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## IMPROVEMENT SCIENCE TRAINING FOR EUROPEAN HEALTHCARE WORKERS

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## **Executive Summary**

The aim of the ISTEW project is to develop shared academic and practice based programmes that enable European universities to build improvement capability and capacity within their own healthcare workforce, through engagement with students based on an agreed scope of practice, essential knowledge base and improvement science competence across partner countries.

To date, “systems thinking” has not been an integral part of the curricula for the healthcare workforce. Meanwhile healthcare systems are failing and many services are not yet at the standard that many of us want and deserve them to be. Everyone has a contribution to make to improving quality and providing safer, better and more person-centred healthcare. From preliminary discussions, it is evident that the provision of academic and professional training in Improvement science is varied throughout partner countries. The capacity, competencies and capabilities varies significantly and as a result the concept, tools and techniques of healthcare quality improvement are far from being at a sustainable level in today’s healthcare workforce. The ISTEW programme aims to address this by supporting universities providing multidisciplinary healthcare education to develop a more collective understanding of Improvement science and develop improvement capability within their own workforce.

Central to this project was the development of a clear definition of Healthcare Improvement Science (HIS). A definition was arrived at using a modified policy Delphi process in conjunction with a review of the scientific evidence of Healthcare Improvement Science and its specific nature. The ways in which different countries understand Healthcare Improvement Science is very important as it contributes to building a shared understanding between partners in different countries. The competency and capability requirements for multidisciplinary healthcare workers have also been clarified. Data on demographic and health profiles in each partner country were compared and summarised, various healthcare professional competency frameworks were also reviewed to provide a rich and valuable source of knowledge crucial for the development of educational modules that will contain multidisciplinary course material that can be applied to suit contextual differences in each country. In order to provide a thorough profile of the current education and training provision in relation to Healthcare Improvement science, a mapping exercise was undertaken. This was important to gain a better understanding about the type, level, curricula content, entry criteria, learning and assessment criteria of current educational provision in relation to Improvement science and was crucial for identifying the gaps in provision so the modules developed will build on, and enhance current provision in line with the Bologna Process. Year 1 of the project also saw the development of an evaluation framework for the ISTEW project. This will provide the platform to allow monitoring and evaluation of the modules going forward.

Despite the complexity and challenges associated with achieving these objectives, the first year of the project has been extremely successful in achieving the outcomes of the work packages discussed above. In addition to these successes ongoing dissemination and exploitation activities have taken place within and across partner

countries. Dissemination of this information will be an important characteristic of the next phase of the project, with plans for several peer-reviewed publications that will share the findings of this project among the wider community in progress. The ISTEW project website ([www.uws.ac.uk/improvementscience](http://www.uws.ac.uk/improvementscience)) has been an excellent dissemination/exploitation resource, featuring news of conferences, bulletins, reports and publications. This website will remain active in order to provide a public platform that will contribute to our dissemination and exploitation activities.

Exploitation will feature strongly in the remaining 12 months of this project, the end of project conference and other events will be important in establishing wider International networks and will be crucial in the sustainability of the project findings and implementation of HIS on a global scale.

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## 1. Project Objectives

The aim of the ISTEW project was to develop shared academic and practice based programmes that enable European universities to build improvement capability and capacity within their own healthcare workforce, through engagement with students based on an agreed scope of practice, essential knowledge base and improvement science competence across partner countries.

The specific project objectives are detailed as follows:

- To develop a definition for Healthcare Improvement Science based on a systematic review of current practice across partner countries
- To clarify competency and capability requirements for Healthcare Improvement Science including the establishment of inter-country consensus at academic level
- To review available education and training available in partner countries
- To develop module materials suitable for flexible delivery to all healthcare professionals at undergraduate and post graduate levels in a range of European languages
- To develop a programme theory to ensure we remain focussed on our objectives and vision
- To develop an evaluation framework
- To incorporate the requirements to complete a quality improvement project into each programme (module) developed
- To develop staff within European universities capable of mentoring students, providing consultation on their improvement projects and capable of collaboration with clinicians in the partner healthcare institutions
- To provide resources that can be used in education and training to further the development of healthcare professionals with the necessary skills and techniques to provide cost effective practice with the appropriate utilisation of facilities and resources
- To provide a framework appropriate for ethical and moral decision making

### Outcomes

- A shared understanding of the role of Healthcare Improvement Science incorporating the required competencies capabilities and training needs
- Development of module materials suitable for delivery in every partner country
- Identification of an appropriate approach to facilitate evaluation

## 2. Project Approach

The project has been designed around 12 work packages (WPs). WP1 centred on Project Management activities. WP 2 focussed on the development and maintenance of the project webpage and private web space that facilitated the sharing of information and documents among partners. It also implemented a project management tool and a discussion forum for communication within the project open to all partners and associate partners to follow and comment if desired. WP 3 concerned the development of a definition of Healthcare Improvement Science. WP 4 focussed on the systematic review of the scientific evidence regarding Healthcare Improvement Science and its specific nature in different EU countries. WP 5 clarified the competency and capability requirements for multidisciplinary healthcare workers and WP 6 undertook a review of available education/training in Healthcare Improvement Science. WP 7 identified the current gaps in the education and training for multidisciplinary healthcare workers and WP 8 developed modules to address these educational/training gaps. WP 9 dealt with Quality Assurance aspects of the project and WP 10 was concerned with the development of an Evaluation Framework for the modules. WP11 focusses on dissemination activities and WP 12 with the wider exploitation of the project results.

