NFU
NEDERLANDSE FEDERATIE VAN UMC'S
CONSORTIUM KWALITEIT VAN ZORG

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Proceedings

Organizing for Improvement

Contexts, accountabilities and collaborations making large scale improvement doable

An Invitational Conference by the NFU-consortium Quality of Care, the quality initiative of the eight Dutch University Medical Centres

London, April 26, 2017

Quality improvement in health care is about delivering better outcomes and experiences for patients. Improvement appears to be necessary but hard. In this invitational conference we will explore what organizational contexts actually help improving care for patients on a scale and intensity beyond loosely scattered improvement projects: how to create a structural situation is which steering efforts have their natural place and are likely to be effective?

Speakers

- Richard Bohmer MD, PhD, Professor of Management Practise, Harvard Business School (VS). Richard Bohmer is a physician and management academic. He formerly was the Director of Clinical Quality Improvement at the Massachusetts General Hospital and was on the faculty of Harvard Business School from 1997 to 2015 where he developed MBA and executive programs in health care management.
- Brent James MD, PhD, Chief Quality Officer at Intermountain Health Care (VS) (video attendance). For more than 20 years, Dr. Brent James has championed the standardization of clinical care through data collection and analysis on a wide variety of treatment protocols and complex care processes.
- Kees Ahaus, PhD, Professor of Healthcare Management, University of Groningen / University Medical Center Groningen. Kees Ahaus is Chair of the Expert Committee of the NFU-program Steering on Quality and former CEO of the Dutch Institute for Healthcare Improvement.

Pitchers

- Arie Franx MD PhD, gynaecologist, professor of Obstetrics, Chair Division Women and Baby at University Medical Center Utrecht
- Jan Hazelzet MD PhD, professor of Healthcare Quality & Outcome, Chief Medical Information Officer at Erasmus Medical Center Rotterdam
- Piet ter Wee MD PhD, internist-nephrologist, professor of Nephrology, Medical Director at VU University Medical Center Amsterdam
- Ralph So MD, consultant intensive care, medical manager department quality, safety and innovation at Albert Schweitzer Hospital Dordrecht.
- Lea Dijksman, PhD, 'senior advisor of the Board of Directors of St. Antonius Hospital' Nieuwegein.

Chair

Ate van der Zee MD PhD, gynaecologist-oncologist, Professor of Gynaecological Oncology, Vice President of the Executive Board of the University Medical Center Groningen, President of the NFU-consortium Quality of Care

This invitational was an activity in the program Steering on Quality. This program is financed by the Citrienfonds and is made possible by ZonMw.

Summary – Three highlights

Highlight 1. Contribution of Brent James MD, PhD,
Key process analyses create the basis for a data system. Key processes are primarily patient processes and are defined by the care provided to patients with a specific disease. Intermountain Health Care prioritizes inclusion of patient processes on the basis of revenue and volume – this appears to cover for complexity and risk too. In Intermountain Health System 7% processes accounted for 95% of care delivery. With a method that follows the steps of those processes can be figured out which data you need. In each step you identify what patients and clinical teams need to know.

Ideas for strong clinical data system: Think about medical outcomes and cost outcomes; they are connected; look at them together. There were massively amounts of data collected that was not needed, but we failed to collect certain data that we must have (30-50%). We have corrected that building on the framework of the care delivery system and now use a well-chosen set of frontline data. This is the key to make a better data system. It has a profound effect. And because of the data make sense to the clinicians it is no burden to them to register.

Highlight 2. Contribution of prof Richard Bohmer, MD PhD
Brent James presented a sound and effective system to manage the performance of a hospital. Now let us look into the hard work they did when we weren't looking. The hard work of health care transformation.

What does reform take?
When you look at organizations that systematically changed: its around the core processes of care:

1. No one can do this at once. Multiple small steps of change over and over again. Redesigning, rebuilding etc. one patient subpopulation at the time.
2. The right answer is very locally determined.
3. You need a multidisciplinary team; nurses, docters, secretery, transporters, managers, administrators, financly analist, so we do really need all those different professions. They all know one perspective on care. You can optimise care by using all these perspectives.
4. Start by using whatever data are available; start with the basics. Build it from the ground up and use in the main time whatever you have. We don't have time for data perfections, but try to improve what you have and especially use your existing system more.
5. You can never have it right at the first time! It's a series of experiments. Redesign and redesign.
6. In spite of local conditions, and not because of local conditions. That would be ideal, but that's not how it is. Nobody have the perfect conditions. You have to do the best you can with inadequate conditions. Led from the middle.
7. In partnership; cross organization partnership, and cross professions.

