal medical file accessibility increased reassurance and a sense of involvement and responsibility.

Conclusion: From the patient perspective medical record accessibility contributes to co-management of personal healthcare.

Keywords: medical record, patient record, communication, patient, participation, doctor-patient relationship, physician-patient relationship.

INTRODUCTION

The last decennia have witnessed a shift from a more paternalistic to an increasingly participatory healthcare model. Instead of the physician deciding for the patient, shared decision making in equal partnership between physician and patient has become the new standard [1]. Patients are increasingly encouraged to co-manage their healthcare and feel a need for this approach. They strive for enhanced autonomy, control over personal healthcare and active involvement in decisions on diagnostic investigations and treatments [2-4].

Meeting these developments requires a largely patient oriented and demand driven healthcare. The Institute of Healthcare Improvement describes patient oriented care as a care system, that integrates patient and his/her family into the care team and allows shared responsibility and decision making [2, 23]. This type of healthcare depends on transparent and clear communication between patient and caregivers. Sharing of information on diagnosis, prognosis and treatment options is key to providing the opportunity of well-considered and weighted choices to the patient [5-8]. Baxter et al. indicate that, within a changing healthcare culture, moving from paternalistic care to 'patient empowerment', is conditional to sharing knowledge and information with the patients [2]. It is the task of all caregivers to reduce any information gap with their patients [2], as patient participation requires continuous patient information and involvement.

Different studies have demonstrated that sharing the personal medical file with the patient can facilitate physician-patient communication and patient information. Through this approach the patient may acquire more insights in his/her personal health status [7, 9, 10], building and underscoring personal health decisions. Furthermore, physician trust, therapy adherence and patient safety through reduction of medical errors may be strengthened, leading in turn to better results and higher quality of care [4, 11-13].

The American 'Health Insurance Portability and Accountability Act' (HIPAA) from 1996 was the first lawmaking initiative dealing with the protection of privacy of health information. In 2004 this act was supplemented with the 'Privacy Rule', stating that patients have the right to consult their personal medical file [9]. The Belgian law on patient rights, which came into practice in 2002, clearly describes the patient right to gain and be provided access to the personal medical file [14]. In the neighboring countries (Netherlands, France, Luxemburg, Germany) patient access is also regulated through legal acts and codes, just as in many other

European countries [15, 16]. In spite of the available evidence in support of sharing this personal medical file with the individual patient and its effect on quality of healthcare, the uptake of this right is only moderate. A survey of 581 persons in 2012 by the Flemish Patient Platform (Vlaams Patiëntenplatform) indicated that 37,1% of respondents had ever gained insight in their patient file, practically solely upon personal request [17]. An international benchmark published in 2003 showed that only 0.4% of medical inpatients and outpatients spontaneously requested their records in Denmark (data from 1988) and USA (1980), for psychiatric inpatients less than 2% (1978) [23]. In a more recent survey in the USA 41% of the public reported that they never ask their doctors for copies of their information, and 83% said they never ask for their information in electronic format [18]. One must acknowledge that over time the gradual shift towards patient empowerment and participatory care may have improved uptake, which is however likely to have remained suboptimal. Possible explanations may include the physicians perception that patients may actually not want to be actively involved in their healthcare or may not understand and/or misinterpret information [5, 6]. Furthermore, patients may be in doubt whether accessing their medical record would prove helpful or even confusing [19]. Third, cultural influences with different interpretations of respect for autonomy and the role of family and community in patient care, may represent a barrier towards patient information and participation. For example, as death is a taboo subject in some traditional societies, the truth is not always told to patients [20]. In cross-sectional data published in 2000, few Japanese physicians (17%, 40/237), and 42% of Japanese patients (24/58) agreed that a doctor should inform the patient of a cancer diagnosis, in contrast to 80% of US physicians (78/98) and patients (44/55). Further, 80% of Japanese physicians and 65% patients agreed that a doctor should primarily inform the patient's family of the diagnosis, in contrast to a minority of US physicians (6%) and patients (22%) [21].

Up to the present, limited research has focused on different dimensions of medical file accessibility from the viewpoint of patients, including their insights into patient rights, needs, handling and understanding of health information and need for further explanation as well as emotional coping. These questions need to be addressed in order to explore the possibilities and limitations of active co-partnership in managing their own health.

Hence, this systematic review aims to explore from the patient perspective the effects of access to the personal medical file on themselves, the patient-physician relationship and quality of medical care.

METHODS

A systematic search was carried out on the databases PubMed, Web of Science, Cinahl and The Cochrane Library using the keywords: ‘medical record’, ‘patient record’, ‘communication’, ‘patient participation’, ‘doctor-patient relationship’, ‘physician-patient relationship’. The keywords were internally validated by the co-authors. Articles in this review needed to be 1) published between January 1, 2002 and January 31, 2016, 2) available as full text in English 3) categorizable as original research, reviews, meta-analyses or letters to the editor. Database screening was closed 31th of January 2016. Only articles in the English language were included in order to avoid misinterpretations. Titles and abstracts were reviewed to verify inclusion criteria. If all inclusion criteria were present or if this remained unclear, the articles were fully read. All studies were screened for eligibility by two independent reviewers (PV,HVT) who reviewed titles, abstracts and full text. Any disagreements were resolved by discussion and, if necessary a third reviewer (DVD) was consulted. Additional literature was obtained through searching references in the manuscripts (snowballing method).

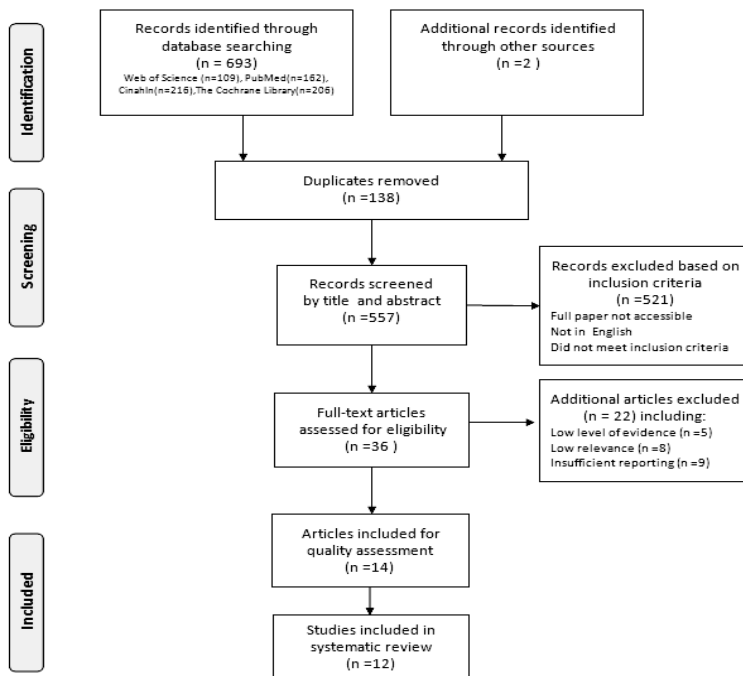


Figure 1: Review stages based on PRISMA flow diagram

The results of the search process are summarized into a PRISMA flow diagram (Figure 1). Out of a total of 693 papers selected, 138 duplicates were removed. After screening of the exclusion criteria, the search in PubMed yielded 112, in Web of Science 87, in Cinahl 195 and in the Cochrane Library 163 articles. Through the snowballing method of screening the reference lists of relevant articles, two additional articles complying with the inclusion criteria could be identified and were added.

After screening of title and abstract based on inclusion criteria of these 557 records, 36 papers remained for full-text screening. From these, fourteen articles were subjected to quality assessment.

Quality assessment

The quality evaluation instrument developed by Hawker et al. was used for assessment of methodologic quality [22]. This instrument comprises 9 items: abstract and title, introduction and aims, methods and data, sampling method, data analysis, ethics and bias, results, generalizability and implications for practice. Each item consists of 4 criteria with a score ranging from one (very poor) to four (good), resulting in an aggregate maximum score of 36 and minimum score of 9. Scores for high quality studies range between 30 and 36, scores between 24 and 29 indicating average and lower than 24 poor quality. Table 3 (online supplement) shows the quality assessment of the 14 studies selected. Six articles were rated as of high quality, six as of average and two as of low quality and hence the latter were excluded from the systematic review.

Results

Table 4 (online supplement) gives an overview of year of publication, country, level of healthcare, aims, study design and methodology including study population and sample size as well as the main findings of the 12 articles included in the systematic review. Eight studies originated from the United States [6, 23-29] and one from Australia [5], Norway [30], Portugal [19] and United Kingdom each [2]. Three studies focused on primary care [23, 24, 27], four on secondary care [5, 6, 26, 30] and five on both [2, 19, 25, 28, 29]. Sample size varied widely from ten [5] to 128 000 patients [25]. In most studies only adults were included. In Halamka et al. [25], apart from adults, also children were questioned and in Forsyth et al. [5] also elderly patients (age 60 years or older). The majority of studies focused on ambulatory patients, whereas in three studies a mix of both ambulatory and hospitalized patients

participated [5, 25, 26]. The studies selected for the systematic review could be subdivided into four explorative, one longitudinal, one qualitative and two quasi-experimental studies, three reviews and one systematic review. These studies used different methods for data collection: (standardized) questionnaires, focus groups, (semi-structured) interviews and published literature. The three dimensions of the effects of accessibility to the personal medical file from the patient perspective, namely on the patient, the patient-physician relationship and quality of care are discussed separately.

Effects on the patient

Different studies indicate that only a minority of patients spontaneously request access to their medical file [6, 19, 26], in spite of and in contrast to frequent awareness of their right to do so [6, 19]. Indeed, Ferreira et al. report that most participants were aware of this patient right but that nevertheless only 5% had effectively already consulted their medical file. In clinical trials using patient-accessible medical records, most patients (75-95%) are interested to be enrolled and to actually consult their medical file [26]. The degree of this interest was not predicted by self-reported health status or demographic characteristics such as age and education [27, 29]. Few, if any, updated quantitative data are available on the relative proportion of these different patient types. In an older study in cancer patients reported in 1991, 91 % declined the offer to see their medical records. The reasons included full trust in the communication of their physicians, a feeling of being sufficiently informed or fear of not being able to understand the information [31]. However, it can be arguably questioned whether this is still valid in the present setting of emancipatory and participatory care.

Forsyth et al conducted qualitative semi-structured interviews in a small sample of 10 patients [5], evenly distributed in terms of gender, aged 60 years or older and having visited at least two specialists and one general practitioner. Patients who were currently active in decision making about their own health had already gathered some health information (e.g. a file with copies of blood results, a list of medications, ...). They were receptive to their information and thought they should take some responsibility for their health. Patients who were more passive in making decisions about their health did not perceive a need to carry their own information and felt that their doctors communicated adequately [5]. Older patients are more likely to fulfill a 'passive' role in the doctor-patient relationship [32, 33]. However, sociodemographic variables (such as age, but also gender and education) explain only 20% or less of the variability in patients' desire to participate in decision making. So

instead of making predictions based on the patient's profile, direct inquiry may be the best way for the physician to gain insight in the patient's wish to participate [33, 34].

Fear for anguish generated through consulting the medical file, is brought up by patients in several studies [6, 24, 26, 28, 29]. These patients express a need for a clear contextual description and explanations in regard to health information by the physician in order to avoid stress and confusion [6, 25]. A remarkable finding are worries about privacy, confidentiality and security of personal "sensitive" information in many patients [2, 19, 23, 24, 26, 29]. Patients may be afraid that employers, government agencies or unauthorized people would be able to gain access to their records, and some prefer sensitive information to be coded. Furthermore there may occur situations, in which reading the medical notes engenders shame or a feeling of insult [19, 24, 27]. Additional or increased fear or worrying can be generated, in the lack or absence of explanation of the particular health information [27, 28]. Many patients indicate difficulties in understanding the medical information in their files, which may induce a worry for wrong interpretation and unnecessary and avoidable confusion [2, 19, 23, 24, 26, 29].

In a pre-intervention assessment probing expectations in the OpenNotes trial [29], a pilot program with an electronic portal providing patients access to their office notes, 110 of 114 (96 %) participating primary care physicians (PCPs), 63 of 140 (45 %) of PCPs choosing not to participate in the program, and 37 856 of 90 826 (42 %) of patients completed surveys. Overall, 69% to 81% of participating PCPs across the 3 sites in different US states and 92% to 97% of patients favored open visit notes, compared with 16% to 33% of nonparticipating PCPs. Similarly, participating PCPs and patients generally agreed with statements about potential benefits (improved communication, patient education) of open visit notes, in contrast to nonparticipating PCPs. More than one half of participating PCPs (50% to 58%) and most nonparticipating PCPs (88% to 92%) expected that open visit notes would result in greater worry among patients; only a minority of patients (12% to 16%) shared the latter point of view. Patient enthusiasm extended across age, education, and health status, and 22% anticipated sharing visit notes with others, including other doctors.

Actually, the majority of the patients, who have gained access to their medical file, are enthusiastic and positive about this experience and would continue or repeat this practice in the future [6, 23, 26, 28, 29]. Patients experience their medical file as a "foothold", as a reliable back up instrument in case explanations and information by the physician would prove insufficient [23, 30]. Several studies describe how patients, after reading their medical file,

gained a better understanding and recollection of their health status and physician instructions, felt more reassured and satisfied, experienced less anxiety, were better prepared for consultations and obtained improved insights, that could be helpful in making medical decisions [2, 23, 24, 26-30]. Furthermore, patients indicated an increased feeling of control and sense of responsibility for their individual healthcare [2, 23, 24, 26-30], increased involvement [2, 19, 28, 35], self-assurance and autonomy [19, 26], as well as participation and an active role in their healthcare process [23, 27]. Moreover, from the patient perspective the medical file can be a support in sharing medical/health information with third parties, such as family, friends, other patients [2, 6, 24, 25]. From the 22% participants who foresaw sharing their record in the pre-intervention assessment study of Open Notes, 93% wants to share the medical file with a family member, 36% with another physician, 23% with a friend and 23% with a nurse or another caregiver. Sharing of medical files conveys a sense of security to patients, as this is viewed as a way to guarantee continuous availability of (critical) health information. This could prove important in specific situations, such as during holidays, in switches to other caregivers and in emergency care.

Effects on the patient/physician relationship

Patients experienced easier communication and interactive discussion with their physician after reading the medical file. The barriers between physician and patient were lowered [2, 6, 19, 24, 26, 28]. Patients became more vocal about their considerations and worries [26] and experienced better understanding from their physician [19, 26]. Across different studies increased transparency improved patient trust in physicians. Patients gained reassurement and certainty that no information was being withheld and all information could be perceived as "honest" [2, 6, 19, 24, 26, 28]. Optimal patient information reinforces patient opportunity for informed health decisions together with physicians [2].

Although most patients were more satisfied about the relationship with their physician upon reading their medical file, some patients experienced disappointment with their physician. They felt not being respected as a person if they gained the perception that the physician had underestimated their possibilities, expressed prejudice or developed a too restricted vision of the medical situation. Furthermore some patients discovered a lack of openness or honesty in previous medical consultations [30]. In this study in two large Norwegian university hospitals, qualitative interviews were conducted with 17 Norwegian adult patients, about their experiences of requesting a copy of their medical record following a hospital stay. The

analytical process identified two main themes: “keeping a sense of control” and “not feeling respect as a person”. The informants’ experiences with reading their own medical record were often connected to their experiences in direct communication with healthcare professionals during the hospital stay.

Effects on quality of medical care

In different studies an improved patient/physician communication facilitated by access and insight in the medical file, also resulted in improvement of clinical results, acceptance of treatment and increased therapy adherence [5, 19, 23, 24, 26-28]. Patients indicated increased meticulousness with recommendations regarding medication and lifestyle [5, 19, 26, 27]. As sense of responsibility increases, patients more actively coordinate their own healthcare [28]. Furthermore, through reading their medical file, patients are better prepared, resulting in more effective and efficient consultations [19, 23, 26]. Moreover, many patients discovered mistakes or deficiencies in their medical file. Through corrections or additional information, patients can actually help caregivers [5, 19, 23, 24, 26, 28, 30], to render medical files more precise and complete [2, 23]. Increased documentation reduces medical errors and avoids double work, in turn increasing satisfaction of both patients and physicians, and quality of care [1, 6, 23, 28, 36]. In a single hospital, information on the right to access medical records improved satisfaction rates with the overall hospital experience (87.8 % scoring “very satisfied” vs 77.1 %) (n = 1134), high ratings of 9 to 10 on a 10-point scale (69.7 vs 62.3 %) and intention to definitely recommend the hospital to others (80.2 vs 69.3 %) (n = 3504) [6].

From the vantage point of caregivers, less than 5% of the physicians indicated longer visits, however, less than one third reports a more efficient care delivery by using open visit notes [23]. In a more recent study, only 22% of providers, including nurses and physicians, indicated that the electronic medical record allowed them to better focus on patients, pointing to the potential problem of relative loss of true patient contact time due to increased administrative workload to meet the requirements of the electronic file [37].

DISCUSSION

The studies selected on the basis of quality criteria in this systematic review revealed a set of similar findings on the effects of medical file accessibility from the patient perspective on the patient, the patient/physician relationship and quality of care. These include patients’

enthusiasm about access to their medical file, increased transparency and improved patient trust in physicians, the opportunity for informed health decisions and reduction of medical errors, all in turn increasing satisfaction and quality of care. It remains remarkable that, in spite of knowledge of the patient right of medical file access, only a minority of patients have actually consulted their medical files. Fear for confusion and anxiety proves the most cited reason hampering this step.

Introducing and enhancing the use of a PHR should take into account and try to minimize the current barriers towards the use of PHR, such as environmental (crossing organizational boundaries, reliable products, legal and privacy concerns) and individual (behavioral change by patient and provider, little inherent motivation and incentives) [38, 39]. Moreover, other possible individual barriers should be recognized, such as computer access, physical or cognitive disabilities, low computer literacy and low health literacy [40].

As such, different approaches are necessary according to those individual characteristics, as well as according to the health state of the patient. Requisites for a healthy, general population are a PHR to be demonstrably useful, fitting well into people's daily lives, secure, reliable and easy to use. Requisites for patients with complex or chronic conditions are probably less compulsory, as they are generally more convinced on the usefulness and the gains of a PHR [39, 41].

It is vital for a PHR to be user-friendly and only show the information that is needed/asked by the patient. It must present data and accompanying tools in ways that enable the individual to understand and to act on the information contained in the record. This is a difficult exercise keeping in mind the patients' widely varying levels of general literacy and of health literacy. Both terminology and data presentation must be adapted to the individual using the PHR, so that they realize optimal benefits. Examples include: patient-friendly terminology of diagnoses, trade and generic medication names, access for adolescents... [25]

Patients who were able to access their medical files were satisfied with this facility which they considered very useful. They felt reassured and involved, were sufficiently informed, had an increased sense of responsibility and took up a more active role in their healthcare program. Furthermore, patients reported improved communication with their physician. Patients were more communicative and had the feeling to be understood. Hence, patients' confidence in their physician increased resulting in an improved interaction. Patients' medical records access resulted in improved clinical outcomes and increased therapeutic adherence. As patients were informed and prepared more intensively, consultations proved

more efficient. Patients play a key role in keeping medical files up-to-date, resulting in less errors, increased satisfaction and improved healthcare quality.

However, various studies reported a number of drawbacks regarding patients' access to medical records. Patients are concerned about data confidentiality and in some cases feel embarrassed or do not understand medical jargon. This might lead to misunderstanding or anxiety. Some patients were disappointed as they had the feeling of incorrect assessment of their pathology by their physician, they also reported their physician being biased or that information was withheld. In general and on balance, however, from the patient perspective the benefits of medical record accessibility decisively outweigh the potential risks. Potential advantages and disadvantages of open notes covering the domains of effects of medical record accessibility on the patient, the patient-physician relationship and quality of medical care, as developed by the authors of the OpenNotes intervention trial, are summarized in table 1.

| POTENTIAL ADVANTAGES AND DISADVANTAGES OF OPEN NOTES |
|---|
| <p>Potential advantages</p> <ul style="list-style-type: none"> Improved patient understanding of his or her medical condition Additional patient insight into medical decision making Increased patient participation in care Improved patient adherence to treatment plan (e.g., medications and self-care) More timely completion of notes Contribution to accuracy and completeness of the record More eyes on documentation, possibly avoiding medical errors Reinforcement of patient memory (e.g., about the treatment plan) Better patient preparation for visits, rendering visits more effective and efficient Greater patient trust and appreciation of a clinician's work Facilitation of the patient sharing notes with others |
| <p>Potential disadvantages</p> <ul style="list-style-type: none"> Perceived pressure for patients to read notes Patient confusion or misunderstanding of medical terminology Concerns about breaches of privacy and security (e.g. to employers or government agencies) Increased patient anxiety or sense of psychological exposure for mental health issues Patients taking offense to descriptions of the patient, encounter, or both Distortion of the clinical encounter by focusing too much on the notes Need for additional clinician time after the visit to address patient concerns about the notes Unwelcome changes in documentation (e.g., more time to create a patient-appropriate note and less candor about observations or clinical reasoning) Exposure of suboptimal notes, clinician worries about negligence, and malpractice |

Table 1: potential advantages and disadvantages of open notes [21]

Strengths and limitations of this review

This study represents a systematic review and screened a vast amount of the literature across a number of databases. As a limitation possible publication bias needs to be taken into consideration as negative or unclear results may be less likely to be published. Many studies also suffered from 'non-response bias', as patients who are willing to take part in studies are likely to be more positive about medical file accessibility. There also is a geographical limitation. Most studies that were included took place in the US Contrary to Europe [36], in the US implementation of shared (electronic) patient records is already common practice. Finally, literature antedating 2002 was not taken into consideration, as the Belgian Law on patient rights, including access to the medical file was passed at this particular time.

Management and policy implications

As patient participation has become increasingly important during the past few years, initiatives that promote self-care and self-management should be fostered.

'Health literacy' among the population should be promoted. Elaborate training of healthcare professionals (e.g. in specific communicative skills in an increasingly and even fully electronic and/or shared environment) will be crucial in order to be able to provide easy-access and understandable information without compromise of quality of care. This applies in particular to difficult cases with outspoken differences in opinion and interpretation of data between care giver and receiver. Furthermore, in the nearby future overall use of electronic patient records will be put into practice in Belgium, allowing patients to have easy access to personal health data.

The Belgian federal coalition agreement states that by 2019 a Personal Health Record (PHR) must be implemented [42]. This PHR should meet a number of requirements. First, mutual confidence between healthcare professionals and patients is essential. Secondly, data must be sufficiently secured whereas the application must be standardized and user friendly. Moreover, the application must be free of charge and technical support to be provided to ensure that patients who do not dispose of ICT facilities and/or who are not proficient in using ICT technology will also be able to access their PHR [43].

There is a lack of interventional trials on the effects of medical record accessibility. Hence, an important dimension of future research could consist of fostering intervention trials to

demonstrate the added value of sharing the personal medical file with end points such as patient satisfaction, safety, therapy adherence. Intervention trials could have an pre/post intervention and interrupted time series design and should ideally focus on a circumscribed particular patient population, in order to reduce variability, e.g in HIV care with therapy adherence and achieving full virologic HIV suppression as an end point.

CONCLUSION

This systematic review studied the effects, from a patient's perspective, of patients' access to health records on the individual patient, on the relationship between physicians and patients and the impact on healthcare. Results show that access to personal files may facilitate decision-making and allows for self-management and coordination by the individual patient. Communication between physician and patient becomes more efficient and adequate. Patient participation and co-operation are essential in optimizing clinical outcome and overall healthcare quality. However, patients' access to medical data comprises a number of risks that will have to be taken into account.

Additional tables: overview of the included articles

Table 1*In- and exclusion criteria*

| | Inclusion criteria | Exclusion criteria |
|--------------------------------|--|---|
| Participants/population | Patients in contact with a doctor within the first-or second-line healthcare | - Patients who access the medical record of someone else (their children, their parents...) - The experiences of doctors with shared patient records |
| Intervention | The intercourse of patients with their individual medical record | Focus on practical/technical side (dealing with pc,software,programs,...) at the implementation of a shared electronic health record |
| Alternative/control | / | / |
| Result | - At least one of the following outcome measures is discussed: patient, physician-patient relationship and/or medical care - Description from the perspective of the patient | - No description from the perspective of the patient |
| Design | Both quantitative and qualitative studies | - Case studies - Expert opinions |

Table 2*Quality evaluation tool (14)*

| Items | Questions |
|-------------------------------------|---|
| 1 Abstract and title | Was there a clear description of the research? |
| 2 Introduction and objective | Was there a good background and a clear description of the purpose of the study? |
| 3 Method and data | Is the method suitable and clearly explained? |
| 4 Sampling method | Was the sampling method suitable to meet the purpose of study? |
| 5 Data-analysis | Was the description of the data analysis sufficiently detailed? |
| 6 Ethics and bias | Were the ethical issues raised and were they approved provided that they were relevant? Is the relationship between researchers and participants described adequately? |
| 7 Results | Is there a clear description of the results? |
| 8 Generalization | Can the findings of this study generalize to a larger population? |
| 9 Implications for practice | How important are these findings to the policy and the practice? |

Comment: This table is used to evaluate the nine items and the associated questions. With each item/each question are four criteria with a corresponding score (1-4). This score is used to judge the methodological quality of the articles. The criteria and scores are not shown in this table.