Each work package had an identified lead responsible for the management of each discrete work package, the arrangement of meetings (agenda/minutes), achieving work package outcomes and the preparation of reports. All work undertaken across these work packages was facilitated and monitored by the Project Management team (P1 UWS).

To reach a definition of Healthcare Improvement science, WP 3 used a modified Policy Delphi process involving 15 experts from each partner country. By way of a semi-structured questionnaire, experts were asked to comment on a working definition of Healthcare Improvement Science. After analysing the results of the first iteration, the 2<sup>nd</sup> working definition was again put to the same experts using the same approach. Again the results of the 2<sup>nd</sup> iteration were analysed. From this a third working definition was developed, this was discussed during a focus group (in light of the preliminary results of the literature review) involving all partners at a face to face meeting in Bled in June 2014. The outcome of this was that a shared understanding and consensus about the definition of Healthcare Improvement Science was reached.

*"Healthcare Improvement Science is the generation of knowledge to cultivate change and deliver person-centered care that is safe, effective, efficient, equitable and timely. It improves patients' outcomes, health system performance and population health."*

Bled, ISTEW, 2014

A systematic approach was used to review the literature on the scientific evidence regarding Healthcare Improvement Science and its specific nature in each partner country by WP 4. A review strategy was designed and followed by all partners in a search of the literature within their own country. In conjunction with librarians, a structured and systematic approach was taken to a narrative literature review that aimed to answer four key research questions:

1. How is Healthcare Improvement Science interpreted?
2. How is Healthcare Improvement Science practiced?
3. How are multi-disciplinary students educated in (the various components of) Healthcare Improvement Science?
4. What is the impact of education in Healthcare Improvement Science on service provision?

The work was split into two parts. Part one entailed carrying out literature searches and pulling the results into an Excel database. This database was standardised across all partner countries and gave details of sources and relevant article abstracts. The second stage was to write a narrative summary of the evidence from the database and surrounding articles (including relevant 'grey' literature sources) to answer each of the research questions.

Parallel to this, WP 5 was collating data that would describe the key demographic drivers and challenges to health and well being in each partner country using primarily the Global Burden of Disease data. They also reviewed various competency frameworks used by multidisciplinary healthcare workers in Europe to develop a framework that set out the competency and capability requirements in Healthcare Improvement Science for healthcare professionals. The health profiles will allow the core material in the modules to be adapted appropriately to take account of each partner's particular health challenges.

WP 6 identified the gaps within training/education currently available in Healthcare Improvement Science for multidisciplinary healthcare workers in each partner country. The mapping exercise gathered information about the levels and type of education, the entry criteria, curricula, module content, and learning and assessment outcomes. The findings of this mapping exercise underpinned the gap analysis undertaken by WP 7. This work sets out the gaps in available education, resources that may be modified for inclusion in future module development and a strategy for the implementation of the ISTEW course material and demonstrates how this will be used in the development of modules to both harmonise course material whilst allowing for local contextual differences.

### 3. Project Outcomes & Results

All but one of the project objectives has been successfully achieved. A summary is detailed below:

- i) To develop a clear definition for Healthcare Improvement Science based on a modified policy Delphi process and in light of systematic narrative review of the literature and current practice across partner countries.
  - Work packages 3 and 4 relate directly to this outcome.
  - Final reports on work packages 3 and 4 are complete.
  
- ii) To clarify competency and capability requirements for multidisciplinary healthcare workers in Europe.
  - Work package 5 relates directly to this outcome.
  - Final report on work package 5 is complete.
  
- iii) To review available education/training in partner countries.
  - Work package 6 relates directly to this outcome.
  - Final report on work package 6 is complete.
  
- iv) To identify the gaps in education and training in Healthcare Improvement Science for multidisciplinary healthcare work in Europe.
  - Work package 7 relates directly to this outcome.
  - This work is in progress. Work package 7 was dependent on the reports from work packages 3, 4, 5 and 6 being delivered (end of June) yet the timescale of the project indicated they would also report end of June, this was clearly not possible. The final reports from work packages 3, 4, 5 and 6 were delivered in July which effectively delayed the work of work package 7 beginning until July.
  
- v) To develop an evaluation framework for monitoring and evaluating the modules.
  - Work package 10 relates directly to this outcome.
  - A monitoring and evaluation framework has been developed

## **Interim Update on Progress of Each work package**

### **Work package 2: Development and Maintenance of ISTEW Project Website**

Project outcomes within WP 2 include the following:

- i) Development of ISTEW Website (public)
- ii) Use of project management software 'Basecamp' (private to full & associate partners).

