Organisational Innovation in Hospitals and Healthcare

European Hospital & Healthcare Federation

Organisational Innovation in Hospitals and Healthcare

REPORT ON HOPE AGORA

DUBLIN, 11-13 JUNE 2017

Contents

INTRODUCTION

The HOPE Agora 2017 took place at the Trinity College in Dublin from 11 to 13 June 2017. It was hosted by the *Health Management Institute of Ireland* (HMI) and focussed on the "*Organisational Innovation in Hospitals and Healthcare*", and more precisely on the implementation of new methods or processES in relation to the use of new technologies, health services provision, human resources management, and patients empowerment.

With such a broad theme, there were numerous initiatives to be discovered. With innovations occurring in a diversity of areas (e.g. patient care, clinical work, nursing, human resources, information systems, drug management, laboratory operations, finances, quality management and patient involvement) there was significant scope for transfer of learning.

The HOPE Agora 2017 hosted a diverse mix of events, all intended to facilitate discussions between health care professionals. The conference was enriched by the presence of high level speakers, reporting good practices implemented in Ireland.

The Agora concluded the 36th edition of the HOPE Exchange Programme. This edition welcomed more than 120 health professionals from 18 European countries. During the Agora, HOPE Exchange participants reported on their 4-week stay abroad. For their presentations, they were asked to identify examples within their host country's healthcare system inspiring for the challenges they face at home. Without judging the system of the country visited, participants described what they would like to see implemented in their own country, region, institution, or ward.

CONFERENCE

The HOPE Agora 2017 started on 12 June with representatives of various key healthcare organisations and companies from Ireland providing their vision of the future and reporting some good practices that changed the health sector during the past years.

Sara Pupato Ferrari – HOPE President

Welcome speech

Sara Pupato Ferrari welcomed the audience, explaining that the HOPE Exchange Programme has been contributing since its first edition in 1981 to the exchange of good practices among health professionals. It has been providing participants with a better understanding of national health systems functioning in the European member states and inviting them to provide their feedbacks and to present the findings of their experience.

She thanked all those who were involved in organising the 2017 Agora. She particularly thanked the Health Management Institute of Ireland (HMI) President, Lucy Nugent; HMI Executive Rosemarie Carroll; Gerry O'Dwyer, President of the European Association of Hospital Managers (EAHM); Eamonn Fitzgerald of the Irish private hospitals; the Irish Department of Health; the Health Service Executive and the HOPE office.

Richard Corbridge, Chief Information Officer of Health Service Executive and Chief Executive Officer of eHealth Ireland and Maria O'Loughlin, Adviser eHealth Ireland

e-Health Ireland: Story Telling in eHealth

Richard Cordbridge underlined the importance of creating synergies between people in order to face the future challenges of health systems. Patients are part of the challenge and should be involved in the definition of their path of care since they have knowledge of their disease. Health systems are moving towards integration of care, through the development of digital solutions. To make it possible, end-users shall be involved and new frontiers explored, while investing more resources to replace old systems with new technologies.

They said that together with Yvonne Gough, HSE Chief Clinical Information Officer, they worked to ensure that clinicians knew what digital could do for health care. They stopped focusing on the technical and started talking about the business effects. It was about changing the mindset. They wanted to create a digital health system led by clinicians and with patients at the centre of healthcare. They went out and spoke to patients and clinicians and visited 19 hospitals to discover their digital challenges and how to solve them. They have also been promoting collaborations between patient groups, charities and academia.

Mr. Corbridge said that in Ireland digital investment was being done carefully, taking longer but at the end more efficient. Ireland's healthcare system today is predominantly paper based. Money is spent on taxis to move paper around the system. It is assumed that the health service in Ireland is not capable of delivering digital yet, he said, there are amazing examples of digital excellence being delivered in Irish hospitals.

Mr. Corbridge and Ms. O'Loughlin said that a digital system was the only way to achieve integrated healthcare in Ireland. They cited some examples of e-Health projects which had been really beneficial for patients and also saved considerable amounts of money.

The *Individual Health Identifier* has gone live and will be introduced incrementally over the next year. Patients and clinicians have been consulted widely to incorporate the views of both groups as to how it could make their lives and work simpler and more effective. The Individual Health Identifier Programme is a key enabler that allows information to be shared about a patient. It is enabling to move from paper records locked in organisations to a digital shared patient record.

Ireland has two digital hospitals delivering maternity services with two more coming on line shortly, they told the Agora.

The first epilepsy genomic sequencing project in the world has been introduced. It identifies genes that affect the response to treatment, saving the HSE €5 million this year.

Then they concluded by presenting Ireland's first healthcare supply chain management solution deployed to the homes of patients with haemophilia. This has saved €2 million in two years.

Deirdre Glenn - Director, Lifesciences & Food Commercialisation and Lifesciences Sector Manager of Enterprise Ireland

Enterprise Ireland Supports for Innovation in Healthcare

Deidre Glenn presented the steps taken in Ireland to enhance the scaling-up of innovation in the life-science sector in particular and in the economy in general.

Ireland is a high potential country: its GDP is growing by 5.2% for 2016, by far the strongest in Europe and the Government is putting in place some actions to attract investors from abroad as well as to sustain entrepreneurship. Ireland has been ranked 18th out of 190 economies by World Bank 2017 for "ease of doing business". There are 189,000 enterprises in Ireland employing 1.5 million people. Eighty per cent of companies are SMEs and 20% foreign-owned multinationals with a high rate of entrepreneurship – almost 10% of adult population, according to the Global Entrepreneurship Monitor Report 2013.

The life-science sector employs 50,000 people, making the country the seventh largest exporter of medical and pharmaceutical products in the world with exports exceeding €50 billion annually. Ireland had 17 of the top 25 global medical devices companies and nine of the top 10 global pharma/biopharma companies.

However, Irish companies are facing important challenges (such as Brexit consequences) and Enterprise Ireland is driving their capacity to deliver innovation by promoting the collaboration within the different actors such as professionals, researchers and industry. Enterprise Ireland supported and drove innovation in healthcare, and Irish life sciences sector included a leading global cluster of over 500 companies with world-class researchers.

Enterprise Ireland had an annual budget of €343 million, an international network of 33 overseas offices, over 5,000 client companies and innovation activities across all industry. It supported high growth industries including food, life sciences, construction, medical technology, agricultural technology and international financial services. It drove the capacity of Irish companies to deliver innovation and was the lead agency supporting the commercialisation of research and industry-led collaboration with the academic community. Deidre Glenn said this was vitally important as companies engaging in research and development performed better. They were fed by graduates and talent and had access to significant international innovation funds. A new Government Strategy supported continued investment in research and innovation.

Finally, Deidre Glenn showed to the audience several initiatives promoted by Enterprise Ireland in partnerships with other entities such as Health Innovation Hub. Officially launched last year, it is a joint initiative between Department of Jobs, Enterprise and Innovation (DJEI) and the Department of Health (Enterprise Ireland and HSE) It has four academic partners and associated hospital groups and clinical research facilities. It facilitates and accelerates the commercialisation of innovative healthcare solutions in public hospitals.

Aine Carroll - National Director of Clinical Strategy and Programmes of Health Service Executive

Disruptive Innovation and the National Clinical Programmes

For Aine Carroll, the implementation of innovation in the health sector needs time, since it is driven by slow processes. The Irish health system is facing important challenges, as many other European countries, Ireland faces real challenges with an ageing population, with chronic diseases, obesity and with cultural attitude to alcohol consumption. These cause major problems for the Irish health care system at primary and secondary care level of care .

