



Participation of the Netherlands in the European Union Network for Patient Safety and Quality of Care (PaSQ)

This report is the result of a collaboration between NIVEL and CBO.

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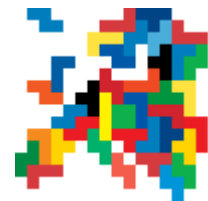
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Summary

This report aims to give insight into the Dutch participation in the European Union Network for Patient Safety and Quality of Care (PaSQ), and the extent to which this participation contributed to the overall goal of PaSQ: 'to improve patient safety and quality of care in Europe by supporting the implementation of good organizational practices and safe clinical practices in health care organizations and through sharing of information and experiences'. The general objective of PaSQ is to improve patient safety and quality of care in Europe by supporting the implementation of good organizational practices and safe clinical practices in health care organizations and through sharing of information and experience. Special attention is paid to patient involvement and to further implementation of existing tools for quality improvement, instead of developing new tools.

By participating in PaSQ Joint Action the Netherlands became part of a large European network, which offered the Netherlands access to information on patient safety and quality of care from other participating countries, as well as an opportunity to share Dutch information and experiences with others.

The participating Dutch hospitals had the chance to improve their care processes by further implementing three safe clinical practices, supported in this effort by CBO and NIVEL. They became part of a network at national level in which they could exchange knowledge on and experiences with these safe clinical practices and had access to the European PaSQ network and resources as well.

Seven Dutch hospitals participated in PaSQ, each working on the implementation or sustainability of one or more safe clinical practices: Medication Reconciliation, Paediatric Early Warning Scores (PEWS), and Hand Hygiene. The hospitals received implementation support in the form of national meetings, webinars, conference calls with project leaders, access to the PaSQ website and implementation toolboxes, and access to PaSQ activities such as international webinars and exchange meetings. In order to provide the hospitals with insight into their performance on the relevant safe clinical practices and further stimulate implementation efforts, NIVEL conducted an implementation evaluation for each of the three safe clinical practices. Data was gathered in each hospital using patient record reviews, hospital guidelines and interviews or observations, after which hospitals received a short report on their performance.

PEWS was used both for more patients and more often per patient in the five participating hospitals by the end of 2014. Many of the hospitals used the participation in PaSQ as an incentive to get the implementation of PEWS going and used the national network to exchange instruments and experiences.

All project leaders indicated that they were implementing PEWS mainly because it had become a mandatory aspect of a safety management system in the Netherlands. Nurses and physicians involved had doubts about the usefulness of existing PEWS for non-university hospitals, because they felt these PEWS were originally developed for university hospitals.

Unlike the implementation of PEWS, Hand Hygiene did not involve a new subject for the participating hospitals and the PaSQ toolbox contained no new tools or ideas for Dutch

hospitals. Due to the fact that only two hospitals participated, the opportunity for knowledge exchange within a national network was also limited. This might explain why Hand Hygiene compliance has not improved in the two PaSQ hospitals during the project.

Medication Reconciliation compliance did improve in the two participating hospitals, when compared to compliance in 2012. The largest improvement was seen in the number of patients where a medication overview was created before discharge. However, overall compliance at discharge remained relatively low.

Overall, the participation in PaSQ meant a new impulse for implementation efforts in the participating hospitals, supported by the knowledge exchange taking place within the national and international network. This led to good results for especially PEWS, as well as the start of a more permanent national group of hospitals and experts working on further developing PEWS and its implementation in the Netherlands.

Future participation of Dutch healthcare organisations in an international network aimed at patient safety and quality of care would be most beneficial to these organisations if the network was aimed at safe clinical practices that are new to the Netherlands. This would ensure sufficient room for improvement, as well as access to new insights, methods and materials from other countries.

In order to make the most of a national network of healthcare organisations, either as part of a larger international network or separately, the number of participating organisations needs to be sufficiently large. Having at least five healthcare organisations in a network would ensure sufficient diversity between organisations and limit negative effects of drop outs on the network.

A proposal for a permanent network for patient safety and quality of care in the EU has been developed by PaSQ partners. The Dutch hospitals participating in PaSQ will individually keep working on the implementation and sustainability of safe clinical practices.

1 Introduction

The European Union Network for Patient Safety and Quality of Care (PaSQ) was launched in May 2012. The general objective of this network is to improve patient safety and quality of care in Europe by supporting the implementation of good organizational practices and safe clinical practices in health care organizations and through sharing of information and experience. Special attention is paid to patient involvement and to further implementation of existing tools for quality improvement, instead of developing new tools.

EU member states, EU stakeholders and international organisations all cooperate in PaSQ Joint Action; sharing knowledge, experiences and good practices, as well as examining transferability of these practices. 28 EU member states, plus Norway, participate in the PaSQ network. Every member state in PaSQ is represented by a national contact point, but other relevant stakeholders, such as patient associations and health care organisations, take part in the network as well. Dutch participation in PaSQ started in 2012, with NIVEL, Netherlands Institute for Health Services Research, acting as national contact point and CBO, Dutch Institute for Healthcare Improvement, as associate partner.

1.1 Joint Action

PaSQ Joint Action has been co funded and supported by the European Commission within the Public Health Programme. A "Joint Action" is a funding instrument of the European Commission, which indicates that a project is co-financed by a party other than the European Commission. Parties that can contribute to the cost of a project are the authorities that are responsible for health in EU member states or in third countries participating, or public sector bodies and non-governmental bodies mandated by those authorities. In case of the Netherlands, the Ministry of Health, Welfare and Sports co-funded the Dutch participation in PaSQ Joint Action.

PaSQ consists of seven different work packages, each concerned with a specific topic related to patient safety, quality of care or the organisation of the Joint Action itself:

Work package	Topic	Lead partner
Work package 1	Coordination of the Joint Action	Haute Autorité de Santé (HAS), France
Work package 2	Dissemination of the Joint Action	Agency for Quality and Accreditation in Health Care and Social Welfare (AQAH), Croatia
Work package 3	Evaluation of the Joint Action	National and Kapodistrian University of Athens (NKUA), Greece
Work package 4	Patient Safety Good Clinical Practices	Danish Society for Patient Safety (DSPS), Denmark
Work package 5	Patient Safety Initiatives Implementation	German Agency for Quality in Medicine (AQuMed), Germany
Work package 6	Quality Healthcare Systems Collaboration in the EU	Spanish Ministry of Health, Social Services and Equality (MSSSI), Spain
Work package 7	Network Sustainability	Lead Partner: Ministry of Health (SKMoH), Slovakia

1.2 Participation of the Netherlands in PaSQ

The Netherlands participated in three PaSQ work packages:

Work package 4: identification and diffusion of safe clinical practices

This work package is aimed at identifying good clinical practices in patient safety (safe clinical practices), and supporting their diffusion to the healthcare organisations and the community of healthcare professionals. Different methods of diffusion are used, such as an online toolboxes through which safe clinical practices and implementation tools are shared online, and exchange meetings where experts share their knowledge with professionals.

Work package 5: implementation of safe clinical practices

Four safe clinical practices were selected by the members of the network as a focus of work package 5: paediatric care (Paediatric Early Warning Scores), and medical activities (Multimodal intervention to increase Hand Hygiene compliance), medication safety (Medication Reconciliation), safe surgery (WHO Surgical Safety Checklist). This work package is aimed at implementation of the four safe clinical practices in healthcare organisations in the participating member states. The implementation is monitored and supported by the national contact points and the lead partner responsible for the work package. The toolboxes developed in work package 4 are one of the ways the healthcare organisations are supported during the implementation process.

Dutch hospitals participated in three out of four safe clinical practices: Paediatric Early Warning Scores (PEWS), Hand Hygiene and Medication Reconciliation. Unfortunately, no Dutch hospitals wanted to participate in safe surgery, which is why this topic was not part of the Dutch PaSQ project.

Work package 6: identification and diffusion of good organisational practices

The goal of work package 6 is to strengthen cooperation between EU Member States and EU stakeholders on issues related to quality management systems in healthcare, including patient safety and patient involvement. The work package aims to achieve this by: obtaining insight and mapping of quality management systems in member states; sharing good organisational practices in quality management systems; reflecting on principles of good quality management in health care; and building and/or consolidating a network of organisations for sustained collaboration in the field of quality management systems. Knowledge about quality management systems in the EU may aid in understanding the principles on which they are built and assist the discussion of common principles for the long-term future. Mapping the characteristics of the systems in place in each member state will provide a structured EU overview. Through the work of this work package health authorities, stakeholders and health care organisations at the national and regional level will experience increased awareness, exchange experiences and gain knowledge on good organisational practices including patient safety and patient involvement. It will also facilitate strategies for implementation of good organizational practices at the national or regional level.