This is the reality to move an organization forward. But if we know this; how do we build and sustain the systems?

How do transformers sustain this? Figure 1.

- Many teams: Virginia Mason had 250 teams redesigning each year. They are across organizational boundaries. They focus on the patient, not on the organization as whole.
- Those teams are lead by local clinical leaders; they train their local clinical leaders.

Moreover, you need a support team, including clinical and financial analysts. And you need much project management. They need to keep the teams on track. Helping to put the teams into implementation phase.

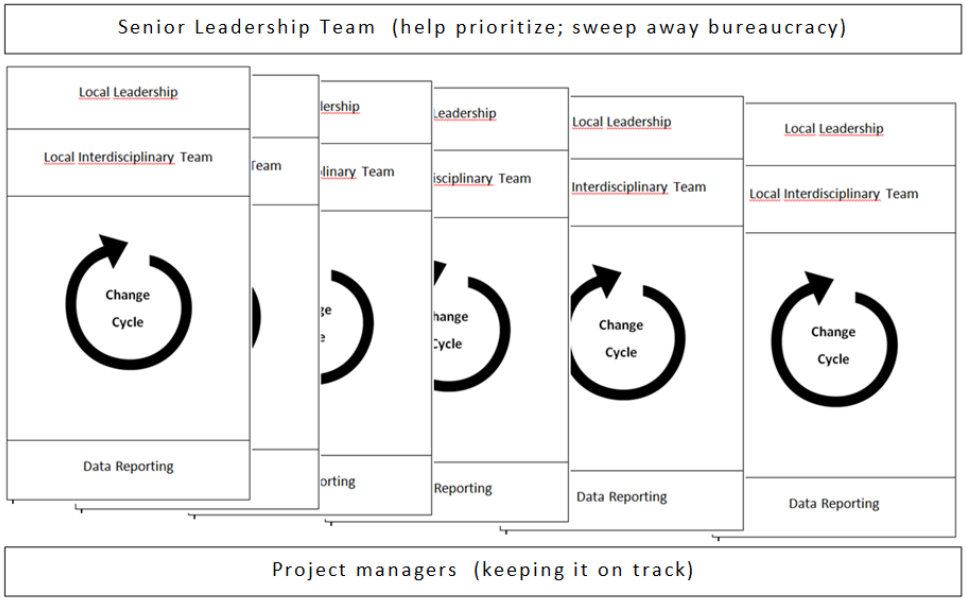

Figure 1: Constellation for healthcare transformation,model by Dr. Bohmer

In addition, you need some kind of senior leadership team; help prioritise, have oversight. And you need someone with a very sharp knife, sharp steering, sweep away bureaucratic old fashions

Finally, you need mechanisms for behaviour alignment; align goals, clarify expectations of behaviour as we are redesigning. Clarity about what we are going to do and how as a collective. How will we treat each other.

The guiding principle is: We are not trying to control the doctors, we are trying to get the doctors to control the system (T. Clemmer).

Highlight 3. Wrap-up by dr. Nico van Weert

Our understanding of what to learn from our invitational today should include further action on three points:

1. As we acknowledge the power to improve of interdisciplinary clinical groups working the way we saw, the way forward is to enhance the space, the status and the power of groups like these.
2. As we understand good data is needed for effective learning, we should develop data systems for quality metrics. Once more since we know most important criteria: data must be (disease) specific and to some extend standardized, but above all relevant in the view of clinicians. A frequent and fresh feedback should be supported by the data system.
3. Collaborate in and between umc's and hospitals, engage (young) clinicians, educate and learn together and share support.

Full proceedings

Presentations

Introduction by prof. Kees Ahaus PhD
Prof. Ahaus presents the first insights of the Expert Group on Quality Information, part of the NFU-program Steering on Quality. This program focuses on the role and information needs of the Executive Board of university medical center and hospitals related to quality of care.