This could be particularly challenging given that nowadays systems are still organised around hospitals than around patients' needs. Health systems are still hospital centric and not tailored to face such challenges. Aine Carroll said that Ireland is hospital obsessed. Hospitals are used as a default position for every health complaint, ranging from acute health episodes to domestic violence issues. They are used as a safety net for all sorts of conditions and that is not the best solution for good sustainable healthcare. In fact, it can cause harm. Around the world, 25% of patients suffer harm by being in a hospital system. Therefore, she considered that it is not right to continue with this hospital centric model of care because it can potentially cause harm.

She mentioned significant problems with health inequality, which is shared with other countries, and expressed the need to think societally about how to tackle these and the social determinants of health. There are also issues with a fragmented healthcare system and services that are often organised around the needs and demands of hospitals rather than patients. Through various engagements, patients have said very clearly that the system is not providing patient centred health care.

Aine Carroll said that slow incremental change was important to sustain any desired change. She considered innovation as an idea, service or product, new to the HSE or applied in a way that was new to the HSE, which significantly improves the quality of health and care wherever it is applied.

She reiterated the popular saying "*every system was perfectly designed to get the results that it got*" and in her opinion if we want different performance, we must change the system and to change the system, we must think in fundamentally different ways.

Aine Carroll said integrated care was not for everybody and many people would continue to need episodic care but those who were older, frailer and have multiple co morbidities needed integrated care. The vision for integrated care is person centred coordinated care and the objectives are to improve and standardise high quality care, support integration with knowledge and information management, increase accountability for integration and align finances with desired outcomes.

The key principles of integrated care are to empower clinicians to lead the change, engage patients at every level, nationalise existing best practice, have strong support from the top table and align stakeholders.

Aine Carroll mentioned that there were many other innovative projects within the Irish health system one of which is the Epilepsy Lighthouse Project, providing individualised services and care in epilepsy which had led to the reduction in the length of stay of epilepsy patients over the age of 70 from 11.84 to 9.98 days in the Regional Hospital, Sligo.

The key ingredient to success is staff. The care and compassion of staff is really precious for success and change. She thinks healthcare across the world is in danger of letting staff burn out and if we cannot recruit and retain our staff in an environment that enables them to do their best, then healthcare is on a very perilous road.

The transition towards more integrated system of care is difficult and for this reason the knowledge of the context is required. Furthermore, the involvement of all the stakeholders who shall drive the change is necessary.

Aine Carroll told the Agora that over 30 National Clinical Programmes had been established since 2010, and were having a remarkable impact on the Irish healthcare system. The work of the National Clinical Programmes had ensured that:

- Over 87,000 people with diabetes were screened as part of the national retinal screening programme;
- 82.3% day of surgery had been achieved for planned/elective trauma and orthopaedic surgery in 2015 compared to only 34.6% in 2010;
- Twenty-two severely obese adults with diabetes underwent bariatric surgery in Galway University Hospital in 2016;
- There had been a 40% increase in the number of new patients seen for dermatology related issues since 2009;
- Over 1,700 patients had been accepted to Chronic Obstructive Pulmonary Disease outreach programmes across 12 hospital sites in 2016;
- Eleven Injury Units were now seeing almost 90,000 patients with injuries such as broken bones, dislocations, sprains, strains, wounds, scalds and minor burns;
- A total of 2,000 staff members had already completed the Adult National Sepsis eLearning module launched in September 2016, increasing competency and expertise on sepsis recognition, escalation and treatment;
- An 11% thrombolysis rate for stroke patients was achieved by the end of 2015, compared to 1% in 2008;
- Over 80,000 patients had been seen through Musculoskeletal Physiotherapy Clinics and removed from consultant waiting lists.

These programmes form the foundation of the integrated care programmes in the areas of prevention and management of chronic disease, older persons, patient flow and children. There is evidence based data on the value of integrated care but the challenge now is to implement it. She concluded that the human side of change is very important and you forget that at your peril. It is the hand that touches the patient that makes the change so it must be involved and looked after, she concluded.

Karin Jay - Senior Director, International Business Development and Operations of Planetree

Advancing Patient and Family Centred Care: Partnership Strategies that Work

Karin Jay reported some personal experiences she and her family had while being taking care of. This made her realising that what matters most is the involvement of patients and their families. It is necessary to move from a disease-centred model of care to a patient centred model of care. The role of staff is fundamental for this change. Healthcare providers should create partnership with patients to anticipate their needs and to better respond to their requests. The new patient-centred model of care shall bring the doctor to be more open in discussing with the patients the options and the pros and cons. Compassionate human interactions, access to meaningful information, support and participation of family and friends and a healing environment with support for body, mind and spirit mattered most to patients around the world and across care settings, Karin Jay told the Agora.

Planetree is a non-profit organisation that provides education and information in a collaborative community of healthcare organisations, facilities efforts to create patient-centred care in healing environments. It advocates between healthcare systems and patients, educates and coaches, is a standard setter and works with staff "who are the most powerful levers of change."

Karin Jay said patients' top three concerns were dismissal/trivialisation of the patient voice, absence of caring attitudes from providers and lack of continuity in care. These patient views were based on an analysis of over 6,000 focus groups involving more than 50,000 patients, family members and professional caregivers across the care continuum carried out by Planetree over the past decade.

She gave examples to illustrate the differences between what doctors thought their patients wanted and what the patients actually wanted.

Doctors believe 71% of patients with breast cancer rate keeping their breast as top priority. The figure reported by patients is just 7%. Karin Jay said Angelica Thieriot, who founded Planetree in 1978 said "*As a patient I rebelled against being denied my humanity and that rebellion led to the beginnings of Planetree. We should all demand to be treated as competent adults, and take an active part in our healing. And we should insist on hospitals meeting our human need for respect, control, warm and supportive care, a harmonious environment and good, healthy food. A truly healing environment*."

Planetree believed healthcare providers should partner with patients and their families to anticipate and satisfy the full range of patient needs and preferences. Caregivers should support staff in achieving their professional aspirations and personal goals.

She said there are four core concepts of patient/family centred care.
Respect and Dignity: staff should listen to patients and family and see that their perspectives as well as choices were honored. The patients and family beliefs, values, knowledge and culture should be incorporated into the plan of care.

Information: staff should provide open complete information to patients and families in a timely manner to assist in participation in care and decision making.
Participation: patients and family should be invited to participate in care and decision making. Staff should support patients and family as necessary.
Collaboration: patients and family should be included in facility wide initiatives-policy, programs, implementation and evaluation, facility design, education and delivery of care.

It was important to know who was currently defining quality, how the patient was involved in defining optimal quality outcomes for themselves and how patient preferences were captured in the current processes. Looking at the way forward, she said many patients continued to carry the old perceptions that doctors were gods and infallible. A new patient-centred model should provide for patients to ask questions and ask about options and for the doctors to offer options. It should ensure that the patient focuses on family and other activities, that physicians should listen more and talk less and that the treatment accommodates patients' culture and values.

Jim Breslin, Secretary General - Department of Health

Major shift in our model of care needed

Jim Breslin said that a major shift in the Irish model of health and social care, with new policies, programmes and practices, were necessary to tackle Ireland's changing demographics: increasing life expectancy, decreased mortality from certain diseases and increased survival rates from others on the one hand and risk factors, such as smoking, obesity and lack of physical exercise on the other hand.