In addition to the participation of the Netherlands in these three work packages, the Netherlands contributed to the other work packages by giving feedback on action plans, preliminary reports and the final reports of these work packages. Furthermore, as NIVEL was the national contact point of the Netherlands, they contributed to the data collection of all the work packages by filling out questionnaires or by forwarding the

questionnaires to relevant stakeholders in the Netherlands with the request to fill them out.

1.3 Aim of this report

This report aims to give an overview of the Dutch participation in PaSQ and the extent to which this participation contributed to the overall goal of PaSQ Joint Action: ‘to improve patient safety and quality of care in Europe by supporting the implementation of good organizational practices and safe clinical practices in health care organizations and through sharing of information and experiences’.

In Chapter 2 the results of the Dutch participation in PaSQ will be discussed: what knowledge, tools, contacts and other benefits did PaSQ result in? One important aspect of the Dutch participation was the implementation of safe clinical practices in hospitals. The evaluation of this implementation process will be described in more detail in Chapter 3: how were the safe clinical practices resulted and how were the participating hospitals supported in their implementation process? In Chapter 4 the results of the implementation process in the participating Dutch hospitals will be discussed. In Chapter 5 the impact of PaSQ Joint Action in the Netherlands will be summarized and plans for the future will be described.

2 Taking part in PaSQ Joint Action

Quality of health care has become an increasingly important topic both at the national and the European level. Improving quality of care can lead to better health outcomes for individuals and more cost-effective use of resources. This will benefit not only health care consumers, but health care organizations and governments as well. PaSQ Joint Action aims to contribute to the safety and quality of care in EU member states, by encouraging collaboration and knowledge exchange between health care organizations and member states. In this chapter we will look at what knowledge, tools, contacts and other benefits PaSQ resulted in for the Netherlands as part of the participation in work packages 4, 5 and 6.

2.1 Building a European network

Through PaSQ a European network was built between important stakeholders within the field of quality and safety in health care. Within this network information was gathered and exchanged in order to learn from each other's experiences. The network was established through several means:

The PaSQ website www.pasq.eu

The website describes the main objectives of the Joint Action and the different work packages, the participating member states, collaborating and associate partners of the project and gives a comprehensive overview of the project. Furthermore, the website was used as a platform for the gathering of information on quality management systems, good organizational practices and safe clinical practices. National contact points could log in to a section on the website where they could fill out the questionnaires that were at the basis of the information gathering. This information was used for the database with good organizational practices and safe clinical practices that is available to the public and intends to encourage the sharing and learning from each other's experiences. Exchange events that were organized were announced on the website, and registration could be done through the PaSQ website.

PaSQ coordination meetings and back-to-back meetings

During the three years of PaSQ, regular coordination meetings and back-to-back meetings were organized. In these meetings the progress and (sub)results in every work package were presented in order to exchange information between work packages and between member states and relevant stakeholders. These project related meetings created a network of all participating member states, stakeholders, associate and collaborating partners within PaSQ. Three of the coordination meetings were open to the public, 500 invitations were sent for every meeting.

Furthermore, separate work package meetings were held for the individual work packages in order to discuss the work in the different work packages with the collaborating and associate partners of these work packages.

Exchange events

All participating member states were assigned a budget for the organization of exchange meetings. These events aimed to share knowledge and experience between stakeholders, and were open for representatives of health care organizations as well.

The events could have the form of collaborations, information and discussion meetings, study tours, webinars and workshops. The exchange events were also an opportunity to showcase best practices to other member states. The Netherlands organized several exchange meetings (see Annex A) :

- An information and discussion meeting on accreditation in healthcare, May 2014
- An information and discussion meeting on the use of indicators in healthcare, September 2014
- An information and discussion meeting on medication safety, December 2014.
- An extra information and discussion meeting on stepwise visitation, February 2015, on request of the HAS (PaSQ Joint Action coordinator)

Furthermore, the Netherlands provided several experts for exchange events that were organized by other member states, disseminated the information on upcoming exchange events to national stakeholders, and participated in several exchange events.

By the end of 2014, about thirty-five exchange events had been organised in the member states to exchange information regarding selected clinical and organisational good practices, and build relationship between experts, practitioners and decision makers. These events continue to be one of the preferred PaSQ mechanisms for knowledge transfer.

Newsletters

Eight newsletters were disseminated to 400 EU partners in order to keep them up-to-date on the progress of the Joint Action (www.pasq.eu).

2.2 Implementing safe clinical practices

Work package 5 gave hospitals an opportunity to work on improving the implementation of certain safe clinical practices, with support and access to an international network of organisations focusing on the same issues. Seven Dutch hospitals participated and each committed to the implementation of one or more safe clinical practices: Medication Reconciliation, Paediatric Early Warning Scores (PEWS) and Hand Hygiene. The implementation was supported and monitored by NIVEL and CBO, as well as the lead partner responsible for the work package. The implementation support and results will be discussed in Chapters 3 and 4.

2.3 Building national relationships

Participation in work package 5 also offered the hospitals the chance to be part of a national network, facilitating knowledge exchange between hospitals and between the hospitals and NIVEL/CBO. The implementation toolbox and other knowledge exchange initiatives, such as webinars, were ways in which the Dutch hospitals had access to information and knowledge from other member states.

Through working with the five hospitals implementing PEWS, CBO and NIVEL came into contact with other organisations and people involved with paediatric care and PEWS in the Netherlands. This led to two meetings, in which it became clear that the difficulties

the five PaSQ hospitals had experienced or still were experiencing with the implementation of PEWS were shared by others. This led to the idea to start a national working group on PEWS, which will develop implementation advice and tools for hospitals implementing PEWS, but will also look at identifying a PEWS that can be used effectively in non-university hospitals and can be adjusted to local circumstances and needs. CBO and NIVEL will help establish this group during the one year extension of PaSQ (2015-2016), in collaboration with the Dutch Society for Paediatricians (NVK).

2.4 Exchanging knowledge and improving practice

The overall value of the network that was established through PaSQ was made explicit in the reference that the Council of the European Union made in its Conclusions. On its December 1st 2014 meeting in Brussels, the Council of the European Union made an explicit reference to PaSQ in the Conclusions: The Council welcomes the work and results on the implementation of its Recommendation 2009/C150/01 as regards to exchange and implementation of good practices, and: “Invites the Member States and the Commission to: Develop further work on the dimensions of quality in healthcare, taking into account existing knowledge, including the work of the “Joint Action on patient safety and quality of care” (PaSQ), and to “Finalise by December 2016 a framework for a sustainable EU collaboration on patient safety and quality of care, also taking into account the results of PaSQ JA” (EPSCO Council 2014). The PaSQ network has demonstrated that knowledge exchange and mutual learning via existing PaSQ tools are a credible alternative to European standardization (Newsletter PaSQ, 2014). Following the Council Recommendation (2009/C 151/01), PaSQ Joint Action is looking to build on its experience, and introduce a permanent network to promote patient safety and quality of care across healthcare systems (EPSCO Council 2009). This network will work towards ensuring EU collaboration on quality improvement and patient safety and continue to facilitate the exchange of good practices .

At the 5th Coordination meeting on 12 & 13 March 2015 in Brussels, in which the results of the EU PaSQ network have been exchanged with the wider audience, it was stated by the member states that exchange between countries and healthcare organisations contributed to the implementation and sustainability of good practices. Face to face meetings between institutes and healthcare organisations, such as exchange conferences, site visits and webinars are most effective to achieve a flywheel for implementation progress within healthcare settings.

Overall, by participating in PaSQ Joint Action the Netherlands had the opportunity to showcase Dutch knowledge and good practices, as well as learn from knowledge and experiences from other countries.

3 Implementation of safe clinical practices: process

The goal of work package 5 was to implement four safe clinical practices - Paediatric Early Warning Scores, Hand Hygiene, Medication Reconciliation and WHO Surgical Safety Checklist—in healthcare organisations in participating member states. This chapter will focus on the selection process of these safe clinical practices in work package 4 and the way participation in work package 5 took shape in the Netherlands.

3.1 Selecting safe clinical practices

Prior to the implementation of safe clinical practices in work package 5, several steps were taken in order to decide which safe clinical practices were to be implemented in the different member states.

1. Development of a framework for safe clinical practices;
2. Data collection for safe clinical practices;
3. Selection of safe clinical practices for implementation.

First, a framework for safe clinical practices was developed. This framework described the definition of safe clinical practices and was based on work in work package 4 and was developed through an interactive process between the partners of work package 4. The partners initially suggested terms to be part of the work package 4 work in a brainstorm. A first draft document was produced comprising the terms and suggested definitions based upon either previous used definitions in the literature or suggestions from partners. Where possible the definition of terms was based upon information in the Conceptual Framework for the International Classification for Patient Safety from the World Health Organization, World Alliance for Patient Safety. All work package 4 partners were invited to review and comment on this first draft of terms and the work package 4 Conceptual framework. Comments and suggestions were integrated and a second draft was sent to the specific work package 4 task group which had signed up for in depths work with this work. Based upon input for new terms, comments and suggestions to the document, it was revised, and yet again shared with the work package 4 partners. This process was replicated a number of times. This resulted in a definitive framework, which determined that a safe clinical practice for implementation in work package 5 was specified as:

A clinical practice to enhance patient safety

- which has been implemented,
- for which a baseline measurement has been established before implementation,
- for which a measurement has been established after implementation,
- which has shown an improvement in patient safety based on the before and after measurement.

or

A clinical practice to enhance patient safety

- which has been implemented,
- which has been evaluated using an intervention and a control group,
- for which an improvement in patient safety has been demonstrated when comparing these two groups.

