Action Plan to create conditions for the adoption of integrated care in Olomouc Region – Improvement of eHealth services

Background: The objective of the Action Plan is to reflect on the possibility to transfer and adopt the learning about the adoption of eHealth services in Norrbotten Region in Sweden to local settings in Olomouc Region in Czech Republic, including the feasibility of the transfer and recommendations on policy priority actions that would enable the creation of local conditions for the adoption of integrated care.

The Action Plan builds on the outcomes of the study visit organised in Norrbotten Region on 12-14 September 2018. The study visit was an opportunity to learn about the eHealth services dimension and discuss a potential transferability of learning by comparing and contrasting the maturity of the healthcare system in Norrbotten Region with the maturity of local health and social care system in Olomouc Region. This process was facilitated by SCIROCCO self-assessment tool which provided the basis for the twinning and coaching activities.

The Action Plan are co-designed jointly by Norrbotten as the transferring region and Olomouc as receiving region as follows:

- Section 1: Needs of the adopting region – **Receiving region**

- Section 2: Description of the integrated care solution – **Transferring region**

- Section 3: Maturity requirements of the integrated care solution – **Transferring region**

- Section 4: Benefits and opportunities of integrated care solution – **Receiving region**

- Section 5: Conditions for the adoption of integrated care solution – **Receiving region**

- Section 6: Adaptation of local environment to enable transferability of learning – **Receiving region**

- Section 7: Priority actions to enable conditions for the transferability of learning - **Receiving region**

1.   *Needs of the receiving region – Olomouc Region*

The healthcare system in the Czech Republic is derived from Bismarckian model and is based on universal health insurance. The healthcare system is medically driven and focuses on institutional care. The system has been achieving some acceptable results but similarly as in other European countries, sustainability becomes a challenge and there is a need for a change in the way the care is currently delivered. There are three key stakeholders in the healthcare system: government, insurance companies and healthcare providers. However, the activities of these stakeholders are not coordinated and aligned to one particular strategy addressing the challenges of ageing population which often cause fragmentation. In addition, most of the proposed changes are politically sensitive and there is a lack of political willingness to address them. The healthcare system is also underfinanced which results in the lack of healthcare professionals. The role of ICT as an enabler of service redesign is not well recognised and digital healthcare services are not developed. Some progress has been made though for example by preparing a new Electronic Health Act, concept of sharing of health data and eHealth strategy (2016). The objective of these initiatives is to increase the interest and involvement of citizens in the digital agenda and raise their awareness about the benefits of technology enabled solutions in the area such as prevention or management of chronic diseases. However, the need for change becomes apparent in the form of poorer quality and accessibility of healthcare services.

Given a strong healthcare coordination role of regions in Sweden, there is an opportunity to learn about the effective use of ICT and eHealth services as an integral part of healthcare delivery and discuss the potential improvement of these services in Olomouc Region and wider Czech Republic. The major issue for the Olomouc Region is to recognise the widespread of eHealth services as a routine part of the healthcare delivery and patient journey. The key difference remains the position and recognition of eHealth agenda (digital first concept) in Norrbotten Region compared to Olomouc Region and wider Czech Republic where the progress in this area has been made mostly on the voluntary basis of involved stakeholders. Most of the care pathways are still managed on the basis of paper exchange or verbal updates of patients and healthcare professionals and there is no ICT infrastructure to allow electronic exchange of data, including access to electronic health records. In addition, legislation is lacking to support a wider implementation of eHealth services in the Region.

2.   *Dimension of integrated care that addresses the needs of Olomouc region*

2.1   *Transferring region*: **eHealth services in Norrbotten Region**

National ICT solutions to increase patients´ access to their medical records have been developed and implemented in Norrbotten Region on a large scale. There are also national ICT solutions to support patients´ participation in the management of their own care but not fully implemented yet. A share of patient related information between different care providers is facilitated at the regional level. Norrbotten Region has also very well progressed with building the ICT solutions on existing platforms and infrastructure and has thus created new services to empower patients and ensure their ability to participate in the decision-making on their care as well as supporting self-care. However, scalability of these solutions still remains the issues.

Transferring region: Current progress in the implementation of eHealth services in Norrbotten

Challenges/problems addressed by eHealth services:

Introduction of ICT solutions, including eHealth services is the key to delivering a new model of healthcare that meets the challenges and expectations of the modern society. It is widely recognised in Norrbotten Region that lack of digitalisation in the healthcare delivery is no longer an option for the sustainability of health and social care system due to the ageing population and increased number of people with chronic conditions. When properly designed and applied as routine care, ICT solutions and eHealth services can transform patient care in the Region. As such, implementation of eHealth solutions helps to deliver patient care while simultaneously improving quality and efficiency, releasing savings and demands through increased productivity.

Key innovative elements of implementing eHealth services in Norrbotten Region:

A need to introduction technology enabled solutions is widely recognised among all stakeholders involved. There is a clear plan and strategy in place to support widespread implementation of eHealth services. Patients are widely supported and encouraged to manage their own care and participate actively in the decision-making process through the access to electronic health records and relevant health information.

Impact/outcomes observed

VAS – In house developed electronic health system is widely implemented and scaled-up. There is one system in place used by all departments in the region. Digitalisation in Norrbotten Region is embedded as part of routine care and routine ways of working. "Digital first" agenda is well recognised and applied in the practice.

3. *Maturity of Norrbotten Region's healthcare system for integrated care*

Transferring region: Maturity of Norbotten Region's health and social and care system, highlighting an eHealth dimension of integrated care, is captured in the spider diagram below and detailed justification is provided in the following Table:

Figure 1: Maturity of Norbