Master Thesis

The use, attitudes and needs of healthcare professionals concerning data from a hospital quality system

R.M. Oudbier
Master Health Sciences

Supervisors

University of Twente
A.A.M. Spil
S. Siesling

Gelre ziekenhuizen
E. Balduk

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Abstract

Background
In the last years there has been a development in the transparency of quality of care in hospitals. Hospitals register a lot of quality data, to improve quality of care and to provide insight into quality of care to patients, insurers and the government (healthcare inspection). Hospitals have to development a quality system for systematic monitoring, control and improvement of quality. Healthcare organizations can use a quality system to guarantee the quality of care and to make it transparent and verifiable. To have an effective and efficient quality management system and to enlarge this, there must be continuous improvement.
Literature research shows that not all quality systems in hospitals are fully developed and used to reach the continues cycle of quality of care improvement and that it is important to involve healthcare professionals in the development. This year, the quality system used at Gelre ziekenhuizen will be changed to a new system named iProva. That is why this is a good moment to search how healthcare professionals think about the quality system at Gelre ziekenhuizen and how they use this data.

Objective
The aim of this research is to provide insight into the use of quality data and attitudes and needs for working according to the quality system of different groups of healthcare professionals working at Gelre ziekenhuizen. There will be analysed what quality data can be displayed on which way, to improve the visibility and usability of it, so that this data can be used for quality of care improvement.

Methods
A combination of qualitative and quantitative research aspects is used, what is called mixed method research. Data was collected with literature review, eleven semi-structured interviews and an online questionnaire. A number of 147 respondents have participated in the questionnaire, which is a response rate of 25%.
The research population existed of healthcare managers, department heads, operational managers, medical managers, care coordinators, medical specialists, nurses and two directors and a quality officer of both hospitals of Gelre ziekenhuizen. In the interviews and questionnaire there were general questions, questions about components of the quality system, about indicators, about the display and delivery of quality data and about experiences with the quality system.

Results
The main results about the components of the quality system are that results of VIM reports are used most and results of PRI are used the least. The most mentioned reasons for no use of components of the quality system are that healthcare professionals do not know the components or the data are not visible for them. VIM reports, complaints and especially patient satisfaction data are found important quality data.
Needs for the display of quality data are in one system, with the possibility to see department specific data and comparisons. Preferences for the delivery of the quality data are in work meetings, with e-mail, in the newspaper or on the VISMO screen.
With regard to the indicators, IGZ indicators and indicators of the profession are used most. There are also a lot of healthcare professionals who do not use indicators. Outcome and process indicators have the highest value according to the healthcare professionals. Furthermore many of them think there are too many indicators and too much quality data is registered.
Lack of time for registration and the time it takes to register are mentioned as negative experiences with the quality system/ barriers and there is not always done something with improvement actions.

Furthermore many healthcare professionals think the quality data is not reliable, especially because the registrations are incomplete. Finally most of the healthcare professionals are not much/ sufficiently involved with the development of the quality system, but only healthcare managers would like to be more involved.

Conclusion

There can be concluded that not all healthcare professionals know the components of the quality system and have insight into the data. A recommendation is that quality data have to be made better visible for everyone on the departments. The data should be more delivered on the VISMO screen or in the newspaper and should be displayed in one system, department specific and with the possibility to see comparisons.

Registration should be done more easily and efficiently and there have to be critical about what is registered, to reduce the number of registrations and the time it takes. Furthermore the number of registrations and indicators have to be reduced and the focus needs to lie on outcome and process indicators.

Finally there have to be analysed what is missing in registrations to make them more complete and the registrations should be more up to date. Then the reliability, which is experienced as not good by many healthcare professionals, can be improved.

When these things will be applied, that can contribute to (improvement of) the use of quality data for quality of care improvement.

Samenvatting

Achtergrond
De laatste jaren vindt er een ontwikkeling plaats in de transparantie van de kwaliteit van zorg in ziekenhuizen. Ziekenhuizen registreren veel kwaliteitsdata, om kwaliteit van zorg te verbeteren en om inzicht te bieden in de kwaliteit van zorg voor patiënten, verzekeraars en de overheid (Inspectie voor de gezondheidszorg). Ziekenhuizen moeten een kwaliteitssysteem ontwikkelen om de kwaliteit te monitoren, te controleren en te verbeteren. Zorgorganisaties kunnen een kwaliteitssysteem gebruiken om de kwaliteit van zorg te garanderen en het transparant en controleerbaar te maken. Om te beschikken over een effectief en efficiënt kwaliteitssysteem moet er continu verbetering plaatsvinden. Uit literatuuronderzoek komt naar voren dat niet alle kwaliteitssystemen in ziekenhuizen volledig ontwikkeld zijn en gebruikt worden om de continue cyclus van kwaliteitsverbetering te bereiken en dat het belangrijk is om professionals in de gezondheidszorg te betrekken bij de ontwikkeling. Dit jaar wordt het kwaliteitssysteem binnen Gelre ziekenhuizen veranderd naar een nieuw systeem met de naam iProva. Dat maakt het een goed moment om te kijken wat professionals in de gezondheidszorg vinden van het kwaliteitssysteem in Gelre ziekenhuizen en hoe zij deze data gebruiken.

Doelstelling
Het doel van dit onderzoek is om inzicht te bieden in het gebruik van kwaliteitsdata door verschillende groepen zorgprofessionals werkzaam in Gelre ziekenhuizen en in hun houding en behoeften wat betreft het kwaliteitssysteem. Er wordt geanalyseerd welke kwaliteitsdata weergegeven kan worden en op welke manier, om de inzichtelijkheid en bruikbaarheid te verbeteren, zodat de data gebruikt kan worden om de kwaliteit van zorg te verbeteren.

Methode
Er wordt in dit onderzoek gebruik gemaakt van een combinatie van kwalitatieve en kwantitatieve aspecten, wat een mixed-method onderzoek genoemd wordt. Data is verzameld met literatuuronderzoek, elf semi-gestructureerde interviews en een online vragenlijst. 147 respondenten hebben deelgenomen aan de vragenlijst, wat een respons percentage oplevert van 25 procent.
De onderzoekspopulatie bestond uit zorgmanagers, afdelingshoofden, operationeel leidinggevenden, medisch managers, zorgcoördinatoren, medisch specialisten, verpleegkundigen, twee directeuren en een kwaliteitsfunctionaris van beide locaties van Gelre ziekenhuizen. In zowel de interviews als in de vragenlijst werden er algemene vragen, vragen over onderdelen van het kwaliteitssysteem, over indicatoren, over de weergave en de aanlevering van kwaliteitsdata en over ervaringen met het kwaliteitssysteem gesteld.

Resultaten
De belangrijkste resultaten met betrekking tot de onderdelen van het kwaliteitssysteem zijn dat de resultaten van VIM meldingen het meest gebruikt worden en de resultaten van PRI's het minst. De meest genoemde redenen om onderdelen van het kwaliteitssysteem niet te gebruiken, zijn dat zorgprofessionals de onderdelen niet kennen of geen inzage in de data hebben. VIM meldingen, klachten en vooral patiënttevredenheidsdata worden belangrijke kwaliteitsdata gevonden.
Behoeften voor de weergave van kwaliteitsdata zijn weergave in één systeem, met de mogelijkheid om afdelingsspecifieke data en vergelijkingen te zien. Voorkeuren voor aanlevering van de data zijn in werkoverleg, met e-mail, in de nieuwsbrief of op het VISMO bord.
Wat betreft de indicatoren worden de IGZ indicatoren en de indicatoren van de beroepsgroep het meest gebruikt. Er zijn ook veel zorgprofessionals die geen gebruik maken van indicatoren. Uitkomstindicatoren en procesindicatoren hebben volgens de zorgprofessionals de hoogste waarde. Naar hun mening zijn er

verder te veel indicatoren en wordt er te veel kwaliteitsdata geregistreerd.
Gebrek aan tijd en de tijd die het kost om te registreren zijn genoemd als negatieve ervaringen met het kwaliteitssysteem/ barrières. Ook wordt er niet altijd wat gedaan met verbeteracties en veel zorgprofessionals denken dat de kwaliteitsdata niet betrouwbaar is, vooral doordat de registraties onvolledig zijn volgens hen. Tot slot zijn de meeste zorgprofessionals weinig/onvoldoende betrokken bij de ontwikkeling van het kwaliteitssysteem, maar alleen zorgmanagers willen er graag meer bij betrokken worden.

Conclusie
Er kan geconcludeerd worden dat niet alle zorgprofessionals de onderdelen van het kwaliteitssysteem kennen en inzicht hebben in deze data. Een aanbeveling in dit onderzoek is dat kwaliteitsdata beter inzichtelijk gemaakt moet worden voor iedereen op afdelingen. De data zou meer aangeleverd moeten worden op het VISMO bord of in de nieuwsbrief en zou weergegeven moeten worden in één systeem, afdelingsspecifiek en met de mogelijkheid om vergelijkingen te zien.
Registratie moet makkelijker en efficiënter gedaan kunnen worden en er moet kritisch gekeken worden wat er geregistreerd wordt, om zo het aantal registraties en de tijd die het kost te verminderen. Verder moeten het aantal registraties en het aantal indicatoren verminderd worden en er moet meer aandacht zijn voor uitkomstindicatoren en procesindicatoren.
Tot slot moet er geanalyseerd worden wat er gemist wordt in de registraties, om deze meer compleet en up to date te maken. Dan kan de betrouwbaarheid van de data, die door veel zorgprofessionals als niet goed wordt ervaren, verbeterd worden.
Wanneer deze punten opgepakt worden, kan dit bijdragen aan (verbetering van) het gebruik van kwaliteitsdata voor verbetering van de kwaliteit van de zorg.

Preface

This thesis 'The use, attitudes and needs of healthcare professionals concerning data from a hospital quality system', is a research about the use, attitudes and needs of healthcare professionals of data from the quality system of Gelre ziekenhuizen. It is written in the final phase of the master Health Sciences at the University of Twente.

I would like to thank my supervisors at the University, Ton Spil and Sabine Siesling, for guidance and support in the writing process of my thesis. I will also thank my supervisor at Gelre ziekenhuizen, Erik Balduk, for guidance and support, but also for the possibility I got to do this research at Gelre ziekenhuizen. Finally I would like to thank all healthcare professionals who have participated in this research, by participating in interviews and filling in the questionnaire. This research would not have been possible without them all.

I hope you enjoy reading this thesis.

Relinde Oudbier

1. Introduction

1.1. Background

In the last years there has been a development in the transparency of quality of care in hospitals. Hospitals register a lot of quality data, to improve quality of care and to provide insight into quality of care to patients, insurers and the government (healthcare inspection). (NVZ, 2015)(NVZ, 2014)(Bos, W.J., Koevoets, H.P.J., Oosterwaal, J., 2011) The government (ministry of health) wants a focus on improvement of quality of care and the transparency and accessibility of it. (Ministerie van VWS, 2011) A method to make quality transparent is with indicators, which are measurable aspects of quality of care. (Algemene Rekenkamer, 2013)

A definition of quality according to ISO9000 is: 'the degree to which a set of inherent characteristics fulfils a need or expectation that is stated, general implied or obligatory'. (Hoyle, D., 2001) Organizations can apply quality management, which consists of coordinated activities to manage and control quality in an organization. (Jorissen, H.J. (1), 2007) Requirements for quality management of hospitals are defined by NIAZ. These requirements must be met for accreditation. (Sluijs, E., Keijser, A., Wagner, C., 2007) NIAZ uses an international accreditation program, named Qmentum. (NIAZ (1), 2015) NIAZ Qmentum offers a quality framework that healthcare organizations can use in their own organization. (NIAZ (2), 2015) NIAZ tests if healthcare institutions work according to their quality norms and if they have an acceptable quality level of care. When organizations do/have this, they can get an accreditation for four years. (NIAZ (3), 2015)

In January 2016, the Quality, Complaints and Disputes Care Law was introduced (Wkkgz). This law replaces the Healthcare Quality Act (KZi) and the Complaint Client Care Sector Law (WKCZ). This law is meant to reach transparency about calamities and complaints and to learn from it by healthcare professionals. With this law, there are rules for healthcare organizations, but they can develop their own complaints regulation and quality system. (Rijksoverheid (1), n.d.)
Care providers must have a quality system, for systematic monitoring, control and improvement of quality of care. (Ministerie van VWS, 2016)(Ministerie van VWS, n.d.) Healthcare institutions can use a quality system to guarantee the quality of care and makes it transparent and verifiable. (Sluijs, E., Keijser, A., Wagner, C., 2007) The healthcare inspection has supervision on compliance with the Wkkgz and the use of a quality system. (IGZ (1), 2015)(Ministerie van VWS, 2016)

1.2 Research problem

Literature, found with the literature research of this study, shows that not all quality systems in hospitals are fully developed/ implemented (Groene, O. et al, 2014)(Schoten, S.M., van et al, 2013)(Dückers, M. et al, 2009) and outcomes are not always used to reach the continues cycle of quality improvement (Visser, M., 2016)(Sluijs, E. et al, 2007)(Schoten, S.M. van, 2015). Furthermore there has been found that it is important to involve healthcare professionals in the development of the quality system. (Schellekens, W.M.L.C.M. et al, 2001)(Botje, D. et al, 2012)(Wardhani, V. et al, 2009)(Schoten, S.M. van, 2015)(Wollersheim, H. et al, (3) 2011) (Visser, M., 2016)(Jorissen, H.J.,(2) 2007) (Kunkel, S. et al, 2009) (Blumen, S.R. et al, 2010)(Weiner, B.J. et al, 2006)
These things can be applied to the quality system used at Gelre ziekenhuizen, to search how they perform on the use of a quality system for quality of care improvement and what the attitudes and needs of healthcare professionals are in this area. This year, the quality system used at Gelre

ziekenhuizen will be changed. All data will be transferred to one system, named iProva. That is why this is a good moment to look at the use of the data in the quality system of Gelre ziekenhuizen.

1.3 Research location

This research is done at the department Patient Safety and Quality of Care of Gelre ziekenhuizen. Gelre ziekenhuizen consists of two hospital locations, one in Apeldoorn and one located in Zutphen. There are about 3.500 employees, 190 medical specialists and the catchment area of the hospitals is about 280.000 inhabitants. (Gelre ziekenhuizen (1), n.d.)
The department Patient Safety and Quality of Care performs integrated quality management. (Gelre ziekenhuizen (2), n.d.) Quality instruments are used for quality improvement. (Gelre ziekenhuizen, 2013) In 2010 Gelre ziekenhuizen received accreditation of NIAZ. In 2014, this accreditation has been extended for four years.(NIAZ (4), 2015) Besides that extended accreditation, Gelre ziekenhuizen also became 'Best Practice Ziekenhuis', because of the high amount of quality norms that they had reached. (Gelre ziekenhuizen, 2014)

1.3.1 Quality system used in Gelre ziekenhuizen

The most important quality instruments used at Gelre ziekenhuizen are (Gelre ziekenhuizen (2), n.d.)(Gelre ziekenhuizen, 2013):

Internal audits
Based on the results of internal audits improvement plans can be developed. These plans for improvement have to be made by the person who had commissioned the audit.
Tracers are a method to do audits, in which the path of the patient will be followed. (Q-academy, 2015)

PRI (Prospective Risk Inventarisation):
This is risk identification and analysis in care processes. Improvement measures will be proposed, to reduce risk and prevent damage for patients. A Prospective Risk Inventarisation analysis system is HFMEA (Healthcare Failure Mode and Effect Analysis). (VMS zorg (1), 2013)(Rossier, J. de, Stalhandske, E., Bagian, J.P., Nudell, T., 2002)

VIM (adverse events reporting):
This consists of reporting and analysis of incidents and near incidents, to search for causes of the incidents. VIM commissions analyse the reports and develop improvement actions. (VMS zorg (2), 2013)

Calamities:
There will be done research about calamities, to learn and improve. These investigated calamities are reported to the healthcare inspection. (Wollersheim, H. et al., (1) 2011)

Complaints:
Based on these complaints, advices can be made to improve.

A Gelre Inzicht portal shows indicators (KPI: key performance indicators) with a norm score, compared with the performance score of the hospital. These indicators are based on the ten VMS safety themes.

1.4 Research objective

The aim of this research is to provide insight into the use of quality data and quality data attitudes and needs for working according to the quality system of different groups of healthcare professionals working at Gelre ziekenhuizen. There will be analysed which quality data can be displayed on which way, to improve the visibility and usability of it, so that this data can be used for quality of care improvement.

1.5 Research questions

The main research question:

What are the use, attitudes and needs of the different groups of healthcare professionals towards the data collected in the quality system used in Gelre ziekenhuizen and how can this data be displayed so that it can be used for quality of care improvement?

Sub questions:

- What is quality of care/ quality management?
- What is a quality system and how can it be used for improvement in quality of care?
- What are the components of the quality system used at Gelre ziekenhuizen?
- What attitudes exist regarding the quality system by healthcare professionals of different departments at Gelre ziekenhuizen?
- What information needs exist regarding the quality system by healthcare professionals of different departments at Gelre ziekenhuizen?
- How are healthcare professionals in Gelre ziekenhuizen using the quality data?
- What quality data can be displayed and in what way, to make it visible and usable for different management levels at Gelre ziekenhuizen?

2. Method

2.1 Research design

This research is a combination of qualitative and quantitative research aspects, what is called mixed method research. Data was collected with literature review, interviews and a questionnaire. The literature review and interviews are qualitative methods and the questionnaire is a quantitative method. With the questionnaire, the information discussed in the interviews could be presented to a larger group of respondents. (Wollersheim, H., et al, (2) 2011)

2.2 Research population

This research focuses on Gelre ziekenhuizen as a whole, both the hospital in Apeldoorn and the hospital in Zutphen. Different healthcare professionals were selected from different departments for the interviews and the questionnaire. For the interviews there were selected healthcare managers, department heads, medical managers, directors of Gelre ziekenhuizen and the MOD (medical support services) and a quality officer of the MOD of Gelre ziekenhuizen. For the questionnaire there were selected healthcare managers, department heads, operational managers, medical managers, care coordinators, medical specialists and nurses.

2.3 Data collection

First, the literature review was done. Information for this literature review was collected with the databases Google (scholar), Scopus, Pubmed, NARCIS and the library (database) at Gelre ziekenhuizen. Both books and articles available from the library were used.

The main searching terms were:

- Quality (AND healthcare)
- Quality system/Quality data (AND effects; AND hospital; AND development; AND healthcare professionals; AND use; AND attitudes; AND needs; AND display)
- Quality of care improvement
- Quality management

Only literature which is published since the year 2000 is used. The articles were selected by reading the abstracts, to determine the usefulness.

Then, eleven interviews for depth information were done. The interviews were semi-structured interviews. (Wollersheim, H., et al, (2) 2011) The subjects of the interviews (overall questions) were made in advance and were sent to the interviewees, so that the interviewees could prepare the interviews.

There were interviews with:

Cardiology
1. Healthcare manager (Apeldoorn)
2. Department head (Zutphen)
3. Medical manager (Apeldoorn)

Surgery
4. Department head (Apeldoorn)
5. Department head (Zutphen)
6. Medical manager (Apeldoorn)
7. Medical manager (Zutphen)

MOD
8. Quality officer MOD
9. Healthcare manager Radiology (Apeldoorn and Zutphen)

Directors
10. Director RVE (Zutphen)
11. Director SSC MOD

There has been chosen for two completely different departments from both the hospital in Zutphen and in Apeldoorn, to get a more overall picture of the use, attitudes and needs. Furthermore the MOD is involved, because of the own quality system that they are using. Finally directors are involved, to get a picture of their experiences and opinions about the quality system and quality data. The interviews were recorded, so that this collected information could be analysed.

The interview structure was:
- General questions
- Components of the quality system
- The display of quality data
- Final questions

After the interviews, using the information found, a questionnaire was made. This questionnaire is used to get a more overall view of the use of quality data, attitudes and information needs in Gelre ziekenhuizen. The questionnaire was an online questionnaire. It was made in iProva (iCheck).
The questionnaire existed of 105 questions. Depending on the given answers, the questions were displayed. So not all respondents got all questions.

The questionnaire structure was:
- General information
- Components of the quality system (divided into: use and added value, display, other information)
- Indicator sets
- The display of quality data (divided into: delivery, access)
- Experiences with the quality system

The questionnaire was sent to 589 healthcare managers, department heads, operational managers, medical managers, care coordinators, medical specialists and nurses of all departments of Gelre ziekenhuizen (Apeldoorn and Zutphen). The respondents had four weeks to fill in this questionnaire. During that time, two reminders were sent.

2.4 Data analysis

The interviews were summarized and these summaries were sent to the interviewees for approval. The information from the interviews was used for both the analysis part of this research and on the basis of these interviews the questionnaire was developed.
The questionnaire was analysed with SPSS, to make the outcomes visible and compare the answers that are given.
Finally, the results found with this research were analysed and described in a report. In the results and conclusion, recommendations and an advice are given about what data has to be saved and how this data can be made visible and usable to contribute to the improvement of quality of care.

2.5 Research models

There are two models that are used in this research.

The first model, the PMT model of Abell and Hammond, shows the structure of this research. In this model, there are three components: customer groups, customer needs and technologies. There can be analysed what the customers of the product or service are, their needs about it and how to meet those needs. (Mulders, M., 2007)
In this research, the customer group is the research population, who are using the quality data. There is analysed what their usage, attitudes and needs are, concerning the quality data. Then there could be made recommendations about how to make the data better visible and more usable based on the customer needs.

Another model that is used in this research is the AMO model. This model is used for the structure of the interviews and the questionnaire. According to the AMO model, when the ability, motivation and opportunity for employees are good, it positively influences their performance. (Appelbaum, E., Bailey, T., Berg, P., Kalleberg, A.L., 2000)
In the interviews and questionnaire, there were questions about the delivery and display of the quality data, which have an effect on the opportunity to see and use the data. Furthermore, there were questions about the knowledge of parts of the quality system and the ease of use, which have an effect on the ability to use the data. At last, there were questions about the added value of the quality data, which have an effect on the motivation to use this data.

3. Literature review

3.1 Literature table

In literature, a lot of information/studies are found about quality (management) of care, indicators, quality management system, implementation and development of quality systems, usage of a quality system, positive and negative effects of the use of a quality system, involvement with quality management and data registration. Most of the information found was derived from different studies. That thirty six articles were selected and an overview of these articles is displayed in a scheme in the appendix. The most important/ most used articles for this research are shown in the scheme below.

Most important articles and subjects	Quality (management) of care	Indicators	Quality management system	Implementation and development	Positive and negative effects	Involvement	Usage	Data regis-tration
Buciuniene, I. et al, 2006				X	X		X	
KPMG Plexus, 2016		X			X			X
Kringos, D.S. et al, 2012		X						X
Schoten, S.M. van, 2015				X	X	X	X	
Sluijs, E. et al, 2007			X	X	X	X	X	
Visser, M., 2016						X	X	

3.2 Quality (management) of care

One definition of quality is mentioned in the introduction of this research. Another description of quality of care/ health systems according to the World Health Organization is “that a health system should seek to make improvements in six areas or dimensions of quality”. That dimensions, in which a health system can make improvements, are that healthcare has to be effective, efficient, accessible, acceptable/patient-centred, equitable and safe. (World Health Organization, 2006)
Quality management can be used to manage and control quality in organizations. Aspects of quality management are quality planning (quality objectives), quality improvement, quality assurance and quality control (meet quality requirements). (Jorissen, H.J. (1), 2007)
In 1996 the Healthcare Quality act, with global quality requirement for healthcare institutions, was introduced. Healthcare institutions had to develop their own quality policy on the basis of these requirements. The most important requirements were responsible care, deliberate policy, development of a quality system for systematic monitoring, control and improvement of quality and publication of a yearly quality report. (Ministerie van VWS, n.d.) Responsible care means that care has to be efficient, effective and patient-centred. Deliberate policy has to be policy that is focused on quality and achieving responsible care. The annual report is used for accountability for the quality policy to the own organization, the Healthcare Inspection and to patient organizations. (Ministerie van VWS,

n.d.)(Wollersheim, H. et al, (1) 2011) As mentioned in the introduction, the Healthcare Quality act is replaced by the Quality, Complaints and Disputes Care Law (Wkkgz). In the quality part of the Wkkgz, the quality requirements are tightened. The term 'responsible care', used in the Healthcare Quality act, has been replaced by 'good care'. (Hendriks, A.C., 2015) An advice of the government, concerning the law, is to look if the complaints and incidents are used to improve quality of care. (Rijksoverheid (2), n.d.)