The public ISTEW website has regularly updated throughout the period of the project. The use of 'Basecamp' as the project management tool for the ISTEW project has been an overwhelming success. Access to this system is limited to project partners. Restricted access has been exerted within varying work packages to limit the non-essential email traffic with associate partners. In addition to daily email contact with all partners, Basecamp has facilitated information sharing (reports, agendas, minutes etc.) with ease. A trail of all communications has provided transparency and a chronological record of progress from the start of the project. Basecamp has also been an effective addition in ensuring deadlines for milestones are achieved. Each lead partner has found the 'reminders' for each milestone allocated to them and a notice of overdue milestones broken down by each work package useful.

### **Work package 3: Development of clear definition for Healthcare Improvement Science**

The aims of work package 3 were as follows:

- i) To achieve consensus on a working definition of Healthcare Improvement Science

This work package utilised a modified policy Delphi methodology and comprised of two iterations with 12-15 experts in each partner country and a focus group with all partners in our face to face meeting in Bled June 2014.

A semi-structured questionnaire was used to seek expert opinions on the nature, concept, scope, practice, application and implementation of Healthcare Improvement Science in their country. Based on the quantitative and qualitative findings of the first round of data collection, a second survey with a refined definition was developed and distributed to project partners.

Eighty seven (n=87) experts returned a completed questionnaire in which they were asked to indicate their level of agreement and comment on various parts of the definition. The results from the first round were used to develop a second working definition.

In the second round 66 experts returned completed questionnaires again indicating their level of agreement and comment on various parts of the definition. The results from the second round were discussed in a focus group with all partners in Bled, 2014. Consensus was reached amongst partners and the final definition reads:

*“Healthcare Improvement Science is the generation of knowledge to cultivate change and deliver person-centered care that is safe, effective, efficient, equitable and timely. It improves patients’ outcomes, health system performance and population health.”* Bled, ISTEW, 2014

#### **Work package 4: Review of scientific evidence regarding Healthcare Improvement Science and its specific nature in different EU countries**

The aims of work package 4 were as follows:

- To analyse literature related to the subject
- To stratify the evidence based on importance and to choose the most significant one for our activity
- To carry out a systematic or narrative review of research (taking a systematic approach) focussing on Healthcare Improvement Science
- To publish review findings on the ISTEW webpages
- To identify differences in the way in which Healthcare Improvement Science is interpreted and practiced in different countries
- To identify differences in the way multidisciplinary students are educated in Healthcare Improvement Science in different countries
- To evaluate difference identifies and their impact on service provision

A review strategy was designed and followed by all partners in a search of the literature within their own country. We worked with librarians to take a structured and systematic approach to a narrative literature review to answer four key research questions:

1. How is Healthcare Improvement Science interpreted?
2. How is Healthcare Improvement Science practiced?
3. How are multi-disciplinary students educated in (the various components of) Healthcare Improvement Science?
4. What is the impact of education in Healthcare Improvement Science on service provision?

The work was split into two parts. Part one entailed carrying out literature searches and pulling the results into an Excel database. This database was standardised across all partner countries and gave details of sources and relevant article abstracts. The second stage was to write a narrative summary of the evidence from the database

and surrounding articles (including relevant 'grey' literature sources) to answer each of the research questions.

A range of electronic resources were used in this search. These included Medline, CINAHL, Applied Social Sciences Index and Abstracts, British Nursing Index, Cochrane Library, EMBASE, National Research Register, and PsycINFO databases and National publications from all partner countries were also used. Following a review of the literature in each country, a spreadsheet was produced consisting of the author; year of publication; title of article/book/chapter/report; methodology (participants/instruments used) and a short summary of results. This information was inputted into an 'Excel' file with a link to the article or saved pdf file, if available. This aided the review and analysis of scientific literature by identifying overlapping and themes emerging within the published literature.

A final report detailing the key findings has been completed. It suggests that HIS is interpreted in a fragmented and diverse way across partner countries and that there is a rapidly developing view of what HIS means in the field of healthcare. HIS tools and techniques were being practiced in a wide range of settings but as with the definition, in the main, these did not link back to a common definition or agreed way of working. There was a paucity of literature directly concerned with the education of healthcare professionals in HIS and literature that discusses the impact of education in HIS on service provision

### **Work package 5: Clarification of competency and capability requirements for Healthcare Professionals working in Europe**

This work package aimed to clarify the competency and capability requirements for healthcare professionals working in Europe. It was to describe the key demographic drivers such as age profiles, population densities etc. and challenges to health and well being such as environment, smoking etc. in each partner country and develop an inclusive conceptualisation of service improvement including scope of practice, essential knowledge base and clinical competence.

The aims of work package 5 were as follows:

- i) To identify and review demographic data and health profiles for each partner country
- ii) To identify required capabilities and competencies for different healthcare professionals in partner countries

#### Demographic Data and Health Profiles

The main aims were to:

- 1) Describe the main health profiles in each partner country (e.g. age profiles, infant and maternal mortality rates, health expenditure)
- 2) Describe the challenges to health and well-being in each partner country (e.g. Risk factors, Years life lost)
- 3) Compare this data in order to highlight the similarities and differences amongst partners.