In 2013, life expectancy in Ireland for women at 83 years was on a par with the EU and for men at 79 years was above the EU figure. Ireland's over 65 population was set to increase by over 24% between 2013 and 2021, and increasing numbers were requiring emergency hospital admission. In 2010, 76% of deaths in Ireland were due to three major conditions – cardiovascular disease (34%), cancer (30%) and respiratory disease (12%). Approximately 38% of Irish people aged 50 and over had a chronic disease and 11% had more than one. As the number of older people increased this burden of chronic disease would grow, – HSE estimated by 20% by 2020.

Between 2005 and 2014, Irish mortality rates dropped by 31.5% for circulatory system diseases, 7.9% for cancers, 20% for respiratory system diseases, 4.2% for infant mortality and 20.7% from external causes. Between the periods 1998-2003 and 2008-2013, the five-year survival rate for breast cancer was up from 75.8% to 81.5% and for colorectal cancer it was up from 51% to 60.3%. Cases of Meningitis C were down from 130 cases in 1999 to six in 2014. Estimates projected a 70% increase in cancer cases in females and an 83% increase in males between 2015-2040. In 2011, 40% of all hospitalisations in patients over 35 years related to four chronic diseases: cardiovascular disease, cancer, respiratory disease and diabetes (either as a direct reason for hospitalisation 19%, or a contributory factor 22%). Chronic disease accounted for 80% of all GP visits.

Seventy-six per cent of all bed days used, either directly (46%) or as a contributory factor (30%) were by patients with these four conditions. Fifty-five per cent (€1.68 billion) of acute hospital budget was attributable to care of patients with these conditions, either directly or indirectly

Jim Breslin said the main risk factors in Ireland today were lack of physical activity (only 32% of people were sufficiently active), obesity (60% of people were overweight or obese), smoking (19% smoked on a daily basis) and alcohol (41% of drinkers binge drank at least once a month). Ireland was addressing these risk factors – smoking among adults was down from 33% to 23% and among children from 21% to 8% between 1998 and 2014.

The Secretary General said Ireland's health services were changing to meet changing needs. Between 2006 and 2014, there had been a 54% increase in day case procedures – up from 558,813 to 860,763 – while the number of inpatient procedures remained constant at approximately 600,000 per year. Between 2008 to 2014, the cost per weighted unit of care fell by 19% (inpatient) and 18.7% (day case), while the day of surgery admission rate increased by 9%.

The HSE integrated care programme for prevention and management of chronic disease provided for integration as a fundamental principle of design rather than a system of delivery as a response to long term, complex care. It was community delivered but integrated across all agencies and services. It also provided for population stratification of risk (and case finding), anticipatory Care Planning (based on common assessment) and care co-ordination by a case manager (with agreed care pathways).

Jim Breslin said that good quality primary care could help prevent the need for hospital admission. There were well established treatment guidelines for chronic conditions. However, there were significant differences between Ireland and other countries and between counties in Ireland. The need for hospital treatment would never be eliminated but there was potential to significantly improve hospitalisation rates and the standard of care for these conditions. The Secretary General said it would mean:

- A national focus on population directed disease prevention and health promotion covering physical and mental health;
- A greater focus on population health and demographics in planning and delivering services;
- Support for self-care and primary care based strategies;
- Social care policy and service development to provide greater clarity on financing, entitlements, regulation and choice to support independence;
- Linkage between providers through greater shared care across organisational boundaries;
- Multidisciplinary teams used to provide care;
- Supportive clinical decision systems;
- Outcomes-based monitoring and evaluation framework.

WORLD CAFÉ

HOPE organised for the second time a World Café during its Agora. Participants were invited to share the most interesting findings or innovations they found during the HOPE Exchange Programme on e-Health, human resources, integrated care, patient involvement and patient safety.

Drawing on five to seven design principles, the World Café methodology is a simple, effective, and flexible format for hosting group dialogue. It aims at harnessing collective wisdom and not at reaching a resolution that involves trade-offs. The process began with the first of three 20 to 30 minutes rounds of conversation for the group seated around a table. At the end of the round, each member of the group moved to a different table. Staying behind on each table was the "*table host*" for the next round, who welcomed the following group and briefly filled them in on what happened in the previous round. Each round had been prefaced with a question designed for the specific context and desired purpose of the session. After the groups' individuals were invited to share the insights of other results from their conversations with the rest of the large group.

The results of the sessions are summarized in the following sections.

e-Health

"e-Health is the use of information and communication technologies (ICT) for health. Examples include treating patients, conducting research, educating the health workforce, tracking disease and monitoring public health"
WHO

When it comes to e-Health solutions implementation the challenges to take into consideration are diverse and depending on the context. In general, interoperability and big-data management are the most widespread. The difficulty to ensure the full implementation of the Electronic Patient Record (EPR) beyond the borders is an example of the interoperability challenge. Data protection and patient information ownership represent further examples, given that e-Health technologies are developed by private companies having access to that information. Not all the patients have the same access to e-Health and this could consequently limit their access to care. The readiness in the implementation of digital solutions varies according to the country. In general, the uptake of e-Health solutions shall be incremental and at the country level rather than being implemented in a single hospital. It is worth to mention the readiness of users: patients and professionals shall be duly trained to use the new technologies and to take advantage from their use.

Human resources

"Human resources for health or 'health workforce' are defined as all people engaged in actions whose primary intent is to enhance health."
WHO, World Health Report 2006

Human resources for health are facing today several challenges in Europe. Staff shortage is one of these challenges, with nurses taking on some of the doctors' tasks and healthcare assistants taking on work from nurses. The lack of nursing staff is posing the issue of workload, that should be measured and monitored. During the discussion, it emerged that to ensure the best working conditions for the employees, the safety of human resources needs to be granted. Further actions to implement are a system of incentives and a system of rotation.

Integrated care

"Integrated care consists in the management and delivery of health services so that patients receive a continuum of preventive and curative services, according to their needs over time and across different levels of the health system."
WHO, "Integrated Health Services – What and Why?"

Integration of care emerged as a response to the need to bring care closer to patients' homes. It has several dimensions: hospital and community, hospital care and primary care, health care and social care. The integration of hospital care and primary care represents a challenge in the hospital centred contexts, which are still many. In order to ensure the effective integration between the two settings it is necessary to integrate the budgets but also to introduce a system of shared responsibilities. The role of GPs is crucial, since they act as gate-keepers while being the first point of contact with the patients. Thus, GPs shall receive adequate training to carry out this role through specific education programmes. Integration of care is appropriate to face the challenges posed by the increasing trend of chronic diseases but it also fits with the palliative care and rehabilitation care.

Public campaigns for integrated care would allow savings of resources in the long term, that could be re-invested in prevention. The premise for integration of care is the development of technology aimed at monitoring the patients increasing their quality of life and independency at home.

Patient involvement

"Patient participation means involvement of the patient in decision making or expressing opinions about different treatment methods, which includes sharing information, feelings and signs and accepting health team instructions."

Patient Involvement in Health Care Decision Making: A Review.

The involvement of the patients in the decision-making process has an organisational impact at hospital and non-hospital levels. In some European countries, healthcare providers use various means such as advisory boards, focus groups and surveys to involve patients and their families. Information provided by them should be analysed and used as the starting point to implement improvement actions. Patients' involvement is beneficial in the definition of the pathway, on which the environment and the facilities should be adapted.