First of all a 'dashboard' on quality of care should primarily be designed to facilitate and stimulate the dialogue between Board and clinicians about quality of care, the room for improvement and the actual realization of improvement.

When creating information systems for this, questions we ask are: what data is needed, how to collect it and – supposing the data is reliable – how do we manage performance? We endorse the call of Gregg S Meyer and others (2016) (among which presenter of today Brent James) for balance and parsimony and try to apply this in our program. The balance should be found in perspectives of clinicians, patients and board members. The parsimony is essential, as to many of our workforce tends to be occupied with registry.

We have found two windows on quality to be relevant: (1) hospital wide indicators on the six IOM dimensions of quality and (2) disease-specific quality indicators. The first indicators should be a small set of hospital wide indicators like mortality ratios, readmission rates and patient experience measures, all of them specified at the departmental or patient group level. The second indicators should include small sets of process and outcome indicators like clinical outcome, patient reported outcomes and experiences and costs. Prof Ahaus shows examples of both.

Key message: The shorter and the more actively used the more successful.

Wrap-up:
- Use a bottom up approach of quality improvement
- Engage with professionals and patients
- Start with indicators for improvement
- Work together in limiting the number of indicators
- Use existing data infrastructure, otherwise it is impossible to deliver the data
- Array outcome indicators in Porters three tiers
- Distinguish indicators and key determinants of quality
- Formulate an ambitious strategy
- Use stretch goals! Challenge your staff to work differently in order to achieve sustainable change
- Remove indicators that are no longer useful, because the shorter the list, the better

Introduction by Brent James MD, PhD

Dr James distinguishes three levels of organizing for quality:

1. Projects: quality is addressed mainly in projects; scope and continuation of results is problematic.
2. System of production (according to Demming): organize your management systems around quality of the care process.
3. Good data systems based on key process analyses.

Key process analyses create the basis for a data system. Key processes are primarily patient processes and defined by the care provided to patients with a specific disease. Intermountain Health System prioritizes patient processes on the basis of revenue and volume – this appears to cover for complexity and risk too.

In general processes come in 4 classes:

1. Clinical conditions: we distinguished 1446 specific clinical condition processes, and prioritized based on how many patients, what is the health risk, internal variability; results: 104 processes (7%); they count for about 95% of all of the inpatient and outpatient care delivery in the Intermountain Health System. We started with these works process in size order.
2. Clinical support services: these are general services, for instance: blood bank, OR, ICU. Clinical conditions and clinical support services group together, they interact together.
3. Patient perceptions of quality: this is service outcome and can be treated seperately.
4. Administrative processes

With a method that follows the steps of those processes can be figured out which data you need. In each step you identify what patients and clinical teams need to know. Ideas for strong clinical data system: Think about medical outcomes and cost outcomes; they are connected; look at them together. There were massively amounts of data collected that was not needed, but we failed to collect certain data that we must have (30-50%). We have corrected that building on the framework of the care delivery system and now use a well-chosen set of frontline data. This is the key to make a better data system. It has a profound effect. And because of the data make sense to the clinicians it is no burden to them to register.

In conclusion: this system is not perfect but it's far better. And better has no limit. I don't know how to be perfect, but I know how to be better. Data is essential for this, and we know how to build a right system.

Introduction by prof Richard Bohmer, MD PhD

Brent James presented a sound and effective system to manage the performance of a hospital. Now let us look into the hard work they did when we weren't looking. The hard work of health care transformation.

The last mile problem; we have a lot of innovations, data innovations, but our organizational models are old. We are not able to implement and sustain the innovations. So, how do we create organizations that are systematic flexible to change to new technology and innovations and stay patient centered?