Further criteria for the selection of the safe clinical practices were subsequently defined:

- 1) Demonstrated effectiveness in clinical trials
- 2) Transferability with regard to healthcare systems and healthcare contexts or clinical specialties
- 3) Feasibility of implementation within PaSQ
- 4) Existing implementation tools
- 5) Patient involvement

Several steps were taken in order to collect and select possible safe clinical practices for implementation:

- 1) Conducting a literature review of safe clinical practices
- 2) Presenting the selected safe clinical practices and gathering feedback from member states
- 3) Assessing and integrating feedback from member states in the list of selected safe clinical practices
- 4) Circulating the final list for confirmation by work package 5 partners, executive board and steering committee
- 5) Placing the list of selected safe clinical practices on the PaSQ website

A literature review to collect potential safe clinical practices was conducted and a first set of safe clinical practices was compiled and presented. This first set consisted of:

- Medical Emergency Team
- Medication Reconciliation
- Multimodal intervention to increase hand hygiene compliance
- Suprapubic bladder catheterization
- WHO Surgical Safety Checklist

Feedback from at least all PaSQ member states which had budget for participating in the work package 5 implementation was gained via an online questionnaire. The questionnaire was divided in two parts:

1. Assessment of the intention to implement the safe clinical practices recommended in the first set and collection of additional information on the first set
2. Addition of other possible safe clinical practices

According to the results of the questionnaire the final set of safe clinical practices for implementation in work package 5 was defined as:

- WHO Surgical Safety Checklist
- Medication Reconciliation
- Multimodal intervention to increase hand hygiene compliance
- Paediatric Early Warning Scores (PEWS)

A final confirmation round was conducted with the 16 PaSQ member states willing to participate in the implementation, to confirm which safe clinical practices of the final set they intended to implement (AQuMed / ÄZQ 2015).

3.2 Participating in work package 5

Several national and international projects aimed at improving patient safety and quality of care have taken place in the Netherlands in recent years, such as the National Patient Safety Programme (2008-2012) and the WHO High 5s project (www.cbo.nl). These projects offered support and knowledge to hospitals, in order to stimulate them to implement good safety or organizational practices. The evaluation of the National Patient Safety Programme in 2013 showed that implementation, sustainability and diffusion of several good practices, such as Medication Reconciliation, was far from perfect (De Blok et al 2013). In that period media attention was also paid to a failure to adhere to Hand Hygiene guidelines in several Dutch hospitals (Zembla, 2012). These and other signs showed that more needed to be done to assist hospitals in improving quality of care. By joining work package 5 of PaSQ, the Netherlands hoped to gain access to useful implementation tools as well as knowledge and experiences gained in other countries. In combination with support by the national contact point and associate partner, this was expected to give the implementation process for specific good practices in Dutch hospitals a boost.

The aim of the Dutch PaSQ team was to find at least two hospitals willing to participate per safe clinical practice, with the possibility for hospitals to participate in more than one safe clinical practice, and with a maximum of eight participating hospitals in total. Initially, all Dutch hospitals received an invitation to participate in PaSQ, through the contact points of the national Patient Safety Programme. Eventually seven Dutch hospitals decided to participate in work package 5, working on the implementation or sustainability of one or more safe clinical practices: Paediatric Early Warning Scores (PEWS), Hand Hygiene and Medication Reconciliation.

Five hospitals focused on the implementation of PEWS, two on Medication Reconciliation, and two hospitals on Hand Hygiene. The two hospitals that focused on Medication Reconciliation also participated in the global World Health Organization (WHO) High 5s project on standardization of patient safety solutions. One hospital participated in both Hand Hygiene and PEWS, while another participated in both PEWS and Medication Reconciliation.

Unfortunately, no Dutch hospitals accepted the invitation to participate in PaSQ for safe surgery, which is why this topic was excluded from the Dutch PaSQ project.

3.3 Implementation support

CBO, assisted by NIVEL, provided the hospitals with implementation support, by organizing national meetings for multidisciplinary hospital teams and two webinars. The meetings were aimed at exchanging information on implementation progress, implementation training (process analysis, measures, project and change management, interventions, etc.) and experiences in daily practice. CBO and NIVEL also held frequent individual conference calls with project leaders of the multidisciplinary hospital teams to discuss implementation progress and provide advice on how to carry out further implementation. The hospitals were made aware of the public PaSQ website, PaSQ activities such as webinars, and exchange meetings and the PaSQ implementation toolboxes.

The public online tool boxes consists of information per safe clinical practice on the origin and background of the practice, the evidence on the effectiveness of each safe clinical practice and advice and tools for implementation. Additionally, the tool boxes offer a selection of specific tools, such as videos, checklists and guidelines, which can be used and/or adapted by health care organizations implementing the safe clinical practices.

In order to provide the participating hospitals with insight into their performance on the relevant safe clinical practices, NIVEL conducted an implementation evaluation for each of the three safe clinical practices. Data was gathered in each hospital using patient record reviews, hospital guidelines and interviews or observations. For PEWS and Hand Hygiene data was gathered on three occasions, after each of which the hospitals received a report on their performance. For Medication Reconciliation data was gathered once, resulting in one performance report. All health care organisations participating in work package 5 also received baseline and end line questionnaires from the work package 5 leaders, to determine their implementation status and experiences.

4 Implementation of safe clinical practices: results

This chapter will focus on the Dutch hospitals participating in work package 5: What did the safe clinical practice they were implementing consist of and what were the results of these hospitals at the end of the project? The overall results of work package 5, using information from all participating member states, will also be discussed briefly in this chapter.

4.1 Paediatric Early Warning Scores

Paediatric Early Warning Scores (PEWS) are used as a means to recognise sick children or deterioration in children, offering healthcare professionals the opportunity to intervene at an early stage and ultimately prevent deterioration or collapse.

PEWS are calculated using scores from a selection of routine observations of patients, such as heart rate, respiratory rate, respiratory distress and oxygen saturation. A higher PEWS score indicates a worse clinical condition, with predefined trigger points indicating when additional nursing or medical action needs to be taken. Different PEWS instruments exist, using different observations or measurements and different cut-off-points.

In order for PEWS to really have effect on the care provided for children, the score needs to be part of a larger early warning system, in which there is a clear and shared approach not only to the observation of hospitalised children and the usage of PEWS, but also to the escalation that follows higher scores. If this system is in place, PEWS is a means of quantifying the clinical status of patients, recognizing deterioration early on and initiating early interventions aimed at preventing or reversing clinical deterioration (NHS Institute for Innovation and Improvement 2013, Roland et al 2014, Fuijkschot et al 2015). In 2011 the national Patient Safety Programme advised Dutch hospitals to implement PEWS (VMS Veiligheidsprogramma 2011).

A total of 35 PaSQ hospitals from four countries worked on this topic. Five Dutch hospitals participated in PaSQ for PEWS. Their goal was to implement PEWS and associated early warning system on at least the paediatric ward. The hospitals were not actively working with PEWS at the start of the project, although some already had selected or developed a specific PEWS. By the end of 2014, all five hospitals had selected or developed a PEWS for their hospital, resulting in five different PEWS and associated approaches (see Table 4.1).

Using patient record reviews, information was gathered on hospital admissions from October/November 2013, May/June 2014 and November/December 2014. The aim was to include 20 patient records per month for each hospital, from either paediatric wards or maternity wards. Only records from patients aged ≤ 18 years, with a length of stay of ≥ 24 hours were included in the data collection.

For each patient we determined whether a PEWS was recorded in the patient record (Table 4.2) and whether action was taken by nursing staff, if the score required action. These actions can include consulting with a paediatrician or primary physician, increasing the frequency of calculating PEWS or taking measures aimed at directly improving the condition of the patient, such as administering oxygen or pain medication.