Patient safety

"Patient safety is the prevention of errors and adverse effects to patients associated with health care."

WHO

The first shared conclusion emerging from the discussion was the need for a culture of learning from mistakes and of communicating with the staff when adverse events occur. Participants reported good-examples of solutions implemented to ensure patient safety and these were mainly referring to the use of automated dispensing system and of health band bracelet to identify the position of the patient and eventually detect the risk of falling.

COUNTRY INFORMATION

AUSTRIA

HOPE National Coordinator: Gertrud Fritz
Exchange Participants 2017: Ewa Jasińska (Poland)
Sanita Kandele (Latvia)
Jose Antonio Reinaldo Lapuerta (Spain)
Salla Koivunen (Finland)
Eveline Scheve (The Netherlands)
Carina Schürmann (Germany)

The organisational innovations identified in Austria refer to three geographical levels: national, regional and local. The solutions reported at the national level were related to *integrated model of health information*: *ELGA*, *A-IQI*, *TEWEB* and *kliniksuche.at* that are structured in a way to allow the patient to be at the centre of the care.

ELGA consists in an informatic system for processing health data through the electronic health record. The system connects the patient with the healthcare providers, optimising the patient path by improved collaboration.

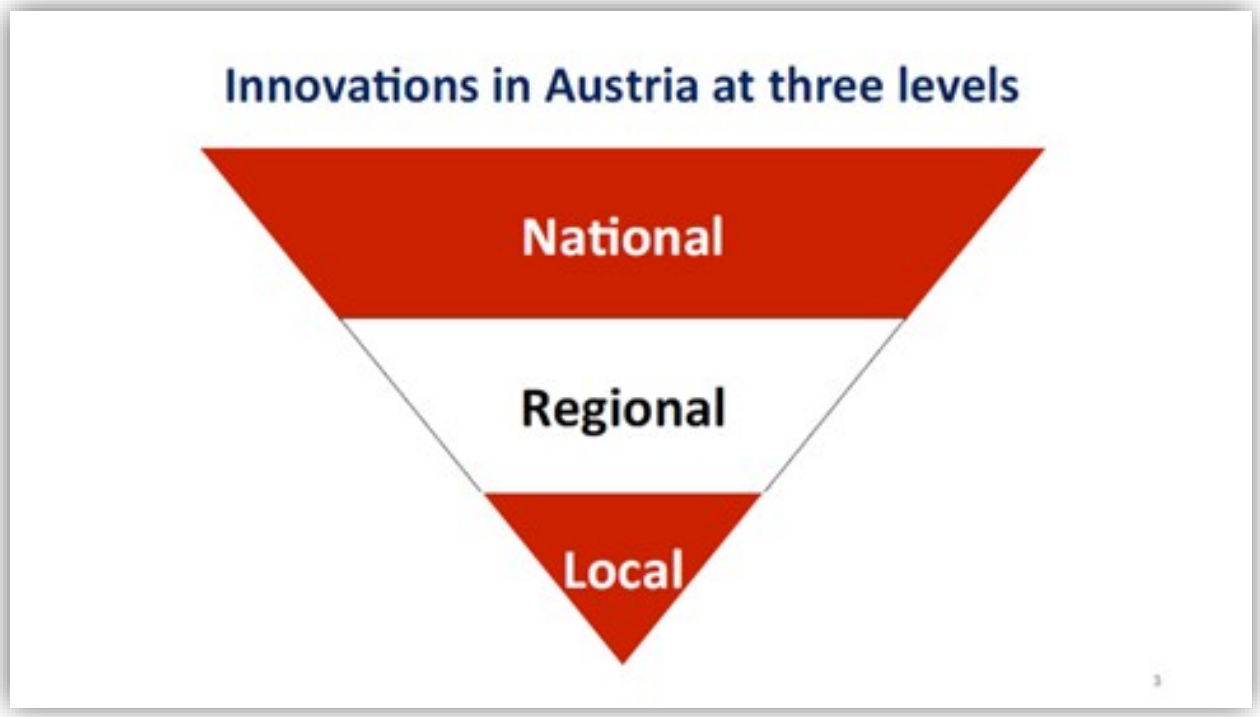
The second innovation reported named *A-IQI* deals with the use of quality indicators in inpatient settings with the aim of establishing a nationwide system for measuring the performance of hospitals in this regard.

The HOPE Exchange participants presented as well *TEWEB*, which is a service based on the use of the telephone that guides patients to the best point of service. It is driven by the Ministry of Health and Women, Social Insurances, and Federal States (Vorarlberg, Vienna, Lower Austria). The service is free and available 24 hours a day, and at weekends and holidays.

Finally, the online portal *kliniksuche.at* supports patients in finding information on the hospitals and to compare them on the basis of quality parameters. The innovation of the national solutions relies on the concept of patient empowerment and on the use of a tool providing information to the patients. These innovations facilitate patient empowerment through transparent information. They are a unique combination of different tools such as the telephone portal for patient data and portals for patient information about the quality of the hospitals. They support a patient focused health care system and were orientated to patient safety.

The regional good practice reported was the *training of young doctors* in Styria. They receive support from senior colleagues, who act as a point of reference for professional and personal matters. This has been recognised as an innovative practice since is based on supporting the young generations in finding a good balance between working and personal time.

The local level innovative practice consisted in the *use of a card for high potential nursing students* in Speising hospital in Vienna, allowing them to participate to events for the personnel of the hospital and acted as a method to reward them for doing a good job. High potential students got a VIP card with which they could take part in schooling and events at the hospital. It motivated the students, gave them feedback on their performance and the feeling that they have done an excellent job.



DENMARK

HOPE National Coordinator: Bertil Selde Krogh
Exchange participants 2017: Michela Bottega (Italy)
Robert Eager (Ireland)
Susana Gómez Leyva (Spain)
Stefanie Kolada (Germany)
Iwona Mazur (Poland)
Minna Alhonen (Finland)
Andrea Sallegger (Austria)
Taina Sneck-Siekkinen (Finland)
Carole Thibaut-Jobe (France)
Rosa Vaz (Portugal)

The three organisational innovations reported by the HOPE Exchange Programme participants in Denmark relates to the *pathway of the patient*.

The first example was the emergency pathway, which is based on predictable patient flow at the regional level. The GPs are key figure in this context since they contribute to manage the patients requesting emergency care services. This is possible through the integration between primary care and the Emergency Departments (EDs). The patients access the EDs through the GPs, who acts as gate keeper 24/7. Once the patient arrives at the EDs, he/she undergoes the triage and then follows a personalised pathway which is built based on the patient condition/disease.

The second innovation was somehow connected to the first one and relates to the pathway of cancer patients. The cancer fast track system provided appointments, exams, diagnostics and treatment within 30 days. If cancer patients were not treated on time, they could go to a private hospital. Typically, patients with suspected breast cancer would get all examinations in one day, have a diagnosis within seven days, be operated within 30 days and discharged the same day. If they needed help, they could get in touch with a contact person and after seven days would get the final results. The so-called cancer fast track is a new way to reducing the hospital length of stay. The hospital offers to the patients the possibility of relying on a contact person. The first two innovations reported highlight that the fast detection of a disease at the EDs could foster the effectiveness of care.