3.3 Indicators

Quality of care is controlled with indicators, by insurers, patient organizations, the healthcare inspection (IGZ) and health care providers. (IGZ, n.d.) The Healthcare Inspection uses quality indicators to determine on which subjects hospitals need to have an extra focus. An important part of these indicators for 2016 was the availability of quality data about the own process in the organization. One of the priorities for the indicators was good use of quality registrations by professionals. (IGZ (2), 2015)
Indicators can be divided into structure, process and outcome indicators. (Nationaal Kompas Volksgezondheid, 2008) According to the model of Donabedian about healthcare quality, improvement in structure has an effect on improvement in process and that has an effect on improvement in outcome. (Moore, L. et al 2015)
Research shows there are a lot of indicators which have to be limited, and the quality and usability of it are low. (Algemene Rekenkamer, 2013) Indicators are not much used in hospitals to monitor and improve quality, but especially for external accountability. Healthcare professionals in hospitals do not see registration (of indicators) as natural part of the care process. There is an increase in effort for data registration and they see registration as an extra activity. (Kringos, D.S. et al, 2012)
Other studies show there is not much focus on outcomes and more focus on outcomes is desirable. (KPMG Plexus, 2016)(Algemene Rekenkamer, 2013) Outcome indicators that were mentioned a lot as important quality indicators in hospitals are client satisfaction data and employee satisfaction data. Furthermore data about reports and complaints is found important for improvement. (Sluijs, E. et al, 2002)

3.4 Quality management system

A quality management system is a management system to direct and control the quality of an organization. (Rijksoverheid, 2015) A purpose of a quality system is to reduce risks and to prevent mistakes.(Sluijs, E. et al, 2007)
A characteristic of a quality system are internal audits. Healthcare organizations have to perform periodical internal audits to judge the functioning of all parts of the quality system and the results of it. Characteristics besides the internal audits are reducing quality risks with analysis of incidents and complaints, improving quality according to patient and employee satisfaction and searching for improvement plans with for example benchmarking. (Sluijs, E. et al, 2007)

To have an effective and efficient quality management system and to enlarge this, there must be continuous improvement. A continuously quality improvement method is the PDCA circle. This circle is also called Deming cycle. (Jorissen, H.J. (2), 2007)(Sluijs, E. et al, 2007) It consists of four steps: Plan, Do, Check, Act. When there is worked according to this circle, there is continuously worked on finding (better) methods of improvement. (Sokovic, M. et al, 2010) In the 'plan' step a plan will be made. In the 'do' step the plan will be implemented. In the 'check' step the results will be controlled and in the 'act' step there will be taken action to improve/ adjust. (Jorissen, H.J. (2), 2007)

3.5 Implementation and development of quality systems

Some research is done about the implementation and development of quality systems in hospitals. There is found a growth in the development of quality systems in the Netherlands since 1995. (Dückers, M. et al, 2009)(Schoten, S.M. et al, 2013) Not in all hospitals quality systems are systematically implemented. (Groene, O. et al, 2014)
Research shows that in 1995, about half of the hospitals were in the preparation stage. (Schoten, S.M. van et al, 2013) In 2005 most hospitals were in the experimentation and implementation stage. (Dückers, M. et al, 2009) A minority of the healthcare institutions in the Netherlands had a certified quality system. Compared with the year 2000, more healthcare institutions worked on quality improvement. Especially with data about the opinion of patients and employees. (Sluijs, E. et al, 2007) In 2007 one third of the hospitals were in the systematic learning and integration stage. (Dückers, M. et al, 2009) In 2011, about half of the hospitals had all the elements of a quality system and almost half of the hospitals had reached the last phase of continuous quality improvement. In this phase, the quality system is integrated in daily work and quality data is used to adjust policy. There was mentioned that this phase will be difficult to reach for the other half of the hospitals. (Schoten, S.M., van et al, 2013)
Influencing factors for the implementation of a quality system are the culture of the organization, the design, leadership for quality, involvement of physicians, quality structure and technical competence. (Wardhani, V. et al, 2009) There may be problems with procedure development, lack of financial resources and information and problems with the development of work instructions/ training. Success factors for the implementation are audit groups, training of employees and managerial attitude. (Buciuniene, I. et al, 2006)
Quality systems in bigger hospitals were more implemented and developed. (Buciuniene, I. et al, 2006)(Schoten, S.M. et al, 2013) When the quality systems are better implemented and developed, this will lead to better outcomes (healthcare quality). (Schoten, S.M. van, 2015)

3.6 Usage of a quality system

Research shows there is a focus on data collection in hospitals, but the outcomes of the quality system are not always used to improve the system to reach the continuous cycle of quality improvement. Complexity is shown of the relationship between the quality systems in hospitals and high quality of care. To achieve the continuous cycle of quality improvement, hospitals have to use outcomes for improvement of the structure and processes in the organization. (Visser, M., 2016)
(Sluijs, E. et al, 2007)(Schoten, S.M. van, 2015)
Barriers for the use of information about quality to change care are lack of skill, knowledge and motivation and lack of organizational and professional capacity to manage change and to improve. (Berwick, D.M. et al, 2003) Other barriers are high workload, distrust against the data and the effort it takes to register. There is found that it is hard to motivate healthcare professionals to register when they do not know the usefulness of it. (Visser, M., 2016) Furthermore differences in preconditions, perceived added value and compliance with procedures will contribute to the finding that hospitals not always translate the requirements of the quality system into effective implementation. (Schoten, S.M. van et al, 2015)
There are found different methods for classifying the barriers. There exist a grouping in practical considerations (workload implications, ease of data collection, level of collaboration between colleagues, the delivery of clear guidelines for implementation, the level of managerial involvement, the existence of training and support and the use of technology), attitudes (transparency of objectives and openness to feedback and change), methodological concerns (interpretability of the data and the validity of the

measures) and impact of the data to change patient care (depends on the usefulness of the data and indirect effects of data collection). (Boyce, M.B. et al, 2014)
Furthermore the different factors that can hinder or promote quality improvement in healthcare can be classified in individual setting, social setting, organizational setting and community setting factors. Individual factors are cognitive factors like knowledge and skills, behaviour and personal characteristics and motivational factors and attitudes. The attitude of professionals about optimal care will have influence on their intention to improve. Factors in the social setting are related to the vision and attitude of teams towards the innovation and the possibility for involvement and input in the team. Factors in the organizational setting are related to the organizational capability for the change and the degree of autonomy of professionals. When care is meeting wishes of professionals this can be positive for quality improvement and vice versa. Finally the factors in the community setting are related to financial consequences. To discover factors that can hinder or promote quality improvement it is important to communicate with stakeholders about this quality improvement. (Wollersheim, H. et al, (3) 2011)
Managers were more satisfied with the quality management system when they and the employees were more competent with quality management. (Buciuniene, I. et al, 2006) When there is more discussed about quality, in meetings of the executive board, that will have a positive effect on the use/ implementation of the quality system. (Botje, D. et al, 2014) The usefulness of quality registrations have to be explained and the data have to be shown. Furthermore it has to be used in a positive way, with positive feedback. (Visser, M., 2016)

3.7 Positive and negative effects of the use of a quality system

Different studies have found positive effect of the use of a quality system. One of these effects is that it will reach a focus on/ higher satisfaction of patients. (Heuvel, J. van den et al, 2005)(Sluijs, E. et al, 2007)(Buciuniene, I. et al, 2006)(Ovretveit, J. et al, 2006) Other positive effects are improved responsibility, power sharing, better service quality (Buciuniene, I. et al, 2006), identification and continuously improvement of processes and sometimes outcomes (Heuvel, J. van den et al, 2005)(Sluijs, E. et al, 2007)(Wagner, C. et al, 2006), positive effects on patient safety (Heuvel, J. van den et al, 2005) and on safety climate and teamwork (Kristensen, S. et al, 2015), an increase in compliance with standards (Ovretveit, J. et al, 2006), better manageability of the organization, an increase of the productivity (Sluijs, E. et al, 2007), a lower number of hospital complications (Groene, O. et al, 2011) and better, less (unnecessary treatments) and less expensive care (Visser, S. et al, 2012).
Negative effects of the use of a quality system/ measuring quality, are an increase in costs (KPMG Plexus, 2016)(Sluijs, E. et al, 2007), high administrative burden (KPMG Plexus, 2016), an increase in workload and an increase in regulations. (Sluijs, E. et al, 2007)
The numbers of rules and procedures are rising with the development of the quality system. These rules and procedures are intended to improve healthcare quality. There is mentioned that it is important to look if registrations contribute to higher healthcare quality. If it does not contribute, these registrations should be removed. (Schoten, S.M. van, 2015)

3.8 Involvement with quality management

Research shows that patient involvement is low in quality management and has to be developed further because of the importance of patients as actor in the quality system. (Groene, O. et al, 2014)(Schoten, S.M. van, 2015)(Groene, O. et al, 2015)(Wiig, S. et al, 2013) In 2005, compared with the year 2000, patients were more involved with quality improvement. The opinion of patients was used most of the times for quality improvement according to more than half of the healthcare institutions who have

participated in that research. (Sluijs, E. et al, 2007) Improvement of the experiences of patients have to be part of quality management systems. (Groene, O. et al, 2014)
Furthermore literature shows that quality management is often performed with little involvement of healthcare professionals. (Blumen, S.R. et al, 2010)(Sluijs, E. et al, 2007) Other research shows that healthcare professionals are more involved. (Saxena, A. et al, 2015) A quality system has to be developed with participation of medical specialists. (Schellekens, W.M.L.C.M. et al, 2001) (Botje, D. et al, 2012)(Wardhani, V. et al, 2009)(Schoten, S.M. van, 2015)(Wollersheim, H. et al, (3) 2011) (Visser, M., 2016) When they are involved in quality improvement, this will be a method to motivate them to deliver good quality work. (Jorissen, H.J.,(2) 2007) Such a cooperative implementation strategy for a quality system is related with process and outcomes (Kunkel, S. et al, 2009) and reaching highest quality of care (Blumen, S.R. et al, 2010). When a high number of physicians are taking part of quality improvement actions, this will lead to better outcomes on two patient safety indicators (fewer postoperative complications and fewer technical difficulties with procedures). (Weiner, B.J. et al, 2006)
By more sharing of quality information in meetings, there is higher collaboration between the board and medical specialists. (Botje, D. et al, 2012)

3.9 Data registration

Research shows different measurements are measuring the same things. A recommendation of that study is that the data have to be registered one time with existing registrations/ data sources. Then the registrations and the registration time (administrative burden) can be reduced. (KPMG Plexus, 2016)
Furthermore there is diversity in the way of measuring and delivery of data and in the interpretation of the data. Hereby there is limited reliability of the registrations. (Kringos, D.S. et al, 2012) (KPMG Plexus, 2016)

3.10 Conclusion literature review

Literature shows that quality of care can be controlled with indicators. There is found that the usability of the indicators is low and that the indicators are not used much to monitor and improve quality. Furthermore there are not many indicators about outcomes, so more focus on outcomes is desirable.
Healthcare organizations have to develop a quality system, to direct and control quality of the organization. According to the literature, the implementation and use of quality systems in hospitals in the Netherlands is developed during the last years. But not all quality systems are fully developed/ systematically implemented. There have to be continuous quality improvement (PDCA) to have an effective and efficient quality system.
Literature shows that quality data are not always used to improve the system to reach the continuous cycle of quality improvement. There are found a lot of possible barriers for this, like the attitude, motivation, skills and knowledge of professionals towards data registration and the effort of the registration and workload.
The use of a quality system has several positive effects, like it will reach a focus on/ higher satisfaction of patients, improvement of care processes and sometimes improvement of outcomes and a positive effect on patient safety (climate). But the use of a quality system has also negative effects like an increase in regulation, costs and workload/ administrative burden.
Patients and healthcare professionals are not much involved in quality improvement, and have to be involved to reach better outcomes/ improve quality.
Finally there is found that registrations, data delivery and interpretation of the data are done in different ways. Hereby there is limited reliability of the registrations.

4. Results

4.1 Interview results

Interviews were done with three department heads, two directors, three medical managers, two healthcare managers and one quality officer. The medical managers forms, together with the healthcare manager, the board of the care unit/department. Besides that they are medical specialists.
Gelre ziekenhuizen exists of two RVE's (result forming units), MOD (medical support services) and AOD (general support services). The MOD has an own quality system, but according to the director of the MOD, the systems of the MOD and the hospital are more coming together. Both the director of the MOD and the quality officer of the MOD said that the MOD is/was further with the quality system than the remainder of the hospital. They also said the MOD is easier structured/easier to test on results. The quality officer mentioned differences between the quality system of the MOD and the remainder of the hospital. He said the components are the same but the display and some names are different. The name of the quality monitor for the MOD is 'management review'. This data is displayed in a report, but they are working to make it more visually. Furthermore the quality officer said the MOD is more process oriented instead of theme/subject oriented. He said a quality system gives structure. According to the directors, in the hospital there are a central committee about quality and there are different decentralized committees. Furthermore the director of the RVE said a quality system is a continuously process of improvement of quality and assurance of patient safety and there are instruments to support this.

4.1.1 Quality monitor/ KPI display

The KPI's are displayed in Gelre Inzicht, according to some interviewees. Two department heads of the department Surgery said they work a lot with the KPI's. Others said they do not use it daily.
The method of displaying the KPI's with clocks on departments was mentioned by six of them. Two interviewees said this data can be more real time, in a digital way and they said the clocks are not active now/ not up to date.
The display of the KPI's would have to be better accessible/ better visible (for everyone working on the department) according to three respondents. Two of them said this data could be displayed on the VISMO screen on the departments. The departments of Gelre ziekenhuizen have a VISMO screen. VISMO means visually interactive management information for multidisciplinary support. Patient data from the EVD (electronic nursing dossier) and the hospital information system with indicators about care are displayed on a touchscreen display. (Techxx, 2014) Two department heads said they send the KPI information with the newsletter.
There were two interviewees who said the indicators (KPI's) are not all relevant for the department or to demonstrate quality. Also two interviewees said the indicators in the KPI display are not all indicators they have. Finally four interviewees said they will positively stimulate employees, and pay also attention when things are going well.

4.1.2 Internal audits

Three interviewees mentioned that internal audits are not done very often. Also three interviewees (including two directors) said audits will be done every two years. There was mentioned three times that

there were done safety rounds and four times that there are now tracers on departments.
Many of the interviewees are seeing added value of internal audits. Added values which were mentioned are: providing insight into processes, that someone else looks to improvement on the department, that departments can be compared and that there will be learned to think strategic and structural about quality.

4.1.3 Prospective Risk Inventarisations

PRI's are not done very often/ are not done much by the interviewees according to many of them. Most of them said PRI's are done/ are useful by change to new processes or new equipment.
Four interviewees said PRI's takes a lot of time/effort and two of them said there should be a choice for a shorter form. One interviewee said it is possible to choose between a complete or shorter PRI.
The quality officer of the MOD said there is used a control of change at the MOD, which is an impact analysis for changes and would connect well on PRI. Furthermore one medical manager had an idea with computer animation to find risks, to make it visually.

4.1.4 Calamities procedure

Many of the interviewees believe the calamities procedure is a good procedure which is done in a good way. Two interviewees said the conversations with people who are involved, are done well. That conversations are done by the director, someone of the department Patient safety and Quality of care and the confidential adviser of the hospital, according to the director of the RVE.
Furthermore there was mentioned three times that the calamities procedure has a lot of impact and that there is/ need to be care for the person who had made the mistake as well.

4.1.5 MIM and VIM reporting

MIM reporting is not done very often according to many of the interviewees, but VIM reporting is being done a lot. There is openness on departments in reporting, according to six interviewees and three mentioned there is willingness to report.
Three interviewees (department heads) said they experience added value of VIM reports, like insight, improvement (plans) and that there can be learned from it.
The reports will be discussed (on departments) according to six interviewees. Three of them and two others said they stimulate doing VIM reports. There are a central and decentral VIM commissions who view and discuss VIM reports.
Mentioned reasons for not doing a report, are lack of time (mentioned 6 times), not seeing improvement (mentioned two times), knowing that something will be improved/more reports of the same problem (mentioned two times) or not getting a reaction on a report.
Three interviewees said things that almost going wrong, are not always reported and that this also needs to be reported to reduce the number of times it goes wrong.
Finally two interviewees said when they/ the department do a report about something that was going wrong at another department, they receive the report and have to send it to the other department.

4.1.6 Reports and feedback of complaints

According to five interviewees, the reports and feedback of complaints can be improved. Areas for improvement that were mentioned, are that the system can be faster and more user friendly, that there

is missing a structural system for reporting, that there is no good and too little overview and that the information the complaints office supplies is little.
Four interviewees said the information about complaints is discussed/ shared with the department. The two medical managers of the department Surgery said this will be done in the department meeting which is held every month.
The director of the RVE said there are three types of complaints: complaints that they try to mediate, complaints with a formal complaints procedure (with a complaints commission) and disciplinary complaints. Most of the complaints will be solved with mediation.
Two department heads said they would like that there exist an evaluation during the stay of the patients in the hospital, about their experiences. Then, there can be done something and complaints can be prevented.

4.1.7 Indicator sets

With regard to the use of indicator sets, the indicators of the IGZ are mentioned most, by nine of the interviewees. The healthcare inspection uses sets of indicators for supervising healthcare. (Inspectie voor de gezondheidszorg, n.d.) Furthermore the indicators of DICA are mentioned by four interviewees. DICA is an organization that makes quality of healthcare transparent. The organization develops and supports quality registrations. (DICA, n.d.) Two interviewees mentioned indicators of the insurer and other mentioned indicators are indicators of Zichtbare Zorg, indicators of the profession and indicators of NIAZ/Qmentum.
Four interviewees said there are (too) many indicators and that this should be reduced/tightened. One healthcare manager said it is better to do one thing good than many things that does not work.
Things that will be done with indicators are applying in annual plans and the indicators will be discussed (mentioned by a department head), checking compliance with the indicators and monitoring processes (mentioned by a healthcare manager), reading the indicators (mentioned by a department head), using it to steer/ control (mentioned by the quality officer) and filling in questionnaires for the indicators (mentioned by a medical manager). Two medical managers of the department Surgery said filling in questionnaires is a lot of work for surgeons. One said that someone else can do this, so that surgeons have less administrative work and one said that there are data nurses for filling in questionnaires.
The healthcare manager of the department Radiology (MOD) said the performance indicators of the MOD are different from the ones of the remainder of the hospital.
Furthermore, one medical manager said he needs to have outcome indicators of care.

4.1.8 Display of quality data

A lot of times there was mentioned that the interviewees prefer a clear and visible display of the quality data for everyone on the department. Two interviewees said now it is much searching for quality data.
Two interviewees mentioned a display with a dashboard method, preferable on the VISMO screen. One of them also said this for the KPI display. Furthermore two interviewees had preference for display with clocks, what they also said for the KPI display.
Three interviewees (of who one also said this for the KPI data) mentioned that they would like to have real time data and six interviewees mentioned comparisons and benchmarks.
Both medical managers of the department Surgery said the display of the DICA registrations is good, with benchmark charts and funnel plots. Four interviewees said they would like to have insight into specific information/ about the own department.
A type of quality data that was mentioned as important by six interviewees, is patient/ customer satisfaction/ appreciation data. Two of these interviewees, department heads of the department

Surgery, mentioned the patient appreciation/satisfaction monitor.
Furthermore three interviewees said (monitoring of) the quality of the personnel is also (important) quality data.
Two interviewees, others than the ones who said this for the KPI data, said it is important to pay attention on good outcomes ass well/ also show this information.
Two healthcare managers said the data in Gelre Inzicht is a lot financial data and they prefer displaying in a system with quality data. In the opinion of one medical manager there is also more confidence in direct registrations meant to register quality data, than in the databases (of which KPI information is extracted) which are not meant to register quality data.
Furthermore one interviewee said the quality registrations should be linked with the information in the electronic patients dossier. Another interviewee said that sources files are needed, like the electronic patient and nurse dossiers and one interviewee said the KPI data should be linked to the electronic nurse dossier.
Finally four interviewees, including three medical managers, said there is too much diversity and there should be analysed were reports/calamities/complaints are about (what the overarching problems are). One medical manager had an idea about VIM reports, that should be automatically selected in different subjects with word recognition.

4.1.9 Experiences and involvement with the quality system

The amount of work and time it takes/they have for quality registration are mentioned a lot as barriers. Furthermore two interviewees said people on departments need to do much, so they are busy.
Four interviewees said there is much registration/ this can be reduced.
Three interviewees, including two directors, said there is too little/ have to be intrinsic motivation/ a matter of course to do something with the quality data.
The two directors said there is participation/ sufficiently involvement in change and development. Many of the other interviewees said they are not (much) involved with the development of the quality system. But three of them said they think this is not necessary and not everyone has to be involved. Also two interviewees said that it would have been possible if this was preferred and that they would involve themselves.
According to a director and the quality officer, things can also going wrong in the backoffice/ support of the hospital (like ICT), which need to be attended.
Finally three respondents mentioned PDCA, which (should) maintained with the quality system. According to one healthcare manager, the ‘check’ and ‘act’ steps are difficult and the first two steps have the most attention.

4.1.10 Conclusion interview results

The interview results show that the MOD has an own quality system, which is more process oriented and the display and some names are different than the quality system of the remainder of the hospital. There are different components of the quality system, which support quality improvement.
The KPI’s are displayed in Gelre Inzicht and are shown with clocks on departments. These data could be more real time and some respondents mentioned display on the VISMO screen. By internal audits, tracers are mentioned which are done on departments. Prospective Risk Inventarisations are not done often. There is mentioned that it will be useful by change to new processes or equipment and that it takes a lot of time/ effort. The interviewees were positive about the calamities procedure and said it will have impact. Care for the person who has made the mistake is considered important as well. MIM

reports are not being done often, but VIM reports are. There is openness and willingness to do these reports on departments. The main mentioned reason for not doing a VIM report is lack of time. These reports and complaints are discussed on departments and reporting will be stimulated. There is mentioned multiple times that things that are almost going wrong are important as well and have to be reported. The reports of/ feedback on complaints could be improved. Mentioned areas for improvement are that the system can be faster and more user friendly, that there is missing a structural system for reporting, that there is no good and too little overview and that the information the complaints office supplies is little.
The indicators of the IGZ are used most, by almost all interviewees, and the indicators of DICA are also used by many of them. There is mentioned more times that there are too many indicators and there is also said there is much registration, which can be reduced.
Most of the interviewees prefer good accessible and visible quality data for everyone on the departments, with the possibility to make comparisons and benchmarks and to see specific data about the own department. Patient satisfaction/ appreciation data is mentioned a lot as important quality data. A few interviewees said there is too much diversity in reports/calamities/complaints and there should be analysed what overarching topics are.
The amount of work and time it takes to register quality data/ the lack of time are mentioned a lot as negative aspects/barriers. Most of the interviewees said they are not (much) involved with the development of the quality system. But many of them said they think this is not necessary/ not everyone has to be involved or that they think they could involve themselves whenever they want.

4.1.11 Information used for the questionnaire development

The questionnaire was developed based on information found with the interviews. The subjects of the questionnaire were almost the same as the subjects of the interviews. Only the component 'quality monitor' is supplemented with 'KPI display' to make it more clear. Furthermore MIM reports are removed, because of the low use of it.
Questions about the amount of quality data, the use of it for quality improvement and available time for the registrations were added to the questionnaire, because these subjects emerged in the interviews. Finally, possible answer options are based on things that were said in the interviews.

4.2 Questionnaire results

4.2.1 General information

The questionnaire was sent to 589 people and is completed by 147 of them. This is a percentage of 25%. The group of possible respondents existed of 280 medical specialists (with medical managers), a randomly chosen number of 200 nurses, 79 care coordinators and 61 healthcare managers, department heads and operational managers. The total number of people to who the questionnaire was sent was lower, because of some non-active accounts and double functions.
The numbers and percentages of the actual respondents for each respondents group are displayed in the appendix (table A). The group of healthcare managers, department heads and operational managers has the highest number of people who have completed the questionnaire, as percentage of the number of possible respondents for that group.

The table with general information about the respondents can be found in the appendix (table B). Most of the respondents are women (70,7%) and have an age between 40 and 59 years old (70,1%). Most of the respondents are working at Gelre ziekenhuizen location Apeldoorn (61,2%) and 17% of the respondents are working at both the location Apeldoorn and the location Zutphen. The departments in which they are working are diverse.

The group of medical specialists is the biggest group of respondents (34,7%). The table below shows all numbers and percentages of respondents for each work function.