There were four main sources of data used to collate the demographic data and health profiles for each partner country. The Global Burden of Disease, injuries and risk factors study (GBD, 2010); The Central Intelligence Agency (CIA, no date) and data held by the Organization for Economic Co-operation and Development (OECD) was also referred to. The OECD report gives an overview of the well-being indicators found in Italy, Poland, Slovenia, Spain and the UK, though it does not contain relevant comparable data for Romania. In both the GBD and OECD reports Scotland and England are not differentiated. To draw out any particular challenges within Scotland the General Register Office for Scotland data (GROS) was considered although the data is not entirely comparable with the GBD data, it does give an insight into the differences between the two countries.

A three-stage process was used to develop competencies and capabilities required for healthcare professionals:

#### Stage 1: Literature Review and Synthesis

A brief search of the literature was carried out to review the available material and literature that related to the competencies and capabilities frameworks for a range of healthcare professionals.

#### Stage 2 – Refinement of Competencies and Capabilities

These frameworks were refined in light of the likely content of the four modules to be developed and the likely requirements needed to practice Healthcare Improvement Science. At this stage partners were invited to further refine the list of competencies and capabilities.

#### Stage 3 – Development of competencies and capabilities.

The framework generated reflects what was found in the literature and what partners feel are likely to be the competency and capability requirements of Healthcare Professionals to understand, apply and practice HIS.

A final report detailing the main findings has been completed. It supports the need for multidisciplinary healthcare professionals to be educated about 'systems thinking and process mapping'; models of healthcare improvement science, measurements of healthcare improvement science and communication and managing change.

### **Work package 6: Review of available education/training**

The aim of this work package was:

- To prepare an overview of partner countries current education and/or training programmes in Healthcare Improvement Science (HIS) relevant for multidisciplinary healthcare workers in Europe.

The mapping exercise was designed to capture the currently available HIS education/training, including entry criteria, curricula, module content, learning outcomes, and assessment criteria at all levels being delivered across Europe. It used the Bologna cycle descriptors and identified those that are already using the European Credit Transfer and Accumulation System (ECTS) which is a standard for comparing the study attainment and performance of Higher education students. Most university websites and national health education bodies provide a description of student education programmes and individual courses. This enabled each partner country to search the university websites who had schools of nursing, dentistry, and medicine. They also searched the websites of national health educational bodies (e.g. Strategic plans of the Ministry of Health, specific education portfolios of professional/Non-governmental organisations) for HIS education.

Data was gathered using a mapping template developed in consultation with project partners. Each partner was asked to gather as much information and populate the mapping template as far as possible using search terms. If they could not get module objectives from the website they were asked to email course co-ordinators and request them.

Search Terms:

Healthcare improvement; Quality improvement; Culture/cultural change; Patient safety; User/patient involvement; Practice development; Evidence based practice; Person centred care/practice; Organisation development; Knowledge into action

Template fields:

Institution; School; Post Grad / Under Grad; Qualification; Course Title; Course Aim; Course objectives; Entry requirement; Full T / Part T; Emphasis; Core / optional; Module; title; Module objectives.

A report detailing the key findings has been complete. It supports the expansion of HIS education at the undergraduate level of education for multidisciplinary healthcare professionals.

### **Work package 7: Gap Analysis (Education/Training)**

This work package aimed to analyse the gaps in HIS education provision for multidisciplinary healthcare workers. It has built upon findings from work packages 3, 4, 5 and 6 and fits with these earlier work packages by synthesising previous information and identifying overlaps between partner countries and gaps in the current provision for the education and training in HIS for healthcare professionals.

The aims of work package 7 were as follows:

- i) To identify common standards for preparation to practice
- ii) To identify currently available education/training opportunities developed in partner countries that could be developed/modified to fulfil the needs of healthcare professionals in the future
- iii) To identify gaps in provision that require the development of new education/learning materials

Following the project meeting in Slovenia it became clear that WP7 would be delayed. This was due to WP7 requiring the final reports from WP4, 5 and 6 to begin a gap analysis. These reports became available in July 2014. This allowed the Polish team to begin work on analysing these for gaps and developing a measurement tool informed by these reports designed to identify gaps that were not apparent from existing data collection efforts. The tool has undergone a number of modifications and is currently being completed by partners. The final report for WP7 will be delivered during October 2015.

### **Work package 8: Development of Modules**

Work package 8 will draw on the findings of earlier work packages (WP3, 4, 5, 6 and 7), specifically work package 7 that will provide an analysis of current gaps in the education and training of HIS for multidisciplinary healthcare professionals within Europe.

The aims of this work package are to:

- i) To focus on the post registration workforce development as well as the education of future practitioners within a coherent and evidenced-based infrastructure.
- ii) To develop academic modules at undergraduate and post-graduate levels with quality control standards and cross-border verification of competencies and academic indices
- iii) Take cognisance of the European Credit Transfer and Accumulation System (ECTS)
- iv) Agree a conceptual framework with quality controls in education and training and a model for harmonisation within course development and evaluation at difference levels from undergraduate to PhD.
- v) To create a balance between conformity to standards and encouraging contextual diversity by multi-site linkage and local support.
- vi) To recognise the independence and autonomy of the individual Higher Education Institutions and their awards while encouraging partnership and collaboration across National boundaries.