The third innovation "*citizen design*" was about a service introduced by the municipalities to assist the patient who suffered of cancer and his/her relatives, after two years the disease appeared and their story used to improve patient flow. This service is aimed at supporting them, in case they face difficulties due to this experience. Citizen design was a way of involving and empowering patients and enabling them, their relatives and politicians, learning from previous experience and improving patient pathways.

The outcome for the healthcare system was higher efficiency, improved quality and financial savings, with the patient always at the centre.

ESTONIA

HOPE National Coordinator: Hedy Eeriksoo
Exchange Participants 2017: Antje Kreisel (The Netherlands)
Daniela Lobin (Germany)
Dolores Marín Morales (Spain)

Innovations reported by the HOPE Exchange Programme participants hosted in Estonia were related to the *use of e-solutions aimed at managing patients' data and processes*. They contribute in general to enhance efficiency but also transparency. The introduction of such innovations dates back to 2000 when the regulatory framework was settled. Examples of patients' data managed through this system are diagnostics and medical reports while examples of processes are beds management and goal-oriented treatments. Patients' processes such as their personal data, diagnostics and medical reports were managed, through e-prescription, e-referral and e-consultancy. E-solutions also supported management processes such as managing beds and managing goal oriented treatment.

The e-solutions created transparency with easy access 24/7 to the data for the patient and all stakeholders involved in treatment. This led to efficiency and made it easier to direct patients quickly to the right treatment at the earliest time. E-consultancy makes it possible for a family physician to have a digital appointment with an expert in a hospital, put a patient diagnostics on line and receive advice if the treatment being planned was correct or if the patient should be referred to hospital. Using this system, they had discovered that 70% of patients could remain with their family physician which made it possible for the others to be treated earlier in hospital and reduce waiting times.

Beds were allocated to different disease groups such as acute and chronic diseases to try and get patients who required hospitalisation earlier. There was a shortage of consultant radiologists in Estonia, so in small hospitals they put images on line and consultants in other hospitals analysed them. Participants said their impressions about Estonia were efficiency, success, transparency, organisation, nature, initiative and attention.

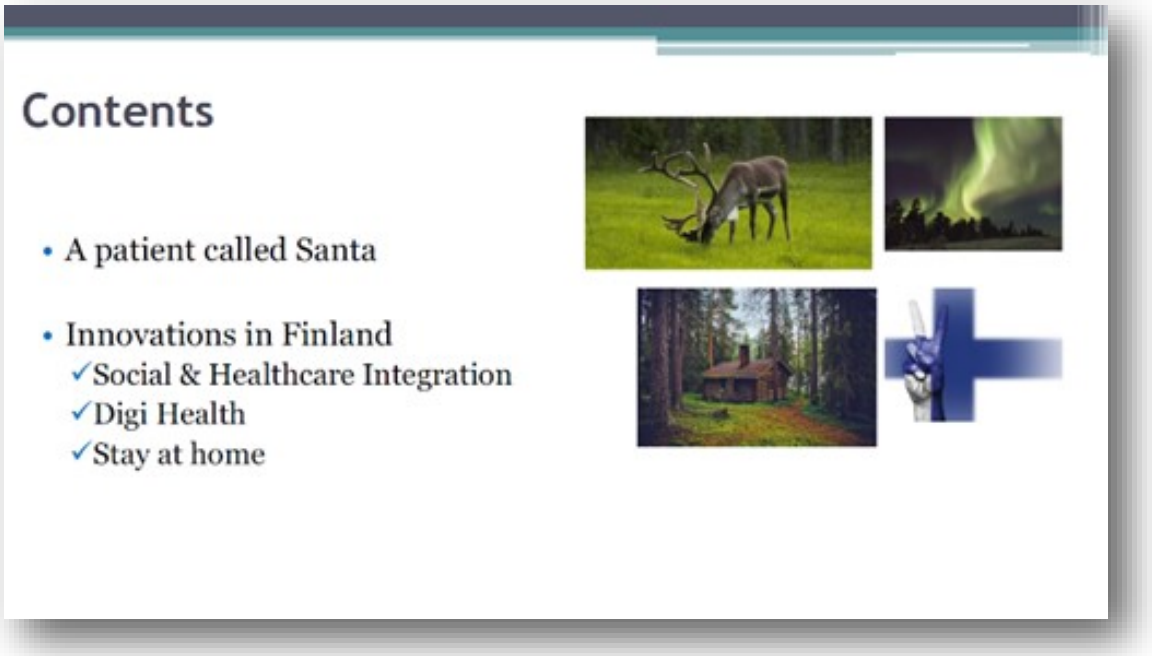
FINLAND

HOPE National Coordinator: Hannele Häkkinen
Exchange Participants 2017: Nikita Bezborodovs (Latvia)
Sarah Cadlock (United Kingdom)
M. José Cantero Sánchez (Spain)
Stephan Granat (Austria)
Sonia Gutierrez Gabriel (Spain)
Linda Harrington (United Kingdom)
Diego Llorente (Spain)
Guida Martins (Portugal)
Patrícia Pacheco (Portugal)
Juan Rodriguez Solis (Spain)
Roelie Schenkel (The Netherlands)
Rosário Sepúlveda (Portugal)
Marlies Strempfl (Austria)
Laura Sweeney (Ireland)
Teodora Todorova (United Kingdom)
Moniek Vogelsang (The Netherlands)
Melanie Watzinger (Austria)

Integration of health and social care in Finland has been introduced to face the challenges of the increasing demand of health services for chronic diseases and co-morbidities. These trends imply significant changes in the way health services provision is organised, with consequent redistribution of resources and responsibilities. Such integration allowed to better assist the patients at home while increasing the participation of the civil society especially in the care of people needing continuous care.

Digi Health and *Virtual Hospital* are services allowing the patients to access some services by using the technology. These solutions have an added value in geographical area characterised by a low coverage of healthcare providers. The benefits of staying at home are improved independency, reduced risk of contracting hospital infections and increased patient satisfaction. In the meantime, such solution produces a positive effect on the whole health system, since it contributes decreasing the average length of stay, with consequences on cost reduction and availability of resources to invest in specialist care. Two examples of hospital at home solutions were presented.

Mallu is a mobile clinic which provided nurse consultation, preventative dental healthcare, health guidance and removed stitches and vaccinations. *Mallam*, a mobile laboratory services took blood samples, carries out electrocardiograms and collects samples brought by patients.



FRANCE

HOPE National Coordinator: Cédric Arcos
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Guillermo Celada Luis (Spain)
Isabel Maria Gámez Peláez (Spain)
Manuel Hernández Estupiñán (Spain)
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Roberta Parnaby (United Kingdom)
Yolanda Revilla Ostalaza (Spain)
Kristina Tomic (Austria)

The three organizational innovations observed by the HOPE Exchange participants in France referred to *emergency planning training programme*; *implementation of patient centred pathways* and *informatic solutions*.

The introduction of emergency planning training programme derives from the need of managing effectively critical situation, such as terroristic attacks. In some hospitals of the country (e.g. Rouen), health professionals had the chance of learning through simulation of the situation itself.

The second innovation consists in the hospitalisation at home, introduced originally to support patients needing palliative care. Multi-disciplinary teams take care of the patients at home, filling the gap between hospital and primary care. The reason behind this stays in implementing innovative pathways, switching from a hospital centred system to a patient centred system of care.