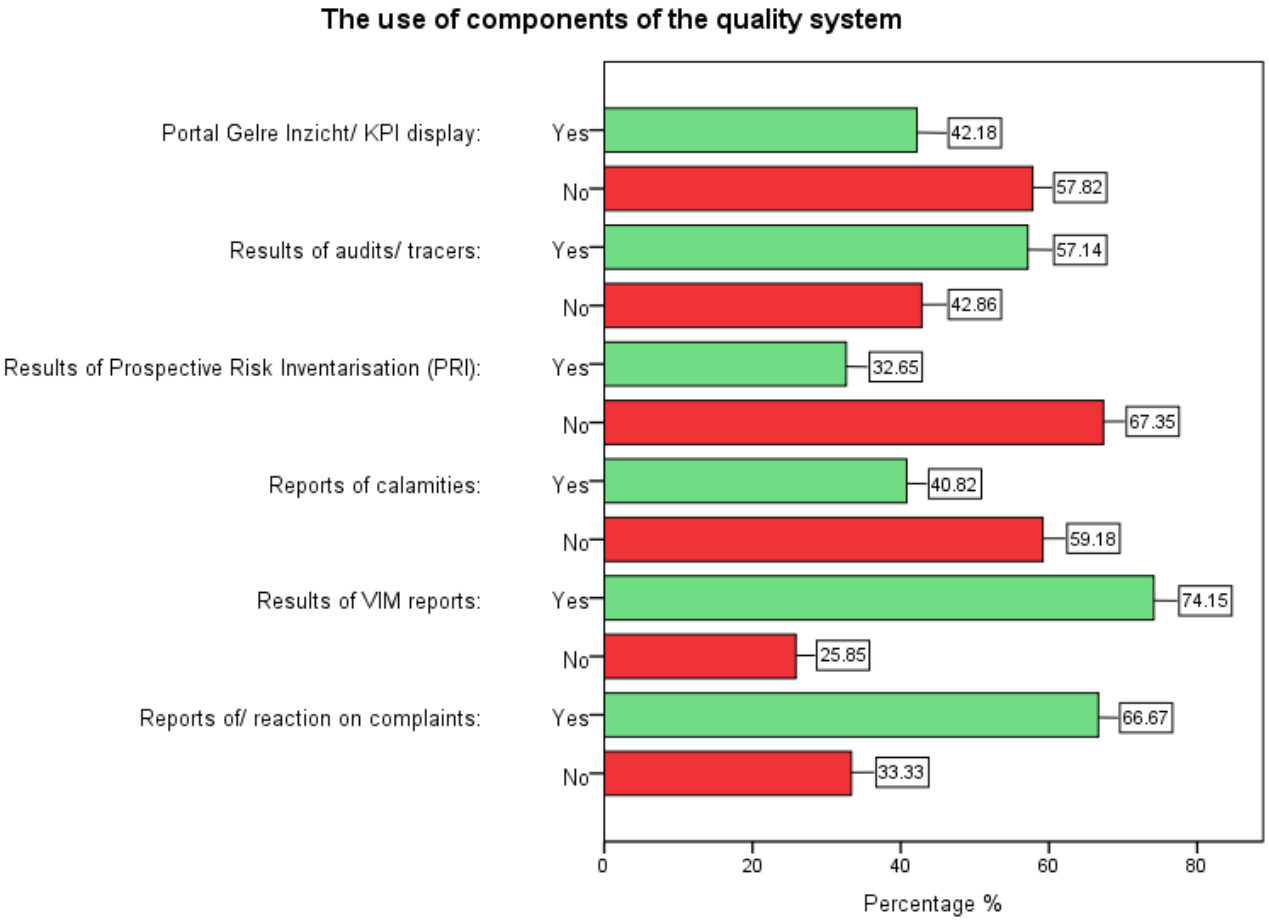
Table 1

Work function	N	%
Healthcare manager	8	5,4
Department head	18	12,2
Operational manager	2	1,4
Medical manager	3	2,0
Care coordinator	26	17,7
Medical specialist	51	34,7
Nurse	39	26,5
Total	***147***	***100***

4.2.2 The use and added value of components of the quality system

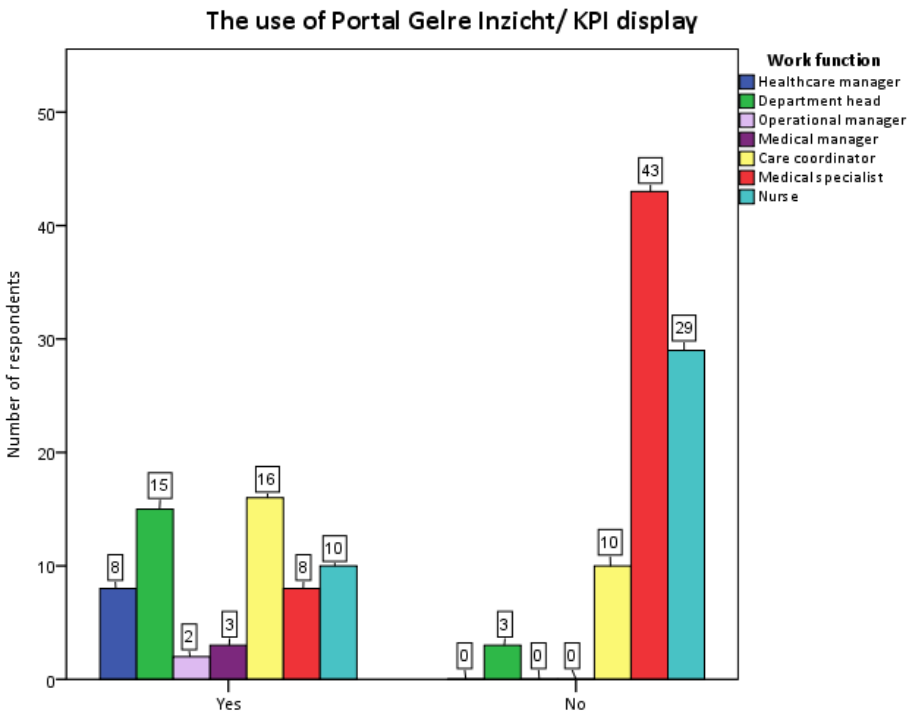
The bar chart below shows the use of components of the quality system. The results of VIM reports are used by the highest number of respondents (74,1%). The results of PRI's are used by the lowest number of respondents (32,7%). The table with the number of respondents by these percentages is displayed in the appendix (table C).

Figure 1



In the bar charts and tables below, the use of the different components of the quality system is displayed for each work function.

Figure 2



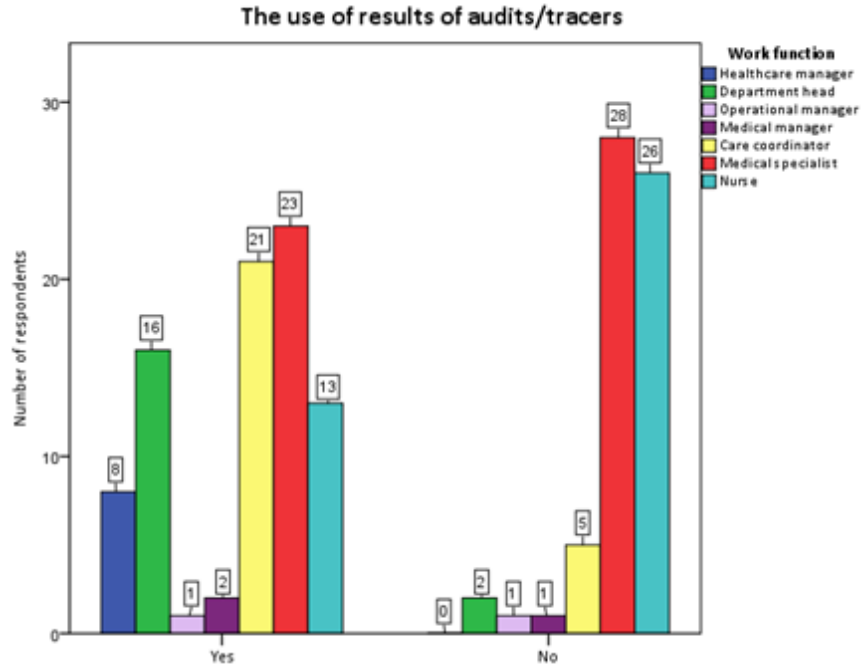
Portal Gelre Inzicht

All healthcare managers, operational managers and medical managers use Portal Gelre Inzicht. Most of the department heads also use it and a high number of care coordinators. Most of the medical specialists and nurses do not use this component.

Table 2

The use of Portal Gelre Inzicht for each work function	% use	% do not use
Healthcare manager	100	0
Department head	83,3	16,7
Operational manager	100	0
Medical managers	100	0
Care coordinator	61,5	38,5
Medical specialist	15,7	84,3
Nurse	25,6	74,4

Figure 3



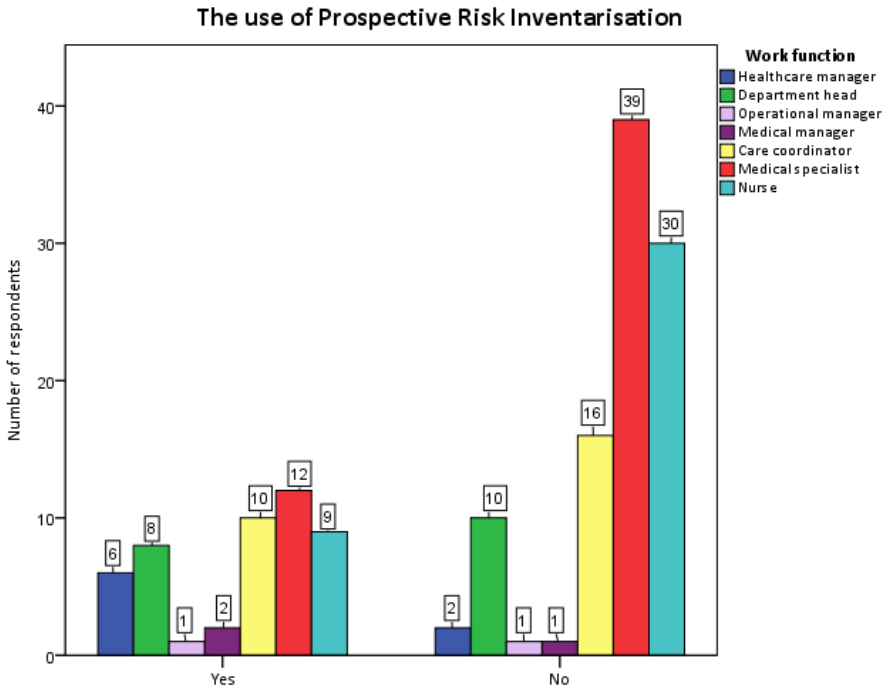
Results of audits/tracers

All healthcare managers use results of audits/tracers. Most of the department heads and care coordinators also use this component. The use of the medical managers, operational managers and medical specialists is spread and the highest number of nurses do not use this component.

Table 3

The use of results of audits/tracers for each work function	% use	% do not use
Healthcare manager	100	0
Department head	88,9	11,1
Operational manager	50,0	50,0
Medical manager	66,7	33,3
Care coordinator	80,8	19,2
Medical specialist	45,1	54,9
Nurse	33,3	66,7

Figure 4



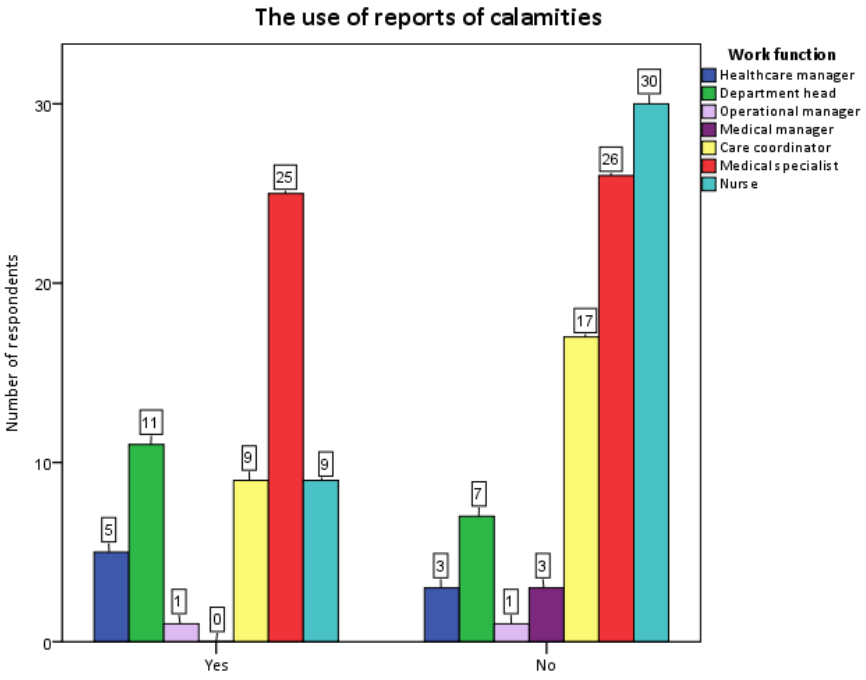
Results of Prospective Risk Inventarisation

Most of the healthcare managers use this component. The used of the department heads, operational managers and medical managers is spread. A high number of care coordinators do not use this component and most of the medical specialists and nurses do not use it as well.

Table 4

The use of results of Prospective Risk Inventarisation for each work function	% use	% do not use
Healthcare manager	75,0	25,0
Department head	44,4	55,6
Operational manager	50,0	50,0
Medical manager	66,7	33,3
Care coordinator	38,5	61,5
Medical specialist	23,5	76,5
Nurse	23,1	76,9

Figure 5

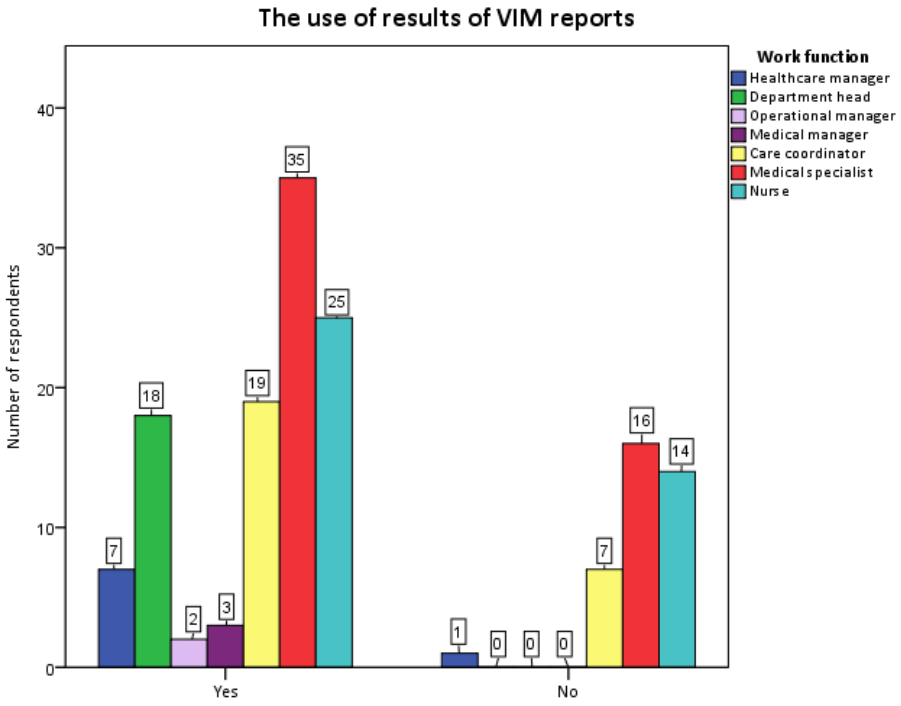


Reports of calamities

Most of the healthcare managers and department heads use this component. The use of the operational managers and medical specialists is spread. All three medical managers do not use this component and most of the nurses and care coordinators do not use it as well. **Table 5**

The use of reports of calamities for each work function	% use	% do not use
Healthcare manager	62,5	37,5
Department head	61,1	38,9
Operational manager	50,0	50,0
Medical manager	0	100
Care coordinator	34,6	65,4
Medical specialist	49,0	51,0
Nurse	23,1	76,9

Figure 6



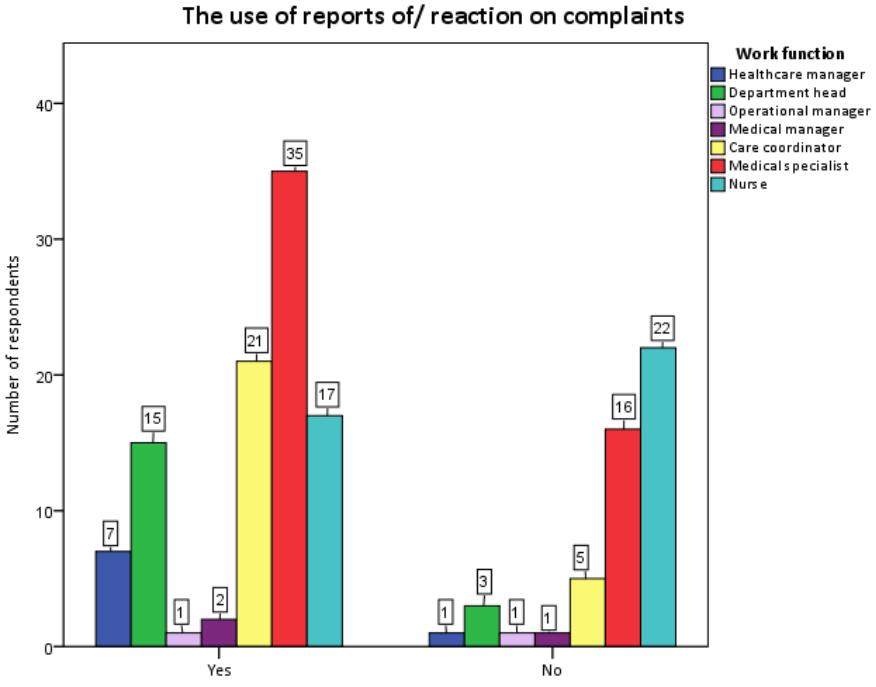
Results of VIM reports

Most of the healthcare managers, care coordinators, medical specialists and nurses use this component. Furthermore all department heads, operational managers and medical managers use this component.

Table 6

The use of results of VIM reports for each work function	% use	% do not use
Healthcare manager	87,5	12,5
Department head	100	0
Operational manager	100	0
Medical manager	100	0
Care coordinator	73,1	26,9
Medical specialist	68,6	31,4
Nurse	64,1	35,9

Figure 7



Reports of/ reaction on complaints

Most of the healthcare managers, department heads, care coordinators and medical specialists use this component. The use of the operational managers, medical managers and nurses is spread.

Table 7

The use of reports of/ reaction on complaints for each work function	% use	% do not use
Healthcare manager	87,5	12,5
Department head	83,3	16,7
Operational manager	50,0	50,0
Medical manager	66,7	33,3
Care coordinator	80,8	19,2
Medical specialist	68,6	31,4
Nurse	43,6	56,4

The table below shows the most and least used components for each work function.

Table 8

The most and least used components for each work function	Most used component	Least used component
Healthcare manager	Portal Gelre Inzicht (100%) Results of audits/ tracers (100%)	Reports of calamities (62,5%)
Department head	Results of VIM reports (100%)	Results of PRI (44,4%)
Operational manager	Portal Gelre Inzicht (100%) Results of VIM reports (100%)	The other components (50,0%)
Medical manager	Portal Gelre Inzicht (100%) Results of VIM reports 100%)	Reports of calamities (0%)
Care coordinator	Results of internal audits/ tracers (80,8%) Reports of/ reaction on complaints (80,8%)	Reports of calamities (34,6%)
Medical specialist	Results of VIM reports (68,6%) Reports of/ reaction on complaints (68,6%)	Portal Gelre Inzicht (15,7%)
Nurse	Results of VIM reports (64,1%)	Results of PRI (23,1%) Reports of calamities (23,1%)

The most often mentioned reasons why respondents do not use components of the quality system, are that respondents do not know the components (the most mentioned reason for 'Portal Gelre Inzicht' (58,5%), 'Results of audits/ tracers' (63,5%) and 'Results of Prospective Risk Inventarisation' (59,6%)) and that they do not have insight into the data (the most mentioned reason for 'Results of VIM reports' (47,4%)). For the components 'Reports of calamities' and 'Reports of/ reaction on complaints', the two above mentioned reasons for no use of the components are mentioned about the same (respectively 42,5% and 38,8% of the respondents do not know the component and 43,7% and 40,8% do not have insight into this data). The remainder given reasons are displayed in the appendix (table D).
Furthermore, the reasons why respondents do not use components for each work function are displayed in the appendix (table E-J).

"Many quality systems are unknown to me. I think these can be better presented and made public"

Remarkable percentages are:

Portal Gelre Inzicht:
- 74,4% of the medical specialists who had answered the question and 54,8% of the nurses do not know the component.
- 70,0% of the care coordinators who had answered the question do not have insight into this data.

Results of audits/ tracers:
- 75,9% of the medical specialists who had answered the question and 57,1% of the nurses do not know the component.
- 60,0% of the care coordinators who had answered the question do not have insight into this data.

Results of PRI:
- 78,0% of the medical specialists who had answered the question and 60,6% of the nurses do not know the component.
- 62,5% of the care coordinators who had answered the question do not have insight into this data.

Reports of calamities:
- 50,0% of the medical specialists who had answered the question, 51,6% of the nurses and 50,0 of the department heads do not know the component.
- 88,2% of the care coordinators who had answered the question do not have insight into this data.

Results of VIM reports:
- 60,0% of the nurses who have answered the question do not have insight into this data.

Reports of/ reaction on complaints:
- 56,3% of the medical specialists who had answered the question do not know the component.
- 52,2% of the nurses who had answered the question do not have insight into this data.

The respondents who use the components of the quality system were asked what they think about the added values of the components. That answers are displayed in the table below.
The most often mentioned added values of Portal Gelre Inzicht/ KPI display are 'on the basis of these data control is possible' and 'there can provide insight'.
The most often mentioned added values of results of Prospective Risk Inventarisation are 'on the basis of these data, improvement actions can be set up' and 'there can provide insight'.
The most often mentioned added value of the other components is 'on the basis of these data, improvement actions can be set up'. The component 'Results of VIM reports' had the highest percentage of respondents who said this (79,8%).

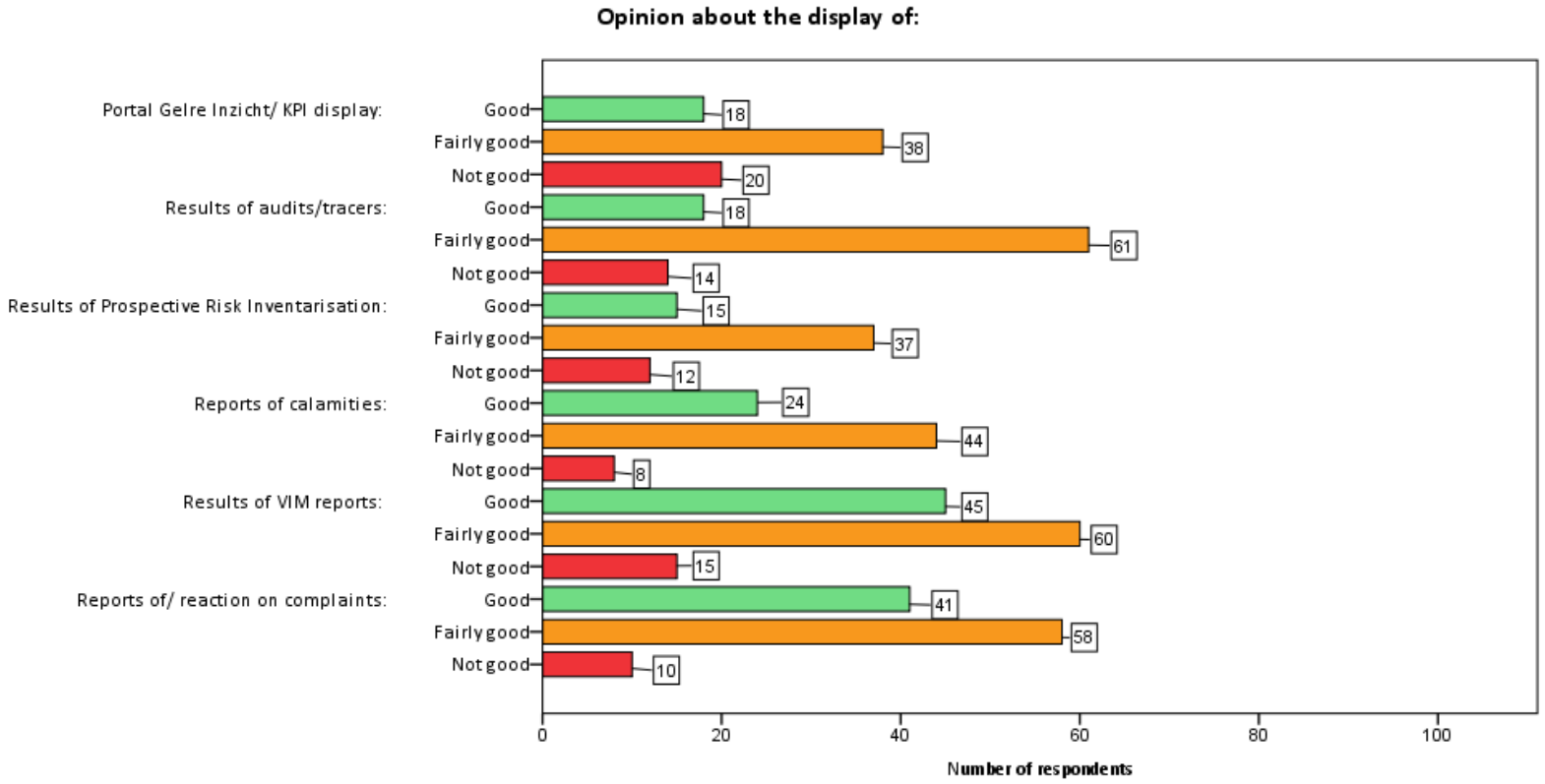
Table 9

The added value N (% of the number of respondents)	Portal Gelre Inzicht/ KPI display	Results of audits/ tracers	Results of Prospective Risk Inventarisation	Reports of calamities	Results of VIM reports	Reports of/ reaction on complaints
On the basis of these data control is possible	28 (45,2)	30 (35,7)	14 (29,2)	19 (31,7)	40 (36,7)	33 (33,7)
These data can be used to discuss the delivered quality	21 (33,9)	44 (52,4)	17 (35,4)	32 (53,3)	50 (45,9)	48 (49,0)
I think this component has no added value	3 (4,8)	1 (1,2)	2 (4,2)		1 (0,9)	
On the basis of these data, improvement actions can be set up	25 (40,3)	65 (77,4)	26 (54,2)	46 (76,7)	87 (79,8)	74 (75,5)
Comparisons can be made	20 (32,3)	17 (20,2)	2 (4,2)	6 (10,0)	16 (14,7)	11 (11,2)
There can provide insight	28 (45,2)	42 (50,0)	25 (52,1)	36 (60,0)	57 (52,3)	45 (45,9)
Another answer	3 (4,8)	1 (1,2)	2 (4,2)	1 (1,7)	2 (1,8)	4 (4,1)
Total answers	***128***	***200***	***88***	***140***	***253***	***215***
Number of respondents	***62***	***84***	***48***	***60***	***109***	***98***

4.2.3 The display of components of the quality system

The bar chart below shows the opinion of the respondents who use the components, or do not use it but have insight into the data and know the components, about the display. Most of the respondents think the display of the components is fairly good.
'Results of VIM reports' and 'Reports of/ reaction on complaints' are components with the highest numbers and the highest percentages (respectively 37,5% and 37,6%) of respondents who think the display is good.
'Portal Gelre Inzicht/ KPI display' is the component with the highest number and the highest percentage (26,3%) of respondents who think the display is not good.
The percentages are displayed in the appendix (table L).