Table 3*Quality assessment of the selected articles.*

| Criteria | Ross 2003 | Ross 2005 | Ferreira 2007 | Minhas 2007 | Singh 2007 | Baxter 2008 | Halamk 2008 | Frampton 2009 | Delbanco 2010 | Forsyth 2010 | Snyder 2011 | Walker 2011 | Wibe 2011 | Delbanco 2012 |
|--|--------------|--------------|------------------|----------------|---------------|----------------|----------------|------------------|------------------|-----------------|----------------|----------------|--------------|------------------|
| Abstract and title | 3 | 4 | 3 | 3 | 3 | 4 | 3 | 1 | 3 | 4 | 3 | 4 | 4 | 4 |
| Introduction and purpose method and data | 4 | 4 | 4 | 3 | 2 | 3 | 3 | 4 | 4 | 4 | 4 | 3 | 3 | 3 |
| Sampling method | 2 | 4 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 4 | 4 | 4 |
| Data-analysis | 2 | 4 | 4 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 2 | 4 | 3 | 4 |
| Ethics and bias | 4 | 3 | 4 | 4 | 2 | 2 | 3 | 4 | 1 | 2 | 2 | 4 | 2 | 4 |
| Results | 4 | 3 | 4 | 4 | 2 | 4 | 4 | 3 | 3 | 4 | 4 | 4 | 4 | 3 |
| Generalization | 4 | 3 | 4 | 2 | 2 | 4 | 3 | 3 | 3 | 4 | 3 | 4 | 3 | 4 |
| Implications for practice | 3 | 4 | 4 | 2 | 3 | 4 | 4 | 3 | 4 | 3 | 4 | 4 | 3 | 4 |
| Total | 30 | 33 | 33 | 23 | 20 | 29 | 27 | 27 | 26 | 31 | 27 | 35 | 29 | 34 |
| Quality level | H | H | H | L | L | M | M | M | M | H | M | H | M | H |

Comment: Quality level: High: 30-36, Medium: 24-29, Low: <24

Table 4*4.1 Overview of the articles included in the systematic review*

| | Author | Year | Country | Level of Healthcare | Sample Size | Study population | Design | Method |
|---|---------------------------------|------|----------------|--|---------------|---|-------------------------------------|---|
| 1 | Ross & Lin | 2003 | USA (Colorado) | 2 nd line | not mentioned | - Adults - Outpatients and hospitalized patients | Review | Existing controlled trials, qualitative studies (questionnaires) |
| 2 | Ross, Todd, Moore et al. | 2005 | USA (Colorado) | 1 st line | 601 patients | - Adult outpatients who have an appointment in one of the six participating first-line healthcare services (3 'community health centers', 3 'primary care clinics') | Explorative research (quantitative) | Questionnaires (in the waiting room) |
| 3 | Ferreira, Correia, Silva et al. | 2007 | Not mentioned | 1 st and 2 nd line | Not mentioned | - Adult patients (excluded: studies concerning parents who have access to medical records of their child) | Systematic review | Published literature (excluded : studies examining features / content of medical records, patient rights and / or legal documentation) |

| | | | | | | | | |
|---|---------------------------------|------|-------------------------------------|--|--|---|---|--|
| 4 | Baxter, Farrell, Brown et al. | 2008 | Not mentioned | 1 st and 2 nd line | Not mentioned | - Adult patients using first- or second -line healthcare | Review | Published literature |
| 5 | Halamka, Mandl & Tang | 2008 | USA (Boston, Palo Alto) | 1 st and 2 nd line | 90 000 patients (ambulatory center), 35 000 (University Hospital), 3000 (childrens hospital) | - Patients who are using the services of 'Children's Hospital Boston', 'Palo Alto Medical Foundation', Beth Israel Deaconess Medical Center (university hospital) | Descriptive study | Questionnaires, focus groups |
| 6 | Frampton, Horowitz & Stumpo | 2009 | USA (Derby, Connecticut) | 2 nd line | 2060 patients | - Hospitalized patients in Griffin Hospital (between 2002 and 2007) | Explorative research (quantitative and qualitative) | Standardized questionnaire (HCAHPS), interviews and focus groups |
| 7 | Delbanco, Walker, Darer et al. | 2010 | USA (Boston, Pennsylvania, Seattle) | 1 st line | 100 doctors and 25 000 patients | - Patients who make use of primary healthcare | Quasi-experimental study (observational design) | Pre- and post-intervention questionnaires |
| 8 | Forsyth, Maddock, Iedema et al. | 2010 | Australia (Sydney) | 2 nd line | 10 patients | - Ambulatory and hospitalized patients - 60 years or older - Visited at least one doctor and two specialists | Explorative research (qualitative) | Semi-structured interviews |
| 9 | Snyder, Wu, Miller et al. | 2011 | Not mentioned | 1 st and 2 nd line | Not mentioned | - Cancer patients | Review | Published literature |

| | | | | | | | | |
|-----------|------------------------------------|------|---|--|---------------------------------|--|-------------------------------------|---|
| 10 | Walker, Leveille, Ngo et al. | 2011 | USA (Massachusetts, Pennsylvania, Washington) | 1 st and 2 nd line | 173 doctors and 37 856 patients | - Adult patients using first- or second-line healthcare - Both participating and non-participating patients in the intervention 'OpenNotes' | Explorative research (quantitative) | Pre- and postintervention questionnaires (questions of face value, established on the basis of focus groups, individual interviews and experience of the researchers) |
| 11 | Wibe, HellesØ, Slaughter & Ekstedt | 2011 | Norway | 2 nd line | 17 patients | - 28-67 years - Different syndromes - Relatively high education level - post-hospitalization | Qualitative study | Interviews |
| 12 | Delbanco, Walker, Bell et al. | 2012 | USA (Massachusetts, Pennsylvania, Washington) | 1 st line | 105 doctors and 13 564 patients | - Patient using first-line healthcare (No patients with serious mental illnesses and / or addictions) | Quasi-experimental trial | Pre- and postintervention questionnaires |

4.2 Purpose and key findings of the articles used

| | Author | Year | Purpose | Key findings |
|---|------------|------|---|---|
| 1 | Ross & Lin | 2003 | To identify results of existing studies on the impact of access to personal medical records | <p>- Few patients ask spontaneous access to their medical records.</p> <p>- Some patients are afraid that reading their medical records will make them more anxious.</p> <p>- More than 80% of patients who have read their medical records would do this again.</p> <p>- Effect on:</p> <p>The patient</p> <ul style="list-style-type: none"> • Patients understand their condition better • Few patients were more anxious, worried or confused • 68% felt more reassured • Patients had the feeling to have more control over their healthcare • Patients felt more autonomous • 85% sense a more participating / active role in their own healthcare • 71% felt more confident • 80% said to deal more carefully with recommendations concerning medication and lifestyle • 3% had concerns about confidentiality • 20% understood (almost) all information / notes from the doctor in their medical records (especially difficulty with vocabulary and meaning) <p>The doctor-patient relationship</p> <ul style="list-style-type: none"> • Patients find it easier to communicate / discuss with their doctor • Improvement in doctor - patient communication also led to better clinical results / better acceptance of therapy • Patients were more vocal about their concerns • Patients found answers in their medical records which doctors had not given them (because of lack of time) • 80% have more confidence in his / her physician and feels better understood <p>The medical care</p> <ul style="list-style-type: none"> • 20% of the patients spent corrections / additions to their medical record • There was no statistically significant change in the number / length of the negative or positive notes in the medical record • The workload didn't increase • Efficiency increased |

| | | | | |
|---|---------------------------------|------|---|---|
| 2 | Ross, Todd, Moore et al. | 2005 | To create a picture about the attitude of patients with respect to shared medical records | <ul style="list-style-type: none"> • Patients of all participating organizations find shared medical records is a good idea (94%-96%). • The number of expected benefits was high among patients in all facilities, but "community health center" patients gave more benefits and more potential problems than primary care clinics' patients. • Improved understanding of the doctor's instructions • Increased adherence (better follow up of the recommendations of the physician) • Increased sense of control over their own healthcare • Possible confusion about some parts of the medical record • Feeling possible ashamed / offended when reading the notes from the doctor • Empowerment • Socio-demographic features (age, sex, education , ethnicity , socio-economic status ...) didn't predict the level of interest, there was there is as much interest among ethnically diverse populations and individuals of lower socio-economic class |
| 3 | Ferreira, Correia, Silva et al. | 2007 | Analyzing existing literature, examining the impact of simplified access to personal medical records on the patient, the doctor-patient relationship and medical care | <p>Effect on:</p> <p>The patient</p> <ul style="list-style-type: none"> • Most patients know about their right to access to their medical record, 5% has effectively read this • Most patients who were not informed of this right , were very interested to read it. Others had no need for this, because they completely trust what the doctor tells them, knew enough or would not understand anyway • Patients who read it are interested to keep reading it in the future • Hard to understand slang and derogatory comments can lead to confusion and / or grief. • Ashamed, insulted feelings about what the doctor wrote • Increased adherence to therapy • Change of lifestyle • Education: understand your health state and what the doctor thinks • Increased knowledge about disease • More involvement , empowerment, autonomy and effectiveness (as responsible for medical record) -> coordinate their own care • No additional anxiety or concern • More reassured and relaxed • 24 % are concerned about the confidentiality and security of 'sensitive information ' <p>The doctor-patient relationship</p> <ul style="list-style-type: none"> • Smaller barriers between doctor and patient • More confidence in doctor • Feeling that physician understands them • Positive for doctor and patient: increased communication level |

| | | | | |
|---|-------------------------------|------|--|--|
| 4 | Baxter, Farrell, Brown et al. | 2008 | | <p>The medical care</p> <ul style="list-style-type: none"> • Ability to detect errors / correction and to make additions → better treatment • 24 % found mistakes in his / her medical file • 30 % indicated that information regarding allergies, medication use, medical history, is missing • Improved quality of healthcare <p>Advantages</p> <ul style="list-style-type: none"> • Increased understanding of health state • Increased involvement • More information and knowledge • It is useful and helps patients • Less inaccuracies in medical records (patients may indicate errors, eg. in doses or recommendations) • Increased confidence in doctor • Better communication and relationship with doctor • More joint decisions during consultations ('shared decision') • Increased patient satisfaction • Reduced anxiety • Helps to remember what was said during consultations, which decisions were made , ... • Easy to share health information with family • Can help to accept bad news <p>Disadvantages</p> <ul style="list-style-type: none"> • Medical terminology difficult to understand (doctors here are more concerned than patients themselves) • Causes anxiety or sadness (especially in bad news or if severe symptoms or several possible diagnoses were described) <ul style="list-style-type: none"> ◦ In one study , no one worried or sad ◦ In other study: 18% worried or sad • Privacy / confidentiality may be breached • Brings increased costs and workload with it |
| 5 | Halamka, Mandl & Tang | 2008 | | <p>Give an overview of existing literature regarding the handover of personal medical records to patients</p> <p>Describing the experiences regarding the implementation of shared patient records (1999-2007)</p> <ul style="list-style-type: none"> • Patients want the full list of their problems to be shared • Full text descriptions of problems instead of codes • Patient -friendly terms, diagnoses explained in plain language and indicate where to find more information • Patients want the full list of their medication to be shared • Being in the possibility to complete / adjust when this is incomplete / incorrect • Patients want all data related to their allergies are to share • Want to supplement what causes a reaction and indicate the severity of a reaction • Patients want all test results (laboratory , diagnostic , ...) are shared • They prefer these in advance orally elucidated (especially if the results are "abnormal"), so they can understand it better |

| | | | | |
|---|--------------------------------|------|---|--|
| 6 | Frampton, Horowitz & Stumpo | 2009 | To examine the use of accessible medical records by patients | <ul style="list-style-type: none"> • Need for coordinated care (bring your own medical information to different care providers: fewer errors and frustration, higher quality of care) • Need for websites containing reliable information on particular conditions (links recommending medical record) • Need for interaction with family, other patients ... : medical record can support • Many patients reported that they did not want to read their medical records because they would not understand its contents. The doctor would give them all the necessary information. Additionally, the physician may provide context and statements about the health information, so that complex and / or difficult language in the medical record does not cause unnecessary stress and / or confusion. • Access to personal medical records leads to: <ul style="list-style-type: none"> ○ Smaller barriers between doctor and patient ○ Increased confidence in the doctor ○ Increased involvement of family members ○ Greater assurance that no information is kept back from the patient ○ Increased satisfaction with medical care and communication with the physician • Informed of the right of access to personal health information: <ul style="list-style-type: none"> ○ 2002: 69.7% ○ 2004: 90.6% ○ 2006: 93% • Effective reading medical records: <ul style="list-style-type: none"> ○ 2002: 18.3% ○ 2004: 26.9% ○ 2006: 30.6% • Informed >>> effective reading?: When patients feel that information is shared with them and that their questions will be answered honestly and completely and when there is trust and transparency between them and their doctors, it may seem unnecessary for patients to view their medical records. • Patients who were informed of the right of access to their medical records were more satisfied with their hospital stay than patients who were not notified (87.8 % vs. 77.1 % "very satisfied"). • Patients who were informed of the right of access to their medical records would more recommend the hospital to family and friends than patients who were not notified (80.2 % vs. 69.3 %) |
| 7 | Delbanco, Walker, Darer et al. | 2010 | Obtain evidence on the feasibility and the pros and cons of providing access to the medical file for patients | <p>Advantages</p> <ul style="list-style-type: none"> • Improved understanding of health state, reassuring, reduces anxiety, telling the truth • Improved understanding of the patient which helps in making medical decisions • Increased patient participation • Increased adherence (medication, self-care,...) • More careful addition , increased accuracy and completeness of medical records • Improved documentation leads to reducing medical errors • Helps patients to remember what was said during consultations (on treatment , ...) • Improved preparation for consultations, more effective and efficient consultations • Increased confidence in the doctor |

| | | | | |
|---|---------------------------------|------|--|---|
| | | | | <ul style="list-style-type: none"> Increased satisfaction The sharing of medical notes with family, friends ... is facilitated; helps to build a personal 'care network' at home Helps patients to search for explanations of medical terms <p>Disadvantages</p> <ul style="list-style-type: none"> Concerned to read things one not wants to know, which would make them anxious and / or that might damage confidence in their doctor Concerned to read what doctors think / find of them Concerned to interpret unprecedented medical terminology wrong Concerned that less time for examination / consultation will remain as doctors make their notes easy to read and to understand for patients Concerned that privacy / security may be compromised |
| 8 | Forsyth, Maddock, Jedema et al. | 2010 | Mapping the vision of patients concerning contributing to their own healthcare by tracking their individual medical record | <ul style="list-style-type: none"> Patients who usually make decisions together with their doctor (' shared decision making ') were eager to keep their personal medical file Patients who take a more passive role with regard to making decisions about their health show no need to keep track of their own health Improved clinical outcomes for patients who take an active role in their own healthcare, as well as for patients who take a rather passive role <ul style="list-style-type: none"> ○ their health information is always available, especially in urgent / emergency situations, on vacation, when switching to other healthcare providers , ... ○ that their doctors forget less details about their health state ○ they have more control over and more responsibility for their health Keeping the personal medical file made patients feel: <ul style="list-style-type: none"> ○ their health information is always available, especially in urgent / emergency situations, on vacation, when switching to other healthcare providers , ... ○ that their doctors forget less details about their health state ○ they have more control over and more responsibility for their health |
| 9 | Snyder, Wu, Miller et al. | 2011 | To consider which role transmission of information to the patient plays (by means of a shared patient record) in promoting patient-centered care | <ul style="list-style-type: none"> Information is crucial in patient-centered care Important information is always available Helps to share health information with family, friends , other patients , ... Patients can help healthcare providers to keep information up- to-date Patients can detect errors or omissions or add / edit information → better quality of care Facilitates and improves communication between doctor and patient Increased patient satisfaction (e.g. about quality of care) Education (on chronic disease and risk factors) Patients better understand what to expect within the various processes (diagnosis, treatment, rehabilitation) More knowledge about health → more active involvement in decisions (including family) Empowerment Increased adherence Can cause more anxiety than necessary (if no explanation is given for results) Improved coordination of the care process |

| | | | | |
|----|-------------------------------------|------|---|---|
| 10 | Walker, Leveille, Ngo et al. | 2011 | To consider the potential advantages and disadvantages of a medical record accessibility to the patient | <ul style="list-style-type: none"> • 92% to 97% find accessible medical records is a good idea and think it will help them. • 35% are concerned about his / her privacy • 22% want to share their medical files with others (93% with family, 36% with another doctor, 23% with a friend and 23% by a nurse or other healthcare provider) • Less than 1/6 patients are worried to be more anxious or confused after reading his / her medical file • Most participants are positive about the potential benefits of accessible medical records: <ul style="list-style-type: none"> ○ more control over their own healthcare: 86-96% ○ better prepared for consultations: 82-91 % ○ reminder for example to remember treatment plan, to remember what was said by the doctor: 90-94% ○ better care of themselves (improved self-care): 70-85 % ○ better take of medication as prescribed: 56-71 % ○ understand better state of health: 89-94 % • Most patients were very enthusiastic and positive about accessible medical records, regardless of socio - demographic and health characteristics |
| 11 | Wibe, HellesØ, Slaughtier & Ekstedt | 2011 | Mapping the experiences of citizens in relation to reading their medical record | <p>- By reading their personal medical file:</p> <ul style="list-style-type: none"> • patients obtained a more complete picture of their health now and in the past • patients compared their experiences with what was described in their medical records by doctors • patients obtained information that they missed before, e.g. precautions they had to take because of their health status • patients felt more responsible for their own healthcare • patients felt 'informed' • patients had a sense of control over their own health process • patients discovered errors in their medical records • some patients did not feel respected as a person because they felt that the doctors had underestimated them, had prejudices and had a too limited view on their situation • patients found that doctors were not always been open and honest during consultations <p>- Patients experience their medical file as a "hold " as a tool to fall back on if the explanation of the doctor was insufficient for them</p> |
| 12 | Delbanco, Walker, Bell et al. | 2012 | To examine the effect of access to the individual medical record on the patient and the physician | <ul style="list-style-type: none"> • The majority experienced access to his / her medical record as very beneficial, few reported cons • 77 % to 87 % had the feeling to have more control on his / her healthcare, to understand better his / her state of health and to be better prepared for future consultations • 60% to 78 % reported increased adherence (especially concerning medication) • 26 % to 36% worried about privacy • 1% to 8 % indicated that confusion or anxiety was caused |

| | | | |
|--|--|---|--|
| | | | <ul style="list-style-type: none"> • 20 % to 42 % shares his / her medical record with others (usually family members) • 62% wanted to make additions to the notes from the doctor • 86 % to 89 % said that an open medical record is a key factor to future decisions (choice of doctor , health / treatment ...) • Patients found an answer to their questions that were not answered by the doctor • Some patients communicated better and had better clinical outcomes after reading the concerns of their physician (e.g. about their weight) • 99% wanted continued access to his / her medical file |
| | | (Quasi experimental study in 3 geographic areas in USA) | |

References

- 1 Raad voor de Volksgezondheid en Zorg. De participerende patiënt. 2013 [October 9, 2015]. Available from: <http://www.raadrvs.nl>.
- 2 Baxter S, Farrell K, Brown C, Clarke J, Davies H. Where have all the copy letters gone? A review of current practice in professional-patient correspondence. *Patient education and counseling*. 2008 May;71(2):259-64.
- 3 Naik AD, Schulman-Green D, McCorkle R, Bradley EH, Bogardus ST, Jr. Will older persons and their clinicians use a shared decision-making instrument? *Journal of general internal medicine*. 2005 Jul;20(7):640-3.
- 4 Siminoff LA, Rogers HL, Thomson MD, Dumenci L, Harris-Haywood S. Doctor, what's wrong with me? Factors that delay the diagnosis of colorectal cancer. *Patient education and counseling*. 2011 Sep;84(3):352-8.
- 5 Forsyth R, Maddock CA, Iedema RA, Lassere M. Patient perceptions of carrying their own health information: approaches towards responsibility and playing an active role in their own health - implications for a patient-held health file. *Health Expect*. 2010 Dec;13(4):416-26.
- 6 Frampton S, Horowitz S, Stumpo B. Patients first. Open medical records: allowing patients access to their records increases their satisfaction. So why are hospitals resistant? *American Journal of Nursing*. 2009;109(8):59-63.
- 7 Ventegodt S, Morad M, Merrick J. Clinical holistic medicine: the "new medicine", the multiparadigmatic physician, and the medical record. *ScientificWorldJournal*. 2004 May 11;4:273-85.
- 8 Vlaams Patiëntenplatform. Patiëntenvoorlichting in ziekenhuizen: Een verkennend onderzoek in Vlaanderen. 2007 [October 21, 2015]. Available from: <http://www.vlaamspatiëntenplatform.be>.
- 9 Feeley TW, Shine KI. Access to the medical record for patients and involved providers: transparency through electronic tools. *Annals of internal medicine*. 2011 Dec 20;155(12):853-4.
- 10 Parchman ML, Flannagan D, Ferrer RL, Matamoras M. Communication competence, self-care behaviors and glucose control in patients with type 2 diabetes. *Patient education and counseling*. 2009 Oct;77(1):55-9.
- 11 Parchman ML, Zeber JE, Palmer RF. Participatory decision making, patient activation, medication adherence, and intermediate clinical outcomes in type 2 diabetes: a STARNet study. *Annals of family medicine*. 2010 Sep-Oct;8(5):410-7.
- 12 Patel VL, Arocha JF, Kushniruk AW. Patients' and physicians' understanding of health and biomedical concepts: relationship to the design of EMR systems. *Journal of biomedical informatics*. 2002 Feb;35(1):8-16.
- 13 Bulas D. Talking to patients: Why should we? *Applied Radiology*. 2011;40(6):6-7.
- 14 Federale Overheidsdienst Volksgezondheid. Wet 'Rechten van de patiënt' - In een goede relatie weet je wat je aan mekaar hebt. 2014 [October 10, 2015]. Available from: <http://www.health.fgov.be>.
- 15 Centre for Biomedical Ethics and Law (Katholieke Universiteit Leuven). EU Member States: General overview 2008. Available from: http://europatientrights.eu/countries/eu_member_states.html
- 16 Wikipedia. Medical record 2016 [cited 2016 22 November]. Available from: https://en.wikipedia.org/wiki/Medical_record#German_law_and_customs.
- 17 Vlaams Patiëntenplatform. Ervaringen van patiënten over tien jaar patiëntenrechten. 2012 [October 10, 2015]. Available from: <http://www.vlaamspatiëntenplatform.be>.
- 18 Markle Foundation. Markle Survey on Health in a Networked Life 2010 2011 [cited 2016 21 November]. Available from: http://www.markle.org/sites/default/files/20110110_HI_NLSurveyBrief_0.pdf
- 19 Ferreira A, Correia A, Silva A, Corte A, Pinto A, Saavedra A, et al. Why Facilitate Patient Access to Medical Records. In: Bos B, Blobel B, editors. *Medical and Care Computetics 4*. Amsterdam: IOS Press; 2007. p. 77-90.
- 20 Zahedi F. The challenge of truth telling across cultures: a case study. *J Med Ethics Hist Med*. 2011;4:11.
- 21 Ruhke GW, Wilson SR, Akamatsu T, Kinoue T, Takashima Y, Goldstein MK, et al. Ethical decision making and patient autonomy: a comparison of physicians and patients in Japan and the United States. *Chest*. 2000 Oct;118(4):1172-82.
- 22 Hawker S, Payne S, Kerr C, Hardey M, Powell J. Appraising the evidence: reviewing disparate data systematically. *Qualitative health research*. 2002 Nov;12(9):1284-99.
- 23 Delbanco T, Walker J, Bell SK, Darer JD, Elmore JG, Farag N, et al. Inviting patients to read their doctors' notes: a quasi-experimental study and a look ahead. *Annals of internal medicine*. 2012 Oct 2;157(7):461-70.

- 24 Delbanco T, Walker J, Darer JD, Elmore JG, Feldman HJ, Leveille SG, et al. Open notes: doctors and patients signing on. *Annals of internal medicine*. 2010 Jul 20;153(2):121-5.
- 25 Halamka JD, Mandl KD, Tang PC. Early experiences with personal health records. *Journal of the American Medical Informatics Association : JAMIA*. 2008 Jan-Feb;15(1):1-7.
- 26 Ross SE, Lin CT. The effects of promoting patient access to medical records: a review. *Journal of the American Medical Informatics Association : JAMIA*. 2003 Mar-Apr;10(2):129-38.
- 27 Ross SE, Todd J, Moore LA, Beaty BL, Wittevrongel L, Lin CT. Expectations of patients and physicians regarding patient-accessible medical records. *J Med Internet Res*. 2005;7(2):e13.
- 28 Snyder CF, Wu AW, Miller RS, Jensen RE, Bantug ET, Wolff AC. The role of informatics in promoting patient-centered care. *Cancer J*. 2011 Jul-Aug;17(4):211-8.
- 29 Walker J, Leveille SG, Ngo L, Vodicka E, Darer JD, Dhanireddy S, et al. Inviting patients to read their doctors' notes: patients and doctors look ahead: patient and physician surveys. *Annals of internal medicine*. 2011 Dec 20;155(12):811-9.
- 30 Wibe T, Helleso R, Slaughter L, Ekstedt M. Lay people's experiences with reading their medical record. *Soc Sci Med*. 2011 May;72(9):1570-3.
- 31 Rostom AY, Gershuny AR. Access to patient records. *Lancet*. 1991 Nov 23;338(8778):1337-8.
- 32 Arora NK, McHorney CA. Patient preferences for medical decision making: who really wants to participate? *Medical care*. 2000 Mar;38(3):335-41.
- 33 Benbassat J, Pilpel D, Tidhar M. Patients' preferences for participation in clinical decision making: A review of published surveys. *Behav Med*. 1998 Sum;24(2):81-8.
- 34 Degner LF, Sloan JA. Decision-Making during Serious Illness - What Role Do Patients Really Want to Play. *Journal of clinical epidemiology*. 1992 Sep;45(9):941-50.
- 35 Fioriglio G, Szolovits P. Copy fees and patients' rights to obtain a copy of their medical records: from law to reality. *AMIA Annual Symposium proceedings / AMIA Symposium AMIA Symposium*. 2005:251-5.
- 36 Goffeau M. E-Health in België: Een toegevoegde waarde? 2013. Available from: http://www.scriptiebank.be/sites/default/files/webform/scriptie/E_health%20in%20Belgie%20een%20toegevoegd%20waarde.pdf.
- 37 Vermeir P, Vandijck D, Degroote S, Ommeslag D, Van De Putte M, Heytens S, et al. Mutual perception of communication between general practitioners and hospital-based specialists. *Acta Clin Belg*. 2015 Oct;70(5):350-6.
- 38 Tang PC, Ash JS, Bates DW, Overhage JM, Sands DZ. Personal health records: definitions, benefits, and strategies for overcoming barriers to adoption. *Journal of the American Medical Informatics Association : JAMIA*. 2006 Mar-Apr;13(2):121-6.
- 39 Fricton JR, Davies D. Personal Health Records to Improve Health Information Exchange and Patient Safety. In: Henriksen K, Battles JB, Keyes MA, Grady ML, editors. *Advances in Patient Safety: New Directions and Alternative Approaches (Vol 4: Technology and Medication Safety)*. *Advances in Patient Safety*. Rockville (MD)2008.
- 40 Lober WB, Zierler B, Herbaugh A, Shinstrom SE, Stolyar A, Kim EH, et al. Barriers to the use of a personal health record by an elderly population. *AMIA Annual Symposium proceedings / AMIA Symposium AMIA Symposium*. 2006:514-8.
- 41 Cruickshank J, Packman C, Paxman J. Personal Health Records. Putting patients in control? 2020health.org, 2012.
- 42 Federaal regeerakkoord 2014 [October 16, 2015]. Available from: http://www.feweb.be/sites/default/files/FEDERAALREGEERAKKOORD_09102014.PDF.
- 43 Vlaams Patiëntenplatform. Introductie van een personal health record in België: Visie VPP. 2015 [November 2, 2015]. Available from: <http://www.rtreh.be>.

Chapter 8

Patient perspectives on medical record accessibility and patient participation: a questionnaire survey

Peter Vermeir

Hanne Van Tiggelen

Dominique Vandijck

Sophie Degroote

Renaat Peleman

Rik Verhaeghe

An Mariman

Dirk Vogelaers

Under review in International Journal of Clinical Practic

8. Patient perspectives on medical record accessibility and patient participation: a questionnaire survey

ABSTRACT

Background: In a changing healthcare environment, shifting from paternalism to patient autonomy, patients are taking a more participative role in their care process. To stimulate proactive involvement and self-management, medical record accessibility may represent a tool to improve patient information and commitment to health management.

Aim: To explore whether patients feel comfortable with participating in their own care process and how medical record accessibility could support this patient participation.

Methods: An explorative quantitative questionnaire study was performed in ambulatory patients visiting the departments of General Internal Medicine and Head, Neck and Maxillo-Facial Surgery of a tertiary referral center respectively.

Results: Patients were recruited by convenience sampling of 1270 patients visiting the two departments within a time period of two weeks. Overall response rate was 97,3% (426/438; 45,3% male; mean age $42,5 \pm 15,4$ years).

Most patients (89,7%) indicated a desire to make healthcare decisions in partnership with their physician. They are in need of transparent and understandable health information. The medical record was perceived as a suitable and effective means to inform patients about their health and to increase involvement in their treatment (77,6%). Besides, access to the medical record is perceived to result in a more effective communication transfer between physician and patient (65,5%), increased patient compliance (64,3%) and increased patient satisfaction (57,4%).

Conclusion: Patients indicates a desire for proactive participation in their individual care process. They felt that medical record accessibility could support them in making informed, well-considered decisions and in managing and coordinating their own care.

Keywords: Medical record, patient participation, shared decisions, health information, physician-patient communication, quality of care

BACKGROUND

Healthcare has progressively shifted from a paternalistic to a more participative model. Patient empowerment, patient involvement and shared decision making in an equal partnership between physician and patient are gaining importance. Patients are increasingly encouraged to take a more participative role in their care process and to co-manage their own healthcare [1-4].

Within such a patient-oriented healthcare system, it is crucial to share information on different items such as diagnosis, prognosis, treatment options, ... with patients in order to provide them the opportunity of well-considered decisions [5-9].

Several studies have shown that sharing the personal medical record can be an effective way to inform patients about their health and to facilitate physician-patient communication. Access to the medical record results in a better understanding of the personal health status, increased patient compliance, better clinical results and improved quality of care [4, 8, 10-13].

Despite this supportive evidence as well as the Belgian law on patient rights (2002), which among other rights includes the possibility to access the personal medical record, in practice patients rarely read their medical record [9, 14].

Up to the present, limited research has focused on the patient perspective on medical record accessibility and patient participation. Do patients feel comfortable with participating in their own healthcare? Are patients aware of their right to access their medical record? Are they in need of reading personal health information? Do they understand this information? Do they need further explanation? How do they feel when reading their medical record?

These questions need to be answered in order to ascertain if patients feel ready to participate in and co-manage their own healthcare. Hence, this study aims to explore whether patients feel comfortable with participating in their own care process and how access to the medical record could support this participation.

METHODS

An exploratory quantitative study was performed among outpatients visiting the departments of General Internal Medicine and of Head, Neck and Maxillo-Facial Surgery of the Ghent University Hospital (Belgium).

Participants were surveyed by means of a 22-item questionnaire previously developed and validated in the study of Ross et al. (2005) [15]. Seventeen statements on the medical record and five statements on participation are included and they are all phased in the same direction (i.e. the more the patients agree, the more positive they are about the medical record and about participation). Some key questions include: "I understand my medical record", "I better understand the guidelines of my doctor", "I feel more involved in my care". The questionnaire has been translated into Dutch and questions on dealing with health information and specialist referral were added. The following sociodemographic data were collected: age, gender, nationality, mother tongue, educational level and occupation. Questions on accessibility of medical records and patient participation were assessed using a five-point Likert scale, ranging from completely agree to completely disagree. In analyses, 'completely agree' and 'agree' were grouped together, as well as 'completely disagree' and 'disagree'. Patients were considered high-skilled when they indicated an educational level of high school, university or post-university.

Questionnaires were completed between the 17th of February and the 2nd of March 2016. Participants were recruited through convenience sampling; all patients that were present in the waiting room of one of the two departments during this period were eligible to be asked for participation. Patients were informed about the study through an information letter and an informed consent form. They also had the possibility to ask questions or to obtain additional information. The study was completely anonymous and was approved by the ethical committee of Ghent University Hospital (reference UZG 2016/0141).

Analyses were performed using the 'Statistical Package for the Social Sciences' (SPSS, version 22). Descriptive statistics are represented by numbers, percentages, means, standard deviations, medians and interquartile ranges. Chi-squared tests were used to identify significant differences between two or more groups. The significance level was set at $p \leq 0,05$.