Three informatic solutions were reported. A diploma course in health informatics at the University of Troyes, allowing 18 hospitals and units inter link for all relevant services, medical notes, pharmacy, lab results, care plans etc. The introduction of systems allowing the patients to stay connected with their healthcare providers; and the development of robot prototype to assist nursing staff and patients apps to collect health information.

GERMANY

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Ursula Kerschbaum (Austria)
Kristjan Kongi (Estonia)
Aleksandra Legęza (Poland)
Giulia Marin (Italy)
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Isabel Sastre Ibarreche (Spain)
Marianne Schild (The Netherlands)
Timo Alalääkkölä (Finland)

The HOPE Exchange Programme participants hosted in Germany reported two good practices: the first was the *upgraded planning process* of a hospital facility at Heidelberg University Hospital New Surgery Clinic while the second was the introduction of the so-called *Ideenmanagement* (Idea Management) at LVR Klinik Langenfeld, a tool to improve quality management while involving the employees.

The idea of upgrading the planning process comes from the necessity of adapting the facility to the path of the patients rather than the opposite. The classic way of planning the facility does not serve the treatment process, representing a challenge. To ensure the acceptance of this solution, it was necessary to focus and invest on communication and on putting effort on understanding. The involvement of a multi-disciplinary team to design the building as well as the use of 3D virtual model were means to analyse the workflow. The benefits of the design process improvement were the optimisation of the use of resources, the centrality of the patients and the better understanding of the processes. The *Ideenmanagement* initiative consists in involving the employees to proposing solutions aimed at improving the quality management. The proposal for improvement is sent to the quality manager via intranet. The quality manager presents the anonymised idea to an expert commission, that has the final word. If the feedback of the commission is positive, the management board gives its approval. Each proposal is published on the intranet. So far, 80 proposals have been published and a quarter of it implemented. Finally, the employee receives a feedback from the quality manager and if the idea implemented, he/she gets a bonus with the next salary.

IRELAND

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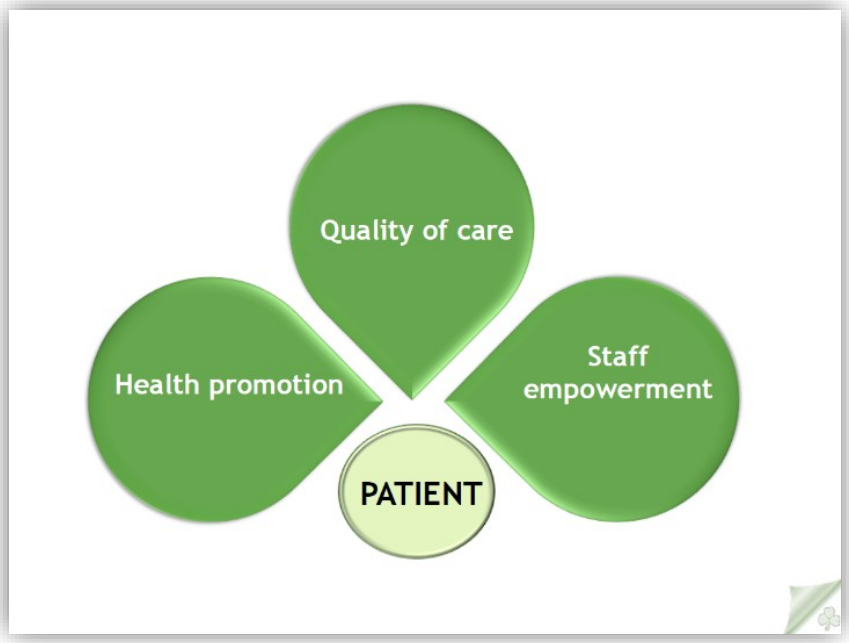
Helle Kjaer Hvidtfeldt (Denmark)
M. Isabel Irigoyen (Spain)
Kai Janisch (Germany)
Benoit Mournet (France)



The four good practices identified in Ireland refer to *health promotion*, *quality of care*, *staff empowerment and nutrition*.

The concept of health promotion is associated to campaigns launched to promote both healthy lifestyles and to reduce the stigma associated to mental health. Healthy lifestyle is promoted to reduce obesity and BMI. Through this campaign obesity decreased by 10% while BMI by 7%. The mental health campaign is based on the diffusion of simple messages aimed at encouraging the understanding of what mental health is.

One of the good practices on quality care regards the introduction of the so called *green cross*, a tool to monitor adverse events, in particular falls, providing instant feedback on the staff. Moreover, a sort of toolkit addressed to support families who are coping with a loss was mentioned.

The staff empowerment is based on the implementation of initiatives to develop hard and soft skills. And finally, a nutrition project aiming at reducing the malnutrition rate and the dermatology digital photography project to receive a fast assessment from the dermatologist were presented

ITALY

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Varpu Puskala (Finland)

The first good practice identified in Italy was the *reduction of the local trusts* in Veneto Region from 21 to nine. This allows a more effective redistribution of activities and responsibilities as well as a more effective management of resources. In this way, the cuts regarded only the administrative expenditure while the variety and quality of services remained.

The second solution highlighted was about the implementation of a *new software* allowing the patient to access information on waiting times in emergency departments in the whole Region. This made emergency care more transparent, giving the patient the possibilities of choosing the best solution at a specific moment.

The third example concerned the *clinical networks* (oncological, stroke, diabetes, Alzheimer's disease, rare diseases, emergency, pain therapy and transplant networks), involving several healthcare providers, from hospitals to primary care facilities. For example, the oncology network had catalysed commitments and efforts of clinicians, managers, governing bodies and patients to homogenise regional oncological performance. There was uniform and even access to the best oncological health care in the whole region and high quality, patient centred services according to the same clinical pathways were provided. At the centre of the care there is the patient, who could move from one structure to the other in order to obtain the best care in the best time.

LATVIA

HOPE National Coordinator: Evija Palceja
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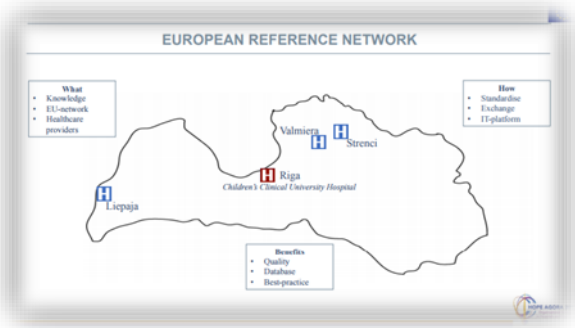
Victor Fradejas (Spain)
Jisk Vellenga (The Netherlands)
Melanie Waitz (Germany)

The organisational innovations presented by HOPE Exchange participants hosted in Latvia were the *European Reference Network* (ERN) and the *sustainability index*.

ERNs are virtual networks involving healthcare providers across Europe. They aim to tackle complex or rare diseases and conditions that require highly specialised treatment and concentrated knowledge and resources[1]. ERN could contribute to implementing a more effective system of data recording as well as quality management procedures. In the future, it is planned that it would give patients a better chance to receive best practice diagnosis and advice on their specific conditions and facilitate clinical studies to improve the understanding of rare diseases.

The *sustainability index* has been introduced in cooperation with the Swedish Embassy as a strategic tool to define the level of sustainability of an organisation. It promotes the responsible use of resources (energy consumption) and the consequent reduction of the costs of consumption. It led to the procurement of green products, reduced paper consumption by working more electronically, educated staff to sort waste correctly and reduce it, and involved employees in environmental protection activities.