Four partners are directly responsible for the writing of the modules developed by this work package, namely UWS, Poland, Slovenia and England.

The modules are:

- Measurement for Improvement
- Communication and Managing change
- Models for Improvements
- Systems Thinking

Discussions are taking place between partners about the level at which the educational materials for HIS should be delivered. The content will be consistent across countries although the level of academic achievement may vary depending on the depth of assessed knowledge and understanding.

### **Work package 9: Quality Assurance**

#### Quality Assurance Principles

The following quality assurance principles were laid out at the onset of the project:

- **Transparent:** all partners will be aware of the strategy adopted, outputs and key indicators being monitored.
- **Inclusive:** all partners will have an opportunity to comment on the outputs and key indicators identified for monitoring purposes.
- **Integrated:** outcomes and key indicators will be embedded in project WPs and deliverables.
- **Ongoing:** monitoring will be ongoing throughout the project with quarterly reports being posted on the website.
- **Supportive:** monitoring is designed to ensure that the project meets objectives – any challenges identified will be addressed with a view to supporting partners to overcome difficulties.

A quality assurance strategy document was prepared in the early stages of the project detailing how the monitoring and evaluation of the project would proceed. This was presented to and agreed by all partners as an effective strategy. Quality assurance of the ISTEW project is reviewed internally and externally with evaluation on all achievements of project milestones/objectives and all related aspects.

The internal evaluation of the project in an ongoing process that has adopted the following methods:

Ongoing review by the internal reviewer is achieved through 2 routes:

- i) Via Basecamp; monitoring of online communications, input/involvement by partners, and milestones/objectives achieved.

- ii) Online questionnaire with a secure/private login for each partner to comment quarterly on the progress of the project and related aspects.
  - a) The internal evaluation of the ISTEW project utilised a SOAR analysis of each work package. This breaks down as follows:

S- Strengths (what are our greatest assets), O- Opportunities (what are the best possible market opportunities), A- Aspirations (what is our preferred future), R - Results (what are the measurable results).
  - b) In addition to this, each work package was assessed on the basis of 'Realisation' where each partner had the opportunity to express their opinion about the present stage of the project on the following criteria:
    - Goals Achievement
    - Timeliness
    - Quality of Cooperation
    - Usability of Online Meetings

The internal review took place throughout the period of the project on a quarterly basis. The repetition of this evaluation strategy has allowed for an analysis of changes in partners responses across these dimensions. Progress of the project development has been assessed as very satisfactorily and it has been noted whilst the project is extremely complex the majority of milestones or deliverables have been completed on time.

### **External Evaluation/Review**

Dr Andrew Carson-Stevens, Clinical Lecturer in Health Care Improvement from the Primary Care Patient Safety Research Team, Cochrane Institute of Primary Care and Public Health, School of Medicine, Cardiff University and the UK and Ireland Faculty Lead, Institute for Healthcare Improvement Open School, Cambridge, MA, was appointed as the external reviewer at the beginning of the project.

The external evaluation focused on the following items:

- a) how the project will work towards achieving its aims,
- b) whether and to what extent the results match the anticipated outcomes,
- c) how the project results fit into the European framework of higher education

External quality assurance is an ongoing process; the interim external quality assurance report has been completed, another will be produced in October 2015.

### **Work package 10: Development of an Evaluation Framework**

Work package 10 aimed to develop a framework for the evaluation/monitoring of HIS education across partner countries. The evaluation was developed integrating two specific approaches:

- i) Identification of and implementation of a minimum dataset (MDS)
- ii) Case study approach in individual partner countries

In July P1 (UWS), P2 (Cov Uni), and the project external evaluator met face-to-face and video conferenced P6 (Alicante). This half-day workshop reviewed the purpose of this work package; the purpose is not to evaluate healthcare improvement science projects but to evaluate the improvement learning educational process. In light of this WP10 will use the Kirkpatrick Framework for Evaluation and its Application to Improvement Initiatives (Parry et al.,(2013). This model will be adapted to provide the framework for monitoring and evaluation of the modules. Minimum data set (MDS) variables will be taken as a reference for Data Collection inside the Case Study and at every level of evaluation. The Case Study will be the Unit of Analysis, the case study being the modules on Healthcare Improvement that will be developed. This way it will be possible to evaluate the impact of the learning at 5 levels.

As can be seen from the diagram below there is a Global MDS for each level of the evaluation of the case study. Discussions are ongoing regarding the identification of healthcare improvement projects for case studies to pilot the suitability of this model and how it can be refined further.