Figure 8



The respondents who said the display of the components is not good, gave different reasons why they think the display is not good.

Portal Gelre Inzicht:
A percentage of 40,0% of those respondents said the display gives no overview and the display is incomplete. Furthermore a percentage of 35,0% said the display is not clear.

> *"I would like to make the system easier visible for everyone"*

Results of audits/ tracers:
A percentage of 50,0% of those respondents said they do not know/use it or do not have insight.

Results of PRI:
A percentage of 41,7% of those respondents said they do not know/use it or do not have insight and a percentage of 33,3% said the display gives no overview.

Reports of calamities:
A percentage of 62,5% of those respondents said they do not know/use it or do not have insight.

Results of VIM reports:
A percentage of 46,7% of those respondents said the display gives no overview and 33,3% said they do not know/use it or do not have insight.

Reports of/reaction on complaints:
A percentage of 40,0% of those respondents said they do not know/use it or do not have insight and also 40,0% said there is no reaction/feedback.

The other, less frequently mentioned reasons, are displayed in the appendix (table M).

4.2.4 Other information about components of the quality system

The respondents who use Portal Gelre Inzicht were asked the frequency of viewing Portal Gelre Inzicht/ KPI display. Most of the respondents see this information once a month (37,1%). Also high percentages of respondents see this information once a week (17,7%) or once in two weeks (19,4%). The other percentages and the numbers are displayed in the appendix (table N).

Most of the respondents who know VIM reports, received a reaction after doing a VIM report and think that reaction was fine (42,0%). But also a high percentage (32,6%) received a reaction but think the reaction could be better. The other percentages and numbers are displayed in the appendix (table O).

The willingness to do a VIM report, according to respondents who know VIM reports, is displayed in the table below. The willingness is mostly experienced as reasonable. Furthermore a high percentage of respondents experience high willingness and there were no respondents who think there is no willingness to report.

Table 10

Willingness to report	N	%
High willingness	51	37,0
Reasonable willingness	72	52,2
Low willingness	15	10,9
Total	***138***	***100***

The respondents who said they experience low willingness, gave different reasons for this. The most mentioned reasons are that there is seen no added value of VIM reports (46,7% of that respondents) and that there is no time to do a VIM report (40,0% of that respondents). The other reasons are displayed in the appendix (table P).

The respondents were asked if they have missed components of the quality system in the questionnaire. There were given a lot of different answers, sometimes more general answers about the subject and the questionnaire. But there were six respondents who all had the answer that quality assurance with the components takes a lot of time/ there is too little time.

The respondents were asked if the quality system gives enough information about the whole care process. Most of the respondents do not know this (44,2%). The other percentages and the numbers are displayed in the appendix (table Q).
There were given a lot of different answers about which components in the care process the quality system gives not enough information, according to the respondents who said that. Four respondents mentioned actual care around the patient and five respondents mentioned that there is much focus on registration and figures, which does not say everything about the actual delivered quality of care/ the whole process. There were different answers mentioned by three respondents: workload/ care burden, patient satisfaction about medical specialists/ care and the actuality/proactivity of data/improvement. Finally three respondents said they do not have insight/ enough information about all components.

4.2.5 Indicator sets

The table below shows the use of indicator sets. Most of the respondents (49,7%) do not use indicator sets. Indicators of the professions and indicators of the IGZ are used most.

Table 11

The use of indicators	N	% of the number of respondents
DICA indicators	20	13,6
IGZ indicators	44	29,9
ZiNL indicators	9	6,1
Indicators of the insurer	21	14,3
Indictors of the profession	45	30,6
I do not use indicator sets	73	49,7
Another answer	9	6,1
I do not know	3	2,0
Total answers	***224***	
Number of respondents	***147***	

A percentage of 84,6% of all nurses who have participated in the questionnaire, said they do not use indicator sets. Also a high percentage of all care coordinators (57,7%) and department heads (50,0%) said they do not use it.
The indicators that are used most by the department heads, operational managers, medical managers and care coordinators are IGZ indicators (by respectively 33,3%, 100%, 66,7%, 34,6%). Medical specialists are most using indicators of the profession (66,7%). The use of the different indicator sets by healthcare managers is spread. The table with these percentages is displayed in the appendix (table R).

The answers about things that are done with indicators are spread, but most of the respondents filling out questionnaires for the indicators (49,4%), checking compliance with the indicators (49,4%) and undertaking improvement actions on the basis of the indicators (48,1%). The other things are displayed in the appendix (table S).

The table below shows the opinion of the respondents about the indicator sets. Most of the respondents do not know what they think about the indicators. Furthermore a high percentage of respondents think there are too many indicators.

Table 12

The opinion about indicator sets	N	% of the number of respondents
Valuable	23	15,6
Not valuable	10	6,8
Clear	10	6,8
Unclear	15	10,2
Too many indicators	42	28,6
Sufficient indicators	6	4,1
Too few indicators	2	1,4
Overlap in indicators	14	9,5
I do not know	64	43,5
Another answer	14	9,5
Mostly not relevant/ not useful	3	2,0
Total answers	***203***	
Number of respondents	***147***	

"I think there is a demand for too many indicators, on too many places, too often"

"Certainly I think indicators are useful, however the question is if there are too many indicators and whether they will actually lead to the desired improvement in quality"

Most of the respondents do not know which indicators (structure, process or outcome) have the highest value for them. This is displayed in the table below. Outcome indicators are mentioned most and also process indicators are mentioned by a high percentage.

Table 13

Indicators with the highest value	N	% of the number of respondents
Structure indicators	9	6,1
Process indicators	40	27,2
Outcome indicators	46	31,3
I do not know	71	48,3
Total answers	***166***	
Number of respondents	***147***	

Healthcare managers and medical specialists mostly prefer outcome indicators (by respectively 62,5% and 45,1%).
Department heads mostly prefer process indicators (38,9%) and a percentage of 38,9% do not know which indicators have the highest value.
Care coordinators also prefer process indicators the most (38,5%) and a percentage of 61,5% do not know which indicators have the highest value.
A percentage of 71,8 % of the nurses do not know which indicators have the highest value.
The other percentages and numbers are displayed in the appendix (table T).

4.2.6 The display and delivery of quality data

The table below shows which quality data the respondents need to get an idea of the delivered quality on the department where they are working. Results of VIM reports, reports of/ reaction on complaints and data about patient satisfaction/ PREMS/ PROMS are mentioned most.

Table 14

The need of quality data	N	% of the number of respondents
Data from Portal Gelre Inzicht/ KPI display	60	40,8
Results of audits/ tracers	82	55,8
Results of PRI's	46	31,3
Reports of calamities	67	45,6
Results of VIM reports	100	68,0
Report of/ reaction on complaints	99	67,3
Data about patient satisfaction/ PREMS (Patient reported experience measures)/ PROMS (Patient reported outcome measures)	96	65,3
Data about employee satisfaction	87	59,2
Results of visitations	84	57,1
Disease specific registrations	29	19,7
I do not need quality data	7	4,8
Another answer	5	3,4
I do not know this	5	3,4
Combination of all data	2	1,4
Information from the manager	2	1,4
Total answers	***771***	
Number of respondents	***147***	

These needs for each work function are displayed in the appendix (table U). The most mentioned components for each work function are:

Healthcare mangers
All healthcare managers mentioned data from Portal Gelre Inzicht, results of audits/tracers, reports of/ reaction on complaints and data about patient satisfaction/PREMS/PROMS.

Department heads
Most of them (83,3%) mentioned results of audits/tracers.

Operational managers
Both of them mentioned data about patient satisfaction/ PREMS/ PROMS, data about employee satisfaction and results of visitations.

Medical managers
All three of them mentioned reports of calamities and results of visitations.

Care coordinators
Most of them (80,8%) mentioned results of VIM reports and data about patient satisfaction/ PREMS/ PROMS.

Medical specialists
Most of them (70,6%) mentioned data about patient satisfaction/ PREMS/ PROMS.

Nurses
Most of them (69,2%) mentioned results of VIM reports.

> *"It is important what our patients think about us. Do they want to come back? Do they think they have been helped? What should I have done better? These things I want to know as a specialist, to be able to align better on supply and demand"*

The respondents were asked how they get delivered quality data and what kind of delivery they prefer. These answers are displayed together in the table below, which shows the differences between the actual delivery of quality data and the preference for delivery. The two separated tables are displayed in the appendix (table V,W).

Table 15

The delivery of quality data	N actual delivery	N preference delivery	Difference between preferred and actual delivery
Outcomes will be communicated and discussed in work meetings	84	74	-10
Outcomes will be sent by e-mail	71	71	-
Through report in the newsletter	32	39	+7
I can get the data by myself from the internal system	31	34	+3
The data will be displayed in Portal Gelre Inzicht	29	33	+4
The data will be delivered by third parties	39	14	-25
Outcomes will be shown with clocks on departments	18	14	-4
Outcomes will be shown with the VISMO screen on departments	3	12	+9

Most of the respondents would like that the outcomes will be communicated and discussed in work meetings (50,3%) and that outcomes will be sent by e-mail (48,3%). These two most mentioned preference outcomes are the same as the best scoring actual delivery methods (respectively 57,1% and 48,3%).
In the last column of the table, the differences between preferred and actual delivery are displayed. The delivery methods with an '-' difference between preferred and actual delivery are more delivered with this method than is preferred. This is especially the case for the method 'the data will be delivered by third parties'.
The delivery methods with an '+' difference between preferred and actual delivery are less delivered with this method than preferred (are more preferred). This is most the case for the method 'outcomes will be shown with the VISMO screen on departments'.

Most of the respondents said quality data is discussed every three months (30,6%) and also a high percentage of respondents said this is discussed once a month (22,4%).
Most of the healthcare managers (75,0%) and department heads (38,9%) discuss quality data once a month. Most of the care coordinators (50,0%), medical specialists (19,6%) and nurses (41,0%) discuss quality data every three months. The tables with this information are displayed in the appendix (table X,Y).
Most of the respondents think this frequency of discussing quality data is good (71,4%). A percentage of 27,9% think this frequency is too low. The percentages/ numbers are displayed in the appendix (table Z).

4.2.7 The display and access to quality data

The most mentioned preference for a type of displaying of quality data is in one system (66,0%). 20,4% of the respondents do not have a preference for the type of displaying.
Most of the healthcare managers (87,5%), department heads (94,4%), medical managers (100%), care coordinators (76,9%) and medical specialists (66,7%) prefer displaying of quality data in one system.
Most of the nurses (43,6%) do not have a preference for a type of displaying. Also a high number of medical specialists said this (23,5%).
The other preferences are displayed in the appendix (tables Z1,Z2).

> *"I would like to have the opportunity to see all mandatory registrations displayed in one system"*

The table below shows how respondents preferable see the quality data. There is most mentioned they would like to see department specific data. Furthermore there is mentioned a lot of times that respondent would like to see quality data per subject and comparisons, especially over several years.

Table 16

Preferences for a way of seeing the quality data	N	% of the number of respondents
Gelre wide	41	27,9
Department specific	110	74,8
Per subject	53	36,1
Overarching topics	8	5,4
Display of recurring problems	31	21,1
Display of best practices	20	13,6
Comparisons over several years	48	32,7
Comparisons with other departments	26	17,7
I do not have preference for this	18	12,2
Another answer	7	4,8
Total answers	***362***	
Number of respondents	***147***	

All healthcare managers prefer department specific data, 75,0% prefer comparisons over several years and 62,5% prefer quality data per subject.
A percentage of 94,4% of the department heads, 73,1% of the care coordinators, 68,6% of the medical specialists, 66,7% of the nurses and both operational managers prefer department specific data.
All three medical managers prefer Gelre wide and department specific data.
The other preferences for each work function are displayed in the appendix (table Z3).

The respondents were asked if they have a preference for the period for which they have insight into quality data. Most of the respondents would like to have insight into quality data up to two years ago (31,3%). Furthermore high percentages of respondents would like to have insight into quality data up to five (24,5%) and up to one year (20,4%) ago. The other preferred periods are displayed in the appendix (table Z4).
Most of the medical specialists (41,2%) and nurses (23,1%) prefer insight into quality data up to five years ago. Most of the healthcare managers (50,0%), department heads (44,4%), care coordinators (46,2%) and medical managers (66,7%) prefer insight in to quality data up to two years ago. The other preferred periods for each work function are displayed in the appendix (table Z5).

Most of the respondents do not know if there exist quality data to which they have no access, but would like to have access to (68,0%). The other percentages and numbers are displayed in the appendix (table Z6).

The small number of respondents who said there exist quality data to which they have no access, but would like to have access to (7,5%), gave different answers about which data. Two of these respondents said they do not have insight into quality data/ do not know what is registered and two respondents mentioned VIM and patient feedback/participation.

4.2.8 Experiences with the quality system

The respondents were asked about their opinion of the amount of quality data which is saved. The highest percentage of respondents think there is too much quality data. Furthermore a high percentage does not know what they think about this amount.

"Because of the many measurements, sometimes I lose the overview"

Table 17

The opinion about the amount of quality data which is saved	N	%
Too much	53	36,1
Good amount	34	23,1
Too little	8	5,4
I do not know	52	35,4
Total	***147***	***100***

"It would benefit patient care when a fewer amount of lists have to be filled in"

Most of the healthcare managers (37,5%), department heads (50,0%), care coordinators (46,2%) and medical specialists (45,1%) think the amount of quality data is too much. Most of the nurses (51,3%) dot not know this and both operational managers (100%) think this amount is good. The table with these percentages and numbers is displayed in the appendix (table Z7).

The table below shows that most of the respondents think quality data is not used enough to improve healthcare.

Table 18

Is quality data used enough to improve healthcare?	N	%
Yes	43	29,3
No	55	37,4
I do not know	49	33,3
Total	***147***	***100***

Most of the department heads (44,4%) and medical specialists (49,0%) think quality data is not used enough to improve care. Both operational managers (100%) and most care coordinators (42,3%) think quality data is used enough to improve care. Most of the nurses (43,6%) and medical managers (66,7%) do not know this. The opinion of the healthcare managers is spread. These percentages and numbers are displayed in the appendix (table Z8).

"According to me, filling in score lists does not say much about the delivered quality of care. Now the focus seems to lie on filling in, but it have to lie on doing something with it. You can fill in everything in a good way, but when nothing is done with it, it will not lead to improvement/optimizing of patient care"

The respondents who think quality data is used insufficient to improve care, gave different reasons why they think this. The most common answer is that quality data is not made transparent for everyone involved with care delivery (58,2% of those respondents). Of these 32 respondents, eighteen were medical specialists (72,0% of the number of medical specialists who have answered this question) and six were nurses (75,0% of the number of nurses who have answered this question).

A percentage of 20,0% of the respondents who think quality data is used insufficient said there is done nothing with improvement actions. The other given reasons and the reasons for each work function are displayed in the appendix (tables Z9,Z10).

A percentage of 63,6% of the respondents who said nothing is done with improvement actions, gave as reasons that it is not clear who starts with improvement actions. A percentage of 45,5% said there is insufficient time to do something with improvement actions. The other given reasons are displayed in the appendix (table Z11).

The respondents were asked if they think there exist quality data which is saved, but is not yet being used to provide insight into quality and improve quality. Most of the respondents do not know if this quality data exist (85,0%). The other percentage and numbers are displayed in the appendix (table Z12). The small number of respondents who think there exist quality data which is saved, but not yet being used to provide insight into and improve quality, gave different answers about which data. Two respondents said there is much data and two respondents mentioned KPI.

The table below shows the opinion of respondents about the reliability of quality data. Most of the respondents do not know whether the quality data is reliable. Also a high percentage of respondents think the quality data is not reliable (36,7%). The most mentioned reason for this is that the registrations are incomplete.

Table 19

Do you think the quality data is reliable?	N	% of the number of respondents
Yes	32	21,8
No , the data is not up to date	15	10,2
No, the registrations are incomplete	39	26,5
I do not know	65	44,2
Another answer	8	5,4
Not always/ variable	3	2,0
Total answers	***162***	
Number of respondents	***147***	

A percentage of 38,5% of the care coordinators, 51,0% of the medical specialists, 53,8% of the nurses and 33,3% of the department heads do not know if the quality data is reliable.
Most of the healthcare managers (87,5%) think the quality data is not reliable, because the registrations are incomplete. Also 33,3% of the department heads and 31,4% of the medical specialists think this.
A percentage of 30,8% of the nurses think the quality data is reliable. Also 27,8% of the department heads and 26,9% of the care coordinators think this.
These percentages and numbers for each work function are displayed in the appendix (table Z13).

The respondents were asked about their experiences with the time they have to register quality data. Most of the respondents, displayed in the table below, do not have enough time to register quality data. Also a high percentage of respondents do no register quality data.

Table 20

Do you have enough time to register quality data?	N	%
I do not register quality data	51	34,7
Yes	31	21,1
No	65	44,2
Total	***147***	***100***

Most of the department heads (50,0%) and medical specialists (58,8%) think they do not have enough time to register quality data. A percentage of 51,3% of the nurses said they do not register quality data. The opinions of the other work functions are spread and displayed in the appendix (table Z14).

The respondents who said they do not register quality data were asked who register quality data. A percentage of 56,9% of those respondents said they do not know who register quality data. Furthermore a percentage of 29,4% said quality data was registered by the department head and 25,5% of the respondents mentioned nurses as persons who register quality data. The other mentioned persons who register quality data are displayed in the appendix (table Z15).

The respondents who said they do not have enough time to register quality data, were asked what reasons are for this lack of time for registration. Most of the asked respondents had answered that they cannot register due to a heavy workload (67,7% of that respondents) or that registration is a lot of work (58,5%). The other given reasons are displayed in the appendix (table Z16).

> *"Registration takes too much time"*

The table below shows that most of the respondents think they are not sufficiently involved with the development of the quality system (60,5%). Most of them said they do not need to be involved (more).

Table 21

Do you think the degree of involvement with the development of the quality system is sufficient?	N	%
Yes, I do not/ not so much need to be involved	25	17,0
Yes, I will be involved (in this degree)	33	22,4
No, I do not need to be involved (more)	56	38,1
No, I would like to be (more) involved	33	22,4
Total	***147***	***100***

Most of the nurses (51,3%), medical specialists (33,3%) and department heads (38,9%) think they are not sufficiently involved and they do not need to be involved (more). Most of the healthcare managers (37,5%) think they are not sufficiently involved and would like to be (more) involved. All three medical managers think they are sufficiently involved and they will be involved (in this degree). Most of the care coordinators (42,3%) also think this way. The other percentages and numbers are displayed in the appendix (table Z17).

At the end of the questionnaire, respondents made several different comments. Some comments were mentioned more times. Six respondents mentioned that it was hard to fill in the questionnaire, because they are insufficient aware of this subject/ this was not much applicable for their function. Furthermore five respondents said there is (too) much registration/ research , three respondents said there is less time for the patient due to registration and three respondents said it is important to focus not only on registration/ figures but also on what is done with it/ improvement/ real care.

4.2.9 Conclusion questionnaire results

Response
The questionnaire was filled in by a high number of medical specialists and by a high percentage of healthcare managers, department heads and operational managers as percentage of the total number to who the questionnaire was sent.

Components and added value
Most of the respondents are using the component 'results of VIM reports'. Results of Prospective Risk Inventarisation are used the least. Most of the healthcare managers and department heads are using the components. Medical specialists and nurses are mainly using VIM reports and reports of/ reaction on complaints. The most important reasons why respondents do not use components are that they do not know that component (especially mentioned by medical specialists and nurses) and that they do not have insight into the data (especially mentioned by care coordinators).
A most mentioned added value of the components of the quality system is that on the basis of these data improvement actions can be set up.
On departments there is mainly high or reasonable willingness to report.

Display
As regards to the opinion about the display of the components, most respondents think the display is fairly good. The display of VIM reports and reports of/reaction on complaints is found best and the display of Portal Gelre Inzicht/ KPI display is found least well.
The most preferred methods for displaying quality data are in one system and department specific. Furthermore data per subject and comparisons over several years are also much preferred. Most of the nurses do not have preference for this.

Delivery
The respondents mostly need VIM reports, reports of/ reaction on complaints and data about patient satisfaction/ PROMS/ PREMS to get an idea of the delivered quality. Quality data is most delivered by e-mail and it is discussed in work meetings. These methods are also most preferred by the respondents. A delivery method which is more preferred is delivery on the VISMO screen or in the newspaper. A delivery method which is less preferred is delivery by third parties.
Quality data is discussed every three months according to most of the care coordinators, medical specialists and nurses. Most of the healthcare managers and department heads said they discuss quality data once a month. Most of the respondents think this frequency is good.

Indicators
Most of the respondents do not use indicators. The indicators of the IGZ and the profession are used the most. A lot of respondents think there are too many indicators. They mainly prefer outcome and process indicators. Almost all nurses do not use indicators and many of them do not know which indicators have

the highest value.

Experiences
Many respondents think too much quality data is collected and they think it is not used enough to improve quality of care. Most of the nurses do not know this. The most mentioned reason for this is that quality data is not made transparent for everyone. Especially medical specialists and nurses said this. Another reason is that there is done nothing with improvement actions, because it is not clear who starts with the improvement actions and there is insufficient time.
Most of the respondents do not know if the quality data is reliable, and also a high percentage think the data is not reliable, especially because the registrations are incomplete.
Almost half of the number of respondents said there is not enough time to register quality data. Especially department heads and medical specialists said this. Reasons for this are a heavy workload and that registration is a lot of work.
Finally, the highest percentage of respondents said they are not sufficiently involved with the development of the quality system. But most of them do not need to be involved more (medical specialists, nurses and department heads). Only most of the healthcare managers would like to be involved more.

5. Analysis

5.1 Comparisons between literature data and collected data

There are both similarities and differences between the literature data and the data collected with the interviews and the questionnaire.

5.1.1 Similarities

Time/ effort
In literature, negative effects are mentioned of the use of a quality system, like an increase in workload/administrative burden. (KPMG Plexus, 2016)(Sluijs, E. et al, 2007) In the collected data, this was also a frequently mentioned barrier of quality registration. A lot of respondents in the questionnaire said they do not have enough time to register quality data because of a high workload or because registration is a lot of work. The interviewees mentioned the amount of work and time it takes to register and the lack of time as negative aspects as well.

Care improvement
Literature shows that quality data is not always used to improve care. (Visser, M., 2016) (Sluijs, E. et al, 2007)(Schoten, S.M. van, 2015) This is also found in the collected data. The questionnaire data show a lot of respondents think the data is not used enough for improvement of quality of care.

Indicators
The literature data show there are a lot of indicators and there are not many indicators about outcomes. (KPMG Plexus, 2016)(Algemene Rekenkamer, 2013) In the questionnaire data is found most of the respondents prefer outcome indicators and also one interviewee said this. Both the questionnaire data and the interview data show that many healthcare professionals think there are too many indicators. Furthermore the literature data show the usability of the indicators is low and the indicators are not used often to monitor and improve quality. (Algemene Rekenkamer, 2013)(Kringos, D.S. et al, 2012) The questionnaire data also show many respondents do not use indicators.

Existing data sources
In literature is found there is overlap in measurements and that existing data sources have to be used. (KPMG Plexus, 2016) In the interviews is mentioned three times that the data of the electronic patient dossier should be used.

Involvement
The literature data show healthcare professionals are not much involved with quality management. (Blumen, S.R. et al, 2010)(Sluijs, E. et al, 2007) The collected data also show that many healthcare professionals think they are not much/ sufficiently involved with the development of the quality system.

PDCA
In literature is mentioned that there must be continuous improvement, according to the PDCA circle, to have an efficient and effective quality system. (Jorissen, H.J. (2), 2007)(Sluijs, E. et al, 2007) (Sokovic, M. et al, 2010) In the interview data there was mentioned three times that PDCA (should) maintained with the quality system.

Use of quality data
Some barriers for the use of quality information, according to the literature, are lack of knowledge, high workload and effort. (Berwick, D.M. et al, 2003)(Visser, M., 2016)(Boyce, M.B. et al, 2014) (Wollersheim, H. et al, (3) 2011)
The collected data also show healthcare professionals do not register due to a heavy workload or the effort to register and they do not use components of the quality system because they do not know it.

Reliability
Literature shows there is diversity in the way of measuring and interpreting the data and hereby there is limited reliability of the registrations. (Kringos, D.S. et al, 2012) (KPMG Plexus, 2016) The questionnaire data show many respondents think the quality data is not reliable.

Important quality data
A study shows that client satisfaction, employee satisfaction and data about reports and complaints are mentioned a lot as important (indicators). (Sluijs, E. et al, 2002) In the questionnaire data, this is also the quality data that the highest number of respondents need the most. Furthermore patient satisfaction was mentioned a lot as important by the interviewees.