RESULTS

Respondent characteristics

1270 patients consulted the two departments within the two weeks of recruitment and from the 438 patients invited through convenience sampling, 426 effectively participated in the study, resulting in a response rate of 97,3%. The vast majority of the participants has the Belgian nationality (89,2%) and speaks Dutch (94,8%). Respondent characteristics are summarized in Table 1.

| | n (%) |
|---------------------------------------|--|
| Year of birth (n = 422) | |
| < 30 | 108 (25,6) |
| 30-49 | 189 (44,8) |
| 50-70 | 105 (24,9) |
| >70 | 20 (4,7) |
| <i>Mean (SD): 42.49 years (15,38)</i> | |
| <i>Median (IQR): 38 years (25)</i> | |
| Gender (n = 426) | |
| Male | 193 (45,3) |
| Female | 233 (54,7) |
| Nationality (n = 426) | |
| Belgian | 380 (89,2) |
| Other | 46 (10,8) |
| Mother tongue (n = 426) | |
| Dutch | 404 (94,8) |
| French | 14 (3,3) |
| English | 5 (1,2) |
| Arabic | 1 (0,2) |
| Other | 14 (3,3) |
| Educational level (n = 425) | |
| Low skilled | <ul style="list-style-type: none"> Primary education 17 (4,0) Lower secondary education 44 (10,4) Higher secondary education 115 (27,1) |
| High skilled | <ul style="list-style-type: none"> High school 129 (30,4) University 93 (21,9) Post-university 27 (6,4) |
| Occupation (n = 420) | |
| Worker | 51 (12,1) |
| Employee | 158 (37,6) |
| Government official | 41 (9,8) |
| Self-employed | 52 (12,4) |
| Job-applicant | 16 (3,8) |
| Disabled | 33 (7,9) |
| Retired | 45 (10,7) |
| Student | 39 (9,3) |

Table 1: respondent characteristics

Medical record

A majority of 94,3% of the participants expressed interest in reading their personal medical record but only 62,7 % is aware of this patient right. The major reasons why patients (would) like to read their medical record include: getting more information about the own health status (76,0%), knowing lab test results (70,9%) and gaining more insight into their treatment (60,2%). Almost a third of the respondents (32,9%) wants to read their medical record in order to enable health-related decisions in partnership with their physician. 23,8% of the participants would not read their record because they consider that they would not understand the information. Low-skilled respondents report more difficulty understanding medical information than the high-skilled participants ($p=0.005$).

Almost a quarter of the participants (24,2%) expect access to their medical record to be confusing. People aged 50 and older expect medical record access to be more confusing than people younger than 50 ($p=0.043$). Nearly half of the low-skilled participants (48,8%) expect their record to be confusing, compared to 18,6% among the highly skilled ($p<0.001$), 73,2% of the respondents anticipate to better understand what was said during consultation after reading their medical record, 76,3% would better understand the physician's recommendations and 76,6% would better understand their health status. Half of the participants (50,8%) expressed concern that reading their record would increase concerns about personal health. This consideration is more prominent in people aged 50 and older as compared to the lower age group (72,0% vs. 48,2%, $p<0.001$) and low-skilled respondents ($p<0.001$). 60,5% of the participants foresee to feel more reassured after reading their medical record. Two-thirds (66,0%) anticipate to feel more in control of their medical care and 77,6% more involved in their care process. Less than 10% (7,6%) of the respondents think they would feel embarrassed about certain things doctors may have written in their medical record.

More than half of the participants report that reading their medical file would result in enhanced trust in their physician (56,3%) and increased satisfaction about their medical care (57,4%). Almost two-thirds (65,5%) assume to feel better prepared for consultations and this feature was more prominent in people aged 50 and older and retirees as compared to younger people (82,1% vs. 58,7%, $p<0.001$) and students (90,4% vs. 43,6%, $p<0.001$).

64,3% of the participants supposed that they would better follow the doctor's advice and 61,8% anticipated increased compliance with medical regimens after insight in their medical

record. People aged 50 and older and low-skilled participants would follow their doctor's advice and their medical regimens better after reading their record than people younger than 50 (80,7% vs. 58,2%, $p<0.001$ and 83,3% vs. 53,1%, $p<0.001$) and the highly skilled (92,7% vs. 58,6%, $p<0.001$ and 93,8% vs. 55,4%, $p<0.001$). 10,9% found or expected to find one or more errors or inadequacies in their record.

Participation

Although almost 90% of the participants felt they should make decisions about their healthcare in partnership with their physician, only 53,5% reports effectively moving to this step. 32% still leaves it fully to his physician to make such health-related decisions, again with a marked difference according to educational level (60% of the low- versus 26,7% among high-skilled participants ($p=0.013$)).

Dealing with health information

Most participants report no difficulties understanding oral (89,2%) and written (82,1%) medical information. Low-skilled respondents have significantly more difficulties understanding oral ($p=0.001$) and written ($p=0.008$) medical information than the high-skilled. Retirees (23,3%) and students (15,4%) understand medical information the least. Almost 80% of the participants look for additional information after their specialist consultation (68,7% of the respondents on the internet, 34,1% through their general practitioner and only 2,8% through patient associations). About half of the patients (55%) report to contact their specialist again after consultation to obtain clarifications about the written medical information. People aged younger than 50 and high-skilled participants are more likely to search for additional information on the internet than people older than 50 (75,7% vs. 50,4%, $p<0.001$) and low-skilled respondents (76,1% vs. 30,4%, $p<0.001$). People older than 50, on the other hand, are more likely to contact their general practitioner (10,4% vs. 3,0%, $p<0.001$) or the specialist for this purpose (3,2% vs. 0,3%, $p<0,001$).

Specialist referral

Almost half of the participants (46,8%) are referred to the specialist by their general practitioner. About a third (32,2%) consulted the specialist on their own initiative. High-

skilled patients and patients without Belgian nationality are more likely to consult a specialist on their own initiative than low-skilled patients (28,9% vs. 19,1%, $p=0,023$) and Belgian patients (37,0% vs. 26,1%, $p=0,048$).

DISCUSSION

In the face of increasing mean age, associated chronic diseases and multimorbidity and ensuing complexity of care, active patient participation in their own healthcare process will gain importance [16]. This study investigated whether patients feel comfortable with participating in their own care process and how medical record accessibility could support patient participation.

Both the present and previous studies have shown that patients are in need of transparent health information. Patients really want to obtain sufficient information about their health and possible treatment options in order to enable well-considered informed decisions [15, 17]. The medical record seems to be a suitable and effective means to inform patients about their health and to increase involvement in their treatment. Patients anticipate to better understand their health status and physician's recommendations after reading their medical record. It would also result in an increased sense of control, responsibility and patient involvement. According to the respondents, medical record accessibility would enhance trust in their physician and improve physician-patient communication. Patients would be better prepared for consultations, resulting in more effective and efficient consultations. Because of a better understanding of their health status and the doctor's advice, patients better follow the physician's recommendations, in turn improving compliance, better clinical results and ultimately improved quality of care and increased patient satisfaction.

However, it should be noted that a significant proportion of patients expect to experience problems with understanding their medical record. To prevent unnecessary concern, confusion and/or anxiety and to enable patients to make well-considered decisions, it is crucial to provide a reiterative explanation framework, e.g through a combination of comprehensible written information (through an easily accessible shared medical record)

and additional oral explanation provided by the physician and/or other health professionals. They should check that patients understand the information and take into account their learning ability. Patient associations, where patients can be helped by answering their questions and giving them additional information, can also play an important role.

About 80% of the patients look for additional information after their specialist consultation, especially on the internet and through their general practitioner. The general practitioner seems to be an important key figure in this information process. Especially older patients and low-skilled patients, who are less likely to search information on the internet, often rely on their general practitioner. Reliability of internet based information remains an important issue. Patient associations should provide an alternative, upon condition that the information supplied through this channel is validated as reliable and evidence-based. In our sample, only 2,8% of the patients used the information forum of patient associations.

Strengths and limitations

An innovative feature of the present research consists of the patient perspective approach of patient participation and sharing of health data. Both represent important issues in health care. Another strength is the high response rate (97,3%), which increases the generalizability of the results. The sample size was sufficiently large to be representative for a larger patient population. Nevertheless, the study should be repeated among various target groups since we only used a Dutch version of the questionnaire, only few non-native speakers were included in the study. In addition, a part of the patient population, namely patients aged 21 to 60, is overrepresented. The technique of convenience sampling used in the present study is hampered by possible sampling bias.

CONCLUSION

In conclusion, a majority of the patients in the present sample expressed interest in participating in their own healthcare process in partnership with their physician. They want to be aware of their health status and are in need of transparent health information. In combination with oral information, the medical record seems to be a suitable and effective means to inform patients about their health and to increase their involvement in their treatment. It is recommended to teach health professionals patient-centered communication skills in order to ensure understandability.

References

- 1 Baxter S, Farrell K, Brown C, Clarke J, Davies H. Where have all the copy letters gone? A review of current practice in professional-patient correspondence. Patient education and counseling. 2008 May;71(2):259-64.
- 2 Naik AD, Schulman-Green D, McCorkle R, Bradley EH, Bogardus ST, Jr. Will older persons and their clinicians use a shared decision-making instrument? Journal of general internal medicine. 2005 Jul;20(7):640-3.
- 3 Raad voor de Volksgezondheid en Zorg. De participerende patiënt. 2013 [October 9, 2015]. Available from: <http://www.raadrvs.nl>.
- 4 Siminoff LA, Rogers HL, Thomson MD, Dumenci L, Harris-Haywood S. Doctor, what's wrong with me? Factors that delay the diagnosis of colorectal cancer. Patient education and counseling. 2011 Sep;84(3):352-8.
- 5 Forsyth R, Maddock CA, Iedema RA, Lassere M. Patient perceptions of carrying their own health information: approaches towards responsibility and playing an active role in their own health - implications for a patient-held health file. Health Expect. 2010 Dec;13(4):416-26.
- 6 Frampton S, Horowitz S, Stumpo B. Patients first. Open medical records: allowing patients access to their records increases their satisfaction. So why are hospitals resistant? American Journal of Nursing. 2009;109(8):59-63.
- 7 Snyder CF, Wu AW, Miller RS, Jensen RE, Bantug ET, Wolff AC. The role of informatics in promoting patient-centered care. Cancer J. 2011 Jul-Aug;17(4):211-8.
- 8 Ventegodt S, Morad M, Merrick J. Clinical holistic medicine: the "new medicine", the multiparadigmatic physician, and the medical record. ScientificWorldJournal. 2004 May 11;4:273-85.
- 9 Vlaams Patiëntenplatform. Patiëntenvoorlichting in ziekenhuizen: Een verkennend onderzoek in Vlaanderen. 2007 [October 21, 2015]. Available from: <http://www.vlaamspatiëntenplatform.be>.
- 10 Bulas D. Talking to patients: Why should we? Applied Radiology. 2011;40(6):6-7.
- 11 Feeley TW, Shine KI. Access to the medical record for patients and involved providers: transparency through electronic tools. Annals of internal medicine. 2011 Dec 20;155(12):853-4.
- 12 Parchman ML, Flannagan D, Ferrer RL, Matamoros M. Communication competence, self-care behaviors and glucose control in patients with type 2 diabetes. Patient education and counseling. 2009 Oct;77(1):55-9.
- 13 Patel VL, Arocha JF, Kushniruk AW. Patients' and physicians' understanding of health and biomedical concepts: relationship to the design of EMR systems. Journal of biomedical informatics. 2002 Feb;35(1):8-16.
- 14 Federale Overheidsdienst Volksgezondheid. Wet 'Rechten van de patiënt' - In een goede relatie weet je wat je aan mekaar hebt. 2014 [October 10, 2015]. Available from: <http://www.health.fgov.be>.
- 15 Ross SE, Todd J, Moore LA, Beaty BL, Wittevrongel L, Lin CT. Expectations of patients and physicians regarding patient-accessible medical records. J Med Internet Res. 2005;7(2):e13.
- 16 de Maeseneer, J., Aertgeerts, B., Remmen, R., & Devroey, D. Eerstelijnsgezondheidszorg: nu meer dan ooit!. Geron. 2016; 18(1), 23-25.
- 17 Walker J, Leveille SG, Ngo L, Vodicka E, Darer JD, Dhanireddy S, et al. Inviting patients to read their doctors' notes: patients and doctors look ahead: patient and physician surveys. Annals of internal medicine. 2011 Dec 20;155(12):811-9.

Chapter 9

Discussion and future perspectives

9. Discussion and future perspectives

This doctoral thesis examined different dimensions of communication in the healthcare setting. The aims were (1) to explore the quality of written communication, (2) to explore communication satisfaction in relation to job satisfaction, turnover intention and burnout among nurses and (3) to explore the patients' perspective on access to their personal health record. These aims were addressed in a combination of reviews on the one hand and experimental research on the other hand. The following table summarizes the questions elaborated in this mirror approach.

| | Reviews | Research in Flanders |
|---|--|--|
| 1 | <ul style="list-style-type: none"> - How is the quality of medical letters? - What is the economic impact of communication inefficiencies in healthcare? - How can written communication in healthcare be improved? | <ul style="list-style-type: none"> - How do general practitioners and hospital-based specialists in Flanders perceive and evaluate the quality of their mutual communication? |
| 2 | <ul style="list-style-type: none"> - How is the relationship between communication satisfaction and job satisfaction in the nursing profession? - What is the impact of communication satisfaction and job satisfaction on turnover intention and risk for burnout among nurses? | <ul style="list-style-type: none"> - What is communication satisfaction among Flemish hospital nurses? - What are current levels of job satisfaction, intention to leave and risk for burnout among Flemish hospital nurses? - Is communication satisfaction related to job satisfaction, intention to leave and risk for burnout in this sample? |
| 3 | <ul style="list-style-type: none"> - What is the effect of access to the personal medical file on the patient, on the patient-physician relationship and on the quality of medical care? | <ul style="list-style-type: none"> - What is the perception in patients accessibility to their own medical record? |

9.1. Main findings

The main findings can be summarized as followed.

9.1.1. Mutual communication of GPs and specialists

Although face-to-face communication is recommended, written communication remains the principal means of communication within and between primary and secondary/tertiary care.

Notwithstanding a consensus on the recommended content of referral and discharge letters, a significant proportion of mutual correspondence is considered deficient or at least suboptimal. Firstly, letters may lack crucial information such as relevant medical information, whether and how the patient and/or his family are involved and do not always meet the expectations of the clinician on the receiver side. There may also be issues about the correctness of the information. Secondly, timeliness (tardiness) of delivery of the information is seen as an important source of inefficiencies in written communication. Deficiencies in written communication contribute to various negative outcomes: discontinuity of care, compromise of patient safety, inefficient use of resources, patient dissatisfaction and overwork in health care providers. The associated economic impact is considerable [1]. Main improvement interventions include structured letters, sharing medical information digitally, training in writing skills and providing feedback.

The mutual perception of quality of letters by Belgian GP's and medical specialists was assessed in a questionnaire study. This subjective appreciation of quality of communication in general was satisfactory. A large majority (85.5%) of the 343 GPs questioned rated the specialists' letter to be of good quality. Similarly, more than half of the 392 specialists reported a good quality of the GP's referral letter. However, timeliness of specialists' letters was considered an issue as well as an area for improvement. Moreover, specialists feel that GPs insufficiently follow recommendations resulting from the specialist consultation. Finally, mutual feedback between primary and secondary care is positively appreciated, but fails to be achieved [2].

9.1.2. Communication satisfaction and job satisfaction among nurses.

First, a narrative review was performed on job satisfaction in relation to communication satisfaction among nurses [3]. This review explored different fields within the complex domain of communication in a healthcare organization and their interrelationship towards relevant outcomes such as communication satisfaction, job satisfaction, intention to leave and effective turnover. Different types of social networks in the healthcare workplace can be distinguished: consulting, trust and communication networks, of which the latter, a network of employees regularly discussing work-related issues, impacts most on job satisfaction. Increasing complexity of care translates into different team configurations around and with the patient. Nurses can belong to different types of teams, each with their particular modalities and specific communication requirements in order to guarantee optimal care. The quality of communication between health care providers and with their clients and their environment determines the risk for medical errors. Identification within a team is key to achieve personal accomplishment, within a complex set of intrinsic and extrinsic determinants of job satisfaction. For nurses, interaction with colleagues and supervisors, autonomy and workload represent repeatedly identified significant predictors of job satisfaction. Job satisfaction is one of the strongest factors related to nurse turnover.

Secondly, an explorative study was undertaken to examine communication and job satisfaction, their mutual relationship and association with burnout and intention to leave in a large sample of nurses in three Flemish hospitals (n=1454) [4]. Overall job satisfaction was high ($7.49 \pm 1.43/10$); only 7.2% of the nurses reported dissatisfaction (defined as a score ≤ 5). Most nurses have a low intention to leave (59.9%). According to their scores on the Maslach Burnout Inventory, less than 3% of the nurses are at risk for burnout, however, 21.9% have a low score on the subscale 'Personal accomplishment' within the Communication Satisfaction Questionnaire [5]. With regard to communication satisfaction, nurses are most satisfied with the dimension 'Relation with supervisor' and least with 'General Organizational Perspective'. Overall, these results indicate that communication satisfaction could be improved and that in particular management could focus on the dimension of personal accomplishment of their employees. All dimensions of communication satisfaction are correlated to job satisfaction, turnover intention and indications for burnout.

9.1.3. Access to medical record by patients

We first performed a systematic review on the patient perspective on the effects of medical record accessibility on patient, patient/physician relationship and quality of medical care respectively [6]. As a background, in the modern interpersonal relational paradigm, the patient viewpoint and experience of the collaboration between GP and specialists is at least as important as the perspective of the health care professionals, as opposed to the traditional paternalistic framework. This systematic review identified only 12 studies that met the inclusion criteria and yielded relevant information. Only a minority of patients spontaneously request access to their medical file, in contrast to frequent awareness of this patient right. The majority of those, that took this step, are positive and would continue or repeat this practice in the future. More than 90% is convinced that reading the personal medical file could be helpful. It leads to increased transparency and improved patient trust in physicians. Optimal patient information creates the opportunity for informed health decisions, in conjunction with physicians. Increased documentation through patient involvement and feedback on the medical file reduce medical errors, in turn increasing satisfaction and quality of care.

Subsequently, the patient perspective on medical record accessibility was explored through a questionnaire study probing perceptions and expectations within a mixed sample of patients consulting different tertiary care polyclinics in a single teaching hospital [7]. A large majority of respondents desires to make healthcare decisions in partnership with their physician. They are in need of transparent and understandable health information. The medical record was viewed as a suitable and effective means to inform patients about their health and to increase involvement in their treatment. Besides, according to the respondents, access to the medical record should result in a more effective communication transfer between physician and patient, increased patient compliance, better clinical results, improved quality of care and increased patient satisfaction.

9.2. Strengths and limitations

Throughout the manuscripts, strengths and limitations of each study were acknowledged. They can be summarized as follows:

- Narrative reviews were included in this PhD. This type of review is prone to bias, as not all relevant papers may have been included due to less rigor in screening the literature as

opposed to the systematic review approach. However, in spite of the narrative review character, search strategies were well-elaborated and clearly reported.

- The experimental studies were all questionnaire-based. Respondents may have given socially desirable answers, although all questionnaires were anonymous. Moreover, we have no information on the non-responders leading to a possible non-response bias. Finally, questionnaires used are subjective by nature but have been well validated in previous literature.
- The explorative studies provide results which reflect the Belgian (or even by restriction Flemish) situation, hampering generalizability of findings and recommendations.
- Large samples of physicians, nurses and patients were included in the three explorative studies, allowing for robust findings and conclusions.
- The systematic review on the effects of medical record accessibility on patient, patient/physician relationship and medical care fulfills all requirements to provide a complete, exhaustive summary of current literature.
- The reviews, as well as the questionnaire studies, include recommendations that may prove of interest to different stakeholders in healthcare. Hence, a translation from science to clinical practice and management purposes has been provided.

9.3. Practical implications and main recommendations

9.3.1. Mutual communication between GPs and specialists

Written communication in healthcare would benefit from a structured approach, addressing both content and timeliness. In previous literature, the information content requirements for medical letters have been assessed [1]. It however seems that these requirements may be at least partially pathology-specific [8]. Content improvement of referral letters can also foster prioritization, which contributes to timely access and higher quality of care [8]. As an example of such a structured approach, a personalized patient hospital discharge letter was introduced in the Netherlands [9]. However, this seemingly 'simple' intervention was

integrated in hospital-wide policy of discharge procedures, integrated in the electronic health record and accompanied by training of professionals (in using lay language, dealing with health literacy). Hence, this intervention was not restricted to written communication. The letter as such was improved through the implementation of a structured plain language discharge summary but this was accompanied by a focus on verbal explanation of diagnosis, treatment, medication and recent changes in medication, potential complications and lifestyle. After implementation of 'MedSheet', a written explanation of medication, Curtis et al concluded that offering both written and verbal information produces a synergistic effect and hence both need to be recommended in combination [10]. This lack of personal interaction with almost no face-to-face contact between GP and specialist was also recognized as a flaw in communication within oncology as a particular field of medicine (11).

This structured approach also includes clear delineation of ownership of the communication process and definition of roles, again identified as a communication challenge in cancer care [11]. As an example, GPs are often confused about who should be responsible for treating comorbidity in cancer patients, while specialists believe this is a GP responsibility. Specialists, patients and GPs also mention additional GP roles: managing psychological distress and counseling behavioral modification [12].

Another potential barrier in information exchange between GPs and cancer specialists, is purely technical such as incompatibility of electronic medical software.

Peer review, feedback, process indicators, follow-up tools and training are proposed lines of approach and action. Combined (bundle approaches) and longitudinal interventions have the highest changes for success. Weiland et al. [13] initiated a training for specialists in addressing medically unexplained physical symptoms. This training included writing appropriate reply letters encompassing peer reviewing and discussing letters post-intervention. This intervention resulted in increased reporting and answering of patients' questions but other important aspects (e.g. giving advice to patient and GP) nevertheless remained underaddressed. Although this training, as part of a larger program of skills training based on experiential learning, modelling, role-play, feedback and techniques derived from cognitive behavioral therapy, was well conceived, it seemed to lack the robustness to obtain better and persistent results [14]. To become successful, interventions should be organized on larger scales and at different levels, in scale and approach comparable to the Dutch intervention of Buurman et al. [9].

Currently available e-tools hold promise to address this problem. In Flanders, the largest electronic platform by which institutions, specialists, GPs, other health care providers and patients can exchange information is 'CoZo' (Collaborative care platform) developed by the University Hospital of Ghent. It is part of the Belgian federal eHealth hubs- and metahub system and has 76 connected institutions (general and psychiatric hospitals, polyclinics, rehabilitation centers...), which makes it the largest Flemish hub. Medical records, results of investigations, medical images, vaccination schedules, prescribed medication, discharge letters etc. can be exchanged between health care providers from different institutions and both in hospital and primary care, upon the sole condition of a therapeutic relationship with the patient. Patients are required to give informed consent for the platform to be used for the exchange of their medical information.

Caregivers need to people identify themselves by means of their electronic identity card, in order to ensure privacy and relevance of access. Another frequently used tool in Belgium to exchange information between physicians, restricted to physicians is the 'Sumehr', or 'summarized electronic health record'. This includes basic data such as date of birth, contact persons, risk factors, medical history, medication etc.

9.3.2. Communication satisfaction and job satisfaction among nurses

Communication satisfaction proved a major factor in job satisfaction, quality of interprofessional communication, high-quality care and patient safety and finally turnover and burnout of health care professionals. Although only modest associations were found in the questionnaire study (probably due to high job satisfaction and low percentages of turnover intention and burnout among participating Flemish nurses), it is needless to say that communication satisfaction deserves more management attention.

In particular, in the questionnaire study communication in the organizational context received poor ratings and significant indifference towards this type of communication was noted. An improved organizational communication culture should be pursued and could upgrade overall organizational commitment. Supervisor communication is linked to nurses' trust in their supervisors and to job satisfaction. Thus, an open communication climate should be advocated, facilitated by supportiveness, involvement in decision-making, trust and confidence. Recommendations for different communication dimensions are summarized in Table 1.

| Dimension | Recommendations |
|---|--|
| Personal feedback | <ul style="list-style-type: none"> ▪ Acknowledge nurses by means of personal feedback in the form of verbal and/or written recognition, in addition to material rewards ▪ Adhere to fixed performance management reviews during the year |
| Supervisory communication | <ul style="list-style-type: none"> ▪ Observe and listen to staff members and pay attention to staff needs and ideas ▪ Organize staff forums: sharing ideas and information between different categories of staff |
| Subordinate communication | <ul style="list-style-type: none"> ▪ Use formal communication structures to allow interactive communication (e.g. forums, meetings) ▪ Use face-to-face communication contributing to upward communication |
| Horizontal informational communication | <ul style="list-style-type: none"> ▪ Provide accurate information, especially on sensitive issues such as change and work security |
| Organizational integration | <ul style="list-style-type: none"> ▪ Update staff members on their job progress ▪ Provide guidance on career planning ▪ Write policies in a simple and concise way |
| Corporate information | <ul style="list-style-type: none"> ▪ Update staff members on policies affecting the hospital and nursing practice ▪ Provide easy accessible regulations ▪ Implement a corporate communication channel (e.g. electronic) |
| Communication climate | <ul style="list-style-type: none"> ▪ Involve staff members in activities to improve the hospital's professional image ▪ Probe staff members by means of a needs analysis survey on possible improvements |
| Media quality | <ul style="list-style-type: none"> ▪ Distribute important information in a formal, written format (i.e. policy statements and procedures) ▪ Follow up verbal messages with written messages for verification purposes |

Table 2: Interventions to improve communication satisfaction among nurses [15]

9.3.3. Patients' access to medical record

Accessibility of medical records results in better self-management and coordination by the individual patient and more efficient patient-physician communication. Health literacy, however, should be promoted among patients (through education and patient associations),

as well as by communication skills training of health care professionals. As such, sharing information would be optimized as patient and professional also share mutual understanding of how to interpret this information. The implementation of an easily accessible, user-friendly, free and secure Personal Health Record (PHR) is supported by a majority of the patients.

Health literacy nevertheless is insufficient to come to grips with the increasing complexity of medical records [16]. Increasing involvement of patients however does not need to be difficult to achieve: by a simple video patients can be learned to ask three important questions: 1. What are my options; 2. What are the possible benefits and harms of those options; 3. How likely are each of those benefits and harms to happen to me? [17]

A training program with good results was developed by Bittner et al. [18]. Medical students translated medical documents into plain language, which increased their communication skills.

Klein et al. described their tips and tricks for successful implementation of access to PHRs, e.g. 'be clear and distinct', 'use supportive language', 'ask for and use feedback' etc. [19].

Privacy and confidentiality remain main issues within sharing information. From the patient's point of view, his patient rights should be guaranteed at all times and only the right people should have access to the right and required medical information. The same is true for the health care professionals : they should have the possibility to create personal notes, to which a restricted access is attached.

Another point of concern is the possible increased workload of health care providers associated with sharing medical information with patients. However, it can be expected (as it was shown by Delbanco et al. [20]) that this extra workload is less a problem than anticipated. Once this new practice is established, and the debugging phase is over, the workload could even decrease, e.g. by patients who are better prepared for their consultation.

9.4. Future perspectives

- The increased digitalization in healthcare facilitates solutions to improve the quality of referral and answer letters, as this was shown to be deficient. The rapid transformation to a full e-health platform should solve the majority of issues surrounding "written

communication”, such as **timeliness** which was one of the main problems that was identified, as notes could be consulted directly by third parties involved in the health care process. In spite of obvious advantages, there still exists and will continue to exist barriers to full implementation both on the generator and receiver sides of the information exchange. Hence, financial and other incentives will be necessary to achieve as full implementation status as possible, with minimal lag times or inertia. This transformation process offers possibilities of assessing different organizational tools. In settings that are still operating without this e-health dimension, there may exist opportunities to assess effects of the change to an electronic information exchange environment in a pre-/post-intervention trial.

- In specific care processes (intensive care, neonatology, cancer care, ...), specific adaptations may be required. This specificity needs to be outweighed with the benefits of a generic system for the whole of an organization. This represents one of the challenges to e.g any hospital wide electronic patient file. Problems and barriers in the data transfer between systems within a single organization as well as effects of the introduction of variability and specificity into a system require separate evaluation. In the reporting process **structured letters** do not have to be static (i.e. same items for every patient), but could be dynamic (items according to diagnosis related groups). It would be interesting to evaluate the implementation of **digital checklists**, adapted to specific medical conditions, embedded in the electronic patient record system. This could be used by both GPs and specialists. These items could standardize and improve the content of medical letters.
- The degree of **coverage** and **timeliness** of hospital discharge letters and ambulatory reporting should be included in any set of hospital key performance indicators. For example, regarding Ghent University Hospital, 70% of the discharge letters is available for the patient’s GP within 24 hours after discharge and 80% within one week after discharge. This implies an area for improvement but also the relevance of the tolerated delays could be assessed.
- Nurses’ wellbeing is the result of complex and multifactorial interactions between internal and external factors and should be one of the key quality indicators of a health care institution (as well as the wellbeing of other professionals). To optimise different

modalities of **inter-professional communication, workload and job satisfaction**, an organization wide multimodal prevention and intervention program should be developed. Pilot tests, e.g. at departmental level, could include team development activities focusing on shared responsibility, communication, collective decision-making, and a good understanding of everyone's roles. As such, an open communication climate and a collaborative team environment could be pursued.

- The questionnaire study on access to medical records revealed a strong **desire** of patients to participate in their health care process. Future research could focus on examining and fostering patient-centered **communication skills** of health care providers, and evaluate the effect of interventions such as e learning modules and focus teaching. Indeed, improving patient-provider communication is deemed to subsequently improve patient satisfaction, adherence and health outcomes (Figure 1).

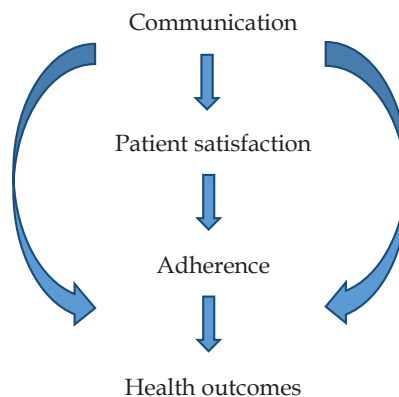


Figure 1: Communication influences patient satisfaction, adherence and health outcomes [21].