## WP10 Case Study

### (about HIS Learning Process):

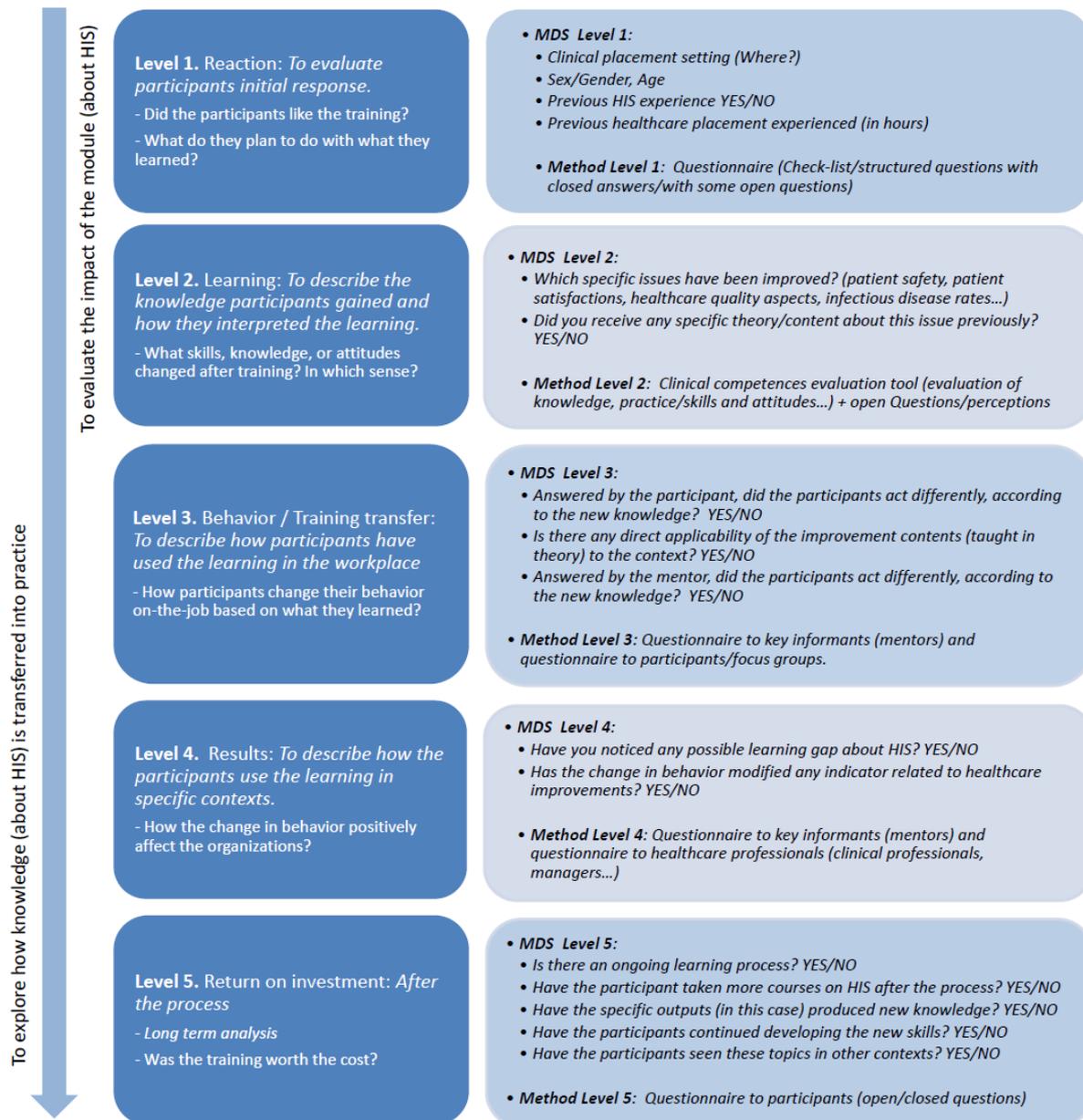
Choose HIS Learning modules/courses in your country about these contents:

- Systems thinking and process mapping.
- Models for improvement.
- Measurement for improvement.
- Communication and managing change.

## Global MDS (for the case):

*HIS learning modules/courses characteristics/items/variables*

- Programme education level (Undergraduate, Master Degree, PhD...)
- Total number of hours and distribution (theory, clinical placements, practice seminars...)
- Programme on ...? (Nursing, Medicine...)
- Programme topic on...? (community nursing, pediatrics, midwifery...)
- How old is the course/module?
- Total number of students
- Is the course/module specifically/directly on HIS?
- Is the course/module related to HIS? (referring to/or including HIS as a content)
- Responsible professor/teacher profile/credentials.
- When did it start? (the course/module)



## Work package 11: Dissemination

The ISTEW project will adopt a strategy of widespread dissemination in order to increase the use of project outcomes after completion of the project. Specifically, we will aim to achieve the following:

- Promote international awareness of the project and its aims and objectives.
- Familiarise health and research professionals with the project and research findings.
- Encourage sharing of opinion and experiences within and between professional groups working in Healthcare Improvement Science.
- Share and promote research findings internationally.
- Inform the practice and application of healthcare Improvement Science on an international scale.