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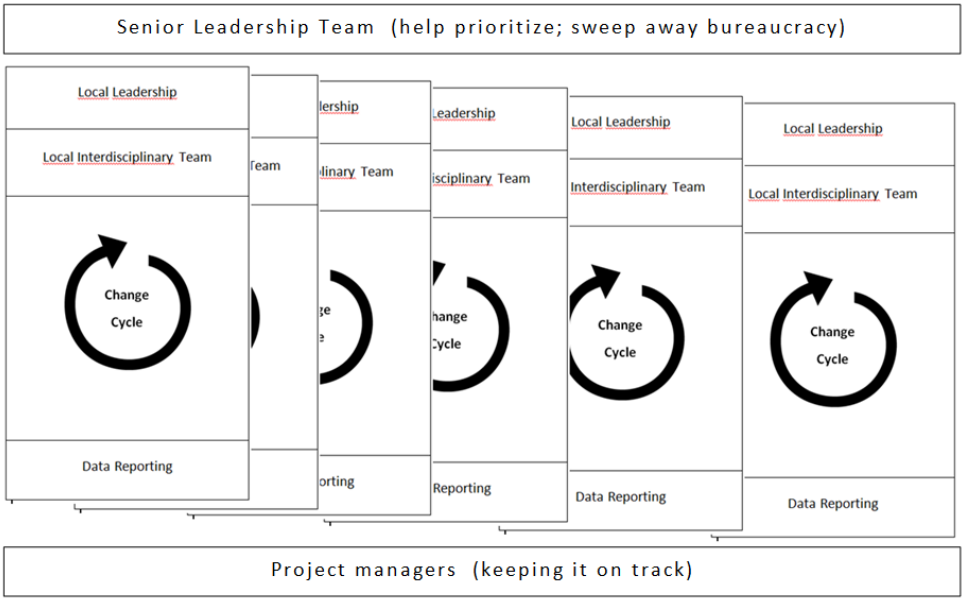

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Finally, you need mechanisms for behaviour alignment; align goals, clarify expectations of behaviour as we are redesigning. Clarity about what we are going to do and how as a collective. How will we treat each other.

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Pitch presentations and dialogue

Pitchers from both university medical centers and general (teaching) hospitals brought cases from Dutch hospitals to the dialogue on two topics:

1. How to improve patient safety?

Pitch by prof Piet ter Wee MD, PhD

University medical centers are responsible for patient care, education, and research. So we are working in a system that is able to and focused on learning. We want to improve patient care, and we want to learn from the things that are not going so well. We have forgotten to really look in detail in what is not going so well and learn from each other.

We should focus on learning together, we have to collaborate for that. Within the collaboration of the eight medical centers there is a good setting is to learn from each other by sharing our mistakes, in order to prevent those things happen elsewhere. However, share mistakes is hard because we are not proud of them. There is a lack of openness, transparency and there is negative media attention and financial barriers. By sharing lessons from sentinel events (calamiteiten) we can improve patient safety. We want to be proactive and learn from each other, and more collaboration.

Pitch by Ralfh So MD

In our hospital the rapid response system is seen as an continuous improvement project, supported by collected hopital data. Four questions (from Maureen Bisognano) have led us:

1. Do you know how good you are?
2. Do you know where you stand relative to the best?
3. Do you know where your variation exists?
4. Do you know your rate of improvement over time?

New research: identify frailty among deterioting patients: 40% were very frail. After 30 days 70% of them have died or were very dependent. Higher scores on frailty were associated with bad outcomes. Dr So offered a preliminary view on data yet to be published.

Dialogue

Prof. Bohmer: The case of Ralph So is a great example, executed with rigor. Ask: who can do it, where can it be done?, and this over and over again. With an important role for nurses. This is the kind of approach we need. Moreover, we need it times 800. It need time to be invested in, and the personal investment of health care professionals in this should be greatly appreciated. A big problem is that we do not value this work, and we simply don't have time for this. So, it's very hard to get doctors on board.

2. How to improve value of care?

Pitch by Lea Dijksman PhD

My key message is 'VBHC starts with trust, not competition'. In our hospital we started with developing outcome sets in 2010 and have an active collaboration with many parties, among which the Santeon group (7 top-clinical teaching hospitals) and ICHOM. All departments are reporting outcomes in quality dashboards: almost 500 outcomes. We currently measure outcomes in 20 conditions and have improvement cycles with patients in place for 8 conditions. Outcomes are being reported on our website and we use them in infographics to be transparent and useful in conversation patient and clinician. Regarding sales: we have insurer quality based purchase of breast cancer. Moreover we are doing research on VBHC.

What did we learn so far from our VBHC project? We have improved outcomes through collaboration. Doctors should trust each other. Be open to each other about your results. Then they can have a good discussion and there can also be some healthy competition. But focus on building trust.