[1] https://ec.europa.eu/health/ern/policy_en

LITHUANIA

HOPE National Coordinator: Daiva Zagurskiene
Exchange Participants 2017: Stephanie Miklau (Austria)
María Saenz Jalón (Spain)

The first good practice reported in Lithuania was related to the services offered at the rehabilitation centres where patients could experience both *medical and vocational therapy*. The medical rehabilitation is based on the use of an integrated application. The professionals involved are gathered in a multi-disciplinary team composed of neurologists, psychologists, social workers, physiotherapists, speech therapists, ergotherapists and physiotherapists. Moreover, patients take part to the active rehabilitation consisting in training them to improve their independence while facing their daily life. The vocational rehabilitation consists in using work as a means of therapy under conditions that are close to reality[2]. It supports patients developing skills for the labour market.

The second good practice was on *nursing education*, which is characterised by several specialisations. Exchange participants mentioned also *Nursing Education, Research, & Practice – NERP*, a bi-annual, peer-reviewed, international general research journal. The purpose is to advance knowledge and disseminate research findings that are relevant to the practice of nursing and midwifery. The journal publishes scholarly papers on all aspects of care in the nursing and midwifery professions including theory, clinical practice and education, history, policy and administration, ethics and new technologies[3].

The third good practice was on the *mechanical treatment for infected waste*, which is an effective method to reduce the risks connected to the management of this kind of waste but also to guarantee safety.

[2] https://www.psych.mpg.de/2193417/Arbeitstherapie
[3] http://nerp.lsmuni.lt/about-medicina/

POLAND

HOPE National Coordinator: Bogusław Budziński
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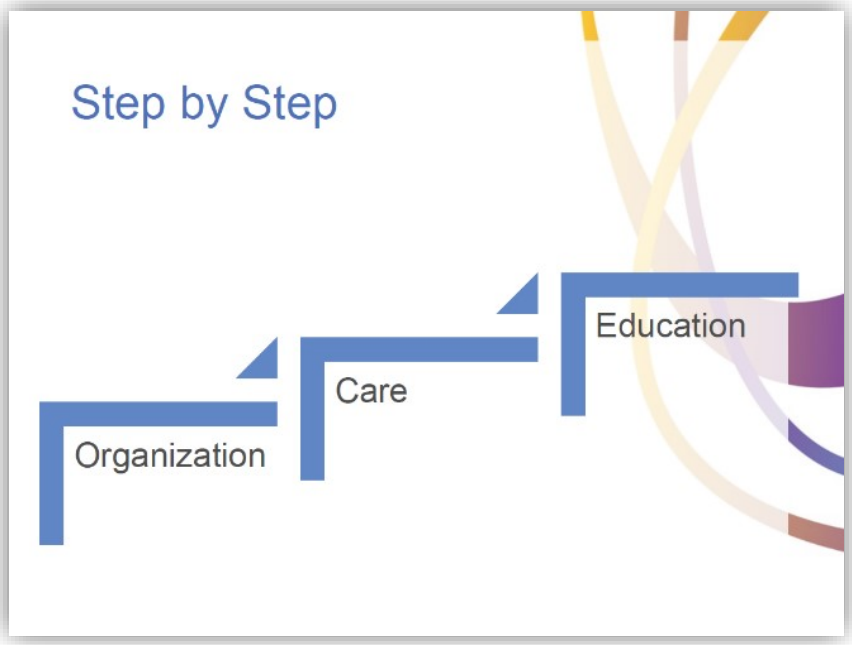
Ieva Damberga (Latvia)
Jani Korpela (Finland)



The HOPE Exchange participants hosted in Poland started from the results of a SWOT analysis to outline the national context. According to them, the threat faced by the country is the low birth trend together with the growing elderly population. Despite the lack of resources (weakness), the country made continuous improvements looking for national and international calls to get resources (opportunity). On the national territory, there are several hospitals that have developed good practices in some specialities such as oncology and maternity care.

The first innovation refers to the implementation of a system called *SGA* aimed at planning the human resources to provide the best care as possible for the patients. Patients are gathered into groups and for each group there are dedicate professionals taking care of them. Benefits of using *SGA* solution are: gathering information on performance; benchmarking; introduction of a new culture; improving effectiveness and better medical and financial results.

The second innovation relates to the introduction of simple tools to foster the patient information flow between professionals, especially in emergency departments. One of this is the *green cross*.

The third innovation was the *collaboration with School of Arts* in order for the patients to collaborate with students and developing projects together.

Finally, the HOPE Exchange participants mentioned the improvement in terms of design of the area dedicated to oncologic patients.

PORTUGAL

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Lone Larsen (Sweden)
Arkadiusz Makoski (Poland)
Gillian Southgate (United Kingdom)

In Portugal, the good practices identified were the *National Health Data Platform*, the *Interdisciplinary Care Planning* for frequent visitor to emergency rooms and the *Integrated Plan of Local Health Unit Matosinhos*.

The *National Health Data Platform* relies on two tools: the "PDS" which is the national digital system of sharing data and the "PEM" which is the electronic system sending the prescriptions to patients via SMS. The PDS and the PEM are integrated so that the medical record keeps track of all the care received by the patient. Moreover, the PDS prevents duplication in the system and provides accurate statistics and up-to-date information.

The *Interdisciplinary Care Planning* has been introduced for patients visiting often the emergency departments (EDs). A team from primary and hospital care meet the patients to work on an integrated plan, to identify their needs and the best way to face them. The objective was to increase the quality of life of patients while decreasing the number of admissions to EDs as well as to hospital.

The *Integrated Plan of Local Health Unit Matosinhos has been* leading to the creation of a unique system composed of different providers (primary care, continuous care and hospitals) where the financial resources are shared as well as the responsibilities in caring the patients. Primary healthcare centres act as gate-keepers in charge of promoting health and preventing avoidable diseases.

THE NETHERLANDS

HOPE National Coordinator: Hans De Boer
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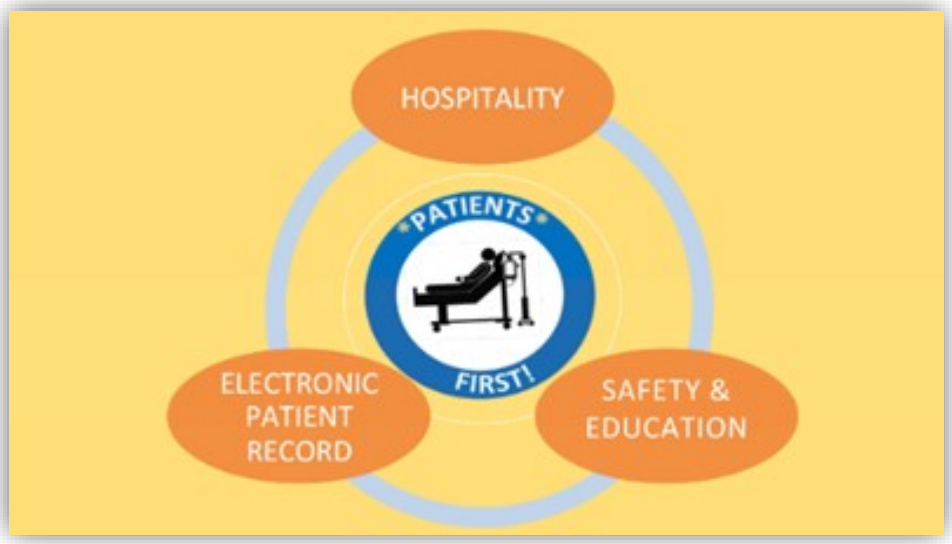
Carla Ferraz (Portugal)
Katariina Klintrup (Finland)
Jennifer Khutter (Austria)
Elisabetta Milani (Italy)
Laia Robert Sabaté (Spain)
Liva Stupele (Latvia)
Doris Voit (Germany)
Michał Żurek (Poland)

The organisational innovations reported by the HOPE Exchange participants hosted in The Netherlands were all *patient centred*.