### Dissemination Audience/Groups

The project is targeted at three key groups:

1. Healthcare educators
2. Pre and post-registration healthcare professionals
3. Professional medical/nursing associations and ministries of health/policy makers

Our initial focus for dissemination was on those with links to full partner and associate partner institutions. This includes students, staff members/peers, trainers, researchers etc. During this time the dissemination of information within partner institutions to professional contacts was encouraged both in terms of raising awareness of the project and the sharing of early findings. This information will also be shown on the ISTEW website for wider reach. As the project progresses, the findings will be disseminated to the wider groups outlined above, who are likely to have an interest in the activities and findings of the ISTEW project. This list of target dissemination audience/groups will be revisited and updated at regular intervals throughout the project.

A range of dissemination methods will be utilised to maximise the potential for dissemination these include: National/international conferences, Workshops, Websites, Social media, Press releases, Face-to-face and online meetings, Existing professional contacts, Newsletters/Briefings, Reports and Peer-reviewed publications

As the project reached the end of year 1, a three-day event took place in Slovenia in July 2014. Representatives of all partner countries/organisations attended, permitting face-to-face communication amongst all partners for the first time since project commencement. This facilitated dissemination through the methods above of much of the early work from the ISTEW project.

As the project nears completion, a final project conference will take place in Alicante, Spain in September 2015. This conference will extend existing professional networks with a more direct focus on project sustainability. Healthcare practitioners, educators, Ministry of Health personnel and senior members of professional organisations from across Europe and beyond with an interest in education, patient safety and improvement science will be invited to attend. This conference will therefore not only communicate and disseminate the project findings across the 2 year period of the project, but will also move towards the exploitation of the project in securing wider international attention and exploring the relevance and applicability of the ISTEW project outcomes worldwide.

### **Work package 12: Exploitation**

This work package aimed to provide highly exploitable project outputs, to identify relevant target groups to maximise exploitation impact and to outline a strategy from which project outcomes can be developed beyond the project partner countries.

#### **Aims of Exploitation**

The ISTEW project will plan for the exploitation and sustainability of the project in order to ensure the project has a high impact and is value for money. Specifically, we will aim to achieve the following:

1. To design and deliver academic modules to a high standard, informed by the research activity taking place under each of the work packages.
2. To design four modules in six languages (English, Slovenian, Polish, Spanish, Romanian and Italian) and make these freely available to the educational community for use across Europe.
3. To validate the modules within each partner institutions academic programmes.
4. To incorporate the modules into the standard institutional marketing activity (to recruit students) and quality assurance processes (to prepare staff and ensure materials are update on a regular basis.
5. To identify additional languages that the modules can be translated into to ensure wider use of materials within and across the European community and beyond (for example French and German).
6. For all the partner countries to deliver the module by a variety of mediums including distance/eLearning, so that students and staff from a wide geographical area will have the opportunity to benefit from the module materials and the accredited programmes developed by the project team.
7. To seek endorsement for the academic modules from professional organisations and policy makers in partner countries to add credibility and contribute to the sustainability of the project.
8. To encourage staff and student exchange with a view to promoting partnership between organisations with an interest in the education and training of health professional in Europe, to encourage future collaboration.

9. To promote the module materials at national and international conferences (in at least six different languages), on health organisations websites and via follow-up meetings with contacts made at conferences, formal and informal meetings.

### **Exploitation Audience/Groups**

The project is targeted at three key groups:

1. Healthcare educators
2. Pre and post-registration healthcare professionals
3. Professional medical/nursing and professions allied to health associations and ministries of health/policy makers

### **Methods of exploitation**

- Our initial focus for exploitation will be to make the validated modules available in six different languages (English, Spanish, Slovenian, Polish, Romanian and Italian) for the educational community to use across Europe.
- The modules will be incorporated into the standard institutional marketing activity to recruit students.
- Partner countries will deliver the modules through a variety of mediums including face to face and distance/eLearning to ensure that students and staff from a wide geographical area will have the opportunity to benefit from the module materials and the accredited programmes developed by the project team.
- The project team will seek endorsement for the academic modules from professional organisations and policy makers in partner countries, and add credibility and contribute to the sustainability of the project.
- Opportunities for staff and student exchange will be maximised with a view to promoting partnership between organisations with an interest in the education and training of health professional in Europe, to encourage future collaboration.
- Module material will be promoted at national and international conferences (in at least six different languages), on health organisations websites and via follow-up meetings with contacts made at conferences, formal and informal meetings.

As the project nears completion, a final project conference will take place in Alicante, Spain in September 2015. This conference will extend existing professional networks with a more direct focus on project sustainability. Healthcare practitioners, educators, Ministry of Health personnel and senior members of professional organisations from across Europe and beyond with an interest in education, patient safety and improvement science will be invited to attend. This conference will therefore not only communicate and disseminate the project

findings across the 2 year period of the project, but will also move towards the exploitation of the project in securing wider international attention and exploring the relevance and applicability of the ISTEW project outcomes worldwide. Exploitation will feature strongly in the remaining 12 months of this project.