Table 4.1 PEWS as used in five participating hospitals

	Hospital 1	Hospital 2	Hospital 3	Hospital 4	Hospital 5
Number of criteria	8	3	8	3	6
Criteria	Heart rate Respiratory rate Respiratory effort Oxygen saturation Use of oxygen therapy Capillary refill time Systolic blood pressure Temperature	Cardiovascular: colour, capillary refill time or heart rate Respiratory: respiratory rate or respiratory effort Behaviour	Heart rate Respiratory rate Oxygen saturation Capillary refill time Systolic blood pressure Temperature Consciousness Nurse concern	Cardiovascular: colour, capillary refill or heart rate Respiratory: respiratory rate, respiratory effort or use of oxygen therapy Behaviour	Heart rate Respiratory rate Respiratory effort Use of oxygen therapy Consciousness Nurse concern
Trigger points	4-5: calculate PEWS every four hours 6-7: calculate PEWS every hour ≥ 8: consult paediatrician	2: calculate PEWS every three hours 3: calculate PEWS every hour and call attending physician 4-5: call paediatrician and attending physician 6: consult paediatrician within 30 minutes	≥ 3: call paediatrician and calculate PEWS every two hours	3: Consider consulting paediatrician or attending physician ≥ 4: consult paediatrician within 15 minutes	3-4: repeat PEWS after four hours, consider measuring blood pressure and oxygen saturation 5-6: call paediatrician and measure blood pressure and oxygen saturation
General policy on PEWS use	High risk patients: once every eight hours. With a score of 0-2: once every 24 hours.	Once every eight hours.	Patients that are on a monitor: once every eight hours. Other patients at least once, on admission.	Once every eight hours.	Twice in 24 hours.

Table 4.2 Use of PEWS in five Dutch hospitals between October 2013 and December 2014

Month	Number of records	PEWS	Action required ¹	Action taken
Oct/Nov '13	207	0	-	-
May/June '14	176	34.7%	29	10.3%
Nov/Dec '14	171	70.2%	55	49.1%

We also calculated the number of PEWS recorded per patient day for the patients where at least one score was recorded. We found that in May/June of 2014 a PEWS was recorded on average 1,0 time a day (n=58, SD 0.79), while this was 1,4 times a day (n=119 SD 0.86) six months later.

These numbers show that PEWS was used both for more patients and more often per patient by the end of 2014. In order to gain insight into the development of the clinical condition of the patient, PEWS should be calculated several times a day (see Table 5). Although the average number of PEWS recorded per patient day was more than one, this suggests there is still room for improvement.

Information on the method of introducing and implementing PEWS was gathered during interviews with paediatric nurses and paediatricians. For each hospital, a researcher conducted a semi-structured interview with one paediatrician and one paediatric nurse. These interviews were held in January, February and March 2015.

The interviews with nurses and paediatricians and teleconferences with the PaSQ contact persons in the hospitals showed that the three hospitals that had not yet selected or developed a PEWS prior to PaSQ, had done such during the course of PaSQ, making use of the information shared on this topic in the national network. Most project leaders used the participation in PaSQ as an incentive to get the implementation going in their hospital. The implementation advice and practical tools provided during the first face-to-face meeting were taken to heart by several project leaders and applied in practice. This led to project leaders involving the end users in selecting a specific PEWS and developing a project plan, among other things. In the interviews, all respondents indicated that they were implementing PEWS mainly because it had become a mandatory aspect of a safety management system in the Netherlands. All clarified that while they agree with the idea behind PEWS, they were sceptical about the usefulness of existing PEWS for non-university hospitals given the different patient groups and organisational circumstances.

4.2 Hand Hygiene

Health care-associated infections affect 7 of every 100 hospitalized patients in developed countries each year (WHO, 2009)). Infections can lead to adverse outcomes, such as more serious illness, long-term disabilities, and even loss of life. However, most

¹ Based on the information on the paediatric early warning systems provided by the participating hospitals. See trigger point in Table 4.1.

infections are preventable, with Hand Hygiene being the primary measure to reduce infections (WHO, 2009). Hand Hygiene can mean washing your hands with soap and water or using an alcohol-based hand rub. Despite the technical simplicity of Hand Hygiene, the lack of compliance among health-care providers is still a problem in Dutch hospitals (Erasmus 2012).

The WHO defines five indications for Hand Hygiene: after touching a patient, after touching patient surroundings, after body fluid exposure risk, before touching a patient and before clean/aseptic procedure (WHO 2009). A sixth indicator was added in the Dutch PaSQ project, based on advice of experts from the field: after touching a patient or patient surroundings wearing gloves.

In total, 73 health care organisations were involved in Hand Hygiene across the different member states. In the Netherlands, two hospitals joined the PaSQ implementation activities for Hand Hygiene, one hospital with the intensive care, accident and emergency department, an internal medicine ward and a surgical ward. The other hospital participated with an internal medicine ward and a cardiology ward. The goal of these two hospitals was to further improve Hand Hygiene compliance and quality.

Using non-participant observation, information on Hand Hygiene practices was gathered in March and October 2014 and in February/March 2015. A Dutch translation of the WHO Hand Hygiene observation form was used during these observations (WHO, 2009). A total of 315 professionals were observed, consisting of 170 nursing staff, 86 physicians and 59 other hospital employees such as physiotherapists, nutritional assistants and cleaning staff. For each person several indications for Hand Hygiene could be observed, as well as any subsequent actions: washing with soap and water or using an alcohol-based hand rub.

Table 4.3 Compliance with Hand Hygiene per profession

	March 2014		October 2014		February/March 2015	
	Indications	Actions ²	Indications	Actions	Indications	Actions
Nursing staff	407	52.3%	99	36.4%	208	43.3%
Physicians	228	61.8%	50	82.0%	59	62.7%
Other	146	32.9%	27	44.4%	44	25.0%
Total	781	51.5%	176	50.6%	311	44.4%

On average 49,6% of the observed indications for Hand Hygiene lead to actual Hand Hygiene actions. When looking in more detail at the type of indications for Hand Hygiene, we found that the indications that were least likely to lead to Hand Hygiene actions were: after touching patient surroundings (compliance 36.3%) and before touching a patient (compliance 52.1%)³.

During the observations attention was also paid to whether hospital staff followed clothing guidelines that are aimed at supporting good Hand Hygiene: not wearing any

² An action can be either washing hands with soap and water or washing hands using an alcohol-based hand rub.

³ Looking only at the indicators that were observed at least 100 times.

jewellery on hands or wrists and not wearing long sleeves. As Table 7 shows, the number of staff members not complying with clothing guidelines was relatively low at all three data collection moments.

Table 4.4 Hospital staff wearing jewellery and/or long sleeves

	March 2014	October 2014	February/March 2015
Nursing staff	3.8% (⁴ n=80)	0.0% (n=36)	0.0% (n=54)
Physicians	4.6% (n=44)	0.0% (n=20)	22.7% (n=22)
Other	22.6% (n=31)	15.4% (n=13)	0.0% (n=15)
Total	7.7% (n=155)	2.9% (n=69)	5.5% (n=91)

Both Table 4.3 and 4.4 show that Hand Hygiene compliance did not improve in the two PaSQ hospitals during the project. There is some random variance in compliance between the three data collection moments. This might be due to natural variance in compliance or to differences between the researchers conducting the observations. The data were collected by three different researchers, one for each data collection moment. All researchers reported difficulties using the WHO observation form, in particular in determining what constituted an indication for Hand Hygiene and what did not. This despite all researchers having had access to the WHO Hand Hygiene technical reference manual (WHO, 2009) and the researchers providing each other with advice.

Unlike the implementation of PEWS, Hand Hygiene did not involve a new subject for the participating hospitals. Both hospitals had worked on improving Hand Hygiene compliance in the past and chose to participate in PaSQ because they felt that their hospital could and should still improve. However, the implementation tools that were available in the PaSQ toolbox contained no really new tools or ideas for Dutch hospitals. Due to the fact that only two hospitals participated, the opportunity for knowledge exchange within a national network was also limited.

It appears that for these two hospitals, simply continuing to work on compliance using no new methods did not yield the results the hospitals were hoping for. In addition, where PEWS implementation started at zero, leaving a lot of room for improvement, the potential room for improvement was possibly more modest for Hand Hygiene because this safe clinical practice was already implemented. Finally, the fact that the researchers reported difficulties in determining what constituted an indication for Hand Hygiene, indicates that the guidelines for Hand Hygiene are harder to interpret than they might at first appear. This problem might also play a role in the difficulty of improving compliance.

4.3 Medication Reconciliation

Within the EU PaSQ network eleven member states participated in the implementation of Medication Reconciliation. The aim of this safe clinical practice is to identify and correct medication inaccuracies across transitions of care. Up to 67% of patients admitted to the hospital have unintended medication discrepancies, and these discrepancies remain common at discharge (Kwan et al. 2004) (www.pasq.eu). In the

⁴ The n indicates the number of hospital staff observed.

Netherlands, the WHO High 5s project showed a similar baseline in almost all participating hospitals. Almost one-third of medication discrepancies occurring at hospital admission or discharge have the potential to cause patient harm (i.e., potential adverse drug events). Adverse drug events associated with medication discrepancies can prolong hospital stays and, in the post discharge period, may lead to emergency department visits, hospital readmissions, and use of other health care resources (Mueller et al. 2012).