- Sharing medical notes with patients has shown to have positive effects on patient participation [20]. In real-time, shared-decision making could also be facilitated by the use of a second computer screen, turned towards the patient, during a consultation. Effects on patient satisfaction and patient participation could be examined.
- Modern medical curricula emphasize the importance of **doctor-patient communication** through **training** in simulated patient encounters. In a real patient environment in

medical practices and hospitals this emphasis is much diminished. Supervisors should focus not only on the correctness of the information that is given to the patient in terms of content but also on the quality of the communication process. This requires more research into the factors of effective doctor-patient communication and specific training sessions for both supervisors and doctors in the field.

9.5. Conclusion

There is a consensus on the recommended content of medical letters, however, a large amount of correspondence is considered deficient or at least suboptimal (due to missing information or tardiness of delivery). Nevertheless, the perception of GPs and specialists on their mutual communication is satisfactory.

Interaction with colleagues and supervisors, autonomy and workload are significant predictors of job satisfaction among nurses. In a large Flemish nurse sample, overall job satisfaction is high, and turnover intention as well as risk for burnout low. Nurses are satisfied with the relation with their supervisor, and dissatisfied with the organizational information.

Most patients are positive about access to their medical file and they are convinced that this leads to increased transparency and improved trust in physicians. Patients are willing to make healthcare decisions in partnership with their physician. Patient access to medical files represents a suitable means to increase patient involvement in their medical management.

References

- 1 Vermeir P, Vandijck D, Degroote S, Peleman R, Verhaeghe R, Mortier E, Hallaert G, Van Daele S, Buylaert W, Vogelaers. Communication in healthcare: A narrative review of the literature and practical recommendations. *International journal of clinical practice*. 2015;69:1257-67.
- 2 Vermeir P, Vandijck D, Degroote S, Ommeslag D, Van De Putte M, Heytens S, et al. Mutual perception of communication between general practitioners and hospital-based specialists. *Acta Clin Belg*. 2015 Oct;70(5):350-6.
- 3 Vermeir P, Degroote S, Vandijck D, Mariman A, De Veugele M, Peleman R, et al. Job satisfaction in relation to communication in health care among nurses: a narrative review and practical recommendations. (Submitted).
- 4 Vermeir P, Downs C, Degroote S, Vandijck D, Tobback E, Delesie L, et al. Intra-organizational communication satisfaction and job satisfaction among Flemish hospital nurses: an exploratory multicenter study. *Workplace Safety and Health* (Accepted for publication). 2017.
- 5 Downs CW, Hazen MD. A factor analytic study of communication satisfaction. *Journal of Business Communication*. 1977;14(3):63-73.
- 6 Vermeir P, Degroote S, Vandijck D, Van Tiggelen H, Peleman R, Verhaeghe R, et al. The patient perspective on the effects of medical record accessibility: a systematic review. *Acta Clin Belg*. 2017 Jan 06;1-9.
- 7 Vermeir P, Van Tiggelen H, Vandijck D, Degroote S, Peleman R, Verhaeghe R, et al. Patients' perspectives on medical record accessibility and patient participation: a questionnaire survey (Submitted).
- 8 Hartveit M. Bridging the gap between primary care and specialized mental health care. Bergen: University of Bergen (Norway); 2016.
- 9 Buurman BM, Verhaegh KJ, Smeulders M, Vermeulen H, Geerlings SE, Smorenburg S, et al. Improving handoff communication from hospital to home: the development, implementation and evaluation of a personalized patient discharge letter. *International journal for quality in health care: journal of the International Society for Quality in Health Care / ISQua*. 2016 Jun;28(3):384-90.
- 10 Curtis LM, Mullen RJ, Russell A, Fata A, Bailey SC, Makoul G, et al. An efficacy trial of an electronic health record-based strategy to inform patients on safe medication use: The role of written and spoken communication. *Patient education and counseling*. 2016 Sep;99(9):1489-95.
- 11 Easley J, Miedema B, Carroll JC, Manca DP, O'Brien MA, Webster F, et al. Coordination of cancer care between family physicians and cancer specialists: Importance of communication. *Canadian family physician Medecin de famille canadien*. 2016 Oct;62(10):e608-e15.
- 12 Sada YH, Street RL, Jr., Singh H, Shada RE, Naik AD. Primary care and communication in shared cancer care: a qualitative study. *Am J Manag Care*. 2011 Apr;17(4):259-65.
- 13 Weiland A, Blankenstein AH, Willems MHA, Van Saase JLCM, Van Daele PLA, Van der Molen HT, et al. Training specialists to write appropriate reply letters to general practitioners about patients with medically unexplained physical symptoms; A cluster-randomized trial. *Patient education and counseling*. 2015 Oct;98(10):1229-35.
- 14 Weiland A, Blankenstein AH, Willems MH, Van Saase JL, Van der Molen HT, Van Dulmen AM, et al. Post-graduate education for medical specialists focused on patients with medically unexplained physical symptoms; development of a communication skills training programme. *Patient education and counseling*. 2013 Sep;92(3):355-60.
- 15 Wagner JD, Bezuidenhout MC, Roos JH. Communication satisfaction of professional nurses working in public hospitals. *Journal of nursing management*. 2015 Nov;23(8):974-82.
- 16 Rowlands G, Protheroe J, Winkley J, Richardson M, Seed PT, Rudd R. A mismatch between population health literacy and the complexity of health information: an observational study. *The British journal of general practice : the journal of the Royal College of General Practitioners*. 2015 Jun;65(635):e379-86.
- 17 Shepherd HL, Barratt A, Jones A, Bateson D, Carey K, Trevena LJ, et al. Can consumers learn to ask three questions to improve shared decision making? A feasibility study of the ASK (AskShareKnow) Patient-Clinician Communication Model((R)) intervention in a primary health-care setting. *Health Expect*. 2016 Oct;19(5):1160-8.
- 18 Bittner A, Jonietz A, Bittner J, Beickert L, Harendza S. Translating medical documents into plain language enhances communication skills in medical students--A pilot study. *Patient education and counseling*. 2015 Sep;98(9):1137-41.
- 19 Klein JW, Jackson SL, Bell SK, Anselmo MK, Walker J, Delbanco T, et al. Your Patient Is Now Reading Your Note: Opportunities, Problems, and Prospects. *The American journal of medicine*. 2016 Oct;129(10):1018-21.
- 20 Delbanco T, Walker J, Darer JD, Elmore JG, Feldman HJ, Leveille SG, et al. Open notes: doctors and patients signing on. *Annals of internal medicine*. 2010 Jul 20;153(2):121-5.

21 Betancourt JR, Green AR, Carrillo JE, Ananeh-Firempong O, 2nd. Defining cultural competence: a practical framework for addressing racial/ethnic disparities in health and health care. *Public Health Rep.* 2003 Jul-Aug;118(4):293-302.

Chapter 10

Summary in English and Dutch

SUMMARY

Background

Healthcare is increasingly complex and requires efficient communication between all stakeholders. Communication failures are one of the most frequent cause of medical errors, and as such, negatively impact upon patient safety. We aimed at assessing within the communication process the dimensions of job satisfaction, communication satisfaction, intention to leave and turnover as well as the patient perspective of medical record accessibility.

Aims and methodology

In this thesis, three aims were preconceived:

- To explore the quality of written communication through a narrative review and a subsequent questionnaire study among hospital-based specialists and general practitioners (GPs).
- To explore communication satisfaction in relation to job satisfaction, turnover intention and burnout among nurses, again through a narrative review and a multicentric questionnaire study
- To explore the patients' perspective on access to their personal health record through a systematic review and a questionnaire study among polyclinical patient samples:

Results

- Referral and discharge letters are often flawed by poor content or timeliness problems. In contrast, the perceptions of Belgian hospital-based specialists and GPs on the quality of their mutual communication is rather positive, although timeliness, uptake of recommendations and feedback were again identified as areas of improvement.
- Job satisfaction among nurses is influenced by a complex set of intrinsic and extrinsic motivators. Communication is intertwined with teamwork and warranting optimal care. Communication satisfaction varies across different dimensions.

- Overall job satisfaction is high among Flemish nurses, associated with a low intention to leave and a low risk for burn-out. In general, patients are enthusiastic about access to their personal health record. They report a strong willingness to participate in their health decisions and expect to experience advantages by having access to their personal health record.

Recommendations

- To optimize medical letters, structured letters and education (including practice and mutual feedback) are recommended.
- Communication and communication satisfaction should be included in team projects and should be an integral part of quality improvement programs in healthcare organizations.
- Patients' access to their personal health record should be promoted and can be facilitated by the digital (r)evolutions in healthcare. Pilot projects could pave the way for an online accessible health record

SAMENVATTING

Achtergrond

De toenemende complexiteit in de gezondheidszorg vereist een efficiënte communicatie tussen de verschillende zorgverstrekkers en de patiënt. Communicatieproblemen zijn één van de meest voorkomende oorzaken van medische fouten en hebben een negatieve impact op patiëntveiligheid. In dit onderzoek wordt het communicatieproces bestudeerd. Meer bepaald wordt gepeild naar de dimensies van jobtevredenheid, communicatietevredenheid, intentie tot verloop bij de zorgverstrekkers enerzijds en het perspectief van de patiënt tot dossierbeschikbaarheid anderzijds.

Doelstellingen en methode

Er werden drie doelstellingen vooropgesteld in dit proefschrift:

- Het onderzoeken van de kwaliteit van geschreven informatie door middel van een narratieve review, met daarop volgend een vragenlijstonderzoek bij ziekenhuisspecialisten en huisartsen.
- Het onderzoeken van communicatietevredenheid in relatie tot jobtevredenheid, verloopintentie en burn-out bij verpleegkundigen, door middel van een narratieve review en een multicentrisch vragenlijst onderzoek.
- Het onderzoeken van het perspectief van de patiënt op toegang tot het eigen medisch dossier door middel van een systematische review en een vragenlijstonderzoek bij poliklinische patiënten.

Resultaten

- De kwaliteit van verwijs- en ontslagbrieven is vaak ontoereikend door inhoudelijke zwakte of laattijdigheid. Tijdigheid, opvolging van aanbevelingen en feedback daarentegen blijven belangrijke verbeterpunten.
- Jobtevredenheid bij verpleegkundigen wordt beïnvloed door een complexe interactie van intrinsieke en extrinsieke motivatoren. Communicatietevredenheid varieert naargelang de dimensies en hangt sterk samen met teamwork en garanderen van optimale zorg.

Over het algemeen is bij Vlaamse verpleegkundigen de jobtevredenheid hoog en de intentie tot verloop en risico op burn-out laag.

- De meeste patiënten zijn enthousiast over toegang tot hun medisch dossier. Ze verwachten hieruit voordelen te ervaren en willen mee participeren in beslissingen over hun gezondheid.

Aanbevelingen

- Gestructureerde brieven en opleidingen (o.a. bestaande uit oefeningen en onderlinge feedback) zijn mogelijke aanbevelingen om medische verslagen te optimaliseren.
- Communicatie en communicatievredenheid zouden opgenomen moeten worden in team projecten en zouden integraal deel moeten uitmaken van kwaliteitsverbeterende initiatieven in gezondheidsinstellingen.
- Toegang tot het medisch dossier moet aangemoedigd worden bij patiënten en kan gefaciliteerd worden door de digitale evoluties in de gezondheidszorg. Pilotprojecten zouden het pad kunnen effenen voor een online toegankelijk medisch dossier.

Chapter 11

Appendix

Additional paper 1

Impact van communicatie tussen zorgverstrekkers op de kwaliteit van patiëntenzorg

Peter Vermeir

Kirsty De Fluitier

Sabine Van Daele

Giorgio Hallaert

Walter Buylaert

Dirk Vogelaers

Dominique Vandijck

Published in Tijdschrift voor Geneeskunde 71, nr. 6, 2015

11.1. Additional paper 1: Impact van communicatie tussen zorgverstrekkers op de kwaliteit van patiëntenzorg

ABSTRACT

The general practitioner (GP) has a central function in patient care. Basically, the GP is the patients' first point of contact. Even after referral, he will always play a coordinating role in the care process. In order to be able to provide high standard care, physicians should have full access to all patient data. Efficient communication is key in this transmural co-operation. To be effective, communication should meet specific quality standards. This requires a regular exchange of communication between the GP and medical specialists. Moreover, any form of communication should meet everybody's needs and be structured. Physicians prefer electronically written letters. Communication between healthcare professionals and communication quality should be an important and integral part of their graduate and postgraduate training. Communication should be considered a basic skill of healthcare professionals in order to provide and ensure high quality patient care.

De huisarts heeft een centrale functie in de zorg voor de patiënt. Hij is in principe het eerste aanspreekpunt voor de patiënt, maar steeds blijft hij een coördinerende rol behouden in het zorgproces, ook na verwijzen. Om kwaliteitsvolle zorg te kunnen aanbieden, moeten artsen optimaal kunnen beschikken over alle relevante gegevens over de patiënt. Doeltreffende communicatie is hiervoor essentieel. Deze moet aan bepaalde vereisten voldoen om kwaliteitsvol te zijn. Dit veronderstelt dat op welbepaalde momenten in het zorgproces de informatie tijdig uitgewisseld wordt tussen huisartsen en arts-specialisten. Het belang van goede communicatie tussen zorgactoren onderling alsmede de voorwaarden waaraan deze dient te voldoen, zou nadrukkelijker aan bod moeten komen in de opleiding. Zo zou communicatie beschouwd moeten worden als een essentiële vaardigheid die nodig is teneinde kwaliteitsvolle patiëntenzorg te kunnen verlenen.

INLEIDING

In onze gezondheidszorg heeft de huisarts een centrale rol. Hij is meestal het eerste aanspreekpunt voor patiënten en kan in het merendeel van de gevallen deze gezondheidsproblemen ook zelf behandelen [1-5]. Soms is het nodig dat de huisarts doorverwijst naar een arts-specialist voor bijkomend advies of behandeling [3, 4, 6-9]. Een zo goed mogelijke samenwerking in de brede zin tussen huisarts en arts-specialist is essentieel om kwaliteitsvolle zorg te leveren, waarvan de huisarts hoe dan ook de coördinatie bewaart [10-12]. Een sleutelement in de samenwerking is communicatie [13]. De huisartsen en arts-specialisten moeten op zorgmomenten optimaal kunnen beschikken over relevante klinische gegevens om kwaliteitsvolle zorg aan de patiënt te bieden [2, 10, 14-16].

Uit onderzoek blijkt dat de communicatie tussen huisartsen en arts-specialisten niet steeds optimaal verloopt en dat dit bijgevolg een impact heeft op de kwaliteit van patiëntenzorg [7, 17, 18], met een hogere morbiditeit en mortaliteit alsook een toename van gezondheidskosten als mogelijke gevolgen [4, 7, 11, 19-22].

Het „Institute of Medicine” (IOM) definieert kwaliteitsvolle zorg als: „de mate waarin gezondheidszorg voor individuen en voor de bevolking de kansen verhoogt om de gewenste gezondheidsresultaten te verkrijgen en de mate waarin die consistent is met de huidige professionele kennis” [23]. Hierbij onderscheidt het IOM de deelaspecten veiligheid, tijdigheid, effectiviteit, gelijkheid, efficiëntie en patiëntgerichtheid. Vaak wordt daar ook nog continuïteit en zorgintegratie aan toegevoegd. In de literatuur is beschreven dat communicatie op al deze aspecten een belangrijke impact heeft.

Desondanks is het effect van de communicatie tussen huisartsen en arts-specialisten op de kwaliteit van de geleverde patiëntenzorg nog maar weinig onderzocht [24]. Er zijn studies die aangetoond hebben dat een doeltreffende communicatie de zorgkwaliteit verhoogt [16, 25, 26], wat evenwel niet steeds bevestigd wordt [27]. Daarom is meer onderzoek nodig om de werkelijke impact van communicatie op de zorgkwaliteit te kunnen bepalen. Foy et al. maken hierbij een kanttekening dat voor optimalisatie van de zorgkwaliteit niet enkel de communicatie tussen huisarts en arts-specialist moet verbeteren, maar dat er ook aandacht moet zijn voor de andere elementen van samenwerking. Voorbeelden hiervan zijn het opnemen van gedeelde zorg door gebruik te maken van zorgpaden, gedeelde verantwoordelijkheid bij het bereiken van gemeenschappelijke doelstellingen, gezamenlijke supervisie en opleiding van paramedisch personeel, „parallele consultaties” (officieuze,

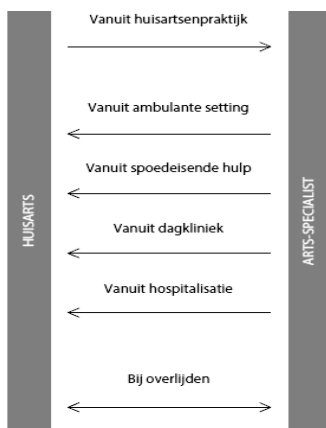
informele contacten met artsen, paramedici, lotgenoten, patiëntenorganisaties) en de ondersteunende rol van een zorgmanager (coördinatie van de werkzaamheden van alle betrokken zorgverleners) [11].

VOORWAARDEN VOOR KWALITEITSVOLLE COMMUNICATIE

De informatie-uitwisseling tussen huisartsen en arts-specialisten moet soepel en adequaat verlopen [17, 19, 28]. Goede communicatie moet aan een aantal theoretische voorwaarden voldoen. Deze omvatten zowel aspecten van timing, vormvereisten als inhoudelijke criteria.

Momenten van communicatie

Voor een goede samenwerking tussen huisartsen en arts-specialisten hebben beide partijen, bij onderlinge verwijzing, behoefte aan gerichte en tijdige informatie-uitwisseling [14, 18, 29]. In het zorgproces kan men verschillende belangrijke momenten van informatie-uitwisseling tussen huisartsen en specialisten onderscheiden [17, 28] (figuur 1). De informatie-uitwisseling is een tweerichtingsproces en brengt een gedeelde verantwoordelijkheid met zich mee.



Figuur 1: communicatiemomenten in het zorgproces [28]

Informatiestroom van de huisarts naar andere subspecialismen

Het is de taak van de huisarts om de zorg voor de patiënt te coördineren en te organiseren. Hij treedt op als informatiemanager. Om deze taak te kunnen volbrengen is de huisarts o.a.

afhankelijk van informatie van de arts-specialisten [16, 30]. Een huisarts kan een patiënt doorverwijzen naar een arts-specialist voor bijkomende onderzoeken, diagnosestelling, advies, behandeling of gedeelde verantwoordelijkheid van de zorg [3, 4, 6-9]. Bij verwijzing naar de ambulante setting, de spoedeisende hulp of geplande opname moet de huisarts informatie overdragen aan de arts-specialist. De terbeschikkingstelling van de vereiste informatie kan in sommige settings de dringendheid van de verwijzing mee helpen inschatten. Ook bij overlijden van een patiënt in de thuiszorg moet de huisarts de medebehandelende arts-specialisten op de hoogte brengen [28].

Indien een arts-specialist deze informatie niet of niet tijdig ontvangt van de huisarts, is hij afhankelijk van de informatie die de patiënt en familie geeft [30, 31]. In verschillende studies is aangetoond dat een arts-specialist soms helemaal geen of laatijdig informatie ontvangt van de huisarts [1, 14, 18, 30-33]. Dit leidt vaak tot ontevredenheid bij de arts-specialist [30]. De arts-specialist kan aan de hand van de verkregen informatie, waaronder de reden van verwijzing, de verwachtingen van de huisarts inschatten [4, 8, 18, 28, 30, 32, 34, 35].

Informatiestroom van subspecialismen naar huisarts als coördinator van de zorg

In het optimale scenario zou de arts-specialist de huisarts op verschillende momenten tijdens de hospitalisatie informatie verschaffen. De huisarts wenst aansluitend op de opname (lieft binnen 48 uur) of de dag daarna in kennis gesteld te worden van de hospitalisatie en de bereikbaarheid alsook coördinaten van de verantwoordelijke arts-specialist. Bij chirurgische ingrepen moet de huisarts voldoende op voorhand verwittigd te worden van het tijdstip van de ingreep, met als belangrijkste motief dat vragen vanuit de patiënt of familie adequaat opgevangen kunnen worden. Bij belangrijke nieuwe diagnoses en veranderingen in het behandelproces, zoals een overdracht naar een andere dienst of ander ziekenhuis, en bij verwickelingen of onverwachte gebeurtenissen en bij overlijden moet de huisarts onmiddellijk verwittigd worden [4, 5, 17, 28, 36]. Beslissingen die voor een lange periode invloed hebben op de zorgplanning moeten in samenspraak met de huisarts genomen worden [4, 17, 28, 37].

Bij ontslag uit het ziekenhuis wordt alle relevante ontslaginformatie met de patiënt meegegeven, in het bijzonder de medicatie bij ontslag of eventuele wondzorg. Als de huisarts instaat voor de nazorg van de patiënt, moet hij deze informatie binnen een dag na het ontslag ontvangen [1, 4]. In geval van ontslag wordt de huisarts het best een dag op voorhand verwittigd. Bij ontslag wordt op zijn minst een voorlopig verslag meegegeven. Een definitief verslag wordt achteraf binnen een zo kort mogelijke termijn doorgegeven aan de

huisarts. Een aantal studies vindt de eerste maand na ontslag een redelijke termijn voor het ontvangen van een definitief medisch verslag [12, 38] terwijl andere studies meer aansturen op een korte termijn van tien dagen na ontslag [5, 28]. De huisartsen ervaren dat de gegevensoverdracht van arts-specialisten door schriftelijke communicatie te traag verloopt en soms helemaal niet toekomt [1, 7, 10, 12, 16-18, 24, 27, 36, 37, 39-44]. Patiënten ervaren dit ook, terwijl arts-specialisten een andere mening zijn toegedaan [10]. Veel arts-specialisten overschatten het aantal medische verslagen dat zij versturen naar de huisarts, terwijl huisartsen dan weer het aantal medische verslagen dat zij ontvangen van de arts-specialist onderschatten [41].

Verscheidende studies hebben aangetoond dat huisartsen in een aantal gevallen zelfs niet in kennis worden gesteld door de arts-specialist. In de studie van Babington et al. betrof dit 256 van de eerste bezoeken bij de arts-specialist [39]. Ook na het ontslag uit het ziekenhuis wordt in 25% van de gevallen de informatie niet overgedragen aan de huisarts binnen een dag en tussen de 8% en 50% van de gevallen ontvangt de huisarts na hospitalisatie nooit de volledige ontslaginformatie [16, 18, 27, 31, 36, 38, 40]. Bij overlijden wordt de huisarts maar in 58% van de gevallen onmiddellijk ingelicht door de arts-specialist [17].

Er zijn verschillende redenen waarom medische informatie van de arts-specialist de huisarts niet bereikt [26]:

- Administratieve en/of ICT-problemen bij de specialist en/of huisarts:
 - verkeerde huisarts opgenomen in het dossier
 - verkeerd adres [gegevens] in het dossier
 - hoewel de brief in het elektronische patiëntendossier is opgenomen, werd deze niet verzonden
- Brief wordt bij de huisarts verkeerd geklasseerd of automatisch gearchiveerd zonder eerst gelezen te worden.
- "Laterale doorverwijzing": de ene arts-specialist verwijst naar de andere, waarbij de huisarts van de patiënt niet in de geadresseerdenlijst wordt opgenomen.
- Geen medisch verslag: soms wordt het opstellen van een samenvattende brief eenvoudigweg vergeten of niet opgesteld vanwege de hoge werkdruk; hier ligt een belangrijk verbeterpunt voor veel artsen.

Om kwalitatieve zorg aan de patiënt te geven, is de huisarts volledig afhankelijk van actuele en volledige informatie van de arts-specialist [1, 12, 42]. Op het moment dat een patiënt na een raadpleging bij de arts-specialist of na hospitalisatie op raadpleging komt bij de huisarts,

moet de huisarts de nazorg opstarten. Vaak ontvangt de huisarts evenwel helemaal geen informatie en is de huisarts afhankelijk van onrechtstreekse medische informatie die de patiënt en zijn familie geven. Deze informatie is vaak onvolledig of incorrect [1, 12, 31, 38]. Er zijn studies die hebben aangetoond dat het laatijdig ontvangen van informatie ernstige gevolgen heeft voor de geleverde patiëntenzorg [19, 24, 38, 41, 45].

Berichtgeving van arts-specialisten is inderdaad regelmatig vertraagd. In de studie van Stille et al. is 84% van de medische verslagen toegekomen voordat de huisarts een raadpleging heeft met de patiënt [12]. Andere studies beschrijven veel lagere cijfers, in een brede marge van 55% tot zelfs maar 12,2% [24, 40]. Het duurt gemiddeld 25 dagen voordat de huisarts een bericht ontvangt van de arts-specialist [1]. De reden van deze vertraging ligt voor een deel in het verwerkingsproces van gedicteerde brieven door arts-specialisten [12, 17]. Het duurt gemiddeld acht dagen voordat de gedicteerde tekst uitgetypt is en nog eens gemiddeld acht dagen voordat de arts-specialist het verslag gecontroleerd en ondertekend heeft, waarna het pas verstuurd wordt [17, 46].

De snelheid van het ontvangen van informatie primeert boven de volledigheid van informatie. Het is aan te raden dat arts-specialisten de huisartsen zo snel mogelijk informatie geven en niet wachten tot de informatie volledig is. Het is in de meeste omstandigheden beter om iets van informatie door te sturen dan helemaal niets [1, 28, 31].

Vormen van communicatie

Schriftelijke communicatie

Professionele samenwerking tussen artsen uit de eerste- en tweedelijnsgezondheidszorg is voornamelijk gebaseerd op schriftelijke communicatie [3, 10, 14, 32, 35, 39, 47-49]. Vaak is dit de enige bron van informatie [32, 50]. Schriftelijke communicatie is een flexibel medium omdat de inhoud en de vorm van de brief aangepast kan worden van eenvoudige medische problemen naar meer complexe gevallen waarbij meer informatie nodig is [51].

Er zijn verschillende vormen van schriftelijke communicatie. De eerste vorm van schriftelijke communicatie is de verwijsbrief. Patiënten verwijzen naar een arts-specialist is een essentiële opdracht van de huisarts [9, 44]. Huisartsen gebruiken de verwijsbrief voor verschillende doeleinden, namelijk voor een aanvraag van een diagnostische raadpleging of een medische behandeling die niet uitgevoerd kan worden door de huisarts, een „second opinion” of advies, of een vraag naar gezamenlijke verantwoordelijkheid van de zorg [7, 15, 30, 34]. Voor de arts-specialist is een verwijsbrief niet enkel belangrijk voor

informatie- uitwisseling, maar het dient ook om de prioriteit van een afspraak te bepalen [9, 34].

De kwaliteit van verwijsbrieven varieert sterk [30, 34]. Studies hebben aangetoond dat arts-specialisten vaak ontevreden zijn over de kwaliteit en inhoud van de verwijsbrief [2, 3, 8, 9, 33, 34, 47, 49]. In de studie van Berendsen et al. vindt maar 29,1% van de arts-specialisten de verwijsbrief van goede kwaliteit [10]. Hoewel er tot op heden geen wetenschappelijk bewijs is voor een relatie tussen de inhoud van een verwijsbrief en de kwaliteit van de geleverde zorg, wordt aangenomen dat afwezigheid of slechte kwaliteit van verwijsbrief leidt tot vertragingen in diagnosestelling en opstarten van de behandeling, dubbele onderzoeken, polyfarmacie, ontevredenheid en wantrouwen van de patiënt in de behandelende artsen en de perceptie of realiteit van een stijging van de werkbelasting [8, 9, 30, 34].

Een tweede vorm van schriftelijke communicatie is het medische verslag. Er zijn drie soorten medische verslagen te onderscheiden, namelijk een consultatiebrief, een voorlopige ontslagbrief en een definitieve ontslagbrief [5, 30]. Een consultatiebrief wordt geschreven na contact in de ambulante setting en een ontslagbrief wordt opgesteld na hospitalisatie. Een medisch verslag heeft verschillende functies. Het wordt namelijk niet enkel gebruikt als een communicatiemiddel tussen arts-specialist en huisarts, maar dient ook als document voor terugbetaling van de ziekteverzekering, alsook als samenvattende informatiebron van de inhoud van de consultatie en de medische problematiek voor de arts-specialist. Het doet verder ook dienst als een methode om studenten en artsen bij te scholen en is een document om kwaliteit te meten [25, 36, 46, 52]. Het medische verslag maakt ook integraal onderdeel uit van het medische dossier en is derhalve aan de toepasselijke wettelijke en deontologische regels onderworpen. Veel huisartsen vinden het medische verslag van de arts-specialist van goede kwaliteit [6, 7, 18, 44]. Ondanks deze appreciatie ontbreken er vaak belangrijke gegevens, zijn gegevens incorrect of is het verslag onleesbaar [7, 19, 38, 40, 47, 50].

Schriftelijke communicatie kan via verschillende verzendmethoden verstuurd worden, namelijk via de post, fax of elektronisch, of meegeven worden aan de patiënt [17, 19]. Er is nog geen consensus over de beste methode om schriftelijke communicatie ter beschikking te stellen [19]. Steeds meer artsen versturen brieven elektronisch [43]. Welk effect dit heeft op de kwaliteit van de geleverde patiëntenzorg is nog niet onderzocht [15, 34]. Wel is het gekend dat elektronisch verstuurd brieven 1,5 tot 3 dagen sneller worden afgeleverd bij de ontvanger dan per post verstuurd brieven [16]. Naast de snelheid heeft elektronisch

versturen ook het voordeel dat er minder kosten aan verbonden zijn en dat het sneller geïmplementeerd kan worden vanuit het patiëntendossier [16, 19]. De kans op administratieve fouten, door bijvoorbeeld verkeerd klasseren, daalt aanzienlijk. Als nadeel stijgt de werkbelasting [16]. Er is aangetoond dat artsen die elektronisch werken meer brieven ontvangen, dan artsen die enkel via papier werken [16]. Artsen moeten bereid zijn om klinische informatie elektronisch te ontvangen [19].

Elektronische verzending is niet alleen sneller, maar ook doeltreffender dan verzending per post of het meegeven aan de patiënt. Beide laatste zijn minder betrouwbaar [17, 19]. Verschillende methoden kunnen gecombineerd worden. De brief kan wel beter per post verstuurd worden dan met de patiënt meegegeven te worden, maar dit leidt wel tot een vertraging van gemiddeld 2 tot 4 dagen [17, 31, 36]. De Orde van Geneesheren raadt af om brieven met patiënten mee te geven [5]. Vaak zijn patiënten niet op de hoogte van het belang van een brief door cognitieve beperkingen of taalbarrières [36]. Zij halen de brief niet op in de praktijk of vergeten de brief af te geven aan de arts [1, 33, 36].

Andere vormen van communicatie

Naast schriftelijke communicatie worden er andere communicatievormen gebruikt waar echter minder onderzoek naar verricht is.

„Face-to-face“-overleg tussen de huisarts en de arts-specialist laat toe behandelschema's van een patiënt gezamenlijk door de huisarts en arts-specialist op te stellen, richtlijnen te bespreken en vragen direct te beantwoorden [3, 20, 37]. Een nadeel van een face-to-face-overleg is dat het tijdrovend en duur is omdat de huisarts of de arts-specialist zijn praktijk moet verlaten en zich moet verplaatsen naar een andere locatie op een gezamenlijk moment [53, 54]. Een face-to-face-overleg verbetert de samenwerking tussen huisarts en arts-specialist. Zowel de huisarts als de arts-specialist zijn meer tevreden over de communicatie, doordat zij het gevoel hebben dat informatie beter gedeeld wordt.

Ook in een toenemend geïnformatiseerde en elektronische omgeving blijft het telefonische contact en overleg belangrijk.

Huisartsen zoeken vaker telefonisch contact met een arts-specialist dan omgekeerd. In de studie van Berendsen et al. [10] geeft 85,9% van de huisartsen aan dat zij éénmaal per week of vaker telefonisch contact hebben met een arts-specialist. Huisartsen nemen contact op met

de arts-specialist om advies te vragen, voor een dringende doorverwijzing of om specifieke medische gegevens van een patiënt door te geven [1, 8, 10, 55, 56].

Arts-specialisten zoeken minder vaak telefonisch contact met de huisarts. In dezelfde studie van Berendsen et al. neemt maar 56,1% van de specialisten éénmaal per week of vaker telefonisch contact op met de huisarts [10]. Heelkundige disciplines nemen minder vaak telefonisch contact op dan internistische of ondersteunende specialismen. Een mogelijke verklaring hiervoor is dat contextuele factoren bij de behandeling van een patiënt voor deze arts-specialisten een minder belangrijke rol spelen [10]. Hoewel arts-specialisten minder vaak telefonisch contact opnemen met de huisarts dan omgekeerd [8, 32, 34], wensen huisartsen meer telefonisch gecontacteerd te worden door de arts-specialist bij een verandering in de gezondheidstoestand van de patiënt, bij een ontslag waarbij de huisarts de nazorg moet leveren en bij een overlijden [17, 36, 42]. Telefonisch contact blijkt een doeltreffend communicatiemiddel om snel patiënteninformatie uit te wisselen tussen de huisarts en de arts-specialist, zeker in dringende en complexe medische gevallen waarin telefonisch contact persoonlijker en sneller is [3, 8, 30, 34, 37, 55].

Door een goed telefonisch contact hebben huisartsen en arts-specialisten meer respect voor elkaar en tonen ze meer begrip. Doordat een telefoongesprek een toegankelijke, accurate en handige bron van medische specialistische informatie is, vermindert dit het aantal onnodige doorverwijzingen en verbetert de zorgcontinuïteit [34, 55, 56].

Een minder gebruikte vorm van communicatie is de videoconferentie. Videoconferentie betreft een „real time face-to-face“-overleg (beeld en geluid) tussen huisarts en/of arts-specialist en/of patiënt via televisie, digitale camera, videofoon of computer [57]. Er is al veel onderzoek gedaan naar de invloed van videoconferenties tussen patiënten en huisartsen of arts-specialisten en zorgkwaliteit [53, 57]. Dit is nog maar weinig onderzocht tussen huisartsen en arts-specialisten. Videoconferentie heeft als voordeel dat de artsen zich niet hoeven te verplaatsen, waardoor het tijd- en kostenbesparend is [53, 54, 57]. Een ander voordeel is dat er direct contact is, waardoor de praktijkvoering van de huisartsen verbetert [29, 58]. Door een overleg tussen huisarts en arts-specialist kunnen behandelplannen worden opgesteld, richtlijnen bediscussieerd en vragen direct beantwoord worden [20, 29, 37, 58]. Er zijn ook nadelen verbonden aan videoconferenties. Zo kunnen er technische problemen optreden voor of tijdens een gesprek. Zowel de huisarts als de arts-specialist moet opgeleid worden om te werken met de videoconferentie-apparatuur zodat technische problemen vermeden kunnen worden [54]. Ook is een videoconferentie enkel toepasbaar om een klein

aantal patiënten te bespreken en niet voor grote groepen patiënten wegens de werkbelasting [54]. Hiernaast wordt de vraag gesteld of het wettelijk wel is toegestaan om via deze weg patiënteninformatie uit te wisselen [54].

Het gedeelde elektronische patiëntendossier is de nieuwste communicatievorm om gegevens van patiënten uit te wisselen tussen huisartsen, arts-specialisten en andere zorgverleners. In de studie van Berendsen et al. geeft driekwart van de huisartsen en arts-specialisten aan dat zij positief staan tegenover een gedeeld elektronisch patiëntendossier [10]. Een gedeeld elektronisch patiëntendossier kan een oplossing zijn om informatiedeling eenvoudig, snel en gestructureerd te laten verlopen en toegang te geven tot medische richtlijnen, waardoor een verbetering van de zorgkwaliteit kan worden bekomen [12, 21, 22, 26, 31]. De communicatieproblemen kunnen door zo'n dossier niet volledig worden opgelost. Een overleg tussen huisarts en arts-specialist om diagnoses en behandelplannen te bediscussiëren moet altijd mogelijk blijven [17, 26]. Ook zijn er nog bezorgdheden over de privacy van patiëntengegevens, de niveaus van toegankelijkheid, de procedures en de patiëntenbetrokkenheid. Ook vrezen een aantal artsen dat de werkbelasting zal toenemen [17]. Verder onderzoek is nodig om duidelijk te maken aan welke doelstellingen een gedeeld elektronisch patiëntendossier moet voldoen, maar dit ingeslagen pad zal in de toekomst zeker voortgezet worden aangezien ook de overheden dit steunen (cf. eHealth en uitwisselingsplatforms in ziekenhuisnetwerken zoals het „collaboratief zorgplatform” (CoZo)) [10].

Inhoudelijke aspecten: relevantie en verwachtingspatronen

De inhoud van de brief moet aansluiten bij de wensen van de ontvanger [49]. Zo zou een verwijsbrief alle informatie moeten bevatten die een arts-specialist nodig heeft en die kan bijdragen om een diagnose te stellen en een behandeling op te starten [31, 32]. Al te vaak missen verwijsbrieven essentiële informatie [1, 3, 7, 10, 14, 18, 47, 48, 59]. Er zijn verschillende studies die richtlijnen hebben geformuleerd voor de inhoud van een verwijsbrief. Deze richtlijnen verschillen per studie [51]. Een verwijsbrief dient minimaal de volgende gegevens bevatten:

- administratieve gegevens;
- reden van verwijzing: bestaat niet louter uit klinische bevindingen, maar bestaat uit een zo goed mogelijk omschreven vraag, waaruit ook het verwachtingspatroon moet blijken;
- relevante comorbiditeit;

- ingestelde behandeling: wat is reeds besproken met de patiënt;
- procedurevoorstel.

Een medisch verslag moet andere informatie bevatten dan een verwijsbrief. Graag wensen huisartsen meer technische informatie te ontvangen om de patiënt de correcte zorg te kunnen bieden [13, 49]. Afhankelijk van discipline worden er verschillende richtlijnen opgegeven voor een goed medisch verslag [47]. De volgende informatie moet minimaal worden opgenomen in een verslag:

- administratieve gegevens;
- vraagstelling en kritische analyse met formulering van werkhypothese;
- beschrijving en motivatie van onderzoeken;
- bespreking: besluit, diagnose;
- beleid;
- aanbevelingen voor de huisarts: advies gegeven aan de patiënt

In bijlage kunnen de overige relevante gegevens worden toegevoegd. Komen er nog resultaten van testen en onderzoeken bij de arts-specialist binnen na het versturen van het definitieve verslag, dan moet de arts-specialist deze resultaten doorsturen naar de huisarts zodat, indien nodig, onmiddellijke actie ondernomen kan worden. Dit nabericht dient even zo goed een kritische bespreking met beschrijving van gevolgen naar beleid toe te omvatten.

Naast de inhoud van de brief is ook de structuur van de brief belangrijk, zodat de brief leesbaar en helder is [9, 40]. Soms zijn brieven knip- en plakwerk van voorgaande brieven en oude verslagen, krijgt belangrijke informatie geen duidelijke plaats in de brief of zit de informatie verborgen in de uitgebreide rapportage. Hierdoor is het voor een arts moeilijk om bepaalde informatie te vinden [10, 34]. Een medisch rapport is geen loutere opsomming van resultaten, maar in tegendeel, het in verband brengen van de vastgestelde bevindingen met een (desnoods tentatieve) diagnose en het voorgestelde beleid. Een standaardisering met vaste rubrieken dringt zich op met de volgende voordelen [3, 5, 9, 17, 30, 48, 49, 60]:

- Voor de verzender vermindert het tijd om de brief op te stellen. De arts hoeft niet meer na te denken hoe hij de brief of verslag structureel gaat opstellen. De gegevens uit het patiëntendossier kunnen automatisch worden ingeladen in een brief of verslag;
- Het is overzichtelijker voor de ontvanger;
- Het vergroot de leesbaarheid;

- Het kan worden gebruikt bij verschillende verwijzingen;
- Het bespaart tijd voor de ontvanger;
- Het zorgt ervoor dat de kans groter is dat de verwijfsbrief of het medische verslag alle informatie bevat.

BESLUIT

In de literatuur is beschreven dat communicatie sterk interageert met de mate van zorgkwaliteit. De evidentie stijgt dat de kwaliteit van de geleverde patiëntenzorg mede verbetert door een meer doeltreffende communicatie. Om te komen tot kwaliteitsvolle communicatie moet er aan een aantal voorwaarden worden voldaan.

Ten eerste moet patiënteninformatie op bepaalde momenten in het zorgproces tijdig uitgewisseld worden tussen huisartsen en arts-specialisten. Ten tweede moet de schriftelijke communicatie aansluiten bij de noden van de ontvanger. Uit de literatuur blijkt duidelijk dat schriftelijke communicatie beter verloopt als deze gestructureerd is met vaste rubrieken. Digitaal geschreven brieven hebben de voorkeur van de artsen, maar over de verzendmethoden is nog geen consensus.

Naast schriftelijke communicatie zijn er nog andere communicatievormen, zoals „face-to-face“- overleg, telefonisch contact, videoconferentie en het gedeelde elektronische patiëntendossier. Deze communicatievormen kunnen een positieve impact hebben op de informatie-uitwisseling tussen huisartsen en arts-specialisten.

Ondoeltreffende communicatie tussen zorgverstrekkers kan leiden tot een reeks van negatieve uitkomsten, waaronder vertragingen in het zorgproces, hypothekeren van de patiëntveiligheid, inefficiënt gebruik van middelen, patiëntenontevredenheid en werkoverlast bij zorgverstrekkers alsook economische impact. Er is een duidelijke behoefte aan een gestructureerde en tijdige aanpak van zorginformatie-uitwisseling, waarbij een duidelijke afbakening van de eigendom van het communicatieproces tussen zorgverstrekkers nodig is. „Peer review“ is nodig om kwaliteitsindicatoren te bepalen en te beoordelen. Er zijn tevens procesindicatoren en „follow up tools“ nodig om de zorginformatie-uitwisseling te monitoren.

Tot slot, de communicatie tussen zorgverleners alsmede het belang van de kwaliteit hiervan, moet meer prominent figureren in zowel de graduaats- als de postgraduaatsopleiding. Communicatie zou beschouwd moeten worden als een essentiële vaardigheid en kwaliteit, kenmerkend voor elke zorgverlener.

References

- 1 Eekhof JA, Heijmans M, Meskers-van Geel AA, Assendelft WJ. A snail leaves trails-how delayed provision of information affects the general Practitioner and patient. *Ned Tijdschr Geneesk* 2010; 154: A2895.
- 2 Grol R, Rooijackers-Lemmers N, van Kaathoven L, Wollersheim H, Mokkink H. Communication at the interface: do better referral letters produce better consultant replies? *Br J Gen Pract* 2003; 53: 217-219.
- 3 Piterman L, Koritsas S. Part II. General practitioner-specialist referral process. *Intern Med J* 2005; 35: 491-496.
- 4 Tandjung R, Rosemann T, Badertscher N. Gaps in continuity of care at the interface between primary care and specialized care: general practitioners' experiences and expectations. *Int J Gen Med* 2011; 4: 773-778.
- 5 Orde van Geneesheren. Relatie huisartsen - specialisten. *Tijdschrift Nationale Raad* 1990; 51: 48-54.
- 6 Bjornsson S, Sigurdsson JA, Svavarsdottir AE, Gudmundsson GH. Gatekeeping and referrals to cardiologists: general practitioners' views on interactive communications. *Scand J Prim Healthcare* 2013; 31: 79-82.
- 7 Kada S, Nygaard HA, Kada R, Laura T, Billsback U, Geitung JT. Quality and general practitioner satisfaction with reply letters for dementia patients. *Quality in primary care* 2008; 16: 165-170.
- 8 Thorsen O, Hartveit M, Baerheim A. General practitioners' reflections on referring: an asymmetric or non-dialogical process? *Scand J Prim Healthcare* 2012; 30: 241-246.
- 9 Ramanayake RP. Structured printed referral letter (form letter); saves time and improves communication. *Journal of family medicine and primary care* 2013; 2: 145-148.
- 10 Berendsen AJ, Kuiken A, Benneker WH, Meyboom-de Jong B, Voorn TB, Schuling J. How do general practitioners and specialists value their mutual communication? A survey. *BMC health services research* 2009; 9: 143.
- 11 Foy R, Hempel S, Rubenstein L, et al. Meta-analysis: effect of interactive communication between collaborating primary care physicians and specialists. *Ann Int Med* 2010; 152: 247-258.
- 12 Stille CJ, McLaughlin TJ, Primack WA, Mazor KM, Wasserman RC. Determinants and impact of generalist-specialist communication about pediatric outpatient referrals. *Pediatrics* 2006; 118: 1341-1349.
- 13 Stalhammar J, Holmberg L, Svardsudd K, Tibblin G. Written communication from specialists to general practitioners in cancer care - What are the expectations and how are they met? *Scand J Prim Healthcare* 1998; 16: 154-159.
- 14 McConnell D, Butow PN, Tattersall MH. Improving the letters we write: an exploration of doctor-doctor communication in cancer care. *Br J Cancer* 1999; 80: 427-437.
- 15 Thorsen O, Hartveit M, Baerheim A. The consultants' role in the referring process with general practitioners: partners or adjudicators? A qualitative study. *BMC family practice* 2013; 14: 153.
- 16 van der Kam WJ, Moorman PW, Koppejan-Mulder MJ. Effects of electronic communication in general practice. *Med Inf* 2000; 60: 59-70.
- 17 Farquhar MC, Barclay SI, Earl H, Grande GE, Emery J, Crawford RA. Barriers to effective communication across the primary/secondary interface: examples from the ovarian cancer patient journey (a qualitative study). *Eur J Cancer Care (Engl)* 2005; 14: 359-366.
- 18 Gandhi TK, Sittig DF, Franklin M, Sussman AJ, Fairchild DC, Bates DW. Communication breakdown in the outpatient referral process. *J Gen Int Med* 2000; 15: 626-631.
- 19 Chen Y, Brennan N, Magrabi F. Is email an effective method for hospital discharge communication? A randomized controlled trial to examine delivery of computergenerated discharge summaries by email, fax, post and patient hand delivery. *Med Inform* 2010; 79: 167-172.
- 20 Solet DJ, Norvell JM, Rutan GH, Frankel RM. Lost in translation: challenges and opportunities in physician-to-physician communication during patient handoffs. *Acad Med* 2005; 80: 1094-1099.
- 21 Kaelber DC, Bates DW. Health information exchange and patient safety. *J Biomed Inform* 2007; 40(6 Suppl): S40-S45.
- 22 van Walraven C, Taljaard M, Bell CM, et al. Information exchange among physicians caring for the same patient in the community. *CMAJ* 2008; 179: 1013-1018.
- 23 Committee on Quality of Healthcare in America of the Institute of Medicine. *Crossing the Quality Chasm: a new health system for the 21st century*. Washington (DC): Institute of Medicine, National Academy Press, 2001.
- 24 van Walraven C, Seth R, Austin PC, Laupacis A. Effect of discharge summary availability during post-discharge visits on hospital readmission. *J Gen Int Med* 2002; 17: 186-92.
- 25 Edwards ST, Neri PM, Volk LA, Schiff GD, Bates DW. Association of note quality and quality of care: a cross-sectional study. *BMJ Qual Saf* 2014; 23: 406-413.
- 26 Singh H, Naik AD, Rao R, Petersen LA. Reducing diagnostic errors through effective communication: harnessing the power of information technology. *J Gen Int Med* 2008; 23: 489-494.
- 27 Bell CM, Schnipper JL, Auerbach AD, et al. Association of communication between hospital-based physicians and primary care providers with patient outcomes. *J Gen Int Med* 2009; 24: 381-386.
- 28 Buiting C, Njoo K. *Richtlijn informatie- uitwisseling tussen huisarts en specialist bij verwijzingen (HASP)*. Utrecht: Nederlandse Huisartsen Genootschap, 2008.
- 29 Mitchell GK, Del Mar CB, O'Rourke PK, Clavarino AM. Do case conferences between general practitioners and

- specialist palliative care services improve quality of life? A randomised controlled trial (ISRCTN 52269003). *Palliat Med* 2008; 22: 904-912.
- 30 Durbin J, Barnsley J, Finlayson B, et al. Quality of communication between primary healthcare and mental healthcare: an examination of referral and discharge letters. *J Behav Health Serv Res* 2012; 39: 445-461.
- 31 Stille CJ, Korobov N, Primack WA. Generalist-subspecialist communication about children with chronic conditions: an analysis of physician focus groups. *Ambulatory pediatrics* 2003; 3: 147-153.
- 32 Jiwa M, Arnet H, Bulsara M, Ee HC, Harwood A. What is the importance of the referral letter in the patient journey? A pilot survey in Western Australia. *Qual PrimCare* 2009; 17: 31-36.
- 33 Couper ID, Henbest RJ. The quality and relationship of referral and reply letters. The effect of introducing a pro forma letter. *S Afr Med J* 1996; 86: 1540-1542.
- 34 Hartveit M, Thorsen O, Biringer E, Vanhaecht K, Carlsen B, Aslaksen A. Recommended content of referral letters from general practitioners to specialised mental healthcare: a qualitative multi-perspective study. *BMC Health Serv Res* 2013; 13: 329.
- 35 Thong JF, Mok P, Loke D. A quality assurance survey to improve communication between ENT specialists and general practitioners. *Singapore Med J* 2010; 51: 796-799.
- 36 Bolton P, Mira M, Kennedy P, Lahra MM. The quality of communication between hospitals and general practitioners: an assessment. *J Qual Clin Pract* 1998; 18: 241-247.
- 37 Wood ML. Communication between cancer specialists and family doctors. *Can Fam Physician* 1993; 39: 49-57.
- 38 Kripalani S, LeFevre F, Phillips CO, Williams MV, Basaviah P, Baker DW. Deficits in communication and information transfer between hospital-based and primary care physicians: implications for patient safety and continuity of care. *JAMA* 2007; 297: 831-841.
- 39 Babington S, Wynne C, Atkinson CH, Hickey BE, Abdelaal AS. Oncology service correspondence: do we communicate? *Australas Radiol* 2003; 47: 50-54.
- 40 Belleli E, Naccarella L, Pirota M. Communication at the interface between hospitals and primary care - a general practice audit of hospital discharge summaries. *Aust Fam Physician* 2013; 42: 886-890.
- 41 O'Malley AS, Reschovsky JD. Referral and consultation communication between primary care and specialist physicians: finding common ground. *Arch Intern Med* 2011; 171: 56-65.
- 42 Pantilat SZ, Lindenauer PK, Katz PP, Wachter RM. Primary care physician attitudes regarding communication with hospitalists. *Am J Med* 2001; 111: 15S-20S.
- 43 Ruth JL, Geskey JM, Shaffer ML, Bramley HP, Paul IM. Evaluating communication between pediatric primary care physicians and hospitalists. *Clin Pediatr* 2011; 50: 923-928.
- 44 Westerman RF, Hull FM, Bezemer PD, Gort G. A study of communication between general practitioners and specialists. *Br J Gen Pract* 1990; 40: 445-449.
- 45 Moore C, Wisnivesky J, Williams S, McGinn T. Medical errors related to discontinuity of care from an inpatient to an outpatient setting. *J Gen Int Med* 2003; 18: 646-651.
- 46 Keely E, Dojeji S, Myers K. Writing effective consultation letters: 12 tips for teachers. *Med Teach* 2002; 24: 585-589.
- 47 Garasen H, Johnsen R. The quality of communication about older patients between hospital physicians and general practitioners: a panel study assessment. *BMC Health Serv Res* 2007; 7: 133.
- 48 Navarro CM, Miranda IA, Onofre MA, Spoto MR. Referral letters in oral medicine: standard versus non-standard letters. *Int J Oral Maxillofac Surg* 2002; 31: 537-543.
- 49 Tattersall MH, Butow PN, Brown JE, Thompson JF. Improving doctors' letters. *Med J Aust* 2002; 177: 516-520.
- 50 Shakib S, Philpott H, Clark R. What we have here is a failure to communicate! Improving communication between tertiary to primary care for chronic heart failure patients. *Int Med J* 2009; 39: 595-599.
- 51 Newton J, Eccles M, Hutchinson A. Communication between general practitioners and consultants: what should their letters contain? *BMJ* 1992; 304: 821-824.
- 52 Adhyan V, Oke A, White AD, Shah IU. Diagnoses in discharge communications: how far are they reliable? *Int J Clin Pract* 2000; 54: 457-458.
- 53 Abrahamian H, Schueller A, Mauler H, Prager R, Irsigler K. Transfer of knowledge from the specialist to the generalist by videoconferencing: effect on diabetes care. *J Telemed Telecare* 2002; 8: 350-355.
- 54 Harrison R, Clayton W, Wallace P. Can telemedicine be used to improve communication between primary and secondary care? *BMJ* 1996; 313: 1377-1380.
- 55 Hollins J, Veitch C, Hays R. Interpractitioner communication: telephone consultations between rural general practitioners and specialists. *Aust J Rural Health* 2000; 8: 227-231.
- 56 Jantusch BA, O'Donnell R, Rodriguez WJ. The pediatric forum. Physician use of a telephone access line for infectious disease consultation. *Arch Pediatr Adolesc Med* 2000; 154: 1170-1171.
- 57 Verhoeven F, van Gemert-Pijnen L, Dijkstra K, Nijland N, Seydel E, Stehouder M. The contribution of teleconsultation and videoconferencing to diabetes care: a systematic literature review. *J Med Internet Res* 2007; 9: e37.
- 58 Waldura JF, Neff S, Dehlendorf C, Goldschmidt RH. Teleconsultation improves primary care clinicians' confidence about caring for HIV. *J Gen Int Med* 2013; 28: 793-800.
- 59 Campbell B, Vanslembroek K, Whitehead E, et al. Views of doctors on clinical correspondence: questionnaire

survey and audit of content of letters. *BMJ* 2004; 328: 1060-1061.

60 Melville C, Hands S, Jones P. Randomised trial of the effects of structuring clinic correspondence. *Arch Dis Child* 2002; 86: 374-375.

Additional paper 2

Communicatietevredenheid en jobtevredenheid bij intensievezorgenverpleegkundigen en de impact op burn-out en intentie tot verloop

Peter Vermeir

Stijn Blot

Sophie Degroote

Dominique Vandijck

Lara Moons

Ruben Vermeir

An Mariman

Rik Verhaeghe

Dirk Vogelaers

Gepubliceerd in Jaarboek voor de Intensievezorgenverpleegkundige, 2016

11.2. Additional paper 2: Communicatietevredenheid en jobtevredenheid bij intensievezorgenverpleegkundigen en de impact op burn-out en intentie tot verloop

INLEIDING

Een hoge mate aan jobtevredenheid wordt geassocieerd met een verminderde intentie tot verloop, een lagere incidentie van burn-out en minder ziekteverzuim bij personeel in de gezondheidszorg. Bovendien hebben burn-out en verloop een negatieve impact op de kwaliteit van de zorg en op de kosten van de gezondheidszorg. Aangezien een dienst Intensieve Zorgen (IZ) een complexe en stressvolle werkomgeving is, kan de preventie van intercollegiale conflicten en de optimalisatie van communicatie- en jobtevredenheid het risico op burn-out verminderen. Verpleegkundigen spelen immers een belangrijke rol binnen het team van de IZ. Ze leveren een onmisbare bijdrage aan betere klinische resultaten, verminderde morbiditeit en mortaliteit, minder complicaties en fouten. Deze intensievezorgenverpleegkundigen kennen een nauwe samenwerking met artsen en andere medische specialisten, de familie van de patiënt en collega's [1-4].

De werksituatie van intensievezorgenverpleegkundigen kan beschouwd worden als uniek en wordt gekenmerkt door een hoog technische omgeving, een hoge mortaliteitsgraad en het continu omgaan met ernstig zieke patiënten. Hierdoor onderscheidt deze dienst zich van andere diensten [5, 6].

De specifieke werkomstandigheden van intensievezorgenverpleegkundigen maakt hen kwetsbaar voor burn-out. Poncet et al. [7] voerden een onderzoek naar burn-out bij verpleegkundigen op de afdeling IZ. Volgens dit onderzoek is burn-out aanwezig bij 1 op 3 van deze verpleegkundigen. Deze cijfers werden gemeten met behulp van de Maslach Burn-out Inventory. Net zoals bij verpleegkundigen op andere afdelingen verhogen de vele nachtdiensten, de werkgerelateerde stress, het aantal vrije dagen, de conflicten die zich voordoen met collega's of patiënten, de relatie met de leidinggevende en de organisatie van de dienst ook het risico op burn-out bij intensievezorgenverpleegkundigen. Hoe minder goed de dienst is georganiseerd, hoe meer stress het personeel ervaart en dit heeft een invloed op de prevalentie van burn-out. [6, 8, 9]

Mealer et al. [10] ondervraagden 351 intensievezorgenverpleegkundigen en algemene

verpleegkundigen uit drie verschillende ziekenhuizen en vervolgens nog 140 verpleegkundigen die specifiek op de afdeling IZ tewerkgesteld waren. Angst en depressie zijn vaak voorkomende gevoelens in beide groepen. Intensievezorgenverpleegkundigen hebben echter een toegenomen prevalentie van symptomen van de posttraumatische stressstoornis (PTSS) in vergelijking met andere algemene verpleegkundigen. Het ervaren van stress is, zoals eerder vermeld, een belangrijke determinant van burn-out. [8, 11]

De aanwezigheid van burn-out heeft een negatieve invloed op de kwaliteit van de verstrekte zorg. Daarnaast is er bij het personeel meer ziekteverzuim aanwezig en ligt de personeelsrotatie beduidend hoger. Deze factoren zorgen op hun beurt voor hogere kosten voor de gezondheidszorginstelling. Het is dus belangrijk dat er voldoende preventie aanwezig is om burn-out te vermijden. Het voorkomen van conflicten en het verbeteren van de communicatie op IZ kan het risico op burn-out verminderen. Interventies zoals critical care-onderzoeksgroepen en trainingen in communicatie- en stress management moeten worden geëvalueerd voor deze verpleegkundigen om aan te tonen hoe effectief ze zijn in het kader van werktevredenheid en het daaraan gerelateerd vermijden van burn-out. Op basis van de resultaten zouden deze interventies geïmplementeerd kunnen worden in de dagelijkse routine op het werkveld [8, 6].

Uit het onderzoek van Liu et al. [1] blijkt dat 58.1% van de intensievezorgenverpleegkundigen tevreden zijn met hun job. 78% van de verpleegkundigen is tevreden met de erkenning die ze ontvangen voor hun werk en hun samenwerking met hun collega's. Verder gaf de meerderheid aan dat ze ontevreden zijn met extrinsieke beloningen, professionele kansen, controle en verantwoordelijkheid, het werkschema en hun work-life balance [6].

De studie van van Dam et al. [5] benadrukt twee belangrijke items binnen IZ, namelijk werkdruk en verlooptentatie. Werkdruk verwijst naar de kwantitatieve en kwalitatieve werklast die moet worden uitgevoerd in een specifieke tijdsperiode. Voorgaand onderzoek toont aan dat werkdruk gerelateerd is aan stress en gezondheidsklachten en zich resulteert in ziekteverzuim. Hoe verpleegkundigen omgaan met nachtshiften heeft een invloed op deze verlooptentatie en ziekteverzuim. Verpleegkundigen op de afdeling IZ moeten vaak nachtshiften uitoefenen omdat er continu zorg aanwezig moet zijn. Deze shiften leiden tot verstoring van het dag- en nachtritme en een verstoring van het sociale leven met familie en

vrienden. Wanneer verpleegkundigen problemen ervaren met deze nachtschiften kan dit zich uiten in een lagere werktevredenheid en een hogere verloopintentie. [4, 6, 8]

Werkdruk en verloopintentie bedreigen de beschikbaarheid van intensievezorgenverpleegkundigen. Verschillende studies tonen aan dat ziekenhuizen kampen met een tekort aan intensievezorgenverpleegkundigen [8, 12].

Een belangrijke indicator van verloopintentie is het beschikken over voldoende technische vaardigheden om aan het huidige niveau van zorg te voldoen. De verpleegkundigen moeten zich tijdig bijscholen om te kunnen omgaan met de snelle technologische ontwikkelingen. Wanneer de verpleegkundigen niet vertrouwd zijn met het hoge technische niveau zal er zich een hogere verloopintentie voordoen [5, 6].

De factor 'autonomie' heeft een belangrijke relatie met werkdruk en verloopintentie, alsook tot jobtevredenheid. Autonomie verwijst naar de mate waarin verpleegkundigen controle ervaren over hun job en beslissen hoe ze hun werk kunnen organiseren. Het ervaren van autonomie heeft een positieve invloed op het vertrouwen, de patiëntenzorg en de werktevredenheid [5].

Cartledge [6] merkte op dat het ervaren van een tekort aan autonomie een belangrijke reden is voor intensievezorgenverpleegkundigen om hun job te verlaten.

Verder blijkt de communicatietevredenheid bij verpleegkundigen een impact te hebben op jobtevredenheid [13, 14].

DOELSTELLING

De doelstelling van deze multicentrische studie is het onderzoeken van de relatie tussen communicatie- en jobtevredenheid, de impact op burn-out en de intentie tot verloop bij IZ-verpleegkundigen.

METHODOLOGIE

Onderzoekspopulatie

Intensievezorgenverpleegkundigen werden gerekruteerd voor deelname aan een multicentrische vragenlijststudie. Deze studie vond plaats in drie Vlaamse ziekenhuizen (een universitair ziekenhuis en twee algemene ziekenhuizen: UZ Gent, 1062 bedden; AZ Groeninge, Kortrijk, 1065 bedden; Sint Vincentius, Deinze, 170 bedden).

Procedure

Alle intensievezorgenverpleegkundigen werden gecontacteerd door de hoofdverpleegkundigen en door het hoofd van het verpleegkundig departement. Vragenlijsten werden verspreid en ingevuld tussen 1 februari 2015 en 15 maart 2015. De studie is goedgekeurd door het Ethisch Comité van het UZ Gent (centraal Ethisch Comité nummer EC 2015/0052), alsmede door de lokale ethische comités van de twee andere ziekenhuizen. Alle potentiële respondenten werden middels een informatiebrief over deze studie geïnformeerd.

Meetinstrumenten

Data werden verzameld door middel van gebruik van drie instrumenten: de communicatie tevredenheidsvragenlijst (the Communication Satisfaction Questionnaire (CSQ)) [15], de verloopintentieschaal (vragenlijst voor de beleving en beoordeling van arbeid, onderzoekt de intentie om een andere job te zoeken of de organisatie te verlaten in het komende jaar [16]) en de Maslach Burn-out Inventory (MBI) [17]). Jobtevredenheid werd gemeten aan de hand van een visuele analoge schaal (VAS-schaal).

De CSQ werd vertaald naar het Nederlands. Vervolgens werd deze vragenlijst voorgelegd aan een expertenpanel, bestaande uit verpleegkundige directeurs (n=4), communicatie-experten (n=4), zorgmanagers (n=6) en hoofdverpleegkundigen (n=6), en werd aangepast aan de Gezondheidszorg. Nadien volgde een pilootproject bij 15 verpleegkundigen die ad random werden geselecteerd, wat resulteerde in minimale aanpassingen van de vragenlijst. Het expertenpanel keurde finaal de vragenlijst goed.

De CSQ bestaat uit 8 dimensies, elk bestaande uit 5 items met Likert-schaal score van 1 (zeer tevreden) tot 7 (zeer ontevreden). Volgende acht dimensies werden in de vragenlijst geïncorporeerd:

Tevredenheid met organisatorische perspectieven (General Organizational Perspective (GOP)), tevredenheid met organisatorische integratie (Organizational Integration (OI)), Tevredenheid met persoonlijke feedback (The Personal Feedback (PF)), tevredenheid over de communicatie met leidinggevenden (Relationship to Superiors (RSup)), tevredenheid met horizontale en informele communicatie (Horizontal and Informal Communication (HIC)), tevredenheid met mediakwaliteit (Media Quality (MQ)), tevredenheid met het communicatieklimaat (Communication Climate (CC)) en tevredenheid over communicatie met werknemers (Relationship with Employees (REmp)).

Een korte toelichting over deze 8 dimensies van de CSQ:

- 1) 'Tevredenheid met organisatorische perspectieven' bevraagt de tevredenheid bij de werknemers omtrent algemene informatie over de organisatie, de doelen en de prestaties. Het gaat ook de kennis na van de werknemers over externe gebeurtenissen zoals een nieuw overheidsbeleid dat een impact heeft op de organisatie.
- 2) 'Tevredenheid met organisatorische integratie' peilt naar de tevredenheid over de mate waarin werknemers informatie ontvangen over hun directe werkomgeving. Deze dimensie omvat vragen inzake het al dan niet op de hoogte zijn van wat er recentelijk gebeurt binnen de organisatie, waar afdelingen mee bezig zijn en nieuws over het personeel.
- 3) 'Tevredenheid met persoonlijke feedback' is de dimensie die vragen stelt over de kennis van jobgerelateerde problemen bij leidinggevenden. Daarnaast wordt er ook nagegaan of de werknemers weten hoe ze worden beoordeeld en geëvalueerd.
- 4) 'Tevredenheid over de communicatie met leidinggevenden' bevraagt de componenten van de opwaartse en neerwaartse communicatie binnen de organisatie. Deze dimensie gaat de openheid van superieuren ten opzichte van medewerkers na evenals hun vermogen om te luisteren. In twee van de vijf items wordt het vertrouwen van de werknemer in de leidinggevende nagegaan.
- 5) 'Tevredenheid met horizontale en informele communicatie' bevraagt de mate waarin er gecommuniceerd wordt en de juistheid van de informatie die het netwerken bevat.

- 6) 'Tevredenheid met mediakwaliteit' be vraagt de tevredenheid over de verschillende communicatiebronnen zoals meetings en schriftelijke communicatie. Daarnaast wordt ook be vraagd of de hoeveelheid communicatie binnen de organisatie goed is.
- 7) 'Tevredenheid met het communicatieklimaat' is één van de sterkste dimensies doordat hier het eerst aan gedacht wordt wanneer personen be vraagd worden omtrent communicatie tevredenheid. Vragen binnen deze dimensie peilen naar de communicatie op het niveau van het individu en op het niveau van de organisatie. Aan de hand hiervan kan worden nagegaan of de communicatie al dan niet identificatie van de werknemer aanmoedigt en al dan niet motiverend en stimulerend werkt binnen de organisatie. Ook de mate waarin de werknemers goede communicatoren zijn wordt nagegaan evenals de mate waarin de informatiestroom het werkproces vooruit helpt.
- 8) 'Tevredenheid over communicatie met werknemers' wordt enkel beantwoord door de leidinggevenden. Deze dimensie be vraagt de mate waarin de medewerkers openstaan voor neerwaartse communicatie en hun bereidheid om bottum-up communicatie te voeren. Hier wordt er ook gevraagd naar de mate waarin de leidinggevende overbelast wordt met communicatie.

Statistiek

Analyses werden uitgevoerd met behulp van het statistisch programma SPSS (versie 22.0). Descriptieve analyses worden aan de hand van aantallen en percentages, gemiddelden en standaarddeviaties, medianen en interkwartielrange (IQR) gerapporteerd. Daarnaast werden ook de non-parametrische testen uitgevoerd tussen groepen (χ^2 werd gebruikt voor categorische variabelen, Mann-Whitney U -Test om continu variabelen tussen twee groepen te vergelijken. Om continu variabelen tussen meerdere groepen te vergelijken werd gebruik gemaakt van de Kruskal Wallis-Test).

RESULTATEN

Karakteristieken

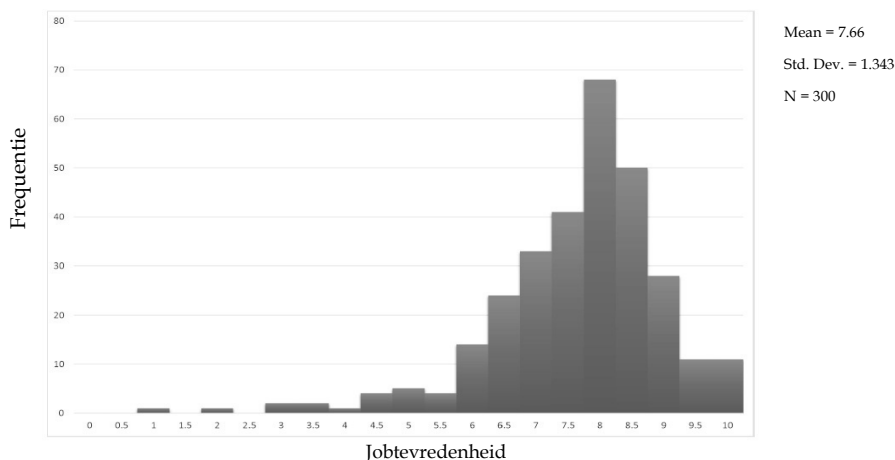
Van 379 intensievezorgenverpleegkundigen die gevraagd werden om deel te nemen aan het onderzoek, namen 303 intensievezorgenverpleegkundigen deel aan de vragenlijst, wat resulteert in een responsgraad van 79,9% voor de drie deelnemende ziekenhuizen.

De meerderheid van de verpleegkundigen zijn vrouwen (77.6%). De gemiddelde leeftijd van een verpleegkundige binnen IZ bedraagt 38.31 jaar met een standaarddeviatie van 9.93. De functies van de verpleegkundige op deze afdeling verschillen, 81.8% werkt er als verpleegkundige, 8.3% als verpleegkundig specialist, 0.3% als sociaal verpleegkundige, 0.7% als vroedvrouw, 7.3% als hoofdverpleegkundige en 1.7% beoefent nog een andere functie. 77.2% van deze verpleegkundigen heeft een diploma Bachelor in de verpleegkunde, gevolgd door 10.2% gediplomeerde in de verpleegkunde en 7.9% met een diploma Master in de verpleegkunde. Een IZ- verpleegkundige heeft gemiddeld 15.28 jaar werkervaring met een standaarddeviatie van 10.27 en 60.1% werkt voltijds.

Jobtevredenheid

Binnen de totale groep intensievezorgenverpleegkundigen is de gemiddelde jobtevredenheid $7.66 \pm 1.34/10$ (mediaan = 8; interkwartielrange (IQR) 7-8.5), deze wordt weergegeven in figuur 1. Een totaal van 16/300 intensievezorgenverpleegkundigen hebben een score ≤ 5 , wat een indicatie is voor job ontevredenheid.

Een vergelijking tussen het aantal ontevreden intensievezorgenverpleegkundigen (score ≤ 5) in de drie ziekenhuizen toonde geen significant verschil ($p = 0.594$)



Figuur 1: Werktevredenheid intensieezorgverpleegkundigen

Communicatietevredenheid intensieezorgverpleegkundigen

De gemiddelde scores op elk item van de CSQ worden voor de intensieezorgverpleegkundigen weergegeven in tabel 1. De scores variëren van 1 (zeer tevreden) tot 7 (zeer ontevreden). De IZ-verpleegkundige is meest tevreden met het item 'Mate waarin mijn leidinggevende mij vertrouwt' (2.74 ± 1.26) en is het minst tevreden met 'Informatie over verwezenlijkingen en mislukkingen van de organisatie' (4.30 ± 1.12).

Onderstaande tabel (tabel 1) geeft het percentage tevredenheid weer per item en per dimensie van de CSQ. Intensieezorgverpleegkundigen zijn het meest tevreden over de dimensie 'Tevredenheid over communicatie met leidinggevend' (68.46%) en het minst tevreden met de dimensie 'Tevredenheid met organisatorische perspectieven' (34.94%).

| | Tevreden | Noch tevreden, noch ontevreden | Ontevreden |
|--|----------|--------------------------------|------------|
| Tevredenheid met organisatorische perspectieven | 34.94 | 30.76 | 34.12 |
| Tevredenheid met organisatorische integratie | 63.16 | 21.98 | 14.58 |
| Tevredenheid met persoonlijke feedback | 51.98 | 22.96 | 24.1 |
| Tevredenheid over de communicatie met leidinggevend | 68.46 | 15.92 | 15.26 |
| Tevredenheid met horizontale en informele communicatie | 53.78 | 27.34 | 18.50 |
| Tevredenheid met mediakwaliteit | 46.40 | 26.4 | 26.48 |
| Tevredenheid met het communicatieklimaat | 44.48 | 24.74 | 30.50 |

Tabel 1 : Percentage communicatietevredenheid intensieezorgverpleegkundigen per dimensie

Verloopintentie

De meeste intensieezorgverpleegkundigen vertonen een lage verloopintentie (150/290; 49.5%), 6.6% (20/290) vertoont een hoge verloopintentie en 39.6% (120/290) een gemiddelde verloopintentie.

Burn-out

Binnen de intensieezorgverpleegkundigen loopt 3% (9/299) risico op burn-out volgens de Maslach Burn-out Inventory. Verschillen tussen de ziekenhuizen zijn niet significant ($p = 0.222$).

Meer gedetailleerde analyses tonen aan dat 23.7% (71/299) van de intensieezorgverpleegkundigen hun persoonlijke prestatie als laag ervaren. Emotionele uitputting en depersonalisatie zijn minder vaak problematisch (33/299; 10.9% en 33/299; 10.9%).

Associaties

De acht dimensies van communicatietevredenheid zijn licht gecorreleerd met werktevredenheid (alle p -waarden < 0.05), tabel 2.

| | GOP | OI | PF | RSup | HIC | MQ | CC | RSub |
|------------|------------|-----------|-----------|-------------|------------|-----------|-----------|-------------|
| Correlatie | 0.269 | 0.379 | 0.430 | 0.443 | 0.476 | 0.362 | 0.453 | 0.381 |

Tabel 2 : Correlaties tussen de CSQ dimensies en werktevredenheid bij de Intensieezorgverpleegkundigen

Daarnaast is elke dimensie ook geassocieerd met verloopintentie (alle p -waarden < 0.05), tabel 3.

| | GOP | OI | PF | RSup | HIC | MQ | CC | RSub |
|------------|------------|-----------|-----------|-------------|------------|-----------|-----------|-------------|
| Correlatie | 0.185 | 0.251 | 0.260 | 0.208 | 0.200 | 0.267 | 0.273 | 0.336 |

Tabel 3: Correlaties tussen de CSQ dimensies en verloopintentie bij de subgroep IZ

Als laatste kan opgemerkt worden dat alle dimensies van communicatietevredenheid matig geassocieerd zijn met risico tot burn-out.

| | GOP | OI | PF | RSup | HIC | MQ | CC | RSub |
|------------|------------|-----------|-----------|-------------|------------|-----------|-----------|-------------|
| Correlatie | 0.132 | 0.220 | 0.278 | 0.259 | 0.272 | 0.249 | 0.224 | - |

Tabel 4: Correlaties tussen de CSQ dimensies en burn-out bij intensieezorgverpleegkundigen

DISCUSSIE

Deze studie over communicatie- en jobtevredenheid bij intensievezorgenverpleegkundigen geeft aan dat bij intensievezorgenverpleegkundigen hoge niveaus van communicatie- en jobtevredenheid bereikt worden. De gemiddelde werktevredenheid bij intensievezorgenverpleegkundigen bedraagt 7.66/10. De verschillende dimensies van communicatietevredenheid zijn geassocieerd met jobtevredenheid en lage niveaus van job- en communicatietevredenheid werden geassocieerd met een hogere verloopintentie en burn-out incidentie.

De gemiddelde jobtevredenheid was 7.7/10 en is in overeenstemming met de internationale literatuur; vergelijking met overige internationale studies zijn samengevat in tabel 5.

| Authors | Scores |
|--------------------------------|---------------|
| Debra, 1991 | 8.1/10 |
| Keith, Coburn and Mahony, 1998 | 7.4/10 |
| Misener and Cox, 2001 | 7.3/10 |
| Schiestel, 2007 | 7.8/10 |
| Dunaway, 2008 | 7.7/10 |
| Gandhi et al., 2014 | 8.1/10 |

Tabel 5: jobtevredenheidsscores bij verpleegkundigen in andere studies

Betreffende communicatietevredenheid zijn intensievezorgenverpleegkundigen het meest tevreden over de communicatie met hun leidinggevendenden. Communicatie met leidinggevendenden wordt in de literatuur vaak beschreven als een belangrijke predictor van jobtevredenheid. Aangezien de respondenten in dit onderzoek het meest tevreden zijn met de dimensie 'Communicatie met leidinggevende', kan dit een verklaring zijn voor de hoge werktevredenheid in dit onderzoek.

Intensievezorgenverpleegkundigen zijn het minst tevreden met de informatie die ze ontvangen inzake de organisatorische perspectieven. Hierbij wordt ontevredenheid ervaren omtrent algemene informatie over de organisatie, de doelen en de prestaties.

In dit onderzoek vertonen de meeste intensievezorgenverpleegkundigen een lage verloopintentie (49.5%), slechts 6.6% vertoont een hoge verloopintentie. Uit het onderzoek van van Dam et al. [5] blijkt dat 30% van de verpleegkundigen op de afdeling IZ denkt om een andere dienstbetrekking te zoeken. In tegenstelling tot de studie van van Dam hebben in dit onderzoek weinig intensievezorgenverpleegkundigen een hoge verloopintentie.

Bij de intensievezorgenverpleegkundigen loopt 3% risico op burn-out. Een groot verschil is waarneembaar bij het vergelijken van deze bevinding met de resultaten uit het onderzoek van Poncet [7]. Volgens dit onderzoek is een risico op burn-out aanwezig bij 1 op 3 intensievezorgenverpleegkundigen. In dit onderzoek tonen meer gedetailleerde analyses aan dat 23.7% van de intensievezorgenverpleegkundigen hun persoonlijke prestatie als laag ervaren. Emotionele uitputting en depersonalisatie zijn minder vaak problematisch (10.9%; 10.9%). In het onderzoek van Liu et al. [1] rapporteert 75% van de respondenten hun persoonlijke prestatie als laag, 51% rapporteert een hoog niveau van emotionele uitputting en 40% rapporteert een hoge depersonalisatie. Ondanks het gebruik van hetzelfde meetinstrument kan een verschil opgemerkt worden van 30%. Dit zou verklaard kunnen worden door verschillen tussen de geïncludeerde ziekenhuizen in beide studies zoals variaties in aantal nachtdiensten, werkgerelateerde stress, conflicten met collega's of patiënten, de relatie met de leidinggevende en de organisatie van de dienst.

Tevens kunnen we concluderen dat communicatietevredenheid significant gecorreleerd is met jobtevredenheid. Daarnaast is elke dimensie van communicatietevredenheid ook geassocieerd met verloopintentie.

Sterktes en beperkingen

Dit is de eerste studie over communicatietevredenheid bij intensievezorgenverpleegkundigen. Het multicentrisch ontwerp van deze studie laat toe de ziekenhuizen met elkaar te vergelijken. Door inclusie van de vragenlijsten over verloopintentie en burn-out zijn we in staat geweest informatie te verzamelen rond twee relevante topics in de dagdagelijkse verpleegkundige zorg. Een andere sterkte van deze studie is dat de resultaten nuttig zijn voor beleidsdoelen binnen de Intensieve Zorgen.

Deze informatie zal ook bijdragen tot de ontwikkeling van verbeteringsprojecten rond communicatie. De beperking van deze studie is dat niet alle verpleegkundigen participeren. Zo hebben we geen informatie van de niet-responders en valt selectiebias niet uit te sluiten.

CONCLUSIE

Deze studie demonstreert hoge niveaus van communicatie- en jobtevredenheid in een cohorte van intensieezorgenverpleegkundigen in 3 Vlaamse ziekenhuizen. In vergelijking tot de literatuur werd een lagere verloopintentie en burn-outprevalentie gedocumenteerd. Er werd aangetoond dat communicatietevredenheid in beperkte mate met jobtevredenheid geassocieerd kan worden, alsook met verloopintentie en burn-out. Verschillende verbeteringsaspecten werden gedefinieerd binnen de 8 dimensies van communicatietevredenheid.

Implicaties voor de managements- en beleidspraktijk van de IZ

Zoals eerder vermeld toont dit onderzoek aan dat communicatietevredenheid bij intensieezorgenverpleegkundigen significant correleert met jobtevredenheid, verloopintentie en burn-out. Hoe beter de uitwerking van een communicatiestructuur op de Intensieve Zorgen, hoe hoger de jobtevredenheid en hoe lager het risico op verloopintentie en burn-out.

Het is dan ook belangrijk dat het management van een IZ-afdeling zich bewust is van deze impact. Het management moet op de hoogte zijn van de invloed, uitgaande van professionele communicatie. Nadien kunnen er betekenisvolle acties ondernomen worden om een efficiënte communicatiestructuur te implementeren teneinde de prevalentie van verloopintentie en burn-out bij intensieezorgenverpleegkundigen te reduceren.

Referenties

- 1 Liu, Y.-E., While, A., Li, S. J., & Ye, W. Q. (2015). Job satisfaction and work related variables in Chinese cardiac critical care nurses. *Journal of nursing management*, 23, 487 - 497.
- 2 Brock, D., Abu-Rish, E., Chiu, C.R., Hammer, D., Wilson, S., Vorvick, L. et al. Interprofessional education in team communication: working together to improve patient safety. *British Medical Journal quality & safety*, 22(5), 414-23.
- 3 Coburn, A., & Gage-Croll, Z. (2011). Improving Hospital patient safety through teamwork: the use of TeamSTEPPS in Critical Access Hospitals. *Flex Monitoring Team*, 21, 1 - 6.
- 4 Courtenay, M., Nancarrow, S., & Dawson, D. (2013). Interprofessional teamwork in the trauma setting: a scoping review. *Human Resources For Health*, 11, 57.
- 5 van Dam, K., Meewis, M., & van der Heijden, B. I. J.M. (2013). Securing intensive care: towards a better understanding of intensive care nurses' perceived work pressure and turnover intention. *Journal of Advanced Nursing*, 69, 31 - 40.
- 6 Cartledge, S. (2001). Factors influencing the turnover of intensive care nurses. *Intensive and Critical Care Nursing*, 17, 348-355.
- 7 Poncet, M. C., Toullic, P., Papazian, L., Kentish-Barnes, N., Timsit, J. F., Pochard, F., Chevret, S., Schlemmer, B., & Azoulay, E. (2007). Burn-out syndrome in critical care nursing staff. *American journal respiratory critical care medicine*, 175(7), 698-704.
- 8 Embriaco, N., Papazian, L., Kentish-Barnes, N., Pochard, F., & Azoulay, E. (2007). Burnout syndrome among critical care healthcare workers. *Current opinion in critical care*, 13(5), 482-8.
- 9 Ramirez, A. J., Graham, J., Richards, M. A., Cull, A., & Gregory, W. M. (1996). Mental health of hospital consultants: the effects of stress and satisfaction at work. *The Lancet*, 347(9003), 724 - 728.
- 10 Mealer, M. L., Shelton, A., Berg B., Rothbaum, B., & Moss, M. (2007). Increased prevalence of posttraumatic stress disorder symptoms in critical care nurses. *American Journal of Respiratory and Critical Care Medicine*, 175(7), 693 - 697.
- 11 McHugh, M. D., Kutney-Lee, A., Cimiotti, J. P., Sloane, D. M., & Aiken, L. H. (2011). Nurses' widespread job dissatisfaction, burnout, and frustration with health benefits signal problems for patient care. *Health Affairs*, 30(2), 202-210.
- 12 Dessy, E. (2009). Effective communication in difficult situations: Preventing stress and burnout in the NICU. *Early Human Development*, 85, 39 - 41.
- 13 Gardulf, A., Orton, M.-L., Eriksson, L. E., Undén, M., Arnetz, B., Kajermo, K. N., & Nordström, G. (2008). Factors of importance for work satisfaction among nurses in a university hospital in Sweden. *Scandinavian Journal of Caring Sciences*, 22, 151-160.
- 14 Hayes, B., Bonner, A., & Pryor, J. (2010). Factors contributing to nurse job satisfaction in the acute hospital setting: a review of recent literature. *Journal of nursing management*, 18(7), 804-814.
- 15 Downs, C.W., & Hazen, M.D. (1977). A factor analytic study of communication satisfaction. *Journal of Business Communication*, 14(3), 63-73.
- 16 Van Veldhoven, & M., Meijman, T. F. (1994). Het meten van psychosociale arbeidsbelasting met een vragenlijst: de vragenlijst beleving en beoordeling van de arbeid (VBBA). Amsterdam: NIA.
- 17 Maslach, C., Jackson, S. E., & Leiter, M. P. (1996). *Maslach burnout inventory manual*. Consulting Psychologists Press.

Chapter 12

Acknowledgements and curriculum vitae

12. Acknowledgements and curriculum vitae

12.1. DANKWOORD

Eens je 50 bent geworden kan je twee richtingen in je leven kiezen. Een eerste richting is de meest vanzelfsprekende: genieten van het gezinsleven, tevreden zijn met één job. Ik prefereerde niettegenstaande een andere richting. Een richting met verschillende uitdagingen. Het was duidelijk dat deze uitdagingen niet altijd gemakkelijk te combineren waren binnen een fulltime job, een familieleven, het schrijven van een doctoraatsproject en het opnemen van verdere opleidingen, zoals mijn MBA. Zo komt het dat mijn gedachten de voorbije jaren regelmatig sterk gefocust waren op het behalen van deze doelstellingen.

Zoals velen onder jullie weten heb ik een verleden in de sportwereld, namelijk binnen de judosport. Als ik iets geleerd heb vanuit deze wereld is het voornamelijk 'vallen en weer opstaan'. Het is door deze sport dat ik geleerd heb om door te zetten en steeds doelen na te streven. Dit bracht mij de basis bij om hard te werken. Dit harde werken brengt mij vandaag tot het behalen van mijn doctoraat.

Dirk (Prof. Dr. Dirk Vogelaers), 14 jaar geleden leerde ik u voor het eerst kennen. Ik maakte kennis met uw enorme gedrevenheid. Een zestal jaar geleden ging u, als doorwinterde wetenschapper, in zee met een onstuimige hoofdverpleegkundige in mijn doctoraatsproject. Uw intelligentie, kritische blik en stimulerende input waren de drijfveren van mijn enthousiasme. De snelheid, maar ook de inventieve manier van verbeteren van documenten waren voor mij een inspiratie. Het ontcijferen van uw hiërogliefen was niet altijd eenvoudig maar gelukkig ontdekte u track changes, wat mijn leven eenvoudiger maakte, alsmede dat van de medewerkers die ik diende te raadplegen om dit alles te helpen ontcijferen. Het geduld dat u steeds opbracht, ondanks mijn onstuimige stijl, was bijzonder en getuigt van uw passie en expertise in de patiëntenzorg. Mijn oprechte dank hiervoor.

Beste Dominique (Prof. dr. Dominique Vandijck), van u leerde ik de passie rond kwaliteit in de zorg maar ook uw gezondheidseconomische insteek was een belangrijk aspect dat mij zeker blijft. Ik kon steeds beroep doen op u en u schonk mij dat tikkeltje extra zelfvertrouwen dat ik soms nodig had. Samen gingen we soms door moeilijke periodes, maar we wisten die telkens toch te overbruggen en dit zowel op familiaal vlak als binnen het doctoraatsproject.

Beste Renaat (Prof. Dr. Renaat Peleman), beste Rik (Prof. dr. Rik Verhaeghe),

Renaat, ik wil u graag danken omdat u mij 14 jaar geleden de mogelijkheid hebt geboden om te starten als hoofdverpleegkundige binnen de dienst Algemene Inwendige Ziekten. U was toen niet alleen hoofdarts van het UZ Gent maar ook diensthoofd van de dienst Algemene Inwendige Ziekten. Ik herinner mij nog steeds de zeer korte maar intense overlegmomenten. U bracht me ook de interesse bij tot het ziekenhuismanagement.