5.1.2 Differences

Involvement
In literature, the importance is shown of involvement of healthcare professionals with quality management. (Schellekens, W.M.L.C.M. et al, 2001) (Botje, D. et al, 2012)(Wardhani, V. et al, 2009)(Schoten, S.M. van, 2015)(Wollersheim, H. et al, (3) 2011) (Visser, M., 2016) (Jorissen, H.J.,(2) 2007) (Kunkel, S. et al, 2009) (Blumen, S.R. et al, 2010)(Weiner, B.J. et al, 2006)
However, the collected data show most of the healthcare professionals are not much/ sufficiently involved.

Reliability
Literature shows there is limited reliability of registrations, because of the diversity in the way of measuring, delivery and interpreting the data. (Kringos, D.S. et al, 2012) (KPMG Plexus, 2016) The questionnaire data show many respondents think the quality data is not reliable, because the data is not up to date or incomplete.

5.2 Comparisons between interview data and questionnaire data

There are both similarities and differences between the interview data and the questionnaire data.

5.2.1 Similarities

Components of the quality system
Prospective Risk Inventarisations are not done much according to the interviewees and according to the respondents of the questionnaire results of PRI's or not used often. VIM reports are done often according to the interviewees and respondents of the questionnaire use results of VIM reports much.

Willingness to report
Both the interview data and the questionnaire data show there is willingness (openness) to report on departments.

Display
Both the interview data and the questionnaire data show there is preference for the display of KPI's/ quality data on the VISMO screen on departments.
Furthermore there is most preference for data that is visible for everyone on the department, according to the interview data. The data of the questionnaire show that the respondents do not use components because they do not have insight into this data and that this is also a reason why quality data is not used enough to improve quality of care.
Moreover in both data there is mentioned high preference for department specific data and comparisons.

Patient satisfaction
Patient satisfaction data is mentioned a lot as important quality data/ data that is needed by the research population (both the respondents of the questionnaire and the interviewees).

Indicators
IGZ indicators are used the most by the research population and in both data there is mentioned there are too many indicators.

Time
In both the questionnaire data and the interview data the time it takes to register and the lack of time are mentioned as negative aspects/ barriers of quality registration.

Involvement
Most of the interviewees and respondents of the questionnaire said they are not (much/sufficiently) involved with the development of the quality system, but do not need this/more involvement.

Reliability
A reason that was mentioned in the questionnaire data why respondents think the quality data is not reliable, was that the data is not up to date. In the interview data there was also said more times that the data (of the KPI's) was not real time and that this was preferred by some interviewees.

5.2.2 Differences

Components of the quality system (complaints)
In the interviews is often said that reports of/ reaction on complaints has to be improved. But the opinion of the respondents of the questionnaire about the display of reports of/ reaction on complaints especially was good or fairly good.

Indicators
According to the questionnaire data, indicators of the profession are highly used. In the interviews, this type of indicators is only mentioned one time and DICA indicators are mentioned a lot.

Delivery
A highly preferred delivery method of the quality data according to the questionnaire data is in one system. This is not expressly mentioned in the interviews.
Furthermore delivery by third parties is really less preferred in the questionnaire data, which is not expressly mentioned in the interviews.

6. Discussion, conclusion and recommendations

6.1 Conclusion

In this research, the use, attitudes and needs of different groups of healthcare professionals (working at Gelre ziekenhuizen) are examined. The data is collected with literate review, interviews and a questionnaire. The most important findings are described below. By these findings, there have been formulated recommendations.

6.1.1 Components of the quality system

The component 'results of VIM reports' is used/done most and 'results of PRI' is used/ done the least. The most mentioned reasons for no use of components are that the healthcare professionals do not know the component or do not have insight into the data. Many medical specialists and nurses do not know components and many care coordinators do not have insight into the data.
The data that is most needed according to the healthcare professionals are patient satisfaction data and also VIM reports and complaints.
The willingness/ openness to report on departments is experiences as high or reasonable.

6.1.2 Indicator sets

Concerning the indicator sets, the most used indicators are indicators of the IGZ. Furthermore indicators of the profession are used a lot as well. There is mentioned a lot that the healthcare professionals think there are too many indicators.
A high number of healthcare professionals said they do not use indicator sets. Almost all nurses who were involved in this research do not use it. Furthermore a lot of nurses do not know their opinion about indicators and which indicators have the highest value. Outcome indicators were mentioned most as indicators with the highest value/ indicators were have to be more focus on. Also process indicators are mentioned a lot.

6.1.3 Display and delivery of quality data

There can be concluded that the healthcare professionals involved in this research prefer a clear and visible display of quality data for everyone on the department. Department specific data, comparisons (between different departments and especially over several years) and display in one system are mentioned most as preferences for the display of the data.
The most mentioned (preferred) delivery methods are with e-mail or in work meetings. Delivery of the data in the newspaper and especially on the VISMO screen are methods that are more preferred than is actually delivered. Delivery by third parties is much less preferred than is actually delivered.
The quality data is discussed once a month according to most of the healthcare managers and department heads and it is discussed every three months according to most of the care coordinators, medical specialists and nurses. This frequency is most experienced as good.

6.1.4 Experiences with the quality system

Many healthcare professionals said they do not have enough time to register quality data. Especially department heads and medical specialists said this. Reasons for this are a heavy workload and that registration is a lot of work/ takes a lot of time. Often it is mentioned that too much quality data is registered.
There is also often mentioned that the quality data is not used enough to improve care. Reasons for this are that the data is not made transparent for everyone involved with care delivery (most mentioned by medical specialists and nurses) and that there is done nothing with improvement actions. Reasons why there is done nothing with improvement actions are that it is not clear who starts with improvement actions and that there is insufficient time to do something with improvement actions.
Most of the healthcare professionals think the quality data is not reliable or they do not know if the data is reliable. The most mentioned reason why the data is not reliable, is that the registrations are incomplete. Another reasons is that the data is not up to date.
Regarding the involvement with the development of the quality system, most of the healthcare professionals in this research think they are not sufficiently involved with the development. But many of them do not need to be (more) involved, especially nurses, medical specialists and department heads. Most healthcare managers would like to be more involved.

6.2 Recommendations

Based on the information found in literature and with the interviews and questionnaire, different recommendations can be formulated. When these things will be applied, that can contribute to (improvement of) the use of quality data for quality of care improvement.

6.2.1 Components of the quality system

There has to be more attention for the components of the quality system, especially to medical specialists and nurses, so that they know the components and know where the components can be used for. The component 'results of Prospective Risk Inventarisation' needs most attention, and also the components 'reports of calamities' and 'Portal Gelre Inzicht/KPI display' because that are components that are the least used.
The components and the added value of it can be more explained in work meetings or with e-mail/newspaper. Then all healthcare professionals are informed about what is done to control quality and this can possibly increase the use of the data.

Furthermore the insight into data for care coordinators should be improved, especially for the components 'Portal Gelre Inzicht/KPI display', 'results of Prospective Risk Inventarisation' and 'reports of calamities'.

Moreover there has to be more attention for patient satisfaction data, also on the positive opinions. That data have to be made visible for the healthcare professionals, because that data is considered as important. When the positive opinions are shown as well, that will positively stimulate.

Furthermore the reactions on VIM reports could be made better and there could be analysed what healthcare professionals think there can be improved about the reactions.

6.2.2 Indicator sets

The number of indicators have to be reduced, in order to keep them useful. There has to be more/ most focus on outcomes indicators and also on process indicators. Structure indicators can have less attention/ can be reduced, because these indicators are experienced as less useful/ valuable. The indicators can be better aligned with the departments, so that there only have to be used indicators that are valuable/ relevant.
Most of the nurses do not use indicators and do not have an opinion about it. Possibly when the indicators are made more useful and more clear to them, this use will increase. Also the use of other healthcare professionals, mainly care coordinators and department heads, can hereby possibly increase.

6.2.3 Display and delivery of quality data

The quality data should be made better visible for every healthcare professional on departments. The data could be made (more) accessible on the VISMO screen or with the newspaper, because these delivery methods are more preferred than are actually used. Then everyone can choose by themselves or and when they look at the quality data. The delivery of data by third parties can be reduced, because this is less preferred.

The data have to be displayed in one system to make it easily accessible. There have to be an option to choose for data for one specific department. Furthermore, there has to be a possibility to make/ see comparisons of the data of different departments and especially of different periods/several years.

The display of the component 'Portal Gelre Inzicht' could be improved. Possibilities for improvement are on the field of the overview, the completeness and the clearness of the display.

6.2.4 Experiences with the quality system

The registrations/ registration time should be reduced. An idea to reach this, is to register more efficiently. This could be done with the use of existing data registrations (the electronic patient dossier) or the registrations could be better reviewed on utility. Registrations that are not useful, can be stopped so that the number of registrations can be reduced.

Furthermore the time it takes to register can be reduced, by making it more easy to register. Lack of time is a reasons why there is not always done something with improvement actions. When the registrations can be done more efficiently, it takes less time and therefore there is more time for improvement actions. Furthermore there has to be made more clear who is responsible for the establishment of improvement actions, so that more will be done with it.

Moreover the registrations could be made more complete, to contribute to the reliability of the quality data. Especially there can be analysed what is missing in the registrations according to healthcare managers, because many of them think the registrations are incomplete. Furthermore the data should be made more up to date/ there have to be better controlled if the data is up to date. Especially the KPI data.

Finally the group of healthcare managers should be more involved with quality improvement and the development of the quality system. The other groups of healthcare professionals do not have to be involved (more).

6.3 Strengths and limitations of the research

The questionnaire used in this research had a response of 25 percent. Furthermore the questionnaire was not send to all nurses working in Gelre ziekenhuizen, but only to a randomly chosen number of the total amount. Hereby a high number of healthcare professionals of Gelre ziekenhuizen did not participate in this research. Especially the groups of medical managers and operational managers where very small. There were only two operational managers and three medical managers who have participated in the questionnaire. So there could only say something about these respondents groups if they all had the same answer. Because of these things the results can give an incomplete picture of the use, attitudes and needs of the groups of healthcare professionals of the whole hospital. However, the number of respondents of the questionnaire (147) and the number of interviews (11) are not low, whereby the results can be representative for all healthcare professionals of Gelre ziekenhuizen.

Some respondents said it was hard to fill in the questionnaire, because they are insufficiently aware of the subject or the questions were not much applicable for their function. Furthermore, sometimes respondents gave multiple answers, whereby they got a question that was not applicable for them. Hereby it is possible that some given answers give a distorted picture of the real use, attitudes or needs, because the respondents cannot fill in the questions truthfully.

In addition to that limitations, there are also strengths of this research. This research is a multi-methods research. Both interviews and a questionnaire are used for the data collection. This improves the reliability and validity of the research and the collected information. The questionnaire was developed based on the interviews, so the answer options could be better developed with knowledge of the subject and the use, attitudes and needs of healthcare professionals. Furthermore there was a lot of data available for the analysis and this data could be compared.

6.4 Further research

Further research could be done about the quality system of other comparable hospitals. There can be examined which components that hospitals are using to make quality of care visible and how they are delivering and displaying the data. Possibly ideas can be obtained which can be used in Gelre ziekenhuizen. The results found with this research are possibly the same for healthcare professionals in other hospitals, but this can be validated by further research.

Furthermore the (open) answers and comparisons for different work functions in the questionnaire data could be further analysed. Answers that are mentioned only one time, can possibly provide ideas as well. Gelre ziekenhuizen can possibly do more with the differences between the different work functions, than only the most remarkable things that are emerged with this research.
There can also be made other comparisons with the data, for example differences can be analysed between healthcare professionals working at Gelre ziekenhuizen location Zutphen and location Apeldoorn.

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8. Appendices

8.1 Interview structure

8.1.1 Interviewees

Cardiology
1. Healthcare manager (Apeldoorn)
2. Department head (Zutphen)
3. Medical manager (Apeldoorn)

Surgery
4. Department head (Apeldoorn)
5. Department head (Zutphen)
6. Medical manager (Apeldoorn)
7. Medical manager (Zutphen)

MOD
8. Director SSC MOD
9. Quality officer MOD
10. Healthcare manager Radiology (Apeldoorn en Zutphen)

Directors
11. Director RVE (Zutphen)

8.1.2 E-mail for interviewees

Onderwerp: Onderzoek naar inzichtelijkheid en gebruik kwaliteitsdata

Geachte meneer/mevrouw,

Voor mijn afstudeeronderzoek kijk ik naar kwaliteitsregistraties en het gebruik van deze data voor het verbeteren van de kwaliteit van zorg. Doel van dit onderzoek is om te weten te komen welke kwaliteitsdata op welke wijze weergegeven kan worden om de inzichtelijkheid en bruikbaarheid hiervan te vergroten. Onderdeel van dit onderzoek zullen een aantal interviews zijn over het gebruik van kwaliteitsdata en informatiebehoeften op dit gebied. Het zou erg fijn zijn als ik u hiervoor zou mogen interviewen. De interviews zullen maximaal een uur duren en zullen worden opgenomen om verwerking mogelijk te maken. U zult benaderd worden voor een afspraak. Voor aanvang van het interview zal ik de onderwerpen toesturen die aan bod zullen komen.

Met vriendelijke groet,
Relinde Oudbier

8.1.3 Interview questions

Questions for the directors
(In the interview with the director of the MOD is also asked the difference between the quality system of the MOD and the quality system use in the remainder departments of the hospital)

Interview inzichtelijkheid en gebruik kwaliteitsdata

Algemeen

In hoeverre bent u op de hoogte van het kwaliteitssysteem dat gebruikt wordt binnen Gelre ziekenhuizen?

Onderdelen kwaliteitssysteem

Wat vindt u van de kwaliteitsmonitor (meerwaarde) en wat doet u hiermee?

Wat vindt u van interne audits (meerwaarde) en wat doet u met de informatie die hieruit naar voren komt?

Wat vindt u van PRI's (meerwaarde) en wat doet u met de informatie die hieruit naar voren komt?

Wat vindt u van de calamiteitenprocedure (meerwaarde) en wat doet u met rapportages hierover?

Wat vindt u van MIM en VIM meldingen (meerwaarde) en wat doet u met deze informatie?
- Openheid/ Bereidheid

Wat vindt u van de rapportage en terugkoppeling van klachten (meerwaarde) en wat doet u met deze informatie?

Wat doet u met de IGZ indicatoren die elk jaar worden opgesteld?
- Andere indicatorensets

Weergave kwaliteitsdata

Welke kwaliteitsdata wilt u kunnen zien/ heeft u nodig om een goed totaalbeeld te krijgen van de geleverde kwaliteit en eventuele verbeteringen?

Wat vindt u van de wijze waarop kwaliteitsdata wordt weergegeven en heeft u voorkeur voor een bepaalde weergave?
- Belang/ Betrouwbaarheid/ Vertrouwelijkheid

Wat zouden medewerkers op afdelingen volgens u moeten kunnen zien wat betreft kwaliteitsdata?

Is er kwaliteitsdata dat op dit moment nog niet wordt opgeslagen maar waarvan u wel graag zou willen dat het wordt vastgelegd?

Afsluiting

Hoe houdt u toezicht op het vastleggen en het gebruik van kwaliteitsdata?

Wat zijn uw goede en minder goede ervaringen met (onderdelen van) het kwaliteitssysteem?

Wie worden er betrokken bij de ontwikkeling van het kwaliteitssysteem binnen Gelre ziekenhuizen en wie zouden er volgens u bij betrokken moeten worden?

Heeft u een advies wat betreft het vastleggen, inzichtelijk maken en gebruiken van kwaliteitsdata?

Heeft u nog aanvullingen/opmerkingen/vragen?

Questions for the quality officer of the MOD

Interview inzichtelijkheid en gebruik kwaliteitsdata

Algemeen

Wat is uw functie/ welke werkzaamheden voert u uit?

In hoeverre bent u op de hoogte van het kwaliteitssysteem dat gebruikt wordt binnen Gelre ziekenhuizen?

Hoe ziet het kwaliteitssysteem dat de MOD gebruikt er uit?

Onderdelen kwaliteitssysteem

Wordt er gebruik gemaakt van een kwaliteitsmonitor? Zo ja, wat vindt u hiervan (meerwaarde) en wat wordt hiermee gedaan?

Wordt er gebruik gemaakt van interne audits? Zo ja, wat vindt u hiervan (meerwaarde) en wat wordt er gedaan met de informatie die hieruit naar voren komt?

Wordt er gebruik gemaakt van PRI's? Zo ja, wat vindt u hiervan (meerwaarde) en wat wordt er gedaan met de informatie die hieruit naar voren komt?

Wordt er gebruik gemaakt van een calamiteitenprocedure? Zo ja, wat vindt u hiervan (meerwaarde) en wat wordt er met rapportages hierover gedaan?

Wordt er gebruik gemaakt van MIM en VIM meldingen? Zo ja, wat vindt u hiervan (meerwaarde) en wat wordt er met deze informatie gedaan?

- Openheid/ Bereidheid

Wordt er gebruik gemaakt van een rapportage en terugkoppeling van klachten? Zo ja, wat vindt u hiervan (meerwaarde) en wat wordt er met deze informatie gedaan?

Zijn er nog andere onderdelen van het kwaliteitssysteem die nog niet genoemd zijn? Zo ja, welke zijn dit en wat wordt er met deze data gedaan (meerwaarde)?

Bent u op de hoogte van de IGZ indicatoren die elk jaar worden opgesteld en wat doet u hiermee?

- Andere indicatorensets

Weergave kwaliteitsdata

Wat voor systeem wordt er gebruikt voor de weergave van kwaliteitsdata (iProva of een ander systeem)?

Wat vindt u van deze weergave?

- Belang/ Betrouwbaarheid/ Vertrouwelijkheid

Wat krijgen medewerkers op afdelingen te zien wat betreft kwaliteitsdata en wat zouden ze volgens u moeten kunnen zien?

Is er kwaliteitsdata dat op dit moment nog niet wordt opgeslagen maar waarvan u wel graag zou willen dat het wordt vastgelegd?

Afsluiting

Wat zijn uw goede en minder goede ervaringen met (onderdelen van) het kwaliteitssysteem?

Wie worden er betrokken bij de ontwikkeling van het kwaliteitssysteem en wie zouden er volgens u bij betrokken moeten worden?

Heeft u een advies voor Gelre ziekenhuizen wat betreft het vastleggen, inzichtelijk maken en gebruiken van kwaliteitsdata?

Heeft u nog aanvullingen/opmerkingen/vragen?

Questions for the healthcare managers, department heads and medical managers

Interview inzichtelijkheid en gebruik kwaliteitsdata

Algemeen

Wat is uw functie/ welke werkzaamheden voert u uit?

In hoeverre bent u op de hoogte van het kwaliteitssysteem dat gebruikt wordt binnen Gelre ziekenhuizen?

Onderdelen kwaliteitssysteem

Wat vindt u van de kwaliteitsmonitor (meerwaarde) en wat doet u hiermee?

Wat vindt u van interne audits (meerwaarde) en wat doet u met de informatie die hieruit naar voren komt?

Wat vindt u van PRI's (meerwaarde) en wat doet u met de informatie die hieruit naar voren komt?

Wat vindt u van de calamiteitenprocedure (meerwaarde) en wat doet u met rapportages hierover ?

Wat vindt u van MIM en VIM meldingen (meerwaarde) en wat doet u met deze informatie?

- Openheid/ Bereidheid

Wat vindt u van de rapportage en terugkoppeling van klachten (meerwaarde) en wat doet u met deze informatie?

Bent u op de hoogte van de IGZ indicatoren die elk jaar worden opgesteld en wat doet u hiermee?

- Andere indicatorensets

Weergave kwaliteitsdata

Welke kwaliteitsdata wilt u kunnen zien/ heeft u nodig, om inzage te krijgen in de geleverde kwaliteit en eventuele verbeteringen?

- Hoe vaak inzage
- Kwaliteitsdata over welke periode

Wat vindt u van de wijze waarop kwaliteitsdata wordt weergegeven en heeft u voorkeur voor een bepaalde weergave?

- Belang/ Betrouwbaarheid/ Vertrouwelijkheid

Wat krijgen medewerkers op uw afdeling te zien wat betreft kwaliteitsdata en wat zouden ze volgens u moeten kunnen zien?

- Wordt dit besproken

Is er kwaliteitsdata dat op dit moment nog niet wordt opgeslagen of aangeleverd maar waarvan u wel graag zou willen dat het voor u inzichtelijk wordt?

Afsluiting

Wat zijn uw goede en minder goede ervaringen met (onderdelen van) het kwaliteitssysteem?

Vindt u dat u voldoende betrokken wordt bij de ontwikkeling van het kwaliteitssysteem binnen Gelre ziekenhuizen?

Heeft u een advies wat betreft het vastleggen, inzichtelijk maken en gebruiken van kwaliteitsdata?

Heeft u nog aanvullingen/opmerkingen/vragen?

8.2 Questionnaire structure

8.2.1 Respondents

The online questionnaire has been sent to in Gelre ziekenhuizen working:

- Healthcare managers
- Department heads
- Operational managers
- Medical managers
- Care coordinators
- Medical specialists
- Nurses

8.2.2. E-mail for respondents

Graag wil ik u uitnodigen om deze vragenlijst in te vullen.

De vragenlijst is een onderdeel van mijn afstudeeronderzoek vanuit de afdeling Patiëntveiligheid en Zorgkwaliteit. Met dit onderzoek kijk ik naar de inzichtelijkheid en het gebruik van kwaliteitsdata in Gelre ziekenhuizen en wat hierin verbeterd zou kunnen worden, zodat deze data gebruikt kan worden voor het verbeteren van de kwaliteit van zorg.
U kunt de vragenlijst invullen tot en met 29 september. De uitkomsten zullen vertrouwelijk en anoniem behandeld worden. Het zou erg fijn zijn als u deel wilt nemen aan dit onderzoek!

U opent de vragenlijst door middel van de link onderaan dit bericht.

Met vriendelijke groet,
Relinde Oudbier

8.2.3 Introduction of the questionnaire

De vragenlijst bestaat uit vijf onderdelen:

- Algemene vragen
- Onderdelen van het kwaliteitssysteem dat gebruikt wordt binnen Gelre ziekenhuizen
- Indicatorensets
- Weergave van kwaliteitsdata
- Ervaringen met het kwaliteitssysteem

Door rechtsonder op de pagina op Volgende> te klikken gaat u naar de volgende pagina met vragen. Door op <Vorige te klikken gaat u naar de vorige pagina waardoor u eventueel nog antwoorden kunt aanpassen. Door op Verzenden te klikken worden de vragen verstuurd.

Door linksonder op de pagina op Opslaan te klikken kunt u de vragenlijst tussentijds opslaan en op een later moment completeren. Ter herinnering ontvangt u via Outlook een mail met daarin een link om de zelfevaluatie opnieuw te openen bij de laatst ingevulde vraag.

8.2.4 Questions

Algemene vragen

1. Wat is uw geslacht?
   - ○ Man
   - ○ Vrouw

2. Tot welke leeftijdscategorie behoort u?
   - ○ < 20 jaar
   - ○ 20-29 jaar
   - ○ 30-39 jaar
   - ○ 40-49 jaar
   - ○ 50-59 jaar
   - ○ > 59 jaar

3. Welke functie heeft u binnen Gelre ziekenhuizen?
   - ○ Zorgmanager
   - ○ Afdelingshoofd
   - ○ Operationeel leidinggevende
   - ○ Medisch manager
   - ○ Zorgcoördinator
   - ○ Medisch specialist
   - ○ Verpleegkundige

4. Hoeveel jaar bent u werkzaam in deze functie?
   - ○ < 2 jaar
   - ○ 2-5 jaar
   - ○ 6-9 jaar
   - ○ 10-13 jaar
   - ○ 14-17 jaar
   - ○ 18-21 jaar
   - ○ 22-25 jaar
   - ○ > 25 jaar

5. Binnen welke locatie van Gelre ziekenhuizen bent u werkzaam?
   - ○ Gelre ziekenhuizen Apeldoorn
   - ○ Gelre ziekenhuizen Zutphen
   - ○ Beide locaties

6. Op welke afdeling bent u werkzaam? (Een antwoord op deze vraag is niet verplicht)

……..

Onderdelen kwaliteitssysteem: gebruik en meerwaarde
Een kwaliteitssysteem wordt gebruikt om kwaliteit te waarborgen en inzichtelijk en toetsbaar te maken. De volgende vragen hebben betrekking op het kwaliteitssysteem dat gebruikt wordt binnen Gelre ziekenhuizen.