In total, 106 health care organizations were involved in Medication Reconciliation across different EU member states. In the Netherlands two hospitals joined the PaSQ implementation activities. PaSQ gave them the possibility to go on with data collection and (inter)national exchange. These hospitals also participated in the National Patient Safety Program (2008-2012) evaluation and in the WHO High 5s project (2009-2015). The purpose of the High 5 s network was to achieve measurable and sustainable reductions in challenging patient safety problems through implementation of standardized protocols (standard operating protocol) (WHO High 5s Interim Report 2013). Within the High 5s network the international standard operating protocols were tested to show that process standardization with minimal variation can improve patient safety across boundaries (Leotsakos et al. 2014, WHO 2013). One of the standard operating protocols addressed medication accuracy at transitions in care (Medication Reconciliation). Exchange between PaSQ and the High 5s project has taken place via WHO, the Netherlands, France and Germany. The Joint Commission International - High 5s partner and WHO Collaborating Centre for patient safety coordinating High 5s – is involved in the PaSQ network as well.

The Dutch Medication Reconciliation guideline requires that hospitals take action on admission and discharge of each patient.

Admission:

1. Request an up-to-date list of medication from the community pharmacy.
2. Interview the patient/family on their medication use.
3. Create a complete and accurate medication history of all prescribed and non-prescribed medication.

Discharge:

1. Create a complete and accurate medication overview of all prescribed and non-prescribed medication.
2. Make sure the attending physician authorizes discharge medication orders.
3. Communicate the current medication overview and any changes in medication orders in an interview with the patient/family.
4. Communicate the current medication overview and any changes in medication orders to the next provider of care.

Using medical records, the compliance to this guideline on admission and discharge was determined for the two participating hospitals, and compared to data from the last two data collection moments from the evaluation of the Dutch National Patient Safety Programme (De Blok et al 2013). The PaSQ data consisted of two samples of medical

records of hospital admissions from August/September 2014 and October/November 2014. All records that were included were from patients aged 65 and over.

Table 4.5 Medication Reconciliation on admission and before discharge in two hospitals

	Number of records	Compliance ⁵ on admission	Compliance ⁶ at discharge
Patient Safety Programme 2012	72	61,1 %	4,3 %
PaSQ August/September 2014	70	60,9 %	14,5 %
PaSQ October/November 2014	113	66,7 %	16,1 %

Compliance is clearly higher on admission than at discharge (Table 4.5). Looking more in detail at several of the steps required on admission and discharge in Tables 4.6 and 4.7, this difference seems to be largely due to the large difference between the frequency of the interview. While creating a medication history and a medication overview was done for more than 90% of patients in 2014, the interviews on medication use were conducted less frequently, especially at discharge (Table 4.6 and 4.7). Patient records from 2014 showed that before discharge less than 18% of patients took part in an interview to discuss their current medication, while more than 60% took part in an interview on medication use on admission.

Table 4.6 Two aspects of Medication Reconciliation on admission in two hospitals

Admission	Number of records	Interview	Medication history
Patient Safety Programme 2012	72	79,2 %	84,7 %
PaSQ August/September 2014	70	62,5 %	93,8 %
PaSQ October/November 2014	113	66,7 %	97,3 %

Table 4.7 Two aspects of Medication Reconciliation before discharge in two hospitals

Discharge	Number of records	Interview	Medication overview
Patient Safety Programme 2012	70	8,6 %	34,3 %
PaSQ August/September 2014	70	15,9 %	92,8 %
PaSQ October/November 2014	113	17,0 %	93,8 %

⁵ All three required steps described above were taken.

⁶ All four required steps described above were taken.

These numbers show that Medication Reconciliation compliance has improved in the two PaSQ hospitals since the end of the Patient Safety Programme. The biggest improvement was the increase in the number of patients where a medication overview was created before discharge. However, overall compliance at discharge remained low (14,5 % - 16,1 %, Table 4.5).

Depending on the moment that the hospitals started their participation in the international High 5s network the project leaders in the hospitals (hospital pharmacist or coordinator of the medication safety platform) were interviewed once a year by the CBO project leader in the Netherlands via a conference call. A structured interview with open-ended questions on the implementation process (full implementation, barriers, challenges, safe operating procedure sustainability, etc.) was used to collect qualitative data. Per hospital the WHO High 5s interview format was completed and translated from Dutch into English.

The two general hospitals decided to join the global WHO High 5s network and the EU PaSQ network, because of the perceived benefits to their implementation efforts of the external pressure and the international status of these network programs. Besides helping realize a hospital wide implementation of Medication Reconciliation, participating in an international project was also considered good PR for the hospital. The hospital felt the strength of the implementation results was due to joining the High5s program. The international setting and (inter)national attention helped better monitor compliance and meet deadlines. The face to face exchange meetings with other hospitals on implementation support and progress at the international and at the national level were considered very helpful. Implementing the standard operating protocol without the support and pressure from participating in High 5s/PaSQ might result in less monitoring of compliance and in less precision in carrying out the safe operating procedure. The other hospital agreed with this view and stated three reasons for participating in a wider network: 1. To improve medication safety by reducing medication errors, 2. To participate in a large (inter)national project and, 3. To be part of a quality collaborative with other hospitals instead of implementing the Dutch guideline for Medication reconciliation without exchange and support.

Similar to Hand Hygiene, Medication Reconciliation did not involve a new subject for the participating hospitals. Both hospitals had worked on Medication Reconciliation during the national Patient Safety Programme and were part of the High 5s project before the start of PaSQ. Similar to Hand Hygiene, the modest improvements in Medication Reconciliation compliance might be due to the lack of new tools or ideas for Dutch hospitals in the PaSQ toolbox and possibly to limited room for further improvement.

4.4 Overall results of work package 5

Altogether 220 healthcare organisations, including hospitals, ambulatory primary healthcare centers, secondary healthcare centers and nursing homes, from 18 European countries took part in work package 5. On the one hand, participation in work package 5 was used to expand the implementation of safe clinical practices (this was true for the Surgical Safety Checklist and Hand Hygiene) and on the other hand, participation was used to start implementation of new safe clinical practices (Medication Reconciliation

and Paediatric Early Warning Scores). The implementation tool boxes, developed in work package 4, were used by between 68% and 94% of the participating healthcare organisations, according to their feedback in the endline questionnaire. More than half of the organisations (between 53% and 79%) indicated that a main benefit they hoped to gain as a result of participating in PaSQ, was to exchange implementation experiences with other healthcare organisations, nationally and internationally. This was accomplished by between 29% and 73% of the organisations (AQuMed / ÄZQ 2015).

5 Conclusions and future plans

5.1 Conclusions

This report aimed to give insight into the Dutch participation in PaSQ and the extent to which this participation contributed to the overall goal of PaSQ Joint Action: 'to improve patient safety and quality of care in Europe by supporting the implementation of good organizational practices and safe clinical practices in health care organizations and through sharing of information and experiences'.

By participating in PaSQ Joint Action, the Netherlands became part of a large European network, which offered the Netherlands access to information on patients safety and quality of care from other participating countries, as well as an opportunity to share Dutch information and experiences with others. The participating Dutch hospitals had the chance to improve their care processes by further implementing three safe clinical practices (PEWS, Hand Hygiene and Medication Reconciliation), supported in this effort by CBO and NIVEL. They became part of a network at national level in which they could exchange knowledge on and experiences with these safe clinical practices and had access to the European PaSQ network and resources as well.

Overall, the participation in PaSQ meant a new impulse for the implementation efforts of the hospitals and offered them the opportunity to learn from each other. PEWS was used both for more patients (70,2 %) and more often per patient per day (1,4) in the five participating hospitals by the end of 2014. Many of the hospitals used the participation in PaSQ as an incentive to get the implementation of PEWS going and used the national network to exchange instruments and experiences. Although nurses and physicians involved had doubts about the usefulness of existing PEWS for non-university hospitals, they did agree with the idea behind PEWS.

Unlike the implementation of PEWS, Hand Hygiene did not involve a new subject for the two participating hospitals and the PaSQ toolbox contained no really new tools or ideas for Dutch hospitals. Due to the fact that only two hospitals participated, the opportunity for knowledge exchange within a national network was also limited. Hand Hygiene compliance did not improve in the two PaSQ hospitals during the project. The researchers found the guidelines for Hand Hygiene hard to interpret, leading to difficulties in determining what constituted an indication for Hand Hygiene. This problem might also play a role in the difficulty of improving compliance.

Participation in PaSQ and the WHO High 5s project resulted in a modest improvement in Medication Reconciliation compliance in the two participating hospitals, when compared to compliance in 2012. The biggest improvement was the increase in number of patients where a medication overview was created before discharge. However, overall compliance at discharge remained low (14,5 % - 16,1 %). Like Hand Hygiene, Medication Reconciliation was not a new subject for the participating hospitals, and the PaSQ toolbox contained no new tools or ideas for these hospitals.

By participating in PaSQ Joint Action the Netherlands had the opportunity to showcase Dutch knowledge and good practices, as well as learn from knowledge and experiences from other countries. However, future participation of Dutch healthcare organisations in an international network aimed at patient safety and quality of care would be most beneficial to these organisations if the network was aimed at safe clinical practices that

are new to the Netherlands. This would ensure sufficient room for improvement, as well as access to new insights, methods and materials from other countries.

In order to make the most of a national network of healthcare organisations, either as part of a larger international network or separately, the number of participating Dutch organisations needs to be sufficiently large. Having at least five healthcare organisations in a national network would ensure sufficient diversity between organisations and limit negative effects of drop outs on the network.

5.2 Main results of PaSQ

On its December 1st 2014 meeting in Brussels, the Council of the European Union made an explicit reference to PaSQ in the Conclusions, point 29 g) and h). The Council welcomes the work and results on the implementation of its Recommendation 2009/C150/01 as regards to exchange and implementation of good practices, and: “Invites the Member States and the Commission to: Develop further work on the dimensions of quality in healthcare, taking into account existing knowledge, including the work of the “Joint Action on patient safety and quality of care” (PaSQ), and to “Finalise by December 2016 a framework for a sustainable EU collaboration on patient safety and quality of care, also taking into account the results of PaSQ JA”.

At the 5th Coordination meeting on 12 & 13 March 2015 in Brussels in which the results of the EU PaSQ network have been exchanged with the wider audience, it was stated by the member states that exchange between countries and healthcare organisations contributed to the implementation and sustainability of good practices. Face to face meetings between institutes and healthcare organisations, such as exchange conferences, site visits and webinars are most effective to achieve a flywheel for implementation progress within healthcare settings.

5.3 The future of PaSQ

In the current year (April 2015 – April 2016) the implementation work and exchange will be continued via the PaSQ network. A proposal for a permanent network for patient safety and quality of care in the EU, starting 2016, has been developed. This permanent network would focus on:

- Patient involvement/empowerment
- Reporting and learning/rapid alert systems
- Quality improvement systems: peer review
- Implementation of good clinical practices

In the Netherlands the national PaSQ team of NIVEL and CBO has the intention to continue the exchange within the PaSQ European network and the Dutch network of hospitals. Specifically for PEWS a national working group will be set up to further support implementation and development of PEWS, in collaboration with the Dutch Society for Paediatricians (NVK). The hospitals participating in PaSQ will individually keep working on the implementation and sustainability of safe clinical practices.

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Annex A: Overview of Dutch PaSQ activities

2012

- Kick off meeting Roskilde, Denmark
- Coordination meeting Madrid, Spain
- Several face to face team meetings Dutch PaSQ team and by phone
- PaSQ meeting Member States implementation; ISQua conference 2012, Geneva, Switzerland, October
- Submission project plan Dutch Ministry of Health Dutch PaSQ team
- Recruitment package hospitals & recruitment Dutch hospitals PEWS, Hand Hygiene, Medication Reconciliation
- Development of framework and questionnaire quality management systems and quality improvement activities in EU member states, in collaboration with WP6 leader.

2013

- Data collection quality management systems and quality improvement activities in EU member states, in collaboration with WP6 leader.
- Analysis and report of results on questionnaire quality management systems and quality improvement activities in EU member states, in collaboration with WP6 leader.
- Several face to face team meetings Dutch PaSQ team and by phone
- Coordination meeting; 28 Member States; Berlin, Germany, January
- - presentation preliminary results WP6 questionnaire on quality management systems and quality improvement activities.
- Recruitment package hospitals & recruitment Dutch hospitals PEWS, Hand Hygiene, Medication Reconciliation
- Individual implementation support conference calls Dutch PaSQ hospitals
- Workshops Medication Reconciliation, Greece, May
- Monitoring PaSQ baseline questionnaire status quo participating hospitals, September
- PaSQ Coordination Meeting; 28 member States, Paris, France, 17 & 18 October
 - o Data collection focus groups via NIVEL-CBO leading PaSQ working group session
- Acceptance project plan Dutch Ministry of Health, September/October?
- Submission safe clinical practices from the Netherlands into the PaSQ database: blood transfusion, implementation tools (project plan, intervention matrix, ideas), Dutch report on the role of the patient to improve patient safety
- Workshop Medication Reconciliation, Zagreb, Croatia, 1 December
- Kick off meeting implementation Dutch PaSQ hospitals; PEWS; Medication Reconciliation (link to WHO High 5s meetings); Hand Hygiene; CBO, Utrecht, Netherlands, 13 December

2014

- Baseline measurement in January and February (observations and patient record review) for Dutch PaSQ hospitals on-site plus individual reports with results

- Follow-up measurement in September/October/November (observations and patient record review) for Dutch PaSQ hospitals on-site, including individual reports with results
- Several face to face team meetings Dutch PaSQ team and by phone
- Individual implementation support conference calls with all Dutch PaSQ hospitals
- PaSQ Back to back meeting; 28 Member States; Budapest, Hungary; 15 & 16 January
 - o Presentation Dutch implementation tools (project plan, intervention matrix, ideas)
 - o Presentation proposal for Focus groups Rome meeting September 2014
- Baseline and interventions exchange implementation meeting Dutch PaSQ hospitals; CBO, Utrecht, Netherlands, 4 April
- Performance measure Dutch PaSQ hospitals on-site plus individual reports with results, April, May
- Exchange Mechanism conference PaSQ Member States; infection and Hand Hygiene (5 May WHO world Hand Hygiene day); Vienna, Austria, 5 May
- Exchange Mechanism webinar PaSQ Member States; Hand Hygiene, 22 May
- Exchange Mechanism conference PaSQ Member States with site visit; Accreditation and certification in healthcare; Locations CBO and UMC Utrecht, Utrecht, Netherlands, 15 & 16 May
- Implementation progress exchange meeting Dutch PaSQ hospitals; Hand Hygiene and PEWS; CBO, Utrecht, Netherlands, 22 May
- Monitoring PaSQ Implementation Questionnaire – second round - participating PaSQ hospitals, September
- PaSQ Coordination meeting Rome; 28 Member States, 18 & 19 September
- - focus groups on accreditation and patient involvement to complement the results of WP6 questionnaire on quality management systems and quality improvement activities.
- Exchange Mechanism conference Member States with site visit; Making indicators work; locations NIVEL, Utrecht and St. Antonius Hospital, Nieuwegein, Netherlands, 29 & 30 September
- Abstract submission PEWS implementation in 5 general Dutch PaSQ hospitals for poster at International Forum on Quality and Safety in Healthcare, November
- PaSQ contribution panel discussion PEWS session; national conference association for paediatric care; plus national meeting PEWS activities in Netherlands (combination PaSQ hospitals and other hospitals that are working on PEWS); Veldhoven, Netherlands, 8 November
- PaSQ Exchange Mechanism conference Member States; Patient Safety; November
- Back to back meeting on future permanent network and gap year. Bratislava, Slovakia, 8 & 9 December
- Exchange Mechanism conference Member States with site visit - in combination with WHO High 5s; Medication Safety Crossing Borders. Location Elkerliek Hospital, Helmond, Netherlands, 12 December
- Submission safe clinical practices from the Netherlands into the PaSQ database: Standard Operating Procedure for Medication Reconciliation, Standard Operating Procedure for High Risk medication

2015

- Several face to face team meetings Dutch PaSQ team and by phone
- Draft final report WP6 on quality management systems and quality management activities in EU member states, in collaboration with WP6 leader.
- Final measurement in January and February (observations, interviews and patient record review) for Dutch PaSQ hospitals on-site, including individual reports with results
- Workshop Medication Reconciliation; Krakow, Poland, 16 January
- National exchange meeting & launch of national working group implementation of PEWS; 5 PaSQ PEWS hospitals; 3 February
- Abstract submission for oral presentation at ISQua 2015, 12 February
- Exchange Mechanism; Stepwise visitation in the Netherlands; HAS, Paris, France, site visit CBO Utrecht, 16 February
- Feedback implementation report Member States, 17 February
- Submission WHO High 5s STANDARD OPERATING PROTOCOLs into PaSQ database safe clinical practices
- Completing PaSQ dissemination list Dutch implementation activities
- PaSQ Coordination meeting; 28 Member States; Brussels, Belgium, 12 & 13 March
- Poster accepted for 20th International Forum on Quality and Safety in Healthcare, London, UK, 21-23 April
- Follow-up National PEWS working group
- Follow-up Dutch PaSQ hospitals on performance results and future issues
- Publications Dutch implementation results hospitals; PEWS, Medication Reconciliation
- Report Dutch Ministry of Health, April
- PaSQ ISQua 2015 45 minutes session (France, Germany, Croatia, the Netherlands)
- PaSQ ISQua 2015 oral presentation PEWS

Annex B: Programmes of Dutch exchange meetings



PaSQ European Union Network
for Patient Safety and
Quality of Care

Stepwise Visitation in the Netherlands

Site Visit at CBO (Netherlands) by HAS (France)

Yvonnick Morice, member of HAS board
Jean-Michel, Dubernard, member of HAS board
Bruno Lucet, Deputy Head Certification of HCOs
Philippe Chevalier, Deputy Head Patient Safety
Jean Bacou, Technical Advisor Patient Safety and Quality of Care

AGENDA

Twitter: #PaSQ

10.00 *Welcome with coffee/tea*

10.30 Welcome & goal setting of the day

Jean Bacou, coordinator PaSQ/HAS, France & Erica van der Schrieck-de Loos, PaSQ/CBO, NL

Introduction HAS, French accreditation of HC professionals & goals of today

Bruno Lucet, Deputy Head Certification of HCOs, HAS, France

From first, second and third victims to monitoring the challenge of soft safety signals

Film & Ruwaard van Putten Dutch hospital case – investigation Dutch Safety Board
Erica van der Schrieck-de Loos, PaSQ/CBO, NL

11.30 Stepwise visitation in the Netherlands since 2005

Ludeke van der Es-Lambeek, senior advisor, CBO, NL

Discussion

12.30 *Lunch*

13.30 Risk Inspections. De IGZ: the shepherd of health care

Jan Maarten van den Berg, Dutch Inspectorate of Health, NL

Discussion

14.30 25 years of peer review in the Netherlands

Roelof van Blommenstein, Quality board, National Federation for Physicians (OMS),
vice president Netherlands Society of Otolaryngology-Head and Neck Surgery, NL

Discussion

15.30 **Conclusions of the day & next steps for France – moderators & participants**

16.30 Close of the day

Date Monday 16 February 2015, 10.30 am – 4.30 pm

Location CBO Dutch Institute for Healthcare Improvement, Utrecht, Netherlands

Hotel <http://www.accorhotels.com/nl/hotel-0880-ibis-utrecht/index.shtml> (10 minutes walking distance CBO)

Train Thalys Paris-Rotterdam Central Station with transfer to Utrecht Central Station

Airport Amsterdam Schiphol, train to Utrecht Central Station

Contact & information, PaSQ Team NL

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Medication Safety Crossing Borders

Patients' Medication Reconciliation Process & Safe Management of High Risk Medications

Moderator: Erica van der Schrieck-de Loos, PaSQ Team NL/project leader WHO High 5s NL, CBO

AGENDA

Twitter: #PaSQ

- 10.00 Welcome by Elkerliek Hospital & Opening**
- 10.15 New trends and strategies in patient safety in the WHO perspective**
With focus on High 5s' global contribution to patient safety and injection safety
Sepideh Begheri Nejad, Service Delivery and Safety, WHO HQ, Geneva, Switzerland/PaSQ
- 10.45 Medication Safety Crossing Borders – Part 1 - Denmark – tele conference**
Recommendations for the procedure for vaccinations in general practice
Helle Søgaaard Frappart, Unit for Patientsafety, Hillerød, Denmark (PaSQ PSP 326)
- 11.00 National patient safety program**
Janneke Schilp, Researcher, NL inst. for health services research (NIVEL) (PaSQ GOP 121-721)
- 11.15 A Dutch impression of PaSQ and WHO High 5s SOP for Medication Reconciliation**
Elske Dettmers, Hospital Pharmacist, ZGT Hospital, Hengelo, NL
- 11.30 Medication Safety Crossing Borders – Part 2: Interactive poster carrousel: All participants**
Please bring your poster on site and see poster guidelines page 2 of the agenda & lunch
Annemieke van Groenestijn, WHO High 5s NL/CBO, NL
- 13.00 Interactive site visit to Elkerliek Hospital: High 5s Med Rec & CIM SOPs in daily practice**
Bjorn Brassé & Jacqueline van der Plas, Hospital Pharmacists, Elkerliek Hospital, Helmond, NL
- 14.30 The flexibility of global SOPs to standardize Medication Safety in Dutch hospitals**
WHO High 5s NL – discussion with hospitals and experts (submitted PaSQ PSP)
- 14.45 Medication Safety Crossing Borders - Part 3 - Italy – Parallel session**
Prevention of medication errors in two hospitals
Simonetta Degano, Quality Improvement, Accreditation, Risk Management,
Healthcare trust n. 4 'Medio Friuli', Udine, Italy (PaSQ PSP 935)
Communication about Adverse Events to patients and their families
Sara Albolino, Florence, Italy (PaSQ PSP 652)
- 15.15 Put on your running shoes & Get Up Get Better!**
Interactive kick off for Competitions: Medication Safety Crossing Borders
Patrick Kools, www.getupgetbetter.com /moderator (submitted PaSQ GOP)
- 16.00 Poster awards** by the jury: Patrick Kools, Sara Albolino, voluntary participant
- 16.15 Closure of the meeting & drinks**



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Poster suggestions and guidelines

1. Information Country/Institute/Authors/Contact person/Vision or slogan.
2. Objectives Main & sub goals, baseline measurement, timeline.
3. Status (Full) Implementation status, participating wards, implementation strategies.
4. Evaluation Quantitative & qualitative results, event analysis, business case.
5. Key factors How to overcome challenges, lessons learnt, conditions, barriers.
6. Conclusions, next steps.

Posters will be judged by the following criteria

1. Specific interventions: creativity of finding resources in times of economic crisis.
2. Implementation process: qualitative strategies and impact.
3. Sustainability: clarity of project and quantitative outcomes.
4. Future perspective: expanding (SOP) implementation hospital-wide/country-wide.
5. Poster design, use of graphics, photos and illustrations

Poster maximum size

1. Height: 160cm & width: 90cm. The orientation format of your poster is **Portrait**.

Poster design

1. The title of your poster should be at the top, in large letters to get the viewer's attention.
2. Posters should then display authors, institutions of origin and contact details.
3. The goal is to convey a clear message and support it with a compelling combination of images and short texts.
4. Text on the objectives, methods, results and conclusions need to be kept brief.
5. Every element, including graphs and tables must be easily readable (distance of 2 metres).
6. Consider how best to use colour, photos, charts and pictures to enhance the information presented.

Poster deadlines

Please send an **electronic version of your poster by 8 December 2014** to e.vanderschriek@cbo.nl with your permission we will upload your poster on the PaSQ website.

Please **bring your printed poster on 12 December 2014**.

1. There will be no printing services available on site.
2. Posters will be set up by the conference team on 12 December 2014.

Date Friday 12 December 2014, 10 am – 4.30 pm

Location Elkerliek Hospital, www.elkerliek.nl/Elkerliek-Contact.html Wesselmanlaan 25, 5707 HA, Helmond, Netherlands

Register by 19 November <http://iturl.nl/snyv4>

Airport Eindhoven www.eindhovenairport.nl Maastricht-Aachen airport www.maa.nl

Hotel Helmond www.goldentulipwestende.nl/nl

Airport Amsterdam-Schiphol – stay over in Utrecht www.nh-hotels.nl/hotel/nh-utrecht - train to Helmond

Contact & information, PaSQ Team NL

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Steffie van Schoten Researcher NIVEL E: S.vanschoten@nivel.nl M: +31 6 38259102



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Making indicators work

Experiences from different countries

Agenda

Monday September 29, 2014

13.00 Welcome by **Cordula Wagner**, NIVEL, The Netherlands

Opening by **Paul Bartels**, Denmark

Goal of meeting, outlining programme, any practical announcements

Paul.Bartels@STAB.RM.DK, Secretary: Maybritt.Pedersen@stab.rm.dk

Invited lecture: **Oliver Groene**, United Kingdom

*"Experiences with the use of patient-reported outcomes (PROMS) data in the UK NHS
- a valid quality indicator?"*

oliver.groene@lshtm.ac.uk

Best practices on national level: **Jane Alop**, Health Care Chief Specialist, Estonian
Health Insurance Fund (GOP 142-818)

*"Using insurance fund billing data for health care quality improvement- presenting
the concept of using health insurance data for calculating clinical indicators to
describe care process in hospitals"*

Jane.Alop@haigekassa.ee

Best Practices on national level: **Katrine Abildtrup Nielsen**, Head of KCKS-Vest,
The Danish Clinical Registries, Denmark

*"Organisation of clinical registries in Denmark and use of indicators for quality
improvement and accreditation"*

Katrine.Nielsen@stab.rm.dk

15.15 Coffee break

15.45 Round table discussion about best practices. Chair: **Paul Bartels**

Flemish contact person: Vera.DeTroyer@icuro.be



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Invited lecture: **Mette Nørgaard**, MD, PhD, Head of KCEB-Nord, The Danish Clinical Registries, and Consultant, Clinical Associate Professor, Department of Clinical Epidemiology, Aarhus University Hospital.