Beste Rik, ik leerde u kennen tijdens de opstart van het Pegasos-project binnen het UZ Gent en later als Directeur Verpleging. De rust die u uitstraalde was voor mij soms noodzakelijk om tot de essentie te komen binnen dit project. Uw pragmatische no-nonsense aanpak was steeds verhelderend. Ook dank voor de ondersteuning en de kansen die u mij bood om mijn lezingen in het kader van mijn doctoraat te faciliteren.

Beste Dirk, Dominique, Renaat en Rik, ik had mij geen betere promotor, co-promotor en begeleidingscommissie kunnen voorstellen. Mijn oprechte dank hiervoor.

Maar, beste professoren, dit alles zou niet mogelijk geweest zijn zonder de hulp en steun van mijn echtgenote, Patricia. Patricia, ik wil je dan ook oprecht danken voor alle momenten in mijn leven die we samen reeds deelden. Je bent het beste wat me ooit overkomen is. Bedankt voor de liefdevolle ondersteuning die je me steeds gaf, om te zorgen voor de kinderen als ik weer eens weg was om aan mijn doctoraat te werken of op buitenlandse verplaatsing was.

Beste Ruben, beste Arne; jullie hebben papa vaak moeten missen. Soms kwam dit jullie wel eens goed uit en op elk moment konden jullie steeds terecht bij mama.

Arne, bedankt voor de mooie tekeningen die je maakte voor de cover van mijn doctoraat. Ruben, bedankt voor de administratieve ondersteuning en ja man, dit staat je ook te wachten.

Mijn ouders wens ik te bedanken voor alle mogelijkheden die zij mij boden, voor de zelfstandigheid en de verantwoordelijkheidszin die zij mij van jongsaf aan bijbrachten. Bedankt om mij de mogelijkheid te geven om te studeren. Jammer dat mijn vader dit niet kan meemaken.

Aan mijn schoonouders wil ik eveneens mijn dank uiten omdat ze steeds weer klaarstonden om de kinderen op te vangen wanneer dit nodig bleek. Ook Nathalie, mijn schoonzus, wil ik graag danken. Aan mijn schoonpa, André, dank voor de vele hulp in de tuin en aan mijn schoonma, Rita, dank voor de huishoudelijke hulp. Jullie zijn fantastische schoonouders.

Aan mijn collega's en stafleden van de dienst Algemene Inwendige Ziekten dank voor de ondersteuning gedurende dit volledige doctoraatsproject. Jullie zijn een fantastisch team en ik hoop nog vele jaren met jullie te mogen samenwerken. Mijn oprechte dank gaat uit naar Marie, Kjell, Sophie, Liesbeth, Els en An, die mij bijgestaan hebben tijdens dit doctoraatsproject. Zij waren de rots in de branding.

Dank ook aan de collega's van het Skillslab, UGent, voor de jarenlange samenwerking.

Dank aan de examencommissie om deze doctoraatsthesis kritisch te lezen en te voorzien van opbouwende kritiek.

Vele doelstellingen zijn nu bereikt. Patricia, Ruben en Arne, ik beloof dat ik nu wat meer tijd aan jullie zal besteden, jullie weten echter nu al dat ik nieuwe uitdagingen zal blijven opzoeken. Deze uitdagingen betekenen een sterke drijfveer in mijn leven. Een belangrijke levensfilosofie die ik verder wil opnemen en wil doorgeven is 'you must do the thing you think you cannot do' (Eleanor Roosevelt).

12.2. CURRICULUM VITAE

PERSONALIA

| | |
|-------------------------|--|
| Name | Peter Vermeir |
| Nationality | Belgian |
| Place and Date of birth | Zele - 05/06/1965 |
| Address | 9041 Oostakker (Gent) Wittewalle 96 |
| Marital status | Married, 2 children |
| Correspondence adress | Algemene Inwendige Ziekten De Pintelaan 185 9000 Ghent (Belgium) |
| Telephone | +32 9 332 23 49 |
| Mobile | +32 474 77 04 83 |
| Fax | +32 9 332 38 59 |
| Email | peter.vermeir@ugent.be peter.vermeir@uzgent.be |

EDUCATION

Academic education

Degree “Master in Business Administration” (Executive MBA), Antwerp Management School in cooperation with Fordham University, New York and the Institute of Business Studies (IBS), Moscow, 2015.

“Master of Public Management”, “Master of Public Administration”, University of Antwerp – Antwerp Management School, 2011.

Specialty training Doctoral schools programme (Life sciences and Medicine at Ghent University), 2017.

Post-academic education

Innovating Health for Tomorrow INSEAD Management School, Fontainebleau, France, 2016.

Value Measurement for Healthcare Harvard Business School, Boston, US, 2014.

Advanced course in International Financial Management Fordham University, New York, US, 2014.

University Certificate “Quality of Care” Catholic University of Leuven, Centre for Health Sciences and Nursing, 2013.

Nursing Leadership Wharton School, University of Pennsylvania, US, 2012.

Hospital Care Management Indian Institute of Management, Ahmedabad, India, 2011.

| | |
|---|---|
| University certificate in Hospital and management for senior managers | Catholic University of Leuven, Centre for Health Sciences in Nursing, 2011. |
| Leading with impact | Harvard Business School, Boston, US, 2011. |
| Advanced Management MBA European Summer School | Aarhus University - Denmark, 2010. |
| Management for Middle Managers in Healthcare | Antwerp University, 2009. |
| Hospital management | Ghent University, 2008. |
| Discharge Management in General and Psychiatric Hospitals | Catholic University of Leuven, Centre for Health Sciences in Nursing, 2007. |

Education

| | |
|------------------------------------|---|
| Executive training for head nurses | Sociale Hogeschool KVMW Ghent - BALANS, 1999. |
| Bachelor's degree Nursing | Hogeschool Sint-Lieven, Sint-Niklaas, 1995. |
| Hospital nurse certification | Institute of Nursing Sint - Geertruid, Ghent, 1992. |

PROFESSIONAL CURRICULUM

Professional experience

- 01.09.2004 – current, Ghent University Hospital
Head of Administration and Technical Staff / Head Nurse General Internal Medicine
- 01.06.2005 – 01.07.2006, Ghent University Hospital
Head Nurse Pain Clinic, ad interim
- 01.09.2004 – 01.03.2005, Ghent University Hospital
Operating theatre nurse
- September 2000 - 31.08.2004, General Hospital Sint-Blasius, Dendermonde
Emergency room nurse/ MUG
- 01.01.1995 – 09.2000, General Hospital Sint Jan, Brussels
Nursing coordinator emergency admission
- 01.07.1992 – 31.12.1994, General Hospital Maria Middelaers, Ghent
Emergency room nurse

Teaching experience

- Ghent University, Faculty of Medicine and Health Sciences, 01.09.2009 – current.
Teacher: Skillslab V-lijn: infusion policies, vena puncture, acute wound care management, Electrocardiography and Injection.
- Guest lecturer: Master in Nursing, Ghent University, 18.04.2016.
Topic: Innovation in Healthcare.
- Guest lecturer: Master of International Healthcare, Economics and Policy (MIHMEP), Bocconi school of Management, University Bocconi, Milaan, 12.02.2016 - 13.02.2016.
Topic: Innovation in Healthcare en Communication in Healthcare.
- Guest lecturer: Master of Science in Healthcare Management and Policy. Ghent University (UGent). 2017.
Topic: communication and corporate culture and innovation in Healthcare.

Academic functions

- Academic member Athens Institute for Education and Research (ATINER), belonging to the Nursing Research Unit and the Health Economics & Management Research Unit.

Advisory and Reviewer Board member

- Reviewer International Communication Association
- Reviewer Journal of Nursing Scholarship
- Reviewer Journal Worldviews on Evidence-Based Nursing
- Reviewer Journal BMJ Open
- Reviewer Athens Journal of Health, Athens Institute for Education and Research (ATINER), Athens, Greece
- Reviewer International Workshop on Nursing and Healthcare, Ankara, Turkey, 2014
- Reviewer International Workshop on Nursing and Healthcare, Istanbul, Turkey, 2015
- Reviewer 2nd Annual International Conference on Nursing, Athens, Greece, 2016
- Member of the organizing committee, International Conference on General Practice & General Medicine, November 10-11, 2016. Istanbul, Turkey

PUBLICATIONS

A1-publications

- Degroote S, Vogelaers D, Vermeir P, Mariman A, De Rick A, Van Der Gucht B, Van Wanzelee F, Pelgrom J, Verhofstede C, Vandijck D. Socio-economic, behavioural, (neuro)psychological and clinical determinants of quality of life (QoL) in people living with HIV: a pilot study. Journal of International AIDS Society (JIAS). 2013. 16:18643.
- Mariman A, Delesie L, Tobback E, Hanoulle I, Sermijn E, Vermeir P, Pevernagie D, Vogelaers D. Undiagnosed and comorbid disorders in patients with presumed chronic fatigue syndrome. Journal of Psychosomatic Research. 2013. 75(5). P.491-496.
- Degroote S, Vogelaers D, Vermeir P, Mariman A, De Rick A, Van Der Gucht B, Van Wanzelee F, Pelgrom J, Verhofstede C, Vandijck D. Determinants of adherence in a cohort of Belgian HIV patients: a pilot study. Acta Clinica Belgica. 2014. Mar-Apr. 69(2):111-5. doi: 10.1179/0001551214Z.00000000035.

- Vermeir P, Vandijck D, Degroote S, Ommeslag D, Van De Putte M, Heytens S, Reniers J, Hanoulle I, Peleman R, Vogelaers D. Mutual perception of communication between general practitioners and hospital-based specialists. *Acta Clinica Belgica*. 2015.
- Vermeir P, Vandijck D, Degroote S, Peleman R, Verhaeghe R, Mortier E, Hallaert G, Van Daele S, Buylaert W, Vogelaers D. Communication in healthcare: a narrative review of the literature and practical recommendations. *International Journal of Clinical Practice*. 2015.
- Vermeir P, Degroote S, Vandijck D, Van Tiggelen H, Peleman R, Verhaeghe R, Mariman A, Vogelaers D. The patient perspective on the effects of medical record accessibility: a systematic review. *Acta Clinica Belgica*. 2017.
- Deschepper M, Vermeir P, Vogelaers D, Devulder J, Eeckloo K. Is pain at discharge a risk factor for unplanned hospital readmission. *Acta Clinica Belgica*. 2017.

A2- publications

- Degroote S, Vogelaers D, Liefhooghe G, Vermeir P, Vandijck D. Sexual experience and HIV-related knowledge among Belgian university students: a questionnaire study. *BMC Research Notes*. 2014. 7:299, doi: 10.1186/1756-0500-7-299.
- Vermeir P, De Fluitier K, Van Daele S, Hallaert G, Buylaert W, Vogelaers D, Vandijck D. Impact van communicatie tussen zorgverstrekkers op de kwaliteit van patiëntenzorg. *Tijdschrift voor Geneeskunde*. 2015. 71 nr. 6, doi: 10.2143/TVG.71.06.2001820.
- Vandijck D, Bergs J, Vermeir P, Hellings J. Patiëntveiligheid in de ziekenhuissector: wat kunnen we leren van de luchtvaartsector? *Tijdschrift van Geneeskunde*. 2015.

B2 - Author or co-author of chapter in books

- Vermeir P, De Fluitier K, Van Daele S, Hallaert G, Buylaert W, Vogelaers D, Vandijck D. Impact van communicatie tussen zorgverstrekkers op de kwaliteit van patiëntenzorg. *Jaarboek voor de intensievezorgenverpleegkundige 2014*, pp 105-115. Acco. ISBN 978-90-334-9575-5.
- Lapeere H, Oosterlinck P, Vermeir I, Van Houtte C, Vermeir P, Coppens M, Vogelaers D, Gevaert P. Latexallergie: Preventie voor patient en personeel. *Jaarboek voor de intensievezorgenverpleegkundige 2015*, pp 79-86. Acco. ISBN 978-94-6292-302-7.
- Mariman A, Tobback E, Delesie L, Neyens M, Vermeir P, Vogelaers D. Kun je slapen op intensieve zorgen? *Jaarboek voor de intensievezorgenverpleegkundige 2015*, pp 113-119. Acco. ISBN 978-94-6292-302-7.
- Vermeir P, Blot S, Degroote S, Vandijck D, Moons L, Vermeir R, Mariman A, Verhaeghe R, Vogelaers D. Communicatietevredenheid en jobtevredenheid bij intensieve zorg

verpleegkundigen en de impact op burn-out en intentie tot verloop. Jaarboek voor de intensievezorgenverpleegkundige 2016, pp 137-148. Acco. ISBN 978-94-6292-754-4

SCIENTIFIC ACTIVITIES

International congresses – invited lectures

- Vermeir P. Pre/hospital treatment of acute burns. European congress emergency medical assistance, Ghent (Belgium), 1999.
- Vermeir P. Head injuries / a specific approach. European congress emergency medical assistance, Brussels (Belgium), 2001.
- Vermeir P. Leadership in nursing: Act local think global. Sigma Theta Tau International's 27th International Nursing Research Congress, July 21-25, 2016. Cape Town, South Africa.

International congresses – oral presentation (submitted abstract)

- Mariman A, Delesie L, Tobback E, Hanouille I, Sermijn E, Vermeir P, Pevernagie D, Vogelaers D. Prevalence of primary sleep disorders in a large sample of patients with presumed chronic fatigue syndrome referred to a tertiary care referral centre. Journal of Sleep Research 2012; 21(S1):90. European Sleep Research Society-congress 2012.
- Degroote S, Vogelaers D, Vermeir P, Mariman A, De Rick A, Van Der Gucht B, Van Wanzelee F, Pelgrom J, Vandijck D. Determinants of quality of life in Belgian HIV patients: A Pilot Study. 21th International Conference on Health Promoting Hospitals and Health. Services: Gothenburg, Sweden, May 22-24, 2013. Clinical Health Promotion 2013; 3, Suppl 1: 66-67.
- Vermeir P, Degroote S, Vogelaers D, Speeckaert E, Tobback E, Delesie L, Mariman A, Vandijck D. Qualitative assessment of medical letters of patients with chronic fatigue and a psychiatric disorder. Presented at: International Conference on Communication in Healthcare, September 29 - October 2, 2013. Montreal, Canada.
- Vermeir P, Degroote S, Vogelaers D, Tobback E, Delesie L, Mariman A, Vandijck D. Qualitative assessment of answer letters of patients with chronic fatigue and a psychiatric disorder. Presented at: the Sigma Theta Tau International's 25th International Nursing Research Congress, July 24-28, 2014. Hong Kong, China.
- Vermeir P, Schillemans S, Christophe J, Leune T, Vandijck D, De Smet G, Vogelaers D, Vermassen F. The impact of nurse - to - nurse bedside communication on patient satisfaction, and resources use. Presented at: Annual International Conference on Nursing, May 4-7, 2015. Athens, Greece. First published in Athens, Greece by the Athens Institute for Education and Research ISBN: 978-618-5065-89-8.

- Vermeir P, Schillemans S, Christophe J, Leune T, Vandijck D, De Smet G, Vogelaers D, Vermassen F. The impact of nurse - to - nurse bedside communication on patient satisfaction, and resources use. Presented at: the Sigma Theta Tau International's 26th International Nursing Research Congress, July 23-27, 2015. San Juan, Puerto Rico.
- Tobback E, Mariman A, Delesie L, Declercq T, Vermeir P, Bouwen A, Spooren D, Snoeck P, Vogelaers D. A new healthcare model for patients with abnormal fatigue and chronic fatigue syndrome. Presented at: 23rd World Congress on Psychosomatic Medicine, August 20 - 23, 2015. Glasgow, UK.
- Vermeir P, Vandijck D, Degroote S, Ommeslag D, Van De Putte M, Heytens S, Reniers J, Hanouille I, Peleman R, Vogelaers D. Mutual perception of communication between general practitioners and hospital-based specialists. Presented at: International Conference on Communication in Healthcare (ICCH), October 25-28, 2015. New Orleans, VS.
- Vermeir P, Degroote S, Vandijck D, Tobback E, Delesie L, Mariman A, Deveugele M, Peleman R, Verhaeghe R, Vogelaers D. Intra-organizational communication satisfaction and job satisfaction among nurses. Presented at: the Sigma Theta Tau International's European Regional Conference, June 6-8, 2016. Utrecht, Netherlands.
- Ryckeghem H, Delesie L, Tobback E, Vermeir P, Lievens S, Vogelaers D, Mariman A. The role of the Advanced Nurse Practitioner within a care path for patients with Chronic Fatigue Syndrome. Presented at: the Sigma Theta Tau International's European Regional Conference, June 6-8, 2016. Utrecht, Netherlands.
- Vermeir P, Vandijck D, Blot S, Mariman A, Deveugele M, Verhaeghe R, Vogelaers D. Communication satisfaction and job satisfaction among executive nurses and impact on burnout and turnover intention. Presented at: the American Academy on Communication in Healthcare, Research Forum, June 16-19, 2016. Yale University, New Haven, VS.
- Vermeir P, Degroote S, Vandijck D, Tobback E, Delesie L, Mariman A, Deveugele M, Peleman R, Verhaeghe R, Vogelaers D. Intra-organizational communication satisfaction and job satisfaction among nurses. Presented at: the Sigma Theta Tau International's 27th International Nursing Research Congress, July 21-25, 2016. Cape Town, South Africa.
- Vermeir P, Degroote S, Vandijck D, Tobback E, Delesie L, Mariman A, Deveugele M, Peleman R, Verhaeghe R, Vogelaers D. Intra-organizational communication satisfaction and job satisfaction among Flemish nurses. Presented at: 14th International Conference on Communication in Healthcare, September 7-10, 2016. University Convention Center Heidelberg, Germany.
- Vermeir P, Degroote S, Vandijck D, Tobback E, Delesie L, Mariman A, Deveugele M, Peleman R, Verhaeghe R, Vogelaers D. Communication satisfaction and job satisfaction among ICU nurses and the impact on burnout and turnover intention. Presented at: 29th European Society of Intensive Care Medicine (ESICM), October 1-5, 2016. Milan, Italy.
- Vermeir P, Downs C, Degroote S, Vandijck D, Tobback E, Delesie L, Mariman A, Deveugele M, Verhaeghe R, Cambré B, Vogelaers D. Intra-organizational communication satisfaction and job satisfaction among Flemish hospital nurses: an explorative multicentric study. Presented at: CARE4 International Scientific Nursing and Midwifery Congress, February 8-10, 2017. Antwerp, Belgium.

- Vermeir P, Degroote S, Vandijck D, Mariman A, Verhaeghe R, Peleman R, Vogelaers D. Nurses' well-being as a quality indicator for improved care. Presented at: 3rd Annual International Conference on Nursing, Atiner, May 1-4, 2017. Athens, Greece.

International congresses – poster presentation (submitted abstract)

- Vermeir P, Degroote S, Vogelaers D, Speeckaert E, Tobback E, Delesie L, Mariman A, Vandijck D. Quality of communication between secondary and primary care providers in psychosomatic medicine: a critical assessment of medical letters after referral. Poster presented at: the Patient Safety Congress, Birmingham (United Kingdom), May 21-22, 2013.
- Degroote S, Vogelaers D, Vermeir P, Mariman A, De Rick A, Van Der Gucht B, Van Wanzelee F, Pelgrom J, Vancauwenberghe J, Vandijck D. HIV-related knowledge in a sample of Belgian university students. Poster presented at: 14th European AIDS Conference, October 16-19, 2013, Brussels, Belgium.
- Degroote S, Vogelaers D, Vermeir P, Mariman A, De Rick A, Van Der Gucht B, Van Wanzelee F, Pelgrom J, Vandijck D. Non-adherence and its determinants in HIV patients. Submitted for ESPACOMP 2013 (European Society for Patient Adherence, Compliance and Persistence), November 15-16, 2013, Budapest, Hungary.
- Schillemans S, Vermeir P, Christophe J, Leune T, Vandijck D, De Smet G, Vogelaers D, Vermassen F. The impact of nurse - to - nurse bedside communication on patient satisfaction, and resources use. Presented at: Care4 International Scientific Nursing and Midwifery Congress, February 4-6, 2015. Antwerp, Belgium.
- Vandijck D, Vermeir P, Neiryck C, Bergs J, Vlayen A, Labeau S, Blot S, Hellings J. Intensive Care Nurses' Knowledge on Quality of Care and Patient Safety. Presented at: the Sigma Theta Tau International's 26th International Nursing Research Congress, July 23-27, 2015. San Juan, Puerto Rico.
- Vermeir P, Vandijck D, Degroote S, Ommeslag D, Van De Putte M, Heytens S, Reniers J, Hanouille I, Peleman R, Vogelaers D. Mutual perception of communication between general practitioners and hospital-based specialists. Presented at: European Association for Communication in Healthcare (EACH) Summer Event, August 24-26, 2015. London, UK.
- Vermeir P, Vandijck D, Degroote S, Peleman R, Verhaeghe R, Mortier E, Hallaert G, Van Daele S, Buylaert W, Vogelaers D. Communication in healthcare: a narrative review of the literature and practical recommendations. Presented at: European Association for Communication in Healthcare (EACH) Summer Event, August 24-26, 2015. London, UK.
- Vermeir P, Vandijck D, Degroote S, Peleman R, Verhaeghe R, Mortier E, Hallaert G, Van Daele S, Buylaert W, Vogelaers D. Communication in healthcare: a narrative review of the literature and practical recommendations. Presented at: International Conference on Communication in Healthcare (ICCH), October 25-28, 2015. New Orleans, VS.
- Vermeir P, Vandijck D, Blot S, Mariman A, Deveugele M, Verhaeghe R, Vogelaers D. Communication satisfaction and job satisfaction among critical care nurses and impact on burnout

and turnover intention. Presented at: the American Academy on Communication in Healthcare, Research Forum, June 16-19, 2016. Yale University, New Haven, VS.

- Vermeir P, Degroote S, Vandijck D, Tobback E, Delesie L, Mariman A, Deveugele M, Peleman R, Verhaeghe R, Vogelaers D. Communication satisfaction and job satisfaction among executive nurses and impact on burnout and turnover intention. Presented at: the Sigma Theta Tau International's 27th International Nursing Research Congress, July 21-25, 2016. Cape Town, South Africa.
- Soenens M, Vandijck D, Blot S, Mariman A, Verhaeghe R, Vogelaers D, Vermeir P. The impact of bedside handover on patient and nurse satisfaction and quality of care. Poster presented at: CARE4 International Scientific Nursing and Midwifery Congress, February 8-10, 2017. Antwerp, Belgium.

National congresses - invited lectures

- Vogelaers D, Vermeir P. Onverklaarbare klachten, what's in a name? 39^e Week van Verpleegkundigen en Vroedvrouwen, NVKV, 20 maart 2013.
- Vermeir P. Patiëntenparticipatie voor een betere chronische zorg. Symposium: hoe gaat de maatschappij om met CVS en somatisch onvoldoende verklaarde lichamelijke klachten?, Gent, 30 september 2016.
- Vermeir P , Blot S , Degroote S, Vandijck D, Mariman A, Verhaeghe R, Vogelaers D. Communicatietevredenheid en jobtevredenheid bij intensieve zorg verpleegkundigen en de impact op burn-out en intentie tot verloop. 34th Congress of the Flemish Society of Critical Care Nurses (VVIZV), Ghent (Belgium), Nov 18, 2016; Jaarboek voor de intensievezorgenverpleegkundige 2016 (ISBN 978-94-6292-754-4);195.

National congresses - oral presentation (submitted abstract)

- Degroote S, Vogelaers D, Vermeir P, Mariman A, De Rick A, Van Der Gucht B, Van Wanzele F, Pelgrom J, Moerman F, Vandijck D. Determinants of adherence in HIV patients: a pilot study. 30th Congress of the Flemish Society of Critical Care Nurses (VVIZV), Ghent (Belgium), Nov 23, 2012; Jaarboek voor de intensievezorgenverpleegkundige 2012 (ISBN 978-90-334-8926-6); 92.
- Vermeir P, Vandijck D, Degroote S, Peleman R, Verhaeghe R, Mortier E, Hallaert G, Van Daele S, Buylaert W, Vogelaers D. Communication in healthcare: Impact of Communication in Healthcare and practical recommendations. Presented at: Research Day Faculty of Medicine and Health Sciences Ghent University, Ghent, March 16, 2016.

National congresses - poster presentation (submitted abstract)

- Tobback E, Mariman A, Delesie L, Vermeir P, Heytens S, Declercq T, Bouwen A, Spooren D, Snoeck P, Vogelaers D. Een multidisciplinair zorgnet voor abnormale moeheid en het chronische vermoeidheidssyndroom in Oost- en West-Vlaanderen. Poster session presented at: Prijs Klinische Paden 2015, Leuven, September 28, 2015.
- Oosterlinck P, Lapeere H, Vermeir I, Van Houtte C, Vermeir P, Coppens M, Gevaert P. Verbeteren van de kwaliteit van zorg door de implementatie van het zorgpad 'Latexallergie' in het

Universitair Ziekenhuis Gent. Poster session presented at: Prijs Klinische Paden 2015, Leuven September 28, 2015.

- Vermeir P, Vandijck D, Peleman R, Ommeslag D, Van De Putte M, Heytens S, Reniers J, Hanouille I, Degroote S, Vogelaers D. Evaluation of the communication between general practitioners and specialists: a qualitative and perceptive assessment. Poster session presented at: Studiedag ICURO VIP² Making Indicators Work, Brussels, December 5, 2014.
- Vermeir P, Vandijck D, Callens S, Delesie L, Vogelaers D, Peleman R. PEGASOS: development of a tool for evaluation of a new organization model. Symposium Hospital Management, Leuven, December 2011.
- Degroote S, Vogelaers D, Vermeir P, Mariman A, De Rick A, Van Der Gucht B, Van Wanzelee F, Pelgrom J, Moerman F, Vandijck D. Determinants of quality of life in HIV patients: a pilot study. Poster session presented at: 2nd Annual BREACH Symposium; Brussels, Sept 28-29, 2012.
- Degroote S, Vogelaers D, Vermeir P, Mariman A, De Rick A, Van Der Gucht B, Van Wanzelee F, Pelgrom J, Moerman F, Vandijck D. Determinants of adherence in HIV patients: a pilot study. Poster session presented at: 2nd Annual BREACH Symposium; Brussels, Sept 28-29, 2012.
- Degroote S, Vogelaers D, Vermeir P, Mariman A, De Rick A, Van Der Gucht B, Van Wanzelee F, Pelgrom J, Moerman F, Vandijck D. Determinants of quality of life in HIV patients: a pilot study. 30th Congress of the Flemish Society of Critical Care Nurses (VVIZV), Ghent, Nov 23, 2012; Jaarboek voor de Intensievezorgverpleegkundige 2012 (ISBN 978-90-334-8926-6); 91.
- Degroote S, Vogelaers D, Vermeir P, Mariman A, De Rick A, Van Der Gucht B, Van Wanzelee F, Pelgrom J, Moerman F, Vandijck D. Adherence and Quality of Life in older HIV patients. Poster presented at: Wetenschapsdag 2013, Ghent, Mar 13, 2013.
- Degroote S, Vogelaers D, Vermeir P, Mariman A, De Rick A, Van Der Gucht B, Pelgrom J, Van Wanzelee F, Verhofstede C, Vandijck D. HRQoL in people living with HIV. Poster session presented at: Studentenonderzoekssymposium 2013, April 22, Ghent.
- Degroote S, Vogelaers D, Vermeir P, Mariman A, De Rick A, Van Der Gucht B, Van Wanzelee F, Pelgrom J, Verhofstede C, Vandijck D. HRQoL in people living with HIV. Poster presented at: Studentenonderzoekssymposium 2013, April 22, Ghent
- Vermeir P, Degroote S, Vandijck D, Mariman A, Verhaeghe R, Peleman R, Vogelaers D. Nurses' well-being as a quality indicator for improved care. Poster presented at: Kwaliteitsvonk congres, zorgnet-ICURO, 2017, January 27, Brussels.

Other invited presentations

- Vermeir P. Change management "psychology = management = psychology". Business school, St-Petersburg (Russia), January 2009.

- Vermeir P. Change management in hospital organization. The Indian Institute of Management. Ahmedabad (India), December 2011.
- Vogelaers D, Heytens S, Bouwen A, Spooren D, Snoeck P, Van Dessel K, D'Hooghe S, Rimbaut S, Vermeir P., Delesie L, Mariman A, Tobback E. Een multidisciplinair zorgnet voor abnormale moeheid en het chronische vermoeidheidssyndroom in Oost- en West-Vlaanderen. Presented at: Prijs Klinische Paden 2015, Leuven (Belgium) september 28, 2015.
- Vermeir P. Policy over gebruik van sociale media. 8ste Organisatie- en beleidssymposium: e-communicatie op intensieve zorgen, Like it?!, Gent (Belgium), November 2015.

Chairman / Moderator

- Vermeir P. Chairman / moderator: session Global Leadership. The Sigma Theta Tau International's 25th International Nursing Research Congress, July 24-28, 2014. Hong Kong, China.
- Vermeir P. Chairman / moderator: session Adult Health Challenge. Research division of ATINER. International Conference on Nursing, May 4-7, 2015. Athens, Greece.
- Vermeir P. Chairman / moderator: session International Research to Improve Patient Care. The Sigma Theta Tau International's 26th International Nursing Research Congress, July 23-27, 2015. San Juan, Puerto Rico.
- Vermeir P. Chairman / moderator: session Promoting Professionalism of Nurses. The Sigma Theta Tau International's European Regional Conference, June 6-8, 2016. Utrecht, Netherlands.
- Vermeir P. Chairman / moderator: session How to Measure Hospital Nurses Knowledge and Attitude. The Sigma Theta Tau International's European Regional Conference, June 6-8, 2016. Utrecht, Netherlands.