Maakt u gebruik van:

7. Portaal Gelre Inzicht/ KPI weergave	○ Ja	○ Nee
8. Resultaten van audits/ tracers	○ Ja	○ Nee
9. Resultaten van Prospectieve Risico Inventarisatie (PRI)	○ Ja	○ Nee
10. Calamiteitenrapportages	○ Ja	○ Nee
11. Resultaten van VIM meldingen	○ Ja	○ Nee
12. Rapportage/ terugkoppeling van klachten	○ Ja	○ Nee

Deze vragen worden alleen gesteld bij de onderdelen met het antwoord 'nee' op vraag 7-12.
Waarom maakt u geen gebruik van: *(Selectie van meerdere antwoorden toegestaan)*

13. Portaal Gelre Inzicht/ KPI weergave	O Ik ken dit onderdeel niet	O Ik vind dat dit onderdeel geen meerwaarde heeft	O Ik heb geen tijd om van dit onderdeel gebruik te maken	O Ik heb geen inzage in deze data	O Anders
14. Resultaten van audits/ tracers	O Ik ken dit onderdeel niet	O Ik vind dat dit onderdeel geen meerwaarde heeft	O Ik heb geen tijd om van dit onderdeel gebruik te maken	O Ik heb geen inzage in deze data	O Anders
15. Resultaten van Prospectieve Risico Inventarisatie (PRI)	O Ik ken dit onderdeel niet	O Ik vind dat dit onderdeel geen meerwaarde heeft	O Ik heb geen tijd om van dit onderdeel gebruik te maken	O Ik heb geen inzage in deze data	O Anders
16. Calamiteiten rapportages	O Ik ken dit onderdeel niet	O Ik vind dat dit onderdeel geen meerwaarde heeft	O Ik heb geen tijd om van dit onderdeel gebruik te maken	O Ik heb geen inzage in deze data	O Anders
17. Resultaten van VIM meldingen	O Ik ken dit onderdeel niet	O Ik vind dat dit onderdeel geen meerwaarde heeft	O Ik heb geen tijd om van dit onderdeel gebruik te maken	O Ik heb geen inzage in deze data	O Anders
18. Rapportage/ terugkoppeling van klachten	O Ik ken dit onderdeel niet	O Ik vind dat dit onderdeel geen meerwaarde heeft	O Ik heb geen tijd om van dit onderdeel gebruik te maken	O Ik heb geen inzage in deze data	O Anders

Deze vragen worden gesteld bij het antwoord 'Anders' op vraag 13-18.

19. Namelijk (Portaal Gelre Inzicht/ KPI weergave): ……
20. Namelijk (Resultaten van audits/tracers): ……
21. Namelijk (Resultaten van Prospectieve Risico Inventarisatie (PRI): ……
22. Namelijk (Calamiteitenrapportages): ……
23. Namelijk (Resultaten van VIM meldingen): ……..
24. Namelijk (Rapportage/ terugkoppeling van klachten): ……

Deze vragen worden alleen gesteld bij de onderdelen met het antwoord 'Ik vind dat dit onderdeel geen meerwaarde heeft' op vraag 13-18.

Waarom heeft … volgens u geen meerwaarde? *(Selectie van meerdere antwoorden toegestaan)*

25. Portaal Gelre Inzicht/ KPI weergave	○ Deze informatie geeft geen inzicht in de geleverde kwaliteit	○ Deze informatie is niet bruikbaar voor het opzetten van verbeteracties	○ Anders
26. Resultaten van audits/ tracers	○ Deze informatie geeft geen inzicht in de geleverde kwaliteit	○ Deze informatie is niet bruikbaar voor het opzetten van verbeteracties	○ Anders
27. Resultaten van Prospectieve Risico Inventarisatie (PRI)	○ Deze informatie geeft geen inzicht in de geleverde kwaliteit	○ Deze informatie is niet bruikbaar voor het opzetten van verbeteracties	○ Anders
28. Calamiteiten rapportages	○ Deze informatie geeft geen inzicht in de geleverde kwaliteit	○ Deze informatie is niet bruikbaar voor het opzetten van verbeteracties	○ Anders
29. Resultaten van VIM meldingen	○ Deze informatie geeft geen inzicht in de geleverde kwaliteit	○ Deze informatie is niet bruikbaar voor het opzetten van verbeteracties	○ Anders
30. Rapportage/ terugkoppeling van klachten	○ Deze informatie geeft geen inzicht in de geleverde kwaliteit	○ Deze informatie is niet bruikbaar voor het opzetten van verbeteracties	○ Anders

Deze vragen worden gesteld bij het antwoord 'Anders' op vraag 25-30.

31. Namelijk (Portaal Gelre Inzicht/ KPI weergave): ……
32. Namelijk (Resultaten van audits/tracers): ……
33. Namelijk (Resultaten van Prospectieve Risico Inventarisatie (PRI): ……
34. Namelijk (Calamiteitenrapportages): ……
35. Namelijk (Resultaten van VIM meldingen): ……..
36. Namelijk (Rapportage/ terugkoppeling van klachten): ……

Onderdelen waarbij het antwoord 'nee' is gegeven op vraag 7-12, zullen bij deze vragen niet weergegeven worden.
Wat is voor u de meerwaarde van: *(Selectie van meerdere antwoorden toegestaan)*

37. Portaal Gelre Inzicht/ KPI weergave	O Er wordt inzicht verkregen (in hoe processen verlopen/ in de geleverde kwaliteit)	O Er kunnen vergelijkingen gemaakt worden (tussen afdelingen/ tussen periodes)	O Er kunnen aan de hand van deze data verbeter acties opgezet worden	O Aan de hand van deze data kan aangestuurd worden	O Deze data kan gebruikt worden om de geleverde kwaliteit te bespreken	O Dit onderdeel heeft voor mij geen meerwaarde	O Anders
38. Resultaten van audits/ tracers	O Er wordt inzicht verkregen (in hoe processen verlopen/ in de geleverde kwaliteit)	O Er kunnen vergelijkingen gemaakt worden (tussen afdelingen/ tussen periodes)	O Er kunnen aan de hand van deze data verbeter acties opgezet worden	O Aan de hand van deze data kan aangestuurd worden	O Deze data kan gebruikt worden om de geleverde kwaliteit te bespreken	O Dit onderdeel heeft voor mij geen meerwaarde	O Anders
39. Resultaten van Prospectieve Risico Inventarisatie (PRI)	O Er wordt inzicht verkregen (in hoe processen verlopen/ in de geleverde kwaliteit)	O Er kunnen vergelijkingen gemaakt worden (tussen afdelingen/ tussen periodes)	O Er kunnen aan de hand van deze data verbeter acties opgezet worden	O Aan de hand van deze data kan aangestuurd worden	O Deze data kan gebruikt worden om de geleverde kwaliteit te bespreken	O Dit onderdeel heeft voor mij geen meerwaarde	O Anders
40. Calamiteiten rapportages	O Er wordt inzicht verkregen (in hoe processen verlopen/ in de geleverde kwaliteit)	O Er kunnen vergelijkingen gemaakt worden (tussen afdelingen/ tussen periodes)	O Er kunnen aan de hand van deze data verbeter acties opgezet worden	O Aan de hand van deze data kan aangestuurd worden	O Deze data kan gebruikt worden om de geleverde kwaliteit te bespreken	O Dit onderdeel heeft voor mij geen meerwaarde	O Anders

41. Resultaten van VIM meldingen	O Er wordt inzicht verkregen (in hoe processen verlopen/ in de geleverde kwaliteit)	O Er kunnen vergelijkingen gemaakt worden (tussen afdelingen/ tussen periodes)	O Er kunnen aan de hand van deze data verbeter acties opgezet worden	O Aan de hand van deze data kan aangestuurd worden	O Deze data kan gebruikt worden om de geleverde kwaliteit te bespreken	O Dit onderdeel heeft voor mij geen meerwaarde	O Anders
42. Rapportage/ terug koppeling van klachten	O Er wordt inzicht verkregen (in hoe processen verlopen/ in de geleverde kwaliteit)	O Er kunnen vergelijkingen gemaakt worden (tussen afdelingen/ tussen periodes)	O Er kunnen aan de hand van deze data verbeter acties opgezet worden	O Aan de hand van deze data kan aangestuurd worden	O Deze data kan gebruikt worden om de geleverde kwaliteit te bespreken	O Dit onderdeel heeft voor mij geen meerwaarde	O Anders

Deze vragen worden gesteld bij het antwoord 'Anders' op vraag 37-42.

43. Namelijk (Portaal Gelre Inzicht/ KPI weergave): ……
44. Namelijk (Resultaten van audits/tracers): ……
45. Namelijk (Resultaten van Prospectieve Risico Inventarisatie (PRI): ……
46. Namelijk (Calamiteitenrapportages): ……
47. Namelijk (Resultaten van VIM meldingen): ……..
48. Namelijk (Rapportage/ terugkoppeling van klachten): ……

Bij de onderdelen met het antwoord 'dit onderdeel heeft voor mij geen meerwaarde' op vraag 37-42 zullen deze vragen gesteld worden.

Waarom heeft … volgens u geen meerwaarde? *(Selectie van meerdere antwoorden toegestaan)*

49. Portaal Gelre Inzicht/ KPI weergave	○ Deze informatie geeft geen inzicht in de geleverde kwaliteit	○ Deze informatie is niet bruikbaar voor het opzetten van verbeteracties	○ Anders
50. Resultaten van audits/ tracers	○ Deze informatie geeft geen inzicht in de geleverde kwaliteit	○ Deze informatie is niet bruikbaar voor het opzetten van verbeteracties	○ Anders
51. Resultaten van Prospectieve Risico Inventarisatie (PRI)	○ Deze informatie geeft geen inzicht in de geleverde kwaliteit	○ Deze informatie is niet bruikbaar voor het opzetten van verbeteracties	○ Anders

52. Calamiteiten rapportages	○ Deze informatie geeft geen inzicht in de geleverde kwaliteit	○ Deze informatie is niet bruikbaar voor het opzetten van verbeteracties	○ Anders
53. Resultaten van VIM meldingen	○ Deze informatie geeft geen inzicht in de geleverde kwaliteit	○ Deze informatie is niet bruikbaar voor het opzetten van verbeteracties	○ Anders
54. Rapportage/ terugkoppeling van klachten	○ Deze informatie geeft geen inzicht in de geleverde kwaliteit	○ Deze informatie is niet bruikbaar voor het opzetten van verbeteracties	○ Anders

Deze vragen zullen gesteld worden bij het antwoord 'Anders' op vraag 49-54.

55. Namelijk (Portaal Gelre Inzicht/ KPI weergave): ……
56. Namelijk (Resultaten van audits/tracers): ……
57. Namelijk (Resultaten van Prospectieve Risico Inventarisatie (PRI): ……
58. Namelijk (Calamiteitenrapportages): ……
59. Namelijk (Resultaten van VIM meldingen): ……..
60. Namelijk (Rapportage/ terugkoppeling van klachten): ……

Onderdelen kwaliteitssysteem: weergave

Onderdelen waarbij het antwoord 'ik ken dit onderdeel niet' of 'ik heb geen inzage in deze data' is gegeven op vraag 13-18, zullen bij deze vragen niet weergegeven worden.
Wat vindt u van de weergave van:

61. Portaal Gelre Inzicht/ KPI weergave	○ Goed	○ Redelijk goed	○ Niet goed
62. Resultaten van audits/ tracers	○ Goed	○ Redelijk goed	○ Niet goed
63. Resultaten van Prospectieve Risico Inventarisatie (PRI)	○ Goed	○ Redelijk goed	○ Niet goed
64. Calamiteiten rapportages	○ Goed	○ Redelijk goed	○ Niet goed
65. Resultaten van VIM meldingen	○ Goed	○ Redelijk goed	○ Niet goed
66. Rapportage/ terugkoppeling van klachten	○ Goed	○ Redelijk goed	○ Niet goed

Deze vraag wordt alleen gesteld bij het antwoord 'niet goed' op vraag 61.

67. Waarom vindt u deze weergave niet goed? (*Selectie van meerdere antwoorden toegestaan)*
    (Portaal Gelre Inzicht/ KPI weergave)
    - o De weergave is onoverzichtelijk
    - o De weergave is onduidelijk
    - o De weergave is onvolledig
    - o Er wordt geen totaalbeeld gegeven
    - o Anders, namelijk……..

Deze vraag wordt alleen gesteld bij het antwoord 'niet goed' op vraag 62.

68. Waarom vindt u deze weergave niet goed? (*Selectie van meerdere antwoorden toegestaan)*
    (Resultaten van audits/ tracers)
    - o De weergave is onoverzichtelijk
    - o De weergave is onduidelijk
    - o De weergave is onvolledig
    - o Er wordt geen totaalbeeld gegeven
    - o Anders, namelijk……..

Deze vraag wordt alleen gesteld bij het antwoord 'niet goed' op vraag 63.

69. Waarom vindt u deze weergave niet goed? (*Selectie van meerdere antwoorden toegestaan)*
    (Resultaten van Prospectieve Risico Inventarisatie (PRI))
    - o De weergave is onoverzichtelijk
    - o De weergave is onduidelijk
    - o De weergave is onvolledig
    - o Er wordt geen totaalbeeld gegeven
    - o Anders, namelijk……..

Deze vraag wordt alleen gesteld bij het antwoord 'niet goed' op vraag 64.

70. Waarom vindt u deze weergave niet goed? (*Selectie van meerdere antwoorden toegestaan)*
    (Calamiteitenrapportages)
    - o De weergave is onoverzichtelijk
    - o De weergave is onduidelijk
    - o De weergave is onvolledig
    - o Er wordt geen totaalbeeld gegeven
    - o Anders, namelijk……..

Deze vraag wordt alleen gesteld bij het antwoord 'niet goed' op vraag 65.

71. Waarom vindt u deze weergave niet goed? (*Selectie van meerdere antwoorden toegestaan)*
    (Resultaten van VIM meldingen)
    - o De weergave is onoverzichtelijk
    - o De weergave is onduidelijk
    - o De weergave is onvolledig
    - o Er wordt geen totaalbeeld gegeven
    - o Anders, namelijk…….

Deze vraag wordt alleen gesteld bij het antwoord 'niet goed' op vraag 66.

72. Waarom vindt u deze weergave niet goed? (*Selectie van meerdere antwoorden toegestaan)*
    (Rapportage/ terugkoppeling van klachten)
    - De weergave is onoverzichtelijk
    - De weergave is onduidelijk
    - De weergave is onvolledig
    - Er wordt geen totaalbeeld gegeven
    - Anders, namelijk……..

Onderdelen kwaliteitssysteem

Als bij het onderdeel 'Portaal Gelre Inzicht/KPI weergave' het antwoord 'nee' is gegeven op vraag 7, zal deze vraag niet weergegeven worden.

73. Hoe vaak bekijkt u gemiddeld het Portaal Gelre Inzicht/KPI weergave?
    - Elke dag
    - Eén keer per week
    - Eén keer per twee weken
    - Eén keer per maand
    - Anders, namelijk…….

Als bij het onderdeel 'Resultaten van VIM meldingen' het antwoord 'ik ken dit onderdeel niet' is gegeven op vraag 17, zal deze vraag niet weergegeven worden.

74. Als u een VIM melding doet, krijgt u dan te horen wat er mee gedaan is?
    - Nee, ik hoef er ook niets van terug te horen
    - Nee, ik zou wel graag een terugkoppeling willen krijgen
    - Ja, maar deze terugkoppeling zou beter kunnen
    - Ja, ik vind de terugkoppeling prima
    - Ik heb nog nooit een VIM melding gedaan

Als bij het onderdeel 'Resultaten van VIM meldingen' het antwoord 'ik ken dit onderdeel niet' is gegeven op vraag 17, zal deze vraag niet weergegeven worden.

75. Hoe ervaart u de bereidheid om te melden als er iets (bijna) fout gaat op de afdeling waarin u werkzaam bent?
    - Geen bereidheid
    - Lage bereidheid
    - Bereidheid in redelijke mate
    - Hoge bereidheid

Deze vraag wordt alleen gesteld bij de antwoorden 'geen bereidheid' en 'lage bereidheid' op vraag 75.

76. Heeft u een idee waardoor het komt dat er op de afdeling geen of lage bereidheid is om een melding te doen? *(Selectie van meerdere antwoorden toegestaan)*

o Men heeft geen tijd voor het doen van een melding
o Men is onvoldoende op de hoogte van de mogelijkheid voor het doen van een melding
o Men meldt niet doordat er niks met een melding gedaan wordt
o Men meldt niet doordat er al veel van hetzelfde gemeld is
o Men ziet geen meerwaarde van het doen van een melding
o Er heerst angst voor de gevolgen van het doen van een melding
o Ik weet niet waardoor dit komt
o Anders, namelijk……

77. Zijn er nog onderdelen van het kwaliteitssysteem die u in de vorige vragen gemist heeft? (Een antwoord op deze vraag is niet verplicht)

……..

78. Geeft het kwaliteitssysteem naar uw mening voldoende informatie over het gehele zorgproces?
    - o Ja
    - o Nee
    - o Weet ik niet

Deze vraag wordt gesteld bij het antwoord 'nee' op vraag 78.

79. Over welke onderdelen binnen het zorgproces wordt volgens u onvoldoende informatie gegeven?
    ……

Indicatorensets

80. Van welke indicatorensets maakt u gebruik? *(Selectie van meerdere antwoorden toegestaan)*
    - o DICA indicatoren
    - o IGZ (Inspectie voor de Gezondheidszorg) indicatoren
    - o ZiNL (Zorginstituut Nederland) indicatoren
    - o Indicatoren van de zorgverzekeraar
    - o Indicatoren van de beroepsgroep
    - o Anders, namelijk……..
    - o Ik maak geen gebruik van indicatorensets

Deze vraag wordt niet gesteld bij het antwoord 'Ik maak geen gebruik van indicatorensets' op vraag 80.

81. Wat doet u met de indicatorensets? *(Selectie van meerdere antwoorden toegestaan)*
    - o Ik lees ze door
    - o Ik word er over geïnformeerd
    - o De indicatoren worden besproken
    - o Ik vul er vragenlijsten voor in
    - o Ik stuur processen aan op basis van de indicatoren / pas ze toe in jaarplannen
    - o Ik ga na of aan de indicatoren wordt voldaan
    - o Ik onderneem verbeteracties op basis van de indicatoren
    - o Anders, namelijk……

82. Wat vindt u (over het algemeen) van de indicatorensets? *(Selectie van meerdere antwoorden toegestaan)*
    - Ik vind de indicatorensets waardevol
    - Ik vind de indicatorensets niet waardevol
    - Ik vind dat er te veel indicatoren uitgevraagd worden
    - Ik vind dat er voldoende indicatoren uitgevraagd worden
    - Ik vind dat er te weinig indicatoren uitgevraagd worden
    - Ik vind dat er overlap bestaat in uitgevraagde indicatoren
    - Ik vind de indicatorensets duidelijk
    - Ik vind de indicatorensets onduidelijk
    - Anders, namelijk……
    - Weet ik niet

83. Wat voor indicatoren hebben naar uw mening de hoogste waarde? *(Selectie van meerdere antwoorden toegestaan)*
    - Structuurindicatoren
    - Procesindicatoren
    - Uitkomstindicatoren
    - Weet ik niet

Weergave kwaliteitsdata: aanlevering

84. Welke kwaliteitsdata heeft u nodig om een goed beeld te krijgen van de geleverde kwaliteit op de afdeling waarin u werkzaam bent? *(Selectie van meerdere antwoorden toegestaan)*
    - Data uit het Portaal Gelre Inzicht/ KPI weergave
    - Resultaten van audits/tracers
    - Resultaten van PRI's
    - Calamiteitenrapportages
    - Resultaten van VIM meldingen
    - Rapportage/ terugkoppeling van klachten
    - Data over patiënttevredenheid/ PREMS (Patient Reported Experience Measures) / PROMS (Patient Reported Outcome Measures)
    - Data over medewerkerstevredenheid
    - Resultaten van visitaties
    - Aandoeningsspecifieke registraties
    - Anders, namelijk…….
    - Ik heb geen kwaliteitsdata nodig

85. Hoe krijgt u data uit het kwaliteitssysteem aangeleverd? *(Selectie van meerdere antwoorden toegestaan)*
    - Uitkomsten worden in een vergadering of werkoverleg medegedeeld/besproken
    - Uitkomsten worden via de mail toegestuurd
    - Via berichtgeving in de nieuwsbrief
    - De data kan ik zelf uit het interne systeem halen
    - De data wordt weergegeven in Portaal Gelre Inzicht
    - De data wordt aangeleverd door derde partijen
    - Uitkomsten worden weergegeven met klokken die op de afdeling hangen
    - Uitkomsten worden weergegeven op het VISMO bord die op de afdeling hangt
    - Anders, namelijk……..
    - Ik krijg deze data niet te zien/aangeleverd

86. Hoe zou u de kwaliteitsdata aangeleverd willen hebben? *(Selectie van meerdere antwoorden toegestaan)*
    - Uitkomsten worden in een vergadering of werkoverleg medegedeeld/besproken
    - Uitkomsten worden via de mail toegestuurd
    - Via berichtgeving in de nieuwsbrief
    - De data kan ik zelf uit het interne systeem halen
    - De data wordt weergegeven in Portaal Gelre Inzicht
    - De data wordt aangeleverd door derde partijen
    - Uitkomsten worden weergegeven met klokken die op de afdeling hangen
    - Uitkomsten worden weergegeven op het VISMO bord die op de afdeling hangt
    - Anders, namelijk…….
    - Ik heb hier geen voorkeur voor

87. Hoe vaak wordt kwaliteitsdata besproken in een vergadering of werkoverleg?
    - Eén keer per week
    - Om de week
    - Eén keer per maand
    - Eén keer per kwartaal
    - Eén keer per half jaar
    - Eén keer per jaar
    - Anders, namelijk…….
    - Dit wordt nooit besproken

88. Wat vindt u van de frequentie waarmee kwaliteitsdata besproken wordt?
    - Te hoog
    - Goed
    - Te laag

Weergave kwaliteitsdata: inzage

89. Heeft u voorkeur voor een manier van weergeven van kwaliteitsdata? *(Selectie van meerdere antwoorden toegestaan)*
    - In één systeem
    - In verschillende systemen per onderdeel van het kwaliteitssysteem
    - Met klokken op de afdeling
    - Op het VISMO bord op de afdeling
    - Anders, namelijk……..
    - Ik heb hier geen voorkeur voor

90. Hoe ziet u de kwaliteitsdata het liefst? *(Selectie van meerdere antwoorden toegestaan)*
    - Gelre breed
    - Afdelingsspecifiek
    - Per onderwerp
    - Overkoepelende onderwerpen
    - Weergave van terugkerende problemen
    - Weergave van best practices
    - Vergelijkingen over een aantal jaar
    - Vergelijkingen met andere afdelingen
    - Anders, namelijk……..
    - Ik heb hier geen voorkeur voor

91. Over welke periode zou u kwaliteitsdata in willen zien?
    - Alle kwaliteitsdata die ooit vastgelegd is
    - Data tot 5 jaar terug
    - Data tot 2 jaar terug
    - Data tot 1 jaar terug
    - Data tot ½ jaar terug
    - Data tot 1 maand terug
    - Anders, namelijk……

92. Is er kwaliteitsdata waar u nog geen inzage in heeft, maar wel graag inzage in zou willen hebben?
    - Ja
    - Nee
    - Weet ik niet

Deze vraag wordt gesteld na het antwoord 'ja' op vraag 92.

93. Namelijk: ……..

Ervaringen met het kwaliteitssysteem

94. Wat vindt u van de hoeveelheid kwaliteitsdata die vastgelegd wordt?
    - Te weinig
    - Goed
    - Te veel
    - Weet ik niet

95. Wordt kwaliteitsdata naar uw idee voldoende gebruikt voor het verbeteren van de zorg?
    - Ja
    - Nee
    - Weet ik niet

Deze vraag wordt alleen gesteld bij het antwoord 'nee' op vraag 95.

96. Waarom wordt kwaliteitsdata naar uw idee onvoldoende gebruikt voor het verbeteren van de zorg? *(Selectie van meerdere antwoorden toegestaan)*
    - Er wordt niets gedaan met verbeterpunten
    - Kwaliteitsdata wordt niet inzichtelijk gemaakt voor iedereen die betrokken is bij het leveren van de zorg
    - Anders, namelijk……

Deze vraag wordt gesteld bij het antwoord 'Er wordt niets gedaan met verbeterpunten' op vraag 96.

97. Waarom wordt er naar uw idee niets gedaan met verbeterpunten? *(Selectie van meerdere antwoorden toegestaan)*
    - Er is onvoldoende tijd om hiermee bezig te gaan
    - Er is onvoldoende kennis om hiermee bezig te gaan
    - Het is onduidelijk wie de verbeterpunten op moet pakken
    - Weet ik niet
    - Anders, namelijk…….....

98. Is er naar uw idee kwaliteitsdata die al wel wordt vastgelegd, maar nog niet gebruikt wordt voor het inzichtelijk maken en verbeteren van kwaliteit?
    - Ja
    - Nee
    - Weet ik niet

Deze vraag wordt gesteld na het antwoord 'ja' op vraag 98.

99. Namelijk: ……..

Ervaringen met het kwaliteitssysteem

100. Vindt u dat de kwaliteitsdata betrouwbaar overkomt? (*Selectie van meerdere antwoorden toegestaan)*
    - Ja
    - Nee, de data is niet up-to-date
    - Nee, de registraties zijn niet volledig
    - Weet ik niet
    - Anders, namelijk……..

101. Heeft u genoeg tijd om kwaliteitsdata te registreren?
    - Ja
    - Nee
    - Ik registreer geen kwaliteitsdata

Deze vraag wordt gesteld na het antwoord 'Ik registreer geen kwaliteitsdata' op vraag 101.

102. Dit wordt geregistreerd door: *(Selectie van meerdere antwoorden toegestaan)*
   - o Datamanager
   - o Zorgmanager
   - o Afdelingshoofd
   - o Operationeel leidinggevende
   - o Medisch manager
   - o Zorgcoördinatoren
   - o Medisch specialisten
   - o Verpleegkundigen
   - o Weet ik niet
   - o Anders, namelijk……..

Deze vraag wordt gesteld bij het antwoord 'nee' op vraag 101.