“HSMR and alternatives: on the topic of surgical complications (an overview)”

mn@dce.au.dk

18.00 Close of meeting & Dutch pancake dinner (registration 29 September)

Tuesday September 30, 2014

9.00 Welcome and coffee at **St. Antonius Hospital, Utrecht, Netherlands**

9.15 Invited lecture: **Jan Maarten van den Berg**, Dutch Inspectorate of Health, NL

“Collaborative governance and indicators, making the polder work for you”

jm.vd.berg@igz.nl

Invited lecture: **Joerg Weimann**, Chief of Department of Anaesthesiology and Intensive Care, St. Gertrauden Hospital, Berlin

“Peer Review in Intensive Care - Instant Quality Improvement based on facts and human factors”

Joerg.Weimann@sankt-gertrauden.de

Lecture and guided tour through St. Antonius Hospital, Nieuwegein, **Wim van den Bosch**, St. Antonius Hospital

w.bosch@antoniusziekenhuis.nl

13.00 Close of meeting and lunch

Dates & locations

Monday 29 September 1 pm – 6 pm, **NIVEL, Otterstraat 118-124, Utrecht, NL**, www.nivel.nl/en/contact-and-route

Tuesday 30 September 2014, 9.15am - 1pm, **St. Antonius Hospital, Koekoekslaan 1, Nieuwegein, NL**
www.antoniusziekenhuis.nl/contact/routes/locatie_nieuwegein/#ov

Twitter

#PaSQ #indicators

Information via Dutch PaSQ Agency

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Exchange meeting May 15/16, 2014 Accreditation and certification in Healthcare Organizations *Comparisons and differences*

Programme

Twitter: #pasq

Thursday May 15, 2014, 1 - 7 pm, 1 pm Welcome with lunch

1.30 pm Opening & short lecture

The results of the Dutch National Patient Safety Program

Prof. dr. Cordula Wagner, Programme coordinator Organisation and quality of health care (NIVEL - NL)

Invited lectures & discussion

Goals, impact and value of healthcare accreditation across Europe

Why is accreditation important, what added value does it have for organizations, government and patients?

Dr. Charles Shaw (UK), adviser to ministries of health

The perspective of the Dutch Health Care Inspectorate

How does the Health Care Inspectorate value accreditation and certification, what role does it play in the supervision and monitoring conducted by the Inspectorates?

Jan Vesseur, MD, project-chief inspector for patient safety, health IT and international affairs, Dutch Health Care Inspectorate (NL)

2.45 pm break

3.15 pm Interactive good practices carroussel with plenary and working group discussions

Types of accreditation and certification part 1

How do different types of accreditation and certification incorporate safety and how do they distinguish itself from each other?

- Jorien Soethout, senior consultant, the Netherlands Institute for Accreditation in Healthcare (NIAZ - NL) & Sebastien Audette, CEO, Accreditation Canada International (CAN)



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- Bruno Lucet, Service Certification des Etablissements de Santé,
Direction de l'Amélioration de la Qualité & de la Sécurité des Soins (FRA)
- Basia Kutryba, NCQA, Krakow (PL)

4.00 pm Discussion round I (parallel groups)

4.45 pm Types of accreditation and certification part II

- Eric van Bavel, Health Care Quality Consultant, HKZ certification in h.c. (NL)
- Kornelia Fiausch, IEC Consultant of JCI European team (AUT)
- James Lawrence, Director of DNV GL Healthcare (UK)

5.30 pm Discussion round II (parallel groups)

6.15 pm Speakers panel with invited presenters

Dr. Charles Shaw (UK), adviser to ministries of health, chair of the panel

7 pm Close of meeting day 1

Site visit Friday May 16, 2014, 9 am – 1 pm, including lunch

UMC Utrecht 2nd Dutch JCI hospital (accredited since 2013), www.umcutrecht.nl

- 9.30 am welcome and opening, 1 pm closing with lunch
- Experience of UMCU with the accreditation process on site
- Guided tour and plenary closing of the meeting with take home message

Dates: Thursday 15 May, 13.00u – 19.00u & Friday 16 May 2014, 9.00u - 14.00u

Registration by 15 April 2014 via www.pasq.eu

Location: CBO Dutch Institute for Healthcare Improvement,
Churchilllaan 11, 3527 GV, Utrecht, the Netherlands, T: +31 30 2843900
www.cbo.nl/over-ons/contact

Hotel www.nh-hotels.com and www.ibis.com/gb/hotel-0880-ibis-utrecht/index.shtml

Information via Dutch PaSQ Agency

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www.pasq.eu



Annex C: Abstract ISQua Pews

ISQua 2015 Abstract Submission

Specific topic: Patient Safety

ISQua15-1546

BUILDING PEWS INTO THE HEALTHCARE SYSTEM FOR PAEDIATRIC PATIENTS OF 5 DUTCH GENERAL HOSPITALS VIA THE EUROPEAN UNION NETWORK FOR PATIENT SAFETY AND QUALITY OF CARE

E. Van Der Schrieck-De Loos^{1,*}, L. V. D. Steeg², S. V. Schoten², C. Wagner²

¹CBO DUTCH INSTITUTE FOR HEALTHCARE IMPROVEMENT (a TNO company), ²NIVEL-Netherlands institute for health services research, Utrecht, Netherlands

Preferred presentation method: 15 min oral presentation

Are you a first time presenter at an ISQua conference?: No

Have you presented this abstract at an ISQua Conference before?: No

I confirm that the submission has been approved by all authors: Yes

I give ISQua the permission to publish this abstract on the ISQua website: Yes

What year was the study conducted?: 2014/2015

Objectives: Within the European Union (EU) network for Patient Safety and Quality of Care (PaSQ) 28 Member States (MS) collaborate to improve patient safety and quality of care via exchange of safe clinical practices. The Netherlands is one out of 4 MS implementing Paediatric Early Warning System (PEWS). This system consists of a PEWS score, which is generated by combining the scores from a selection of routine observations of patients. The overall score indicates whether a child's clinical condition is deteriorating. If a high PEWS score is calculated, nurses are expected to contact a physician and if necessary adapt the care plan. PEWS is aimed at averting resuscitation by timely recognition of deterioration and timely intervention. Five Dutch general hospitals participating in PaSQ aim to effectively implement PEWS in their paediatric care units.

Methods: Despite the Dutch National Patient Safety Programme identifying PEWS as a theme to be implemented and sustained in 2013, few hospitals succeeded. Participation in PaSQ gave hospitals an opportunity to implement PEWS supported by exchange with other Dutch and EU hospitals. Hospitals selected or developed a PEWS to implement in their paediatric care units. They developed a PEWS protocol to guide nurses on use of the score and corresponding actions. To evaluate PEWS implementation, the PEWS score use was determined and whether action was taken based on the score, using an observational design and collecting data through Medical Record (MR) review. A baseline measure was carried out using MR from Oct-Nov '13. Measures are repeated using MR from May-June and from Nov-Dec '14 to evaluate PEWS implementation. Per hospital a sample of 30-40 MR of admitted patients ≤18 years was used per measure. Data were used to measure the percentage of patients for which a PEWS score was recorded in the MR. When no PEWS was recorded, the other measures that were used to monitor the clinical condition of patients were determined. In 2015, qualitative interviews on implementation with 2 hospital team members on-site complemented the quantitative data.

Results: The PaSQ toolbox with evidence-based tools for implementing PEWS in combination with education, including exchange among hospitals and countries, supported implementation training. Two national face to face conferences, 2 online webinars and 3 individual hospital calls supported the evaluation of interim results. The baseline measure showed 0% of hospitals (n=5) using a PEWS system and a space in the MR (n=207) to monitor PEWS. Follow-up measure 1 showed 4 hospitals succeeded in implementing a PEWS system ≤6 months. The PEWS scores registration differed significantly between these hospitals from 0% to 92,3% of patients having at least one PEWS score calculated during their hospital stay. Follow-up measure 2 (Feb '15) will be available at ISQua, but preliminary findings show an increased use of PEWS scores (n=4), hospital 5 implementing PEWS and the launch of a national PEWS working group.

Conclusion: Building PEWS into the healthcare system of five Dutch general hospitals did benefit from sharing knowledge, experiences and tools with other hospitals and countries, as well as implementation support from the Dutch PaSQ team. Hospital care and in this specific case care for children could be improved by the exchange of knowledge,

experiences and tools on safe clinical practices within the EU network, including experts from policy, management and frontline staff.

References: www.pasq.eu

20th International Forum on Quality and Safety in Healthcare. London, UK, 21-24 April 2015, Poster, accepted

I do not want to receive other promotional material from ISQua: No

Disclosure of Interest: None Declared

Keywords: patient safety and quality, quality improvement, healthcare systems

Annex D: Poster PEWS International Forum on Quality and Safety in Healthcare

Optimizing patient safety for paediatric patients in 5 Dutch general hospitals by introducing PEWS within an (inter)national exchange collaborative network

EM van der Schriek-de Loos, L van de Steeg, S van Schoten, C Wagner
International Forum on Quality and Safety in Health Care, 21th-24th April 2015, London, UK