AWARDS

Winner of the business game in change management at the Wharton Business school, University of Pennsylvania, Philadelphia during training Nursing Leaders Program 2012.

Chapter 13

Questionnaires used in articles

13. Questionnaires used in articles

Vragenlijst: Intra-organizational communication satisfaction and job satisfaction among Flemish hospital nurses: an explorative multicentric study

Vragenlijst voor huisartsen:

Demografische gegevens

1. Uw leeftijd:jaar
2. Uw geslacht:
0 Man
0 Vrouw
3. U bent?
0 Huisarts
0 Huisarts in opleiding
4. Aantal jaren praktijkervaring?
0 < 1 jaar
0 1 - 5 jaar
0 6 - 10 jaar
0 11 - 20 jaar
0 > 20 jaar
5. Aantal dagen per week dat u raadpleging doet?
0 1 dag / week
0 2 dagen / week
0 3 dagen / week
0 4 dagen / week
0 5 dagen / week
0 6 dagen / week
0 7 dagen / week
6. U bent stagemeester voor artsen in opleiding?
0 Ja
0 Nee
7. Waar bent u hoofdzakelijk actief?
0 Stedelijk gebied
0 Landelijk gebied
8. U bent?
0 Zelfstandig
0 Bediende/ambtenaar
0 Beide

9. U werkt hoofdzakelijk in een?
 Solopraktijk
 Duopraktijk
 Groepspraktijk
 Ziekenhuispraktijk
10. U heeft iemand in uw praktijk voor administratieve ondersteuning?
 Ja
 Nee

Communicatie

| | Volledig eens | Gedeeltelijk eens | Neutraal | Gedeeltelijk oneens | Volledig oneens |
|--|---------------|-------------------|----------|---------------------|-----------------|
| Telefonisch contact | | | | | |
| 11. De arts-specialist is doorgaans vlot telefonisch bereikbaar. | 0 | 0 | 0 | 0 | 0 |
| 12. Ik ben doorgaans vlot telefonisch bereikbaar voor arts-specialisten. | 0 | 0 | 0 | 0 | 0 |
| Briefwisseling | | | | | |
| 13. De arts-specialist beantwoordt de vraag uit mijn verwijsbrief. | 0 | 0 | 0 | 0 | 0 |
| 14. De medische verslagen van de arts-specialist worden doorgaans tijdig verzonden naar de huisarts. | 0 | 0 | 0 | 0 | 0 |
| 15. De medische verslagen van de arts-specialist vind ik voldoende informatief en bruikbaar. | 0 | 0 | 0 | 0 | 0 |
| 16. Ik volg doorgaans de adviezen van de arts-specialist op. | 0 | 0 | 0 | 0 | 0 |
| 17. Ik vind de gegevensdeling tussen huisarts en arts-specialist (bijvoorbeeld over complexe/chronische patiënten) zou kunnen worden verbeterd door middel van een gezamenlijk elektronisch dossier. | 0 | 0 | 0 | 0 | 0 |
| Feedback | | | | | |
| 18. Ik stel feedback vanwege arts-specialisten aangaande mijn klinisch handelen op prijs. | 0 | 0 | 0 | 0 | 0 |
| Professionele expertise | | | | | |
| 19. Ik vind dat arts-specialisten huisarts dienen te informeren over de nieuwe medische ontwikkelingen binnen hun vakgebied. | 0 | 0 | 0 | 0 | 0 |
| 20. Ik vind dat huisartsen zich periodiek moeten bijscholen. | 0 | 0 | 0 | 0 | 0 |
| 21. Ik vind dat huisartsen arts-specialisten dienen te informeren over de nieuwe medische ontwikkeling binnen de eerstelijnsgezondheidszorg. | 0 | 0 | 0 | 0 | 0 |
| 22. Ik vind dat arts-specialisten zich periodiek moeten bijscholen. | 0 | 0 | 0 | 0 | 0 |

Telefonisch contact

23. Hoe vaak zoekt u gemiddeld telefonisch contact met een arts-specialist?
 > 1x / week
 1x / week
 1x / maand
 1x / 3 maanden
 < 1 x / 3 maanden
 Nooit

Briefwisseling

24. Hoe ontvangt u bij voorkeur correspondentie van arts-specialisten? *(Meer antwoorden mogelijk)*
- 0 Elektronisch (e-mail, hector/medibridge,
 - 0 Per post
 - 0 Per fax

Feedback

25. Hoe vaak krijgt u gemiddeld feedback op uw medische praktijkvoering door een arts-specialist?
- 0 > 1x / week
 - 0 1x / week
 - 0 1x / maand
 - 0 1x / 3 maanden
 - 0 < 1x / 3 maanden
 - 0 Nooit
26. Hoe vaak geeft u gemiddeld feedback aan arts-specialisten op hun medische praktijkvoering?
- 0 > 1x / week
 - 0 1x / week
 - 0 1x / maand
 - 0 1x / 3 maanden
 - 0 < 1x / 3 maanden
 - 0 Nooit

Vragenlijst voor ziekenhuisspecialisten:

Demografische gegevens

1. Uw leeftijd:jaar
2. Uw geslacht:
 - Man
 - Vrouw
3. U bent?
 - Arts-specialist in (vermeld discipline).....
 - Arts-specialist in opleiding in (vermeld discipline).....
4. Aantal jaren praktijkervaring?
 - < 1 jaar
 - 1 - 5 jaar
 - 6 - 10 jaar
 - 11 - 20 jaar
 - > 20 jaar
5. Aantal dagen per week dat u raadpleging doet?
 - 1 dag / week
 - 2 dagen / week
 - 3 dagen / week
 - 4 dagen / week
 - 5 dagen / week
 - 6 dagen / week
 - 7 dagen / week
6. U bent stagemeester voor artsen in opleiding?
 - Ja
 - Nee
7. U bent verbonden aan een?
 - Algemeen ziekenhuis
 - Universitair ziekenhuis
 - nvt
8. U bent?
 - Zelfstandige
 - Bediende/ambtenaar
 - Beide
9. U werkt hoofdzakelijk in een?
 - Solopraktijk
 - Duopraktijk
 - Groepspraktijk
 - Ziekenhuispraktijk
10. U heeft iemand in uw praktijk voor administratieve ondersteuning?
 - Ja
 - Nee

Communicatie

| | Volledig eens | Gedeeltelijk eens | Neutraal | Gedeeltelijk oneens | Volledig oneens |
|--|---------------|-------------------|----------|---------------------|-----------------|
| Telefonisch contact | | | | | |
| 11. De huisarts is doorgaans vlot telefonisch bereikbaar. | 0 | 0 | 0 | 0 | 0 |
| 12. Ik ben doorgaans vlot telefonisch bereikbaar voor huisartsen. | 0 | 0 | 0 | 0 | 0 |
| Briefwisseling | | | | | |
| 13. Verwijsbrieven van huisartsen vind ik doorgaans voldoende informatief en bruikbaar. | 0 | 0 | 0 | 0 | 0 |
| 14. Ik beantwoord steeds de vraag uit de verwijsbrief van de huisarts. | 0 | 0 | 0 | 0 | 0 |
| 15. Mijn verslagen worden doorgaans tijdig verzonden naar de verwijzende huisarts. | 0 | 0 | 0 | 0 | 0 |
| 16. De huisarts volgt doorgaans mijn adviezen op. | 0 | 0 | 0 | 0 | 0 |
| 17. Ik vind dat de communicatie tussen huisarts en arts-specialist (bijvoorbeeld over complexe/chronische patiënten) zou kunnen verbeterd worden door middel van een gezamenlijk elektronisch medisch/patiënten dossier. | 0 | 0 | 0 | 0 | 0 |
| Feedback | | | | | |
| 18. Ik stel feedback vanwege huisartsen aangaande mijn klinisch handelen op prijs. | 0 | 0 | 0 | 0 | 0 |
| Professionele expertise | | | | | |
| 19. Ik vind dat ik huisartsen dien te informeren over nieuwe medische ontwikkelingen binnen mijn vakgebied. | 0 | 0 | 0 | 0 | 0 |
| 20. Ik vind dat huisartsen zich periodiek moeten bijscholen. | 0 | 0 | 0 | 0 | 0 |
| 21. Ik vind dat huisartsen arts-specialisten dienen te informeren aangaande nieuwe ontwikkelingen binnen de eerstelijnsgezondheidszorg. | 0 | 0 | 0 | 0 | 0 |
| 22. Ik vind dat arts-specialisten zich periodiek moeten bijscholen. | 0 | 0 | 0 | 0 | 0 |

Telefonisch contact

23. Hoe vaak per week heeft u gemiddeld telefonisch contact met een huisarts?

- 0 > 1x / week
- 0 1x / week
- 0 1x / maand
- 0 1x / 3 maanden
- 0 < 1x / 3 maanden
- 0 Nooit

Briefwisseling

24. Hoe ontvangt u bij voorkeur correspondentie van huisartsen? (meer antwoorden mogelijk)

- 0 Elektronisch (e-mail, hector/medibridge,
- 0 Per post
- 0 Per fax

Feedback

25. Hoe vaak krijgt u gemiddeld feedback op uw praktijkvoering door een huisarts?

- 0 > 1x / week
- 0 1x / week
- 0 1x / maand
- 0 1x / 3 maanden
- 0 < 1x / 3 maanden
- 0 Nooit

26. Hoe vaak geeft u gemiddeld feedback aan huisartsen op hun praktijkvoering?

- 0 > 1x / week
- 0 1x / week
- 0 1x / maand
- 0 1x / 3 maanden
- 0 < 1x / 3 maanden
- 0 Nooit

Vragenlijst: Intra-organizational communication satisfaction and job satisfaction among Flemish hospital nurses: an explorative multicentric study

SOCIO-DEMOGRAFISCHE GEGEVENS

- 1. Uw leeftijd:jaar

- 2. Uw geslacht
 - 0 Man
 - 0 Vrouw

- 3. U bent
 - 0 Verpleegkundige
 - 0 Hoofdverpleegkundige
 - 0 Staffunctie verpleegkunde
 - 0 Zorgmanager / diensthoofd verpleegkunde
 - 0 Verpleegkundig specialist
 - 0 Sociaal verpleegkundige
 - 0 Psychiatrisch verpleegkundige
 - 0 Vroedvrouw
 - 0 Andere:

- 4. Hoogste opleidingsniveau (slechts 1 antwoord mogelijk)
 - 0 Gediplomeerde in de verpleegkunde (A2)
 - 0 Bachelor in de verpleegkunde (A1)
 - 0 Master in de verpleegkunde
 - 0 Doctoraat in de verpleegkunde
 - 0 Graden buiten de verpleegkunde (gelieve te specificeren:.....)

- 5. Ziekenhuis waar u momenteel tewerkgesteld bent:
 - 0 Universitair Ziekenhuis Gent
 - 0 AZ Sint Lucas ziekenhuis Gent
 - 0 Sint Vincentius ziekenhuis Deinze
 - 0 AZ Groeninge Kortrijk

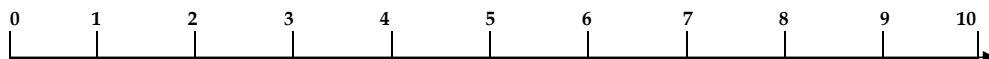
- 6. Dienst waar u momenteel tewerkgesteld bent binnen het ziekenhuis:
.....
.....

- 7. Hoeveel jaren (totaal) bent u reeds werkzaam als verpleegkundige?
.....

- 8. Uw huidig tewerkstellingspercentage bedraagt:
 - 0 100% (full time)
 - 0 90%
 - 0 80%
 - 0 70%
 - 0 60%
 - 0 50%
 - 0 Anders, namelijk

ONDERZOEK

1. **Hoe tevreden bent u met uw huidige job?** Gelieve een cijfer aan te duiden op de schaal;
van 0 (= heel ontevreden) tot 10 (= heel tevreden)



2. **Hoe is uw niveau van tevredenheid geëvolueerd gedurende de voorbije zes maanden?**

- 0 Is gestegen
- 0 Is gelijk gebleven
- 0 Is gedaald

3. **Hoe kan communicatie voor u bijdragen tot meer jobtevredenheid? Gelieve aan te geven hoe er op één of andere manier iets zou kunnen veranderen om u meer tevreden te stellen:**

.....
.....
.....

COMMUNICATION SATISFACTION QUESTIONNAIRE

| | Heel tevreden | Tevreden | Eerder tevreden | Noch tevreden, noch ontevreden | Eerder ontevreden | Ontevreden | Heel ontevreden |
|--|---------------|----------|-----------------|--------------------------------|-------------------|------------|-----------------|
| A. Hieronder vindt u verschillende vormen van informatieverstrekking. Gelieve aan te duiden in welke mate u tevreden of ontevreden bent met elk type informatie. | | | | | | | |
| 1. Informatie over de gemaakte vooruitgang binnen mijn job | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2. Informatie over persoonlijk nieuws van collega's | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3. Informatie over het beleid en de organisatiedoelstellingen | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4. Informatie over hoe mijn collega's mijn functie binnen de dienst zien | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5. Informatie over hoe ik beoordeeld word door mijn leidinggevende | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6. Informatie over de waardering van mijn inspanningen door mijn leidinggevende | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7. Informatie over de doelstellingen van de dienst waar ik tewerkgesteld ben | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8. Informatie over de vereisten van mijn job | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9. Informatie over overheidsmaatregelen die impact hebben op de werking van de organisatie | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10. Informatie over veranderingen binnen de organisatie | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11. Informatie over hoe problemen binnen mijn job aangepakt worden | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12. Informatie over loon en arbeidsvoordelen | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13. Informatie over de financiële situatie van de organisatie | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14. Informatie over verwezenlijkingen en mislukkingen van de organisatie | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B. Geef aan hoe tevreden of ontevreden u bent met de volgende zaken: | | | | | | | |
| 15. Mate waarin mijn leidinggevende op de hoogte is van de eventuele problemen van de medewerkers en hier begrip voor heeft. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16. Mate waarin de communicatie binnen de organisatie enthousiasme creëert voor het behalen van de doelstellingen | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17. Mate waarin mijn leidinggevende naar me luistert en mij aandacht schenkt | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 18. Mate waarin de mensen in mijn organisatie goede communicatoren zijn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19. Mate waarin mijn leidinggevende mij begeleidt bij jobgerelateerde problemen | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20. Mate waarin de communicatie bij mezelf betrokkenheid creëert met de organisatie; mij doet identificeren met de organisatie of me er een essentieel onderdeel doet van voelen | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21. Mate waarin de communicatie van de organisatie interessant is en hulp biedt | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22. Mate waarin mijn leidinggevende me vertrouwt | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23. Mate waarin ik tijdig de informatie ontvang die ik nodig heb om mijn job te kunnen uitoefenen | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 24. Mate waarin conflicten op een goede manier aangepakt worden via gepaste communicatiekanalen | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25. Mate waarin u vertrouwen heeft in uw leidinggevende | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26. Mate waarin mijn leidinggevende openstaat voor ideeën en suggesties | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 27. Mate waarin horizontale communicatie met andere leden van de organisatie | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| accuraat en vrij kan verlopen | | | | | | | |
| 28. Mate waarin communicatiemethodes aanpasbaar zijn bij noodsituaties | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29. Mate waarin er open gecommuniceerd wordt binnen de dienst | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30. Mate waarin de dienstvergaderingen goed georganiseerd zijn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 31. Mate van tevredenheid over de ondersteuning en supervisie die mijn leidinggevende mij geeft | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 32. Mate waarin geschreven richtlijnen en rapporten duidelijk en beknopt zijn | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 33. Mate waarin de communicatie in de organisatie open en transparant is | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 34. Mate waarin informele communicatie actief en correct is | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35. Mate waarin de hoeveelheid communicatie in de organisatie goed is | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C. De volgende vragen zijn enkel bedoeld voor leidinggevenden. Gelieve aan te duiden hoe tevreden of ontevreden u bent met het volgende: | | | | | | | |
| 36. Mate waarin de medewerkers toegankelijk zijn voor neerwaartse directieve communicatie | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 37. Mate waarin de medewerkers anticiperen op mijn informatienoden | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 38. Mate waarin ik overbelast word met communicatie | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 39. Mate waarin de medewerkers toegankelijk zijn voor evaluatie, suggesties en kritiek | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40. Mate waarin de medewerkers zich verantwoordelijk voelen om juiste opwaartse communicatie te starten | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

DE SUBSCHAAL M.B.T. VERLOOPINTENTIE UIT DE 'VRAGENLIJST VOOR DE BELEVING EN BEOORDELING VAN ARBEID'

| D | Loopbaanperspectief | Ja | Neen |
|----|---|----|------|
| 1. | Ik denk er wel eens aan om van baan te veranderen. | | |
| 2. | Ik denk er wel eens aan om een baan buiten deze organisatie te zoeken. | | |
| 3. | Ik ben van plan om het komende jaar van baan te veranderen. | | |
| 4. | Ik ben van plan om het komende jaar buiten deze organisatie werk te zoeken. | | |

MASLACH BURNOUT INVENTORY VRAGENLIJST

De volgende uitspraken hebben betrekking op hoe u uw werk beleeft en hoe u zich daarbij voelt. Wilt u aangeven hoe vaak iedere uitspraak op u van toepassing is door het bet passende cijfer te omcirkelen?

| Nooit 0 | Sporadisch 1 | Af en toe 2 | Regelmatig 3 | Dikwijls 4 | Zeer dikwijls 5 | Altijd 6 |
|-------------------|--|--------------------------------|----------------------------|------------------|---------------------------|-------------|
| Komt niet voor | Een paar keer per jaar of minder | Eens per maand of minder | Een paar keer per maand | Eens per week | Een paar keer per week | Dagelijks |

| | | | | | | | | |
|-----|---|---|---|---|---|---|---|---|
| 1. | Ik voel me mentaal uitgeput door mijn werk | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 2. | Aan het einde van een werkdag voel ik me leeg | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 3. | Ik voel me vermoeid als ik 's morgens opsta en er weer een werkdag voor me ligt | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 4. | Ik kan mij gemakkelijk inleven in de gevoelens van mijn collega's en / of van patiënten/klanten | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 5. | Ik heb het gevoel dat ik sommige collega's en/of patiënten /klanten te onpersoonlijk behandel | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 6. | De hele dag met mensen werken vormt een zware belasting voor mij | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 7. | Ik weet de problemen van collega's en/of patiënten/klanten adequaat op te lossen | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 8. | Ik voel mij "opgebrand" door mijn werk | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 9. | Ik heb het gevoel dat ik het leven van andere mensen op een positieve manier beïnvloed door mijn werk | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 10. | Ik heb het idee dat sinds ik deze baan heb, ik onverschilliger ben geworden tegenover andere mensen | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 11. | Ik maak mij er zorgen over dat mijn werk mij gevoelsmatig afstompt | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 12. | Ik voel me gefrustreerd door mijn baan | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 13. | Ik denk dat ik me teveel inzet voor mijn werk | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 14. | Het kan me niet echt schelen wat er met sommige collega's en/of patiënten/klanten gebeurt | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 15. | Met mijn collega's en/of patiënten/klanten kan ik gemakkelijk een ontspannen sfeer scheppen | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 16. | Het werken met collega's en/of patiënten/klanten vrolijkt mij op | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 17. | Ik heb in deze baan veel waardevolle dingen bereikt | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 18. | Ik voel me aan het einde van mijn latijn | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 19. | In mijn werk ga ik heel rustig om met emotionele problemen | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 20. | Ik heb het gevoel dat collega's en/of patiënten/klanten mij hun problemen verwijten | 0 | 1 | 2 | 3 | 4 | 5 | 6 |

Vragenlijst: Patient perspectives on medical record accessibility and patient participation: a questionnaire survey

VRAGENLIJST: INZAGE VAN MEDISCH DOSSIER

1. Bent u op de hoogte van uw recht op inzage van uw medisch dossier?

- Ja
- Neen
- Ik weet het niet

2. Wanneer u een medisch verslag meekrijgt van uw arts, leest u dit dan?

- | | | |
|---|---|---|
| <ul style="list-style-type: none"><input type="radio"/> Altijd<input type="radio"/> Meestal wel<input type="radio"/> Meestal niet<input type="radio"/> Nooit | } | Indien u 'Altijd' of 'Meestal wel' aanduidde, ga naar vraag 3. |
| | } | Indien u 'Meestal niet' of 'Nooit' aanduidde, ga naar vraag 4. |

3. Waarom leest u uw medisch verslag (meestal) wel? (meerdere antwoorden mogelijk)

- Om een beeld van mijn gezondheidstoestand te krijgen
- Om informatie over mijn behandeling te bekomen
- Om mijn onderzoeksresultaten te kennen
- Om na te kijken wat tijdens de consultaties gezegd is
- Om te weten wat artsen over mij schrijven
- Om te plannen en voor te bereiden wat ik met mijn arts zal bespreken
- Om samen met de arts beslissingen over mijn gezondheid te kunnen maken

Ga naar vraag 5.

4. Waarom leest u uw medisch verslag (meestal) niet? (meerdere antwoorden mogelijk)

- Omdat ik er geen interesse in heb
- Omdat ik het niet begrijp
- Omdat ik angst heb voor wat ik zal lezen
- Omdat ik voldoende heb aan de uitleg van mijn artsen
- Omdat ik voldoende uitleg verkregen heb van andere gezondheidsmedewerkers (verpleegkundigen, kinesisten, diëtisten,...)

5. Wat is uw mening over uw medisch dossier en uw betrokkenheid in uw behandeling?

Hieronder vindt u verschillende stellingen met betrekking tot uw medisch dossier en uw betrokkenheid in uw behandeling. Gelieve aan te duiden in welke mate u het eens of oneens bent met elke stelling. Zelfs wanneer u nog nooit een medisch verslag heeft gelezen, dient u hieronder telkens aan te duiden in welke mate onderstaande zaken van toepassing zouden kunnen zijn indien u uw eigen medisch verslag zou lezen.

Gelieve **1 antwoord** per vraag aan te duiden.

| | Volledig eens | Eerder eens | Noch eens, noch oneens | Eerder oneens | Volledig oneens |
|---|---------------|-------------|------------------------|---------------|-----------------|
| A. MEDISCH DOSSIER | | | | | |
| Geef aan hoe eens of oneens u het bent met de volgende stellingen: | | | | | |
| 1. Ik ben geïnteresseerd in het lezen van mijn medisch dossier. | 0 | 0 | 0 | 0 | 0 |
| 2. Ik begrijp wat er in mijn medisch dossier staat. | 0 | 0 | 0 | 0 | 0 |
| 3. Ik vind mijn medisch dossier verwarrend. | 0 | 0 | 0 | 0 | 0 |
| 4. Ik begrijp beter wat tijdens mijn consultatie gezegd werd. | 0 | 0 | 0 | 0 | 0 |
| 5. Ik begrijp de richtlijnen van mijn arts beter. | 0 | 0 | 0 | 0 | 0 |
| 6. Ik begrijp mijn gezondheidstoestand beter. | 0 | 0 | 0 | 0 | 0 |
| 7. Ik volg het advies van mijn arts beter op. | 0 | 0 | 0 | 0 | 0 |
| 8. Ik volg mijn medicatiegebruik beter op. | 0 | 0 | 0 | 0 | 0 |
| 9. Ik ben meer bezorgd om mijn gezondheid. | 0 | 0 | 0 | 0 | 0 |
| 10. Ik voel me meer gerustgesteld. | 0 | 0 | 0 | 0 | 0 |
| 11. Ik heb meer controle over mijn medische zorg. | 0 | 0 | 0 | 0 | 0 |
| 12. Ik voel me meer betrokken bij mijn zorg. | 0 | 0 | 0 | 0 | 0 |
| 13. Ik voel me beschaamd over sommige dingen die mijn artsen over me schreven. | 0 | 0 | 0 | 0 | 0 |
| 14. Ik heb meer vertrouwen in mijn arts. | 0 | 0 | 0 | 0 | 0 |
| 15. Ik ben beter voorbereid op consultaties. | 0 | 0 | 0 | 0 | 0 |
| 16. Ik ben meer tevreden over mijn medische zorg. | 0 | 0 | 0 | 0 | 0 |
| 17. Ik heb een fout of ontbrekende informatie in mijn dossier gevonden. | 0 | 0 | 0 | 0 | 0 |
| B. PARTICIPATIE (betrokkenheid) | | | | | |
| Geef aan hoe eens of oneens u het bent met de volgende zaken: | | | | | |
| 18. Ik vind dat de arts moet beslissen waarover gepraat wordt tijdens consultaties. | 0 | 0 | 0 | 0 | 0 |
| 19. Ik vind het soms beter om niet alles te weten over mijn gezondheidstoestand. | 0 | 0 | 0 | 0 | 0 |
| 20. Ik vind dat ik als patiënt vertrouwen moet hebben in de kennis van mijn arts. | 0 | 0 | 0 | 0 | 0 |
| 21. Ik vind dat ik zelf zaken over mijn gezondheid mag uitzoeken. | 0 | 0 | 0 | 0 | 0 |
| 22. Ik vind dat ik als patiënt samen met mijn arts beslissingen kan en mag nemen. | 0 | 0 | 0 | 0 | 0 |

6. Heeft u problemen om medische informatie te begrijpen die uw arts u mondeling verstrekt?

- Altijd
- Meestal wel
- Meestal niet
- Nooit

Indien u 'Altijd' of 'Meestal wel' aanduidde, ga naar **vraag 7.**

Indien u 'Meestal niet' of 'Nooit' aanduidde, ga naar **vraag 8.**

7. Stelt u tijdens een consultatie extra vragen aan uw arts?

- Altijd
- Meestal wel
- Meestal niet
- Nooit

8. Heeft u problemen om medische informatie te begrijpen die uw arts u schriftelijk verstrekt (brieven, folders,...)?

- Altijd
- Meestal wel
- Meestal niet
- Nooit

Indien u 'Altijd' of 'Meestal wel' aanduidde, ga naar **vraag 9.**

Indien u 'Meestal niet' of 'Nooit' aanduidde, ga naar **vraag 10.**

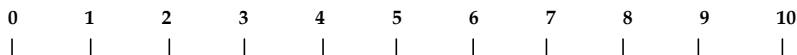
9. Neemt u terug contact op met uw arts om extra informatie over de schriftelijke medische informatie te bekomen?

- Ja
- Neen

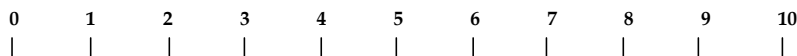
10. Welke van volgende uitspraken is voor u van toepassing?

- Mijn arts geeft mij aanbevelingen, maar ik maak mijn eigen beslissingen over mijn medische zorg.
- Mijn arts en ik maken samen, als een team, beslissingen over mijn medische zorg.
- Ik laat het aan mijn arts over om de beste beslissingen aangaande mijn medische zorg te maken.
- Mijn arts geeft de verschillende behandelmogelijkheden niet weer, terwijl ik deze wel zou willen kennen om zelf een keuze te kunnen maken.

11. Hoe tevreden bent u in het algemeen over de communicatie tussen u en uw arts-specialisten? Gelieve een cijfer aan te duiden op de schaal; van 0 (=heel ontevreden) tot 10 (=heel tevreden).



12. Hoe tevreden bent u in het algemeen over de communicatie tussen u en uw huisarts? Gelieve een cijfer aan te duiden op de schaal; van 0 (=heel ontevreden) tot 10 (=heel tevreden).



13. Door wie bent u verwezen naar de arts-specialist?

- Door een andere arts-specialist
- Door mijn huisarts
- Door een andere zorgverstrekker (verpleegkundige, kinesist, diëtist,...)
- Op eigen initiatief

14. Gaat u op zoek naar extra informatie na uw consultatie bij de arts-specialist?

(meerdere antwoorden mogelijk)

- Neen
- Ja, via internet
- Ja, via boeken/tijdschriften
- Ja, via familie/vrienden/kennissen
- Ja, via patiëntenverenigingen
- Ja, via mijn huisarts
- Ja, ik neem terug contact op met de arts-specialist
- Ja, via een andere arts-specialist
- Ja, via andere zorgverstrekkers (verpleegkundigen, kinesisten, diëtisten,...)

SOCIO-DEMOGRAFISCHE GEGEVENS

15. Uw geboortejaar:

16. Uw geslacht

- Man
- Vrouw

17. Uw nationaliteit:

- Belg
- Andere:

18. Wat is uw moedertaal?

- Nederlands
- Frans
- Engels
- Arabisch
- Andere:

19. Hoogste opleidingsniveau

- Lager onderwijs
- Lager secundair onderwijs
- Hoger secundair onderwijs
- Hoger niet-universitair onderwijs
- Universitair onderwijs
- Postuniversitair onderwijs

20. Uw hoofdactiviteit

- Arbeider
- Bediende
- Ambtenaar
- Zelfstandige
- Werkzoekende
- Arbeidsongeschikt
- Gepensioneerde
- Student

21. Hoe vaak heeft u het laatste jaar een arts-specialist bezocht?

- Niet - 1 keer
- 2 - 5 keer
- 6 - 10 keer
- 11 - 15 keer
- Meer dan 15 keer

22. Hoe vaak heeft u het laatste jaar een huisarts bezocht?

- Niet - 1 keer
- 2 - 5 keer
- 6 - 10 keer
- 11 - 15 keer
- Meer dan 15 keer