Our future perspectives / next steps are:

- More collaboration is needed
- More implementation of VBHC in the organization
- Reform our hospital into integrated practice units; we investigate the possibilities
- Expand sales based on quality improvement
- The infographics with outcome data can be useful to develop more shared decision tools

Again: VBHC starts with trust, not competition. Competition can be nice, but only when there is trust.
Question: How can non-academic hospitals work together with academic hospitals?

Pitch by prof Jan Hazelzet MD, PhD

The direction we are heading is measuring outcome and costs. But there are more to do: we should go to smaller units, the disease team, those who are working together in direct patient care. That's what we should focus on. The team can only do this by organizational support: data, IT systems, accounting and cultural change. That's all needed for change. This can mean system redesign is needed.

To enable teams to improve patiënt care, data is needed: patient outcomes: patient reported outcome measures (PROMs), patient experience measures (PREMs), and clinical outcomes. Moreover, data is needed on provider results: key process measures, team cultures, financial status. To help using the data for improvement, benchmarking is needed. Moreover these teams and their patiënts need patients, peer & community support, good team collaboration, work on shared decision and patient empowerment. This is how we can achieve continuous team based improvement.

Pitch by prof Arie Franx MD, PhD

This is our journey to value based pregnancy and birth care. What is the problem? In spite of the good health care system in the Netherlands and a 15-years old national quality registry for pregnancy and childbirth care, the results of birth care rank among the worst in the European Union when measured by foetal and neonatal mortality.

Organization of care in the Dutch birth care system is considered to be an important factor for this: as a consequence of many referrals and transitions between the three lines of care there are enormous dynamics in our system.

Collaboration and integration of the lines of birth care are regarded as important part of the solution as recommended by a national Steering Committee on Pregnancy and Childbirth Care ordained by the Minister of Health in 2009. Since then, the Dutch birth care system is in transition. We now have in the Netherlands integrated practice by collaborative birth care organizations; this includes public health, midwifery care, maternity care, and care in general hospitals and academic hospitals.

In the collaborative birth care organization around the University Medical Centre Utrecht we set out for a value based birth care strategy according to the concept launched by Porter and co-workers, and supported by the International Consortium of Health Outcome Measurement (ICHOM). Drivers are outcomes resulting from the whole care cycle that matter to patients and the costs made to achieve these outcomes. We developed many of the Dutch outcome and patient experience measures that are now adopted bij the Dutch Health Care Instituut (Zorginstituut Nederland) and contributed to ICHOM's standard set Pregnancy and Childbirth Care. With Zilveren Kruis health care insurers we have an experimental accountable care contract for the years 2016-2018 that ties quantitative outcomes and improvement of outcomes to payments. Outcomes are clinical outcomes, patient reported outcome measures (PROMs) and patient experience measures (PREMs). We started to collect and report these outcomes "by hand"; all this work is done by professionals "on the floor". We cyclically change and improve our protocols on basis of the measurement, that eventually must also give insight inhowfar we adhere to protocols. So far we are enthousiastic about the changes in mindset and collaborative accountibility we observed since the beginning of this journey.

Now our dream is an electronic dashboard with real-live outcome and process data for continuous improvement and learning, and iterative protocol development. The electronic dashboard, however, requires the support of the board of directors and the ICT board of the hospital. The outcomes of the ICHOM standard set is the type of information we would like to have on this dashboard. Much of this data is not collected in current routine clinical practice. So, we also will change the care paths.

Dialogue

When and what should we measure? You need to start by measuring: use the sense of dissatisfaction about where you are versus where you want to be. But avoid the risk to be lost in a sea of data, and don't try to make the perfect measurement set. You can also start with try to understand what patients need/want, and after that ask yourself what should we measure to improve this? We need standard measures to show where we are, but also keep the core small enough that really enhance what clinicians want; more specific; what patients want. The dataset should be variable: constantly evaluate the value of the data. The data might also include qualitative data and storytelling based on N=1, for initiating personal dissatisfaction of health professionals.

Collaboration among hospitals is needed, as redesigning patient processes internally can only be done in collaboration with the inflow source or outflow recipient. A good topic to start working together as university medical centres en teaching hospitals in the Netherlands seems the be on support teams.

Finally it is important to engage young doctors, training in value-based healthcare should be included in medical education.