103. Hoe komt het dat u niet genoeg tijd heeft om kwaliteitsdata te registreren? *(Selectie van meerdere antwoorden toegestaan)*
   - o Het registreren is lastig om te doen
   - o Het registreren is veel werk
   - o Door een hoge werkdruk kom ik aan registreren niet toe
   - o Anders, namelijk…….

104. Vindt u dat u voldoende betrokken wordt bij de ontwikkeling van het kwaliteitssysteem?
   - o Ja, ik wil er ook (in deze mate) bij betrokken worden
   - o Ja, al hoef ik er niet/ niet zo veel bij betrokken te worden
   - o Nee, ik hoef er ook niet (meer) bij betrokken te worden
   - o Nee, ik zou er graag (meer) bij betrokken willen worden

105. Wilt u nog iets kwijt wat betreft: (Een antwoord op deze vraag is niet verplicht)
   - Goede/ minder goede ervaringen met het kwaliteitssysteem
   - Positieve/ negatieve punten van het kwaliteitssysteem
   - Advies voor het vastleggen, inzichtelijk maken of gebruiken van kwaliteitsdata
   - Opmerkingen

……

Afsluiting

U bent aan het einde gekomen van deze vragenlijst. Hartelijk bedankt voor het invullen!

8.3 Tables questionnaire analysis

General information by the tables:
Some respondents had given 'another answer' than the answer options in the questionnaire. The open answers mentioned more than one time, are displayed in the tables below the option row 'another answer'. The respondents that are still displayed in the table row of the option 'another answer', are respondents with an answer that was mentioned only one time.
By some questions respondents could give more than one answer. In the tables of these questions the total number of respondents and the total numbers of answers are displayed.

8.3.1 General information

Table A

Respondent groups	+/- N of possible respondents	N of actual respondents	+/- %
Healthcare managers/department heads/ operational managers	61	28	46
Care coordinators	79	26	33
Medical specialists/medical managers	280	54	19
Nurses	200	39	20

(Information by the table: the 4th column shows the number of respondents as percentage of the number of possible respondents. This percentage is not exactly the percentage, because of the lower number of people to who was sent the questionnaire. But approximately it will give an overview of the number of people who have completed the questionnaire for each work function)

Table B

	N	**%**
Gender		
Man	43	29,3
Woman	104	70,7
Total	***147***	***100***
Age		
20-29	9	6,1
30-39	28	19,0
40-49	53	36,1
50-59	50	34,0
>59	7	4,8
Total	***147***	***100***
Work function		
Healthcare manager	8	5,4
Department head	18	12,2
Operational manager	2	1,4
Medical manager	3	2,0

Care coordinator	26	17,7
Medical specialist	51	34,7
Nurse	39	26,5
Total	***147***	***100***
Years working in function		
<2	9	6,1
2-5	25	17,0
6-9	38	25,9
10-13	16	10,9
14-17	21	14,3
18-21	13	8,8
22-25	4	2,7
>25	21	14,3
Total	***147***	***100***
Work location		
Gelre ziekenhuizen Apeldoorn	90	61,2
Gelre ziekenhuizen Zutphen	32	21,8
Both locations	25	17,0
Total	***147***	***100***

8.3.2 The use and added value of components of the quality system

Table C

The use of: N	Yes	No
Portal Gelre Inzicht/ KPI display	62	85
Results of audits/ tracers	84	63
Results of Prospective Risk Inventarisation (PRI)	48	99
Reports of calamities	60	87
Results of VIM reports	109	38
Reports of/ reaction on complaints	98	49

Table D

Reasons why the components are not used N (% of the number of respondents)	Portal Gelre Inzicht/ KPI display	Results of audits/ tracers	Results of Prospective Risk Inventarisation	Reports of calamities	Results of VIM reports	Reports of/ reaction on complaints
I do not have insight into this data	23 (27,1)	17 (27,0)	30 (30,3)	38 (43,7)	18 (47,4)	20 (40,8)
I do not have time to use this component	3 (3,5)	3 (4,8)	6 (6,1)	2 (2,3)	2 (5,3)	2 (4,1)
I do not know this component	50 (58,8)	40 (63,5)	59 (59,6)	37 (42,5)	10 (26,3)	19 (38,8)
I think this component has no added value	1 (1,2)				1 (2,6)	
Another answer	2 (2,4)			3 (3,4)		1 (2,0)
This is not applicable/done by me/the department	4 (4,7)	3 (4,8)	6 (6,1)	7 (8,0)	2 (5,3)	5 (10,2)
I get the information from others (the manager/ in consultation)	2 (2,4)	3 (4,8)	4 (4,0)	2 (2,3)	6 (15,8)	3 (6,1)
The system/ display is not good	2 (2,4)					
Total answers	***87***	***66***	***105***	***89***	***39***	***50***
Number of respondents	***85***	***63***	***99***	***87***	***38***	***49***

The respondent who thinks Portal Gelre Inzicht has no added value, gave as reason that this information gives no insight into the delivered quality and that this information is not usable to set up improvement actions. The respondent who said results of VIM reports has no added value, said as reason that this information is not usable to set up improvement actions.

Table E

Reasons why the components are not used, for each work function N (% of the number of respondents for each work function)	**Portal Gelre Inzicht/ KPI display**				
	I do not know this component	I think this component has no added value	I do not have time to use this component	I do not have insight into this data	Another answer
Healthcare manager					
Department head					3 (100)
Operational manager					
Medical manager					
Care coordinator	1 (10,0)			7 (70,0)	2 (20,0)
Medical specialist	32 (74,4)	1 (2,3)	3 (7,0)	3 (7,0)	4 (9,3)
Nurse	17 (54,8)			13 (41,9)	1 (3,2)
Total answers	***50***	***1***	***3***	***23***	***10***

Table F

Reasons why the components are not used, for each work function N (% of the number of respondents for each work function)	**Results of audits/ tracers**				
	I do not know this component	I think this component has no added value	I do not have time to use this component	I do not have insight into this data	Another answer
Healthcare manager					
Department head	1 (50,0)				1 (50,0)
Operational manager				1 (100)	
Medical manager	1 (100)				
Care coordinator				3 (60,0)	2 (40,0)
Medical specialist	22 (75,9)		2 (6,9)	3 (10,3)	2 (6,9)
Nurse	16 (57,1)		1 (3,6)	10 (35,7)	1 (3,6)
Total	***40***	***0***	***3***	***17***	***6***

Table G

Reasons why the components are not used, for each work function N (% of the number of respondents for each work function)	**Results of Prospective Risk Inventarisation**				
	I do not know this component	I think this component has no added value	I do not have time to use this component	I do not have insight into this data	Another answer
Healthcare manager	1 (33,3)			2 (66,7)	
Department head	3 (30,0)		2 (20,0)	1 (10,0)	4 (40,0)
Operational manager				1 (10,0)	
Medical manager	1 (100)				
Care coordinator	2 (12,5)		1 (6,3)	10 (62,5)	3 (18,8)
Medical specialist	32 (78,0)		3 (7,3)	4 (9,8)	2 (4,9)
Nurse	20 (60,6)			12 (36,4)	1 (3,0)
Total	***59***	***0***	***6***	***30***	***10***

Table H

Reasons why the components are not used, for each work function N (% of the number of respondents for each work function)	**Reports of calamities**				
	I do not know this component	I think this component has no added value	I do not have time to use this component	I do not have insight into this data	Another answer
Healthcare manager	2 (66,7)			1 (33,3)	
Department head	4 (50,0)			2 (25,0)	2 (25,0)
Operational manager				1 (100)	
Medical manager	1 (33,3)			1 (33,3)	1 (33,3)
Care coordinator	1 (5,9)			15 (88,2)	1 (5,9)
Medical specialist	13 (50,0)		2 (7,7)	5 (19,2)	6 (23,1)
Nurse	16 (51,6)			13 (41,9)	2 (6,5)
Total	***37***	***0***	***2***	***38***	***12***

Table I

Reasons why the components are not used, for each work function N (% of the number of respondents for each work function)	**Results of VIM reports**				
	I do not know this component	I think this component has no added value	I do not have time to use this component	I do not have insight into this data	Another answer
Healthcare manager					1 (100)
Department head					
Operational manager					
Medical manager					
Care coordinator				3 (42,9)	4 (57,1)
Medical specialist	6 (37,5)	1 (6,3)	1 (6,3)	6 (37,5)	2 (12,5)
Nurse	4 (26,7)		1 (6,7)	9 (60,0)	1 (6,7)
Total	***10***	***1***	***2***	***18***	***8***

Table J

Reasons why the components are not used, for each work function N (% of the number of respondents for each work function)	**Reports of/ reaction on complaints**				
	I do not know this component	I think this component has no added value	I do not have time to use this component	I do not have insight into this data	Another answer
Healthcare manager				1 (100)	
Department head				1 (33,3)	2 (66,7)
Operational manager				1 (100)	
Medical manager	1 (100)				
Care coordinator				2 (40,0)	3 (60,0)
Medical specialist	9 (56,3)		2 (12,5)	3 (18,8)	2 (12,5)
Nurse	9 (39,1)			12 (52,2)	2 (8,7)
Total	***19***	***0***	***2***	***20***	***9***

Table K

The respondents who use the components and said the components have no added value, was asked why they think the components have no added value.

Reasons why the components have no added value N (% of the number of respondents)	Portal Gelre Inzicht/ KPI display	Results of audits/ tracers	Results of Prospective Risk Inventarisations	Results of VIM reports
These information gives no insight into the delivered quality	1 (33,3)	1 (100)		
These information is not usable to set up improvement actions	2 (66,7)	1 (100)	1 (50,0)	
Another answer	1 (33,3) (no management information related to my department)		1 (50,0) (completely unclear)	1 (100) (I never had feedback/ reaction on VIM reports in the past)
Total answers	***4***	***2***	***2***	***1***
Number of respondents	***3***	***1***	***2***	***1***

8.3.3 The display of components of the quality system

Table L

Opinion about the display % (of the number of respondents)	**Portal Gelre Inzicht/ KPI display**	**Results of audits/ tracers**	**Results of Prospective Risk Inventarisation**	**Reports of calamities**	**Results of VIM reports**	**Reports of/ reaction on complaints**
Good	23,7	19,4	23,4	31,6	37,5	37,6
Fairly good	50,0	65,6	57,8	57,9	50,0	53,2
Not good	26,3	15,1	18,8	10,5	12,5	9,2
Number of respondents	*76*	*93*	*64*	*76*	*120*	*109*

(Information by the table: there were two respondents who gave 'another answer' as reason for no use of the component 'reports of calamities', but that answers are placed by the answer 'I do not have insight into this data'. Hereby these respondents saw this question while they do not have insight into this data and the total number of respondents who had answered is 76 instead of 74 what it should be)

Table M

Reasons why the display is not good N (% of the number of respondents)	Portal Gelre Inzicht/ KPI display	Results of audits/ tracers	Results of Prospective Risk Inventarisation	Reports of calamities	Results of VIM reports	Reports of/ reaction on complaints
The display is not clear	7 (35,0)			1 (12,5)	2 (13,3)	1 (10,0)
The display gives no overview	8 (40,0)	2 (14,3)	4 (33,3)	2 (25,0)	7 (46,7)	1 (10,0)
The display is incomplete	8 (40,0)	2 (14,3)				1 (10,0)
There is no overall picture	3 (15,0)				2 (13,3)	
Another answer	4 (20,0)	5 (35,7)	2 (16,7)	1 (12,5)	3 (20,0)	1 (10,0)
I do not know it/ have no insight/ do not use it	5 (25,0)	7 (50,0)	5 (41,7)	5 (62,5)	5 (33,3)	4 (40,0)
Not easily accessible for everyone	2 (10,0)		1 (8,3)			
There is no reaction / feedback						4 (40,0)
Total answers	***37***	***16***	***12***	***9***	***19***	***12***
Number of respondents	***20***	***14***	***12***	***8***	***15***	***10***

8.3.4 Other information about components of the quality system

Table N

Frequency of viewing Portal Gelre Inzicht/ KPI display	N	%
Every day	5	8,1
Once a week	11	17,7
Once in two weeks	12	19,4
Once a month	23	37,1
Another answer (depends on need)	1	1,6
Once every three months	2	3,2
This information is communicated (by department head/ manager/ with clocks)	5	8,1
Rarely	3	4,8
Total	***62***	***100***

Table O

Reaction after doing a VIM report	N	%
I have never done a VIM report	11	8,0
I received a reaction and I think the reaction was fine	58	42,0
I received a reaction but I think the reaction could be better	45	32,6
I have not received a reaction and I would not like to get a reaction	2	1,4
I have not received a reaction and I would like to get a reaction	22	15,9
Total	***138***	***100***

(Information by the table: one respondent who said he/she do not know VIM reports gave also another answer for no use of results of VIM reports, so that respondent saw this question while he/she do not know the component. Hereby the total number of respondents who answered this question is 138 instead of 137 what it should be)

Table P

Reasons for low willingness to do a VIM report	N	% of the number of respondents
No time to do a VIM report	6	40,0
Insufficiently awareness of the possibility to do a VIM report	1	6,7
There is done nothing with VIM reports	3	20,0
There has been reported a lot of the same things	4	26,7
There is seen no added value of VIM reports	7	46,7
Fear of the consequences of doing a VIM report	4	26,7
Do not know why the willingness is low	1	6,7
Another answer	3	20,0
Total answers	***29***	
Number of respondents	***15***	

Table Q

Does the quality system give enough information about the whole care process?	N	%
Yes	45	30,6
No	37	25,2
I do not know	65	44,2
Total	***147***	***100***

8.3.5 Indicator sets

Table R

The use of indicators, for each work function N (% of the number of respondents for each work function)	Healthcare manager	Department head	Operational manager	Medical manager	Care coordinator	Medical specialist	Nurse	***Total answers***
DICA indicators	2 (25,0)	4 (22,2)			1 (3,8)	13 (25,5)		***20***
IGZ indicators	3 (37,5)	6 (33,3)	2 (100)	2 (66,7)	9 (34,6)	21 (41,2)	1 (2,6)	***44***
ZiNL indicators	1 (12,5)					8 (15,7)		***9***
Indicators of the insurer	3 (37,5)	4 (22,2)		1 (33,3)		13 (25,5)		***21***
Indicators of the profession	3 (37,5)	2 (11,1)	1 (50,0)	1 (33,3)	1 (3,8)	34 (66,7)	3 (7,7)	***45***
I do not use indicator sets	3 (37,5)	9 (50,0)		1 (33,3)	15 (57,7)	12 (23,5)	33 (84,6)	***73***
Another answer	1 (12,5)	1 (5,6)			2 (7,7)	2 (3,9)	3 (7,7)	***9***
I do not know					2 (7,7)		1 (2,6)	***3***
Total answers	***16***	***26***	***3***	***5***	***30***	***103***	***41***	***224***
Number of respondents	***8***	***18***	***2***	***3***	***26***	***51***	***39***	***147***

Table S

What is done with indicator sets	**N**	**% of the number of respondents**
Reading the indicators	22	28,6
Be informed about the indicators	33	42,9
Discussing the indicators	30	39,0
Filling out questionnaires for the indicators	38	49,4
Controlling processes on the basis of the indicators/ applying in annual plans	28	36,4
Checking compliance with the indicators	38	49,4
Undertaking improvement actions on the basis of the indicators	37	48,1
Another answer	4	5,2
Total answers	***230***	
Number of respondents	***77***	

(Information by the table: three respondents said they do not use indicators sets, but also gave another answer. That respondents saw this question while they do not use indicator sets. Hereby the number of respondents is 77 instead of 74 what it should be)

Table T

Indicators with the highest value, for each work function N (% of the number of respondents for each work function)	Structure indicators	Process indicators	Outcome indicators	I do not know	***Total answers***	***Number of respondents***
Healthcare manager		2 (25,0)	5 (62,5)	3 (37,5)	***10***	***8***
Department head	1 (5,6)	7 (38,9)	4 (22,2)	7 (38,9)	***19***	***18***
Operational manager	1 (50,0)		1 (50,0)		***2***	***2***
Medical manager	1 (33,3)		2 (66,7)	1 (33,3)	***4***	***3***
Care coordinator	2 (7,7)	10 (38,5)	4 (15,4)	16 (61,5)	***32***	***26***
Medical specialist	3 (5,9)	13 (25,5)	23 (45,1)	16 (31,4)	***55***	***51***
Nurse	1 (2,6)	8 (20,5)	7 (17,9)	28 (71,8)	***44***	***39***
Total answers	***9***	***40***	***46***	***71***	***166***	***147***

8.3.6 Delivery of quality data

Table U

The need of quality data, for each work function N (% of the number of respondents for each work function)	Healthcare manager	Department head	Operational manager	Medical manager	Care coordinator	Medical specialist	Nurse	***Total answers***
Data from Portal Gelre Inzicht/KPI display	8 (100)	14 (77,8)	1 (50,0)	2 (66,7)	15 (57,7)	13 (25,5)	7 (17,9)	***60***
Results of audits/tracers	8 (100)	15 (83,3)	1 (50,0)	1 (33,3)	20 (76,9)	24 (47,1)	13 (33,3)	***82***
Results of PRI's	7 (87,5)	7 (38,9)	1 (50,0)	1 (33,3)	10 (38,5)	12 (23,5)	8 (20,5)	***46***
Reports of calamities	7 (87,5)	10 (55,6)	1 (50,0)	3 (100)	14 (53,8)	23 (45,1)	9 (23,1)	***67***
Results of VIM reports	7 (87,5)	13 (72,2)	1 (50,0)	2 (66,7)	21 (80,8)	29 (56,9)	27 (69,2)	***100***
Reports of/ reaction on complaints	8 (100)	13 (72,2)	1 (50,0)	2 (66,7)	20 (76,9)	33 (64,7)	22 (56,4)	***99***
Data about patient satisfaction/PREMS/PROMS	8 (100)	11 (61,1)	2 (100)	1 (33,3)	21 (80,8)	36 (70,6)	17 (43,6)	***96***
Data about employee satisfaction	7 (87,5)	14 (77,8)	2 (100)	2 (66,7)	17 (65,4)	23 (45,1)	22 (56,4)	***87***
Results of visitations	7 (87,5)	11 (61,1)	2 (100)	3 (100)	12 (46,2)	35 (68,6)	14 (35,9)	***84***
Disease specific registrations	3 (37,5)	1 (5,6)			2 (7,7)	18 (35,3)	5 (12,8)	***29***
I do not need quality data						1 (2,0)	6 (15,4)	***7***
Another answer		1 (5,6)			1 (3,8)	3 (5,9)		***5***
I do not know this						1 (2,0)	4 (10,3)	***5***
Combination of all data					2 (7,7)			***2***
Information from the manager					1 (3,8)		1 (2,6)	***2***
Total answers	***70***	***110***	***12***	***17***	***156***	***251***	***155***	***771***
Number of respondents	***8***	***18***	***2***	***3***	***26***	***51***	***39***	***147***

Table V

The delivery of quality data	N	% of the number of respondents
Outcomes will be communicated and discussed in work meetings	84	57,1
Outcomes will be sent by e-mail	71	48,3
Through report in the newsletter	32	21,8
I can get the data by myself from the internal system	31	21,1
The data will be displayed in Portal Gelre Inzicht	29	19,7
The data will be delivered by third parties	39	26,5
Outcomes will be shown with clocks on departments	18	12,2
Outcomes will be shown with the VISMO screen on departments	3	2,0
I do not see this data / do not get this data delivered	32	21,8
Another answer	10	6,8
Delivery by the manager	2	1,4
Total answers	***351***	
Number of respondents	***147***	

Table W

The preference for delivery of quality data	N	% of the number of respondents
Outcomes will be communicated and discussed in work meetings	74	50,3
Outcomes will be sent by e-mail	71	48,3
Through report in the newsletter	39	26,5
I can get the data by myself from the internal system	34	23,1
The data will be displayed in Portal Gelre Inzicht	33	22,4
The data will be delivered by third parties	14	9,5
Outcomes will be shown with clocks on departments	14	9,5
Outcomes will be shown with the VISMO screen on departments	12	8,2
I do not have preference for this	21	14,3
Another answer	5	3,4
This happens fine now	2	1,4
Easy and clear displayed/ transparent	4	2,7
Not sent/ by mail	2	1,4
Delivery by the manager	2	1,4
Total answers	***327***	
Number of respondents	***147***	

Table X

Discussion of quality data in work meetings	N	%
Once a week	2,5	1,7
Every two weeks	7	4,8
Once a month	33	22,4
Every three months	45	30,6
Every six months	10	6,8
Once a year	16	10,9
This is never discussed	13	8,8
Another answer	4,5	3,1
I do not know	5	3,4
Not structural/ variable	4	2,7
In (weekly) newsletters	2,5	1,7
In work meetings (without frequency)	3	2,0
Once every two months	1,5	1,0
Total	***147***	***100***

(Information by the table: for the respondents who said two different things by 'another answer', the answers are placed in the right table row and are displayed with 0,5 respondent)

Table Y

Discussion of quality data in work meetings, for each work function N (%)	Healthcare manager	Department head	Operational manager	Medical manager	Care coordinator	Medical specialist	Nurse	***Total***
Once a week		0,5 (2,8)			1 (3,8)	1 (2,0)		***2,5***
Every two weeks					1 (3,8)	6 (11,8)		***7***
Once a month	6 (75,0)	7 (38,9)	1 (50,0)	2 (66,7)	6 (23,1)	6 (11,8)	5 (12,8)	***33***
Every three months	0,5 (6,3)	4 (22,2)	0,5 (25,0)	1 (33,3)	13 (50,0)	10 (19,6)	16 (41,0)	***45***
Every six months	1 (12,5)	2 (11,1)				6 (11,8)	1 (2,6)	***10***
Once a year		2 (11,1)				9 (17,6)	5 (12,8)	***16***
This is never discussed		1 (5,6)				7 (13,7)	5 (12,8)	***13***
Another answer	0,5 (6,3)					3 (5,9)	1 (2,6)	***4,5***
I do not know						2 (3,9)	3 (7,7)	***5***
Not structural/ variable		1 (5,6)			1 (3,8)		2 (5,1)	***4***
In (weekly) newsletters			0,5 (25,0)		2 (7,7)			***2,5***
In work meetings (without frequency)					2 (7,7)		1 (2,6)	***3***
Once every two months		0,5 (2,8)				1 (2,0)		***1,5***
Total	***8 (100)***	***18 (100)***	***2 (100)***	***3 (100)***	***26 (100)***	***51 (100)***	***39 (100)***	***147***

Table Z

The opinion about the frequency of discussing quality data	N	%
Too high	1	0,7
Good	105	71,4
Too low	41	27,9
Total	***147***	***100***

8.3.7 Access to quality data

Table Z1

Preferences for a type of displaying of quality data	N	% of the number of respondents
In one system	97	66,0
In different systems for each part of the quality system	10	6,8
With clocks on departments	7	4,8
On the VISMO screen on departments	12	8,2
I do not have a preference for the type of displaying	30	20,4
Another answer	3	2,0
I do not know this	2	1,4
Clear/ organized/easy displayed	5	3,4
Total answers	***166***	
Number of respondents	***147***	

Table Z2

Preferences for a type of displaying of quality data, for each work function N (% of the number of respondents for each work function)	Healthcare manager	Department head	Operational manager	Medical manager	Care coordinator	Medical specialist	Nurse	***Total answers***
In one system	7 (87,5)	17 (94,4)	1 (50,0)	3 (100)	20 (76,9)	34 (66,7)	15 (38,5)	***97***
In different systems for each part of the quality system		1 (5,6)	1 (50,0)		2 (7,7)	4 (7,8)	2 (5,1)	***10***
With clocks on departments					3 (11,5)		4 (10,3)	***7***
On the VISMO screen on departments	1 (12,5)	3 (16,7)			3 (11,5)	3 (5,9)	2 (5,1)	***12***
I do not have a preference for the type of displaying					1 (3,8)	12 (23,5)	17 (43,6)	***30***
Another answer	2 (25,0)				1 (3,8)			***3***
I do not know this					1 (3,8)		1 (2,6)	***2***
Clear/ organized/ easy displayed					3 (11,5)		2 (5,1)	***5***
Total answers	***10***	***21***	***2***	***3***	***34***	***53***	***43***	***166***
Number of respondents	***8***	***18***	***2***	***3***	***26***	***51***	***39***	***147***

Table Z3

Preferences for a way of seeing the quality data, for each work function N (% of the number of respondents for each work function)	Healthcare manager	Department head	Operational manager	Medical manager	Care coordinator	Medical specialist	Nurse	***Total answers***
Gelre wide	3 (37,5)	4 (22,2)	1 (50,0)	3 (100)	4 (15,4)	21 (41,2)	5 (12,8)	***41***
Department specific	8 (100)	17 (94,4)	2 (100)	3 (100)	19 (73,1)	35 (68,6)	26 (66,7)	***110***
Per subject	5 (62,5)	9 (50,0)		2 (66,7)	13 (50,0)	15 (29,4)	9 (23,1)	***53***
Overarching topics	1 (12,5)	1 (5,6)			1 (3,8)	2 (3,9)	3 (7,7)	***8***
Display of recurring problems	2 (25,0)	2 (11,1)	1 (50,0)		8 (30,8)	11 (21,6)	7 (17,9)	***31***
Display of best practices	4 (50,0)	2 (11,1)		1 (33,3)	2 (7,7)	8 (15,7)	3 (7,7)	***20***
Comparisons over several years	6 (75,0)	7 (38,9)		2 (66,7)	4 (15,4)	21 (41,2)	8 (20,5)	***48***
Comparisons with other departments	2 (25,0)	6 (33,3)			4 (15,4)	11 (21,6)	3 (7,7)	***26***
I do not have preference for this					3 (11,5)	6 (11,8)	9 (23,1)	***18***
Another answer	1 (12,5)				1 (3,8)	4 (7,8)	1 (2,6)	***7***
Total answers	***32***	***48***	***4***	***11***	***59***	***134***	***74***	***362***
Number of respondents	***8***	***18***	***2***	***3***	***26***	***51***	***39***	***147***