## **4. Plans for the future**

Phase 1 and phase 2 of the project has been completed. Phase 3 is due to commence at the end of October 2014 and this will involve the development, validation and translation of modules for HIS education within partner countries.

The development of learning materials to educate multidisciplinary healthcare professionals will be based on the findings of workpackages/deliverables that have very recently been achieved. The identified gaps will inform the module content and the level at which modules will be delivered taking account of the local educational context of each partner country. Partners will work hard to develop 4 distinct modules that meet the current gaps in HIS education for healthcare professionals and these will be highly sustainable project outcomes. These modules will be translated in the main languages in partner countries (Spanish, Polish, Slovenian, Italian and Romanian). It is aimed to promote and advertise these modules utilising existing contacts/networks i) to a wider audience within partner countries to institutions not involved in the original ISTEW project, ii) to a wider audience outwith Europe with the opportunity for further module translation into relevant languages including German, French etc.

The evaluation framework will also feature in the next phase of this project, with the further development of an evaluation framework that will provide a template to evaluate the impact of HIS education within and across partner countries.

With a plethora of findings and a greater understanding of HIS, partners will continue to develop papers for international publication as outlined in the dissemination and exploitation strategies. This will involve the development of work package final reports into publishable papers for peer review.

## 5. Partnerships

UWS (Project Managers) are working in partnership with a range of European institutions. There are 7 full partners across 6 European countries outlined below:

University of the West of Scotland, Institute of Care and Practice Improvement

Professor Kevin Rooney, [kevin.roonery@uws.ac.uk](mailto:kevin.roonery@uws.ac.uk)

Coventry University, Faculty of Health and Life Sciences

Alan Taylor, [aa7831@coventry.ac.uk](mailto:aa7831@coventry.ac.uk)

University of Economics and Innovation in Lublin, Poland

Zbigniew Orzel, [zbignieworzel@poczta.onet.pl](mailto:zbignieworzel@poczta.onet.pl)

Faculty of Healthcare, Jesenice, Slovenia

Dr. Brigita Skela Savič, [bskelasavic@vszn-je.si](mailto:bskelasavic@vszn-je.si)

University of Medicine and Pharmacy 'Gr.T.Popa' IASI

Traian Mihaescu, [traian@mihaescu.eu](mailto:traian@mihaescu.eu)

University of Alicante, Faculty of Health Sciences

Jose Ramon Martinez Riera, [jr.martinez@ua.es](mailto:jr.martinez@ua.es)

Sapienza University of Rome, Department of Public Health and Infectious Disease Nursing Research Unit

Julita Sansoni, [julita.sansoni@uniroma1.it](mailto:julita.sansoni@uniroma1.it)

In addition, the ISTEW project also has a number of associate partners. Details are outlined below:

University Clinic of Respiratory and Allergic Diseases, Slovenia

Association of Community Nursing, Spain

Professional Association of Nurses, Spain

Healthcare Improvement Scotland, Scotland

NHS Midlands and East West Midlands Strategic Health Authority, England

Bridge Mental Health Trust, England

Kingsley Organisation, England

## **6. Contribution to EU policies**

In line with the ERASMUS Multilateral projects action this project specifically addresses priority 2: Improving the quality and relevance of higher education, including thorough cooperation between HEI's and the labour market. It also covers aspects of Priority 1: increasing attainment levels and the social dimension of higher education, Priority 2: Strengthening the quality through mobility and cross border cooperation, Priority 4: knowledge alliances and Priority 5: improving governance and funding.

This project will specifically contribute to Priority 2 in the following ways:

- i) Reach consensus on a definition of Healthcare Improvement Science.
- ii) Review the competency and capability specifications that will underpin the core learning and development of HIS education for multidisciplinary healthcare professionals in Europe.
- iii) Review the education and training of HIS in healthcare to allow for the identification of gaps in the training and education of multidisciplinary healthcare professionals in Europe.
- iv) Develop an evaluation framework with a Minimum Data Set that will assess the contribution this education makes to the HIS practice of multidisciplinary healthcare professionals in Europe.
- v) Develop training and module materials that will allow for HIS education to be delivered at undergraduate and postgraduate levels in partner countries (and other interested countries/partner organisations).

Partners involved in the ISTEW project, whether as full or associated partners have considerable awareness and interest in Education for multidisciplinary healthcare professional and Healthcare improvement Science in their respective countries. Although there is an abundance of knowledge and expertise there is however variation between countries in approach and duration of education of HIS. Moreover healthcare improvement has followed a top down approach from leadership and management. Partners in this project acknowledge the benefits of core competencies being internationally agreed, allowing future work to build on progress already achieved. Also acknowledged is the need to have professionals at every level of the organisation with the knowledge, skills, techniques and abilities required to practice Healthcare Improvement Science. This means putting HIS at the heart of the curricula for healthcare professionals in training. The development of shared educational resources and competency framework will enhance the harmonisation of student and lecturer experience and promote cooperation in quality assurance across Europe. This project will enable educators of multidisciplinary healthcare professionals to develop improvement capability within their own workforce by engaging with pre and post registration healthcare students during their professional education.