Wrap-up by dr. Nico van Weert

The great work presented today has in common that it is persued by clinical groups in which several specialties and professions join forces. They act with rigor on improvement of outcome, using available data. And they do so '…in spite of local conditions'. They demonstrate to be able to find their way and be effective.

Our understanding of what to learn from this invitational should include further action on three points:

1. As we acknowledge the power to improve of interdisciplinary clinical groups working the way we saw, the way forward is to enhance the space, the status and the power of groups like these.
2. As we understand good data is needed for effective learning, we should develop data systems for quality metrics. Once more since we know most important criteria: data must be (disease) specific and to some extend standardized, but above all relevant in the view of clinicians. A frequent and fresh feedback should be supported by the data system.
3. Collaborate in and between umc's and hospitals, engage (young) clinicians, educate and learn together and share support.

We are dedicated to work on these topic in the collaboration of the eight university medical centres in het NFU-consortium Quality of Care.

Appendix 1. Program April 26, 2017

5.00 PM	**Opening and brief introduction to the invitational** Nico van Weert PhD, Coordinator of the NFU-consortium Quality of Care
5.05 PM	**Perspectives on organizing for improvement** Brent James (by video) - Richard Bohmer - Kees Ahaus
6.00 PM	**Pitches and dialogue about (next steps in) Dutch hospitals** Pitches related to improvement in value of care Lea Dijksman – Jan Hazelzet - Arie Franx Pitches related to improvement of patient safety Piet ter Wee - Ralph So
7.15 PM	**Wrap-up**
7.30 PM	**Closing**

Appendix 2. Participants (subscribed)

Dineke	Abels	ZonMW
Kees	Ahaus	UMCG
Cathy	van Beek	Radboudumc
Gerda	Berkhout	VUmc
Meike	de Boef	VUmc
Wilma	Boeijen	Radboudumc
Didi	Braat	Radboudumc
Marlies	den Butter	NFU-consortium Kwaliteit van Zorg
Hilly	Calsbeek	Radboudumc
Mary	Derix-de Leeuw	MUMC
Monique	van Dijk	Erasmus MC
Hannah	Dijkhuis	ZonMW
Dave	Dongelmans	AMC
Irma	van Everdinck	LUMC
Judith	Frank	UMCU
Arie	Franx	UMCU
Melina	van Gunsteren	VUmc
Leo	de Haan	VUmc
Jolanda	Hagen-Maluw	VUmc
Monique	Hanraets	MUMC
Annet	van Harten	Radboudumc
Jan	Hazelzet	Erasmus MC
Jos	Hoofs	MUMC
Gerrie	Hop	VUmc
Marie-José	Jorna-Van der Aa	Radboudumc
Job	Kievit	LUMC
Dorthe	Klein	MUMC
Renée	Kool	VUmc
Mark	Kramer	VUmc
Laura	Krijgsman	VUmc
Nicole	Leferink	Radboudumc
Erica	de Loos	NFU-consortium Kwaliteit van Zorg
Ybe	Meesters	UMCG
Suzan	Meijer	Radboudumc
Guido	Penders	MUMC
Mireille	Pluijgers	NFU-consortium Kwaliteit van Zorg
Chris	Polman	VUmc
Edwin	Pompe	VUmc
Rico	Rinkel	VUmc
Kira	Scheerman	VUmc
Suzanne	Schmeink	LUMC
Wilke	Schut	Radboudumc

Bert	Smit	Erasmus MC
Linda	Smulders	Radboudumc
Ralph	So	Albert Schweitzer zknhuis
Daphne	van Soest	LUMC
Erwin	Sponselee	Radboudumc
Monique	Staps	UMCG
Piet	ter Wee	VUmc
Nicole	Tijhuis	Radboudumc
Roos	Trooster	NFU-consortium Kwaliteit van Zorg
Dirk	Ubbink	AMC
Marion	Verduijn	NFU-consortium Kwaliteit van Zorg
Kim	Vereijken	STZ
Joke	Vermeeren	Erasmus MC
Jentien	Vermeulen	AMC
Greetje	Vos-Schuurke	UMCG
Marit	de Vos	LUMC
Jeannette	Vreman	Radboudumc
Nico	van Weert	NFU-consortium Kwaliteit van Zorg
Gera	Welker	UMCG
Ate	van der Zee	UMCG