The first was related to *hospitality*, which is based on delivering a service to the patient as promised. All the staff is trained to do so. Some initiatives according to this philosophy are the 24/7 open cafeteria, allowing the patients to have their meal at any time, especially the ones facing problems due to their health conditions, and the presence of volunteers assisting the patients.

Medimap was the second innovation mentioned, consisting of a digital tool defining the pathway of the patient. It provides information about the professionals taking care of the patient but also advices and information on the type of diet to follow.

The third practice was about *safety & education*: through simulations, the staff is trained on how to face critical situations such as fire and aggressions.



SPAIN

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Exchange Participants 2017: Marie Audoin (France)
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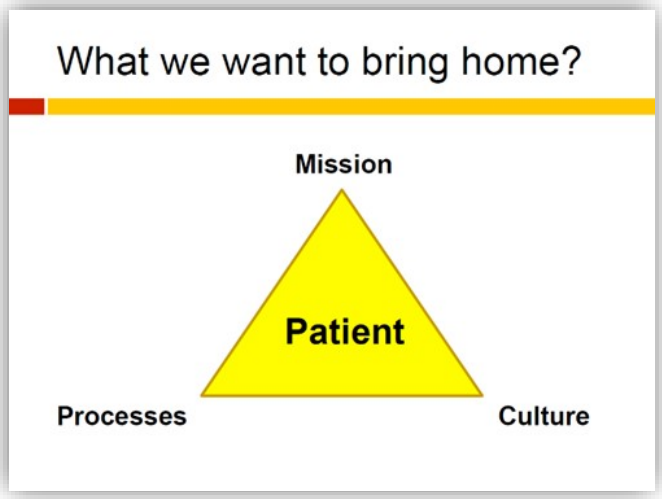
Gita Birstina (Latvia)
Diogo Branco (Portugal)
Erika Hernekamp (Germany)
Andreas Kuchenbecker (Germany)
Aili Laasner (Estonia)
Mäkelä Leena (Finland)
Renato Magalhães (Portugal)
Nikolaos Proestakis (Greece)
Michael Ryl (Switzerland)
Erik Smith (United Kingdom)

The three practices reported by the HOPE Exchange participants in Spain were related to the *centrality of the patient*. They referred to the mission of Spanish National Health System, the processes and the culture.



The mission of the Spanish National Health System consists in ensuring the free access to health service and a good quality of care. This is possible through the strengthening of outpatient sector. To reach the objective, improvement shall be driven through competition and implementation of programme on innovation.

The second practice was the management of the patient pathway through IT solutions. These allow all providers involved in the process of care to access the same information.

The third practice was related to the culture of humanization, which is focused on the needs of both patients and employees.

SWEDEN

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Niskala Heli (Finland)
Sigrun Kauertz (Germany)
María Pilar Muñoz Muñoz (Spain)
Sjoerd Walburg (The Netherlands)
Michelle Watts (United Kingdom)

In Sweden, three simple and effective innovations have been reported by the HOPE Exchange participants. All of them dealt with the need of *improving communication*.

The first solution implemented was the *green cross*, which is a tool aimed at ensuring patient safety. The added value of the green cross is to have clear information on the risk of adverse events faced by the patients.

The second innovation was related to the placement of a parking disc at the bedside of the patient in order to monitor the timing required for regular and repeated actions. In this case, parking disc was used for preventing pressure ulcers. It could be put on the patient's bedside and could also be used for other activities that required regular time recall. In 2015 the prevalence of pressure sores in one region was 18% which dropped to 5%. They said that the cost of treating one patient with level 4 pressure ulcers could be up to €50,000 and could be prevented for a €1 parking ticket. Parking discs could also be used to promote hourly checks by staff to see if patients needed a drink or to go to the toilet.

The third innovation was the introduction of pictograms, consisting of simple images, to overcome language barriers between the patients and the professionals and promoting common understanding. In 2015 a total of 160,000 people came to Sweden alone and the pictogram tool could be downloaded from the internet. It helped person centred healthcare and was premade in ten languages.

SWITZERLAND

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Katariina Jantunen (Finland)
Julia Morgenbesser (Austria)
Vilma Raskeliene (Lithuania)
Lidia Rodriguez (Spain)
Gersdisja Van Breemen (The Netherlands)

The organisational innovations reported by the HOPE Exchange participants hosted in Switzerland presented examples on *patient safety*, *environment* and *laboratory process*. Several solutions have been implemented in the field of patient safety.

One of these was the *patient safety walk rounds* suggested as a tool for managers and leaders to develop partnership on patient safety in clinical areas.

The second example of this kind was the adoption of *medStandards*, a technological solution based on the collection of medical algorithms that are used by doctors as a web-based reference book for emergency situations.

The third example was a kind of report called *Speak Up,* paving the way to consolidate a patient safety culture. It encourages a culture centred on sharing information about risks related to patient safety. Employees report their concerns to managers who in turn act to minimise the risk that adverse events happen.

The fourth example was *Qnnect*, an app used by around 1,000 employees, promoting the communication between them. Information exchange via Qnnect promotes coordination within departments, maintains high standards of patient care and complies with security and privacy standards.

The organisational innovation on environment was on the implementation of a new system to manage the food waste. Finally, the implementation of new laboratory processes that allowed to reach higher quality standards as well as quicker results.

UNITED KINGDOM

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Kerstin Hinz (Sweden)
Caroline Lancian (Germany)
Roman Lewandowski (Poland)
Rikke Gravlev Poulsen (Denmark)
Gerda Reithofer (Austria)
Ikonen Tuija (Finland)

The innovation reported by HOPE Exchange participants hosted in United Kingdom was the *red to green* management system, which has been introduced in all hospital trusts to provide more effective care to inpatients.

The reason behind the introduction of such solution is the necessity of reducing the length of stay of the patient but also to better manage the time of health professionals in charge of him/her. The system is based on a key principle: if all the steps of the process are accomplished then the stay will be optimized. Professionals of different background take part to multi-disciplinary meetings to jointly discuss about the situation of the patient. These meetings allow the switch of tasks within professionals and help to face the shortage of doctors and nurses.

The second innovation presented was on extending the scope of health professionals' roles and transferring working tasks between different healthcare professionals. Some registered nurses, technicians and physiotherapists have trained to become clinical practitioners. They have the experience and training for their new roles, work for a while under supervision and are then accepted by the medical profession to perform their work independently. There are acute nurse practitioners in EDs sharing the workload of junior doctors and providing continuum of care when the junior doctors move on.

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HOPE represents national public and private hospitals and healthcare associations, national federations of local and regional authorities and national health services from 30 European countries.

HOPE mission is to promote improvements in the health of citizens throughout Europe, high standard of hospital care and to foster efficiency with humanity in the organisation and operation of hospital and healthcare services.