Table Z4

Insight into quality data for which period	**N**	**%**
All quality data	13	8,8
Data up to five years ago	36	24,5
Data up to two years ago	46	31,3
Data up to one year ago	30	20,4
Data until six months ago	10	6,8
Data until one month ago	3	2,0
Another answer	6	4,1
I do not know this	3	2,0
Total	***147***	***100***

Table Z5

Insight into quality data for which period (according to respondents of each work function) N (%)	Healthcare manager	Department head	Operational manager	Medical manager	Care coordinator	Medical specialist	Nurse	***Total***
All quality data						9 (17,6)	4 (2,6)	***13***
Data up to five years ago	2 (25,0)	3 (16,7)		1 (33,3)		21 (41,2)	9 (23,1)	***36***
Data up to two years ago	4 (50,0)	8 (44,4)	1 (50,0)	2 (66,7)	12 (46,2)	14 (27,5)	5 (12,8)	***46***
Data up to one year ago	1 (12,5)	7 (38,9)	1 (50,0)		9 (34,6)	4 (7,8)	8 (20,5)	***30***
Data until six months ago					3 (11,5)	1 (2,0)	6 (15,4)	***10***
Data until one month ago					1 (3,8)		2 (5,1)	***3***
Another answer	1 (12,5)				1 (3,8)	2 (3,9)	2 (5,1)	***6***
I do not know this							3 (7,7)	***3***
Total	***8 (100)***	***18 (100)***	***2 (100)***	***3 (100)***	***26 (100)***	***51 (100)***	***39 (100)***	***147***

Table Z6

Do there exist quality data to which you have no access, but you would like to have access to?	**N**	**%**
Yes	11	7,5
No	36	24,5
I do not know	100	68,0
Total	***147***	***100***

8.3.8 Experiences with the quality system

Table Z7

The opinion about the amount of quality data which is saved, for each work function N (%)	Healthcare manager	Department head	Operational managers	Medical manager	Care coordinator	Medical specialist	Nurse	***Total***
Too much	3 (37,5)	9 (50,0)		1 (33,3)	12 (46,2)	23 (45,1)	5 (12,8)	***53***
Good amount	2 (25,0)	7 (38,9)	2 (100)	1 (33,3)	8 (30,8)	3 (5,9)	11 (28,2)	***34***
Too little	1 (12,5)			1 (33,3)		3 (5,9)	3 (7,7)	***8***
I do not know	2 (25,0)	2 (11,1)			6 (23,1)	22 (43,1)	20 (51,3)	***52***
Total	***8 (100)***	***18 (100)***	***2 (100)***	***3 (100)***	***26 (100)***	***51 (100)***	***39 (100)***	***147***

Table Z8

Is quality data used enough to improve healthcare? (the opinion for each work function) N (%)	Healthcare manager	Department head	Operational manager	Medical manager	Care coordinator	Medical specialist	Nurse	***Total***
Yes	3 (37,5)	6 (33,3)	2 (100)		11 (42,3)	7 (13,7)	14 (35,9)	***43***
No	3 (37,5)	8 (44,4)		1 (33,3)	10 (38,5)	25 (49,0)	8 (20,5)	***55***
I do not know	2 (25,0)	4 (22,2)		2 (66,7)	5 (19,2)	19 (37,3)	17 (43,6)	***49***
Total	***8 (100)***	***18 (100)***	***2 (100)***	***3 (100)***	***26 (100)***	***51 (100)***	***39 (100)***	***147***

Table Z9

Reasons why quality data is used insufficient to improve care	**N**	**% of the number of respondents**
There is done nothing with improvement actions	11	20,0
Quality data is not made transparent for everyone involved with care delivery	32	58,2
Another answer	9	16,4
Fill in things, not always say something about quality of care/ improves care	3	5,5
(Too) much measurements	3	5,5
Too much cuts in healthcare/ too little money	3	5,5
There is not (always) measured what you really want to know	3	5,5
Takes too much time/ lack of time	2	3,6
Lack of coordination/ more collaboration	2	3,6
Not clear and easy displayed	2	3,6
Total answers	***70***	
Number of respondents	***55***	

Table Z10

Reasons why quality data is used insufficient to improve care, for each work function N (% of the number of respondents for each work function)	Healthcare manager	Department head	Operational manager	Medical manager	Care coordinator	Medical specialist	Nurse	*Total answers*
There is done nothing with improvement actions					2 (20,0)	6 (24,0)	3 (37,5)	***11***
Quality data is not made transparent for everyone involved with care delivery	1 (33,3)	3 (37,5)		1 (100)	3 (30,0)	18 (72,0)	6 (75,0)	***32***
Another answer	1 (33,3)	2 (25,0)			2 (20,0)	3 (12,0)	1 (12,5)	***9***
Fill in things, not always say something about quality of care/ improves care					3 (30,0)			***3***
(Too) much measurements		1 (12,5)			2 (20,0)			***3***
Too much cuts in healthcare/ too little money	1 (33,3)				1 (10,0)		1 (12,5)	***3***
There is not (always) measured what you really want to know		1 (12,5)				2 (8,0)		***3***
Takes too much time/ lack of time						2 (8,0)		***2***
Lack of coordination/ more collaboration		2 (25,0)						***2***
Not clear and easy displayed		1 (12,5)				1 (4,0)		***2***
Total answers	***3***	***10***	***0***	***1***	***13***	***32***	***11***	***70***
Number of respondents	***3***	***8***	***0***	***1***	***10***	***25***	***8***	***55***

Table Z11

Reasons why there is done nothing with improvement actions	N	% of the number of respondents
There is insufficient time	5	45,5
There is insufficient knowledge	1	9,1
It is not clear who starts with improvement actions	7	63,6
I do not know	1	9,1
Another answer	1 (insufficient money)	9,1
Total answers	***15***	
Number of respondents	***11***	

Table Z12

Do there exist quality data which is saved, but is not yet being used to provide insight into and improve quality?	N	%
Yes	8	5,4
No	14	9,5
I do not know	125	85,0
Total	***147***	***100***

Table Z13

Do you think the quality data is reliable? (according to each work function) N (% of the number of respondents for each work function)	Yes	No, the data is not up to date	No, the registrations are incomplete	I do not know	Another answer	Not always/ variable	***Total answers***	***Number of respondents***
Healthcare manager	1 (12,5)	2 (25,0)	7 (87,5)	1 (12,5)	1 (12,5)		***12***	***8***
Department head	5 (27,8)	2 (11,1)	6 (33,3)	6 (33,3)	1 (5,6)	1 (5,6)	***21***	***18***
Operational manager	1 (50,0)				1 (50,0)		***2***	***2***
Medical manager	1 (33,3)		1 (33,3)	1 (33,3)			***3***	***3***
Care coordinator	7 (26,9)	4 (15,4)	4 (15,4)	10 (38,5)	4 (15,4)		***29***	***26***
Medical specialist	5 (9,8)	5 (9,8)	16 (31,4)	26 (51,0)	1 (2,0)	2 (3,9)	***55***	***51***
Nurse	12 (30,8)	2 (5,1)	5 (12,8)	21 (53,8)			***40***	***39***
Total answers	***32***	***15***	***39***	***65***	***8***	***3***	***162***	***147***

Table Z14

Do you have enough time to register quality data? (according to respondents of each work function) N (%)	Yes	No	I do not register quality data	***Total***
Healthcare manager	3 (37,5)	3 (37,5)	2 (25,0)	***8 (100)***
Department head	3 (16,7)	9 (50,0)	6 (33,3)	***18 (100)***
Operational manager		1 (50,0)	1 (50,0)	***2 (100)***
Medical manager	1 (33,3)	2 (66,7)		***3 (100)***
Care coordinator	9 (34,6)	10 (38,5)	7 (26,9)	***26 (100)***
Medical specialist	6 (11,8)	30 (58,8)	15 (29,4)	***51 (100)***
Nurse	9 (23,1)	10 (25,6)	20 (51,3)	***39 (100)***
Total	***31***	***65***	***51***	***147***

Table Z15

Registration of quality data by	**N**	**% of the number of respondents**
Data manager	2	3,9
Healthcare manager	3	5,9
Department head	15	29,4
Operational manager	3	5,9
Medical manager	3	5,9
Care coordinators	6	11,8
Medical specialists	6	11,8
Nurses	13	25,5
I do not know	29	56,9
Another answer	5	9,8
Total answers	***85***	
Number of respondents	***51***	

Table Z16

Reasons for the lack of time for registration	**N**	**% of the number of respondents**
It is difficult to do the registrations	9	13,8
The registration is a lot of work	38	58,5
Due to a heavy workload, I cannot register	44	67,7
Another answer	6	9,2
The main task is patient care/ registration is at the expense of patient care	3	4,6
Total answers	***100***	
Number of respondents	***65***	

Table Z17

Do you think the degree of involvement with the development of the quality system is sufficient? (according to respondents of each work function) N (%)	Healthcare manager	Department head	Operational manager	Medical manager	Care coordinator	Medical specialist	Nurse	***Total***
Yes, I do not/ not so much need to be involved	2 (25,0)	5 (27,8)			3 (11,5)	9 (17,6)	6 (15,4)	***25***
Yes, I will be involved (in this degree)	1 (12,5)	1 (5,6)	1 (50,0)	3 (100)	11 (42,3)	11 (21,6)	5 (12,8)	***33***
No, I do not need to be involved (more)	2 (25,0)	7 (38,9)	1 (50,0)		9 (34,6)	17 (33,3)	20 (51,3)	***56***
No, I would like to be (more) involved	3 (37,5)	5 (27,8)			3 (11,5)	14 (27,5)	8 (20,5)	***33***
Total	***8 (100)***	***18 (100)***	***2 (100)***	***3 (100)***	***26 (100)***	***51 (100)***	***39 (100)***	***147***

8.4 Literature review: overview scheme of the articles

Author	Title	Year of publication	Subject	Short findings
Algemene Rekenkamer	Indicatoren voor kwaliteit in de zorg.	2013	Transparency of quality and indicator sets	There are initiatives to make quality of care more transparent, like the development of indicators sets. The quality of the indicators and the usability of it are low and there is a small number of outcome indicators.
Berwick, D.M., James, B., Coye, M.J.	Connections between quality measurement and improvement.	2003	The relationship between measurement and improvement	Barriers for the use of information about quality to change care are lack of skill, knowledge and motivation and lack of organizational and professional capacity to manage change and to improve.
Blumen, S.R., Naud, P.S., Palumbo, M.V., McIntosh, B., Wilcke, B.W.	Knowledge and perceptions of quality systems among Vermont laboratorians.	2010	Knowledge of and influence on quality systems, according to Vermont laboratorians	Almost all Vermont laboratorians think they have knowledge about the quality system. About half of the laboratorians think they do not have influence in quality measures. A recommendation is that they should influence quality systems to get highest quality of care.
Botje, D., Klazinga, N.S., Suñol, R., Groene, O., Pfaff, H., Mannion, R., Depaigne-Loth, A., Arah, O.A., Dersarkissian, M., Wagner, C.	Is having quality as an item on the executive board agenda associated with the implementation of quality management systems in European hospitals: a quantitative analysis.	2014	Discussion about quality and the effect of it on the implementation of a quality system in hospitals	When there is more discussed about quality, in meetings of the executive board, that will have a positive effect on the use/ implementation of the quality system.
Botje, D., Plochg, T., Klazinga, N., Wagner, C.	Hospital boards and medical specialists collaborating for quality of care.	2012	The collaboration with medical specialists in governance of hospitals in the Netherlands	Medical specialists are/ have to be involved in (quality) governance of hospitals. By more sharing of quality information in meetings, there is higher collaboration between the board and medical specialists.
Boyce, M.B., Browne, J.P., Greenhalgh, J.	The experiences of professionals with using information from patient-reported outcomes measures to improve the quality of healthcare: a systematic review	2014	The use of PROMS	Barriers for the use of PROMS are practical considerations (workload implications, ease of data collection, level of collaboration between colleagues, the delivery of clear guidelines for implementation, the level of managerial involvement, the existence of training and support and the use of technology), attitudes (transparency of objectives and

	of qualitative research.			openness to feedback and change), methodological concerns (interpretability of the data and the validity of the measures) and impact of the data to change patient care (depends on the usefulness of the data and indirect effects of data collection).
Buciuniene, I., Malciankina, S., Lydeka, Z., Kazlauskaite, R.	Managerial attitude to the implementation of quality management systems in Lithuanian support treatment and nursing hospitals.	2006	Managerial attitude about the implementation of a quality management system	Most of the Lithuanian hospitals have a quality management system (about one third) or it will be implemented. It is more implemented in bigger hospitals. Benefits according to the managers of the use of a quality system are improved responsibility, power sharing, better service quality ad higher patient satisfaction. The managers were more satisfied with the quality management system when they and the employees were more competent with quality management. Problems with the implementation are problems with procedure development, lack of financial resources and information and problems with the development of work instructions/ training. Success factors in the implementation are audit groups and training of employees and managerial attitude.
Dückers, M. Makai, P., Vos, L., Groenewegen, P., Wagner, C.	Longitudinal analysis on the development of hospital quality management systems in the Netherlands.	2009	The development of quality systems in hospitals in the Netherlands between 1995 and 2007	Quality systems are more developed since 1995. In 2005 most hospitals were in the experimentation and implementation stage and in 2007 one third of the hospitals were in the systematic learning and integration stage.
Groene, O., Arah, O.A., Klazinga, N.S., Wagner, C., Bartels, P.D., Kristensen, S., Saillour, F., Thompson, A., Thompson, C.A., Pfaff, H., DerSarkissian, M., Sunol, R.	Patient Experience Shows Little Relationship with Hospital Quality Management Strategies	2015	Patient involvement (and experiences) in quality management in a hospital	Patient involvement is low in quality management and has to be developed further because of the importance of patients as actor in the quality system.
Groene, O., Sunol, R.	The investigators reflect: what we	2014	Quality systems in hospitals in	Quality management is associated with clinical effectiveness of care. Improvement

	have learned from the Deepening our Understanding of Quality Improvement in Europe (DUQuE) study.		Europe	of the experiences of patients have to be part of quality management systems. Quality systems are not always systematically implemented and the support to clinical work is limited. Furthermore patient involvement is low.
Groene, O., Mora, N., Thompson, A., Saez, M., Casas, M., Suñol, R.	Is the maturity of hospitals' quality improvement systems associated with measures of quality and patient safety?	2011	Quality improvement systems and clinical outcomes (positive effect)	When hospitals have a quality system that is more developed, that will lead to a lower number of adjusted hospital complications.
Hendriks, A. C.	En toen was er de Wkkgz, nieuwe wet met vergaande gevolgen voor artsen.	2015	The Quality, Complaints and Disputes Care Law (Wkkgz)	In the Quality, Complaints and Disputes Care Law (Wkkgz), the quality requirements are tightened. The term 'responsible care' has been replaced by 'good care'.
Heuvel, J. van den, Koning, L., Bogers, A.J., Berg, M., Dijen, M.E. van	An ISO 9001 quality management system in a hospital: bureaucracy or just benefits?	2005	Advantages of the use of a quality management system	Advantages of the use of a quality management system (ISO 9001) in the Red Cross Hospital in Beverwijk are a re-established focus on patients, identification and continuously improvement of processes, positive effects on patient safety and there are performance measurement which lead to improvement of quality of care and the quality system and show results.
Jorissen, H.J.	Handleiding kwaliteits-management (Chapter 1: Kwaliteits-management)	2007	Quality management	Quality management consists of coordinated activities to manage and control quality in an organization. Aspects of quality management are quality planning, quality improvement, quality assurance and quality control.
Jorissen, H.J.	Handleiding kwaliteits-management. (Chapter 2: De principes)	2007	Involvement of medical specialists in quality improvement	When medical specialists are involved in quality improvement, this will be a method to motivate them to deliver good quality work.
KPMG Plexus.	Inzicht in uitgevraagde variabelen voor kwaliteitsmetingen en handvatten voor verbetering.	2016	Quality data registrations and bottlenecks of quality measurements	Bottlenecks of measuring of quality are costs and administrative burdens, there exist overlap and the way of measuring varies and finally the outcomes of measurements are hard to compare, because the different ways of delivery and low reliability of the data. Recommendations are to reduce the

				double measurements (which will have a small effect on the administrative burden) and to use existing data sources (which will have more effect on the administrative burden).
Kringos, D.S., Anema, H.A., Asbroek, A.H.A. ten, Fischer, C., Botje, D., Kievit, J., Steyerberg E.W., Klazinga, N.S.	Beperkt Zicht, onderzoek naar de betrouwbaarheid, validiteit en bruikbaarheid van prestatie-indicatoren over de kwaliteit van de Nederlandse ziekenhuiszorg.	2012	The use of Zichtbare Zorg indicators	Indicators are not much used in hospitals to monitor and improve quality, but especially for external accountability. There exist high diversity in data registrations and there is limited reliability of the registrations.
Kristensen, S., Hammer, A., Bartels, P., Suñol, R., Groene, O., Thompson, C.A., Arah, O.A., Kutaj-Wasikowska, H., Michel, P., Wagner, C.	Quality management and perceptions of teamwork and safety climate in European hospitals	2015	Positive effects of the use of a quality system in European hospitals	The use of a quality system in hospitals have a positive effect on safety climate and teamwork
Kunkel, S., Rosenqvist, U., Westerling, R.	Implementation strategies influence the structure, process and outcome of quality systems: an empirical study of hospital departments in Sweden.	2009	A cooperative implementation strategy for a quality system	A cooperative implementation strategy for managers and staff is related with process and outcome .
Moore, L., Lavoie, A., Bourgeois, G., Lapointe, J.	Donabedian's structure-process-outcome quality of care model: Validation in an integrated trauma system.	2015	Donabedian (structure, process, outcome)	According to the model of Donabedian about healthcare quality, improvement in structure has an effect on improvement in process and that has an effect on improvement in outcome.
Ovretveit, J., Al Serouri, A.	Hospital quality management system in a low income Arabic country: an evaluation.	2006	Positive effects of the use of a quality system	Positive effects of the use of a quality system in a hospital in a low income Arabic country, are an increase in compliance with standards and little improvement in patient satisfaction and utilisation.
Saxena, A.,	Towards	2015	Involvement of	Physicians are more involved with

Walker, K., Kraines, G.	reconciliation of several dualities in physician leadership.		physicians in leadership in healthcare	leadership.
Schellekens, W.M.L.C.M., Everdingen, J.J.E. van.	Kwaliteits-management in de gezondheidszorg. (Chapter 5: Voorwaarden voor het succesvol implementeren van een kwaliteitssysteem)	2001	Quality system development and participation of medical specialists	A quality system has to be developed with participation of medical specialists.
Schoten, S.M. van.	Hospital Quality Systems, unraveling working mechanisms.	2015	The implementation of quality systems and higher quality of care	There is found a complex relationship between quality systems in hospitals and high quality of care. When the quality systems are better implemented, this will lead to better outcomes. Hospitals do not use the data from the quality system to systematically improve the system and processes and outcomes. The involvement of healthcare professionals is important for good functioning of the quality system.
Schoten, S.M., Groenewegen, P.P., Wagner, C.	De ontwikkeling van kwaliteitssystemen in Nederlandse ziekenhuizen tussen 1995 en 2011.	2013	The development of quality systems in hospitals in the Netherlands between 1995 and 2011	Quality systems are more developed between 1995 and 2011. In 1995 about half of the hospitals were in the preparation stage. In 2011 about half of the hospitals had all the elements of a quality system and almost half of the hospitals had a continuously quality improvement system. Larger hospitals had a further developed quality system.
Sluijs, E., Keijser, A., Wagner C. (NIVEL)	Kwaliteitssystemen in zorginstellingen, de stand van zaken in 2005.	2007	Quality systems in healthcare institutions in the Netherlands in 2005	In 2005 a minority of the healthcare institutions in the Netherlands had a certified quality system. In a lot institutions, internal audits are insufficiently used to improve the system. The opinion of patients is used most of the times for quality improvement, according to more than half of the institutions. Positive effects of the quality system are working more client-focused (with attention for their satisfaction), improvement of care processes and sometimes outcomes of care, better manageability of the organization and an increase of the productivity. Negative effect of the quality system are

				increased workload and an increase in costs and regulations. In 2005 (compared with 2000) more institutions worked on quality improvement (especially with data about the opinion of patients and employees). Furthermore patients were more involved with quality improvement.
Sluijs, E., Beek van, S., Mouthaan, I., Neef de, M., Wagner, C.	Verdiepingsstudie transparantie kwaliteit van zorg, een exploratief onderzoek naar de mate waarin zorginstellingen indicatoren gebruiken om de kwaliteit van zorg zichtbaar te maken.	2002	The use of indicators for quality of care (outcome indicators)	Outcome indicators that were mentioned a lot as important quality indicators in hospitals are client satisfaction data and employee satisfaction data. Furthermore data about reports and complaints is found important for improvement.
Sokovic, M., Pavletic, D., Kern Pipan, K. , DMAIC and DFSS.	Quality Improvement Methodologies – PDCA Cycle, RADAR Matrix, DMAIC and DFSS.	2010	PDCA circle	The PDCA circle consists of four steps: Plan, Do, Check, Act. When there is worked according to this circle, there is continuously worked on finding (better) methods of improvement.
Visser, M. (M&I partners)	Kennis voor verbetering.	2016	Data collection in hospitals and the use of that data for quality improvement	Quality data (from the EPD) is not much used for quality improvement. An important reason for this is high workload of healthcare professionals. Other barriers are that it is hard to motivate healthcare professionals to register when they do not know the usefulness of it, distrust against the data and the effort it takes to register. Recommendations are that healthcare professionals have to be involved with quality registration, the usefulness have to be explained and the data have to be shown. Finally this research shows that some healthcare professionals think there is a taboo on making mistakes. A recommendation is to use the data in a positive way, with positive feedback.
Visser, S., Westendorp, R., Cools, K., Kremer, J., Klink, A. (Booz & Company)	Kwaliteit als medicijn, Aanpak voor betere zorg en lagere kosten.	2012	Quality initiatives	Quality initiatives will contribute to better, less and less expensive care.

Wagner, C., Klein Ikkink, K., Wal, G. van der, Spreeuwenberg, P., Bakker, D.H. de, Groenewegen, P.P.	Quality management systems and clinical outcomes in Dutch nursing homes.	2006	The impact of quality management systems on clinical outcomes	There are differences in the prevalence of undesirable clinical outcomes in different Dutch nursing homes. A small number of these differences in outcomes can be explained by the implementation of a quality management system (significant influence of the quality management system on undesirable outcomes)
Wardhani, V., Utarini, A., Dijk, J.P. van, Post, D., Groothoff, J.W.	Determinants of quality management systems implementation in hospitals.	2009	Influencing factors of the implementation of a quality management system	Influencing factors of the implementation of a quality management system are the culture of the organization, the design, leadership for quality, involvement of physicians, quality structure and technical competence. Involvement of physicians is important by the implementation of a quality management system.
Weiner, B.J., Alexander, J.A., Baker, L.C., Shortell, S.M., Becker, M.	Quality improvement implementation and hospital performance on patient safety indicators.	2006	Quality improvement actions and involvement of physicians	The number of physicians who participate in quality improvement, is related with better values (fewer) on the patient safety indicators 'postoperative complications' and 'technical difficulties with procedures'.
Wollersheim, H., Bakker, P.J.M., Bijnen A.B., Gouma, D.J., Wagner, C., Weijden, T., van der	Kwaliteit en Veiligheid in Patiëntenzorg. (Chapter 4: Organisatie van zorg)	2011	Organization of care	Responsible care means that care has to be efficient, effective and patient-centred. Deliberate policy has to be policy that is focused on quality and achieving responsible care. The annual report is used for accountability for the quality policy to the own organization, the Healthcare Inspection and to patient organizations.
Wollersheim, H., Bakker, P.J.M., Bijnen, A.B., Gouma, D.J., Wagner, C., Weijden, T. van der.	Kwaliteit en Veiligheid in Patiëntenzorg. (Chapter 6: Kwaliteits-verbetering en implementatie in de dagelijkse praktijk)	2011	Factors that can hinder or promote quality improvement in healthcare and communication with stakeholders about quality improvement	Factors that can hinder or promote quality improvement can be classified in individual setting (cognitive factors like knowledge and skills, behaviour and personal characteristics and motivational factors and attitudes), social setting (vision and attitude of teams toward innovation and possibility for involvement/input), organizational setting (organizational capability and degree of autonomy of professionals) and community setting factors (financial consequences). Communication with stakeholders about quality improvement is important to discover these factors and improve quality.

Wiig, S., Storm, M., Aase, K., Gjestsen, M.T., Solheim, M., Harthug, S., Robert, G., Fulop, N.	Investigating the use of patient involvement and patient experience in quality improvement in Norway: rhetoric or reality?	2013	Patient involvement/ experience in quality improvement	Patient involvement is low in quality improvement and has to be developed further because of the importance of patients as actor in the quality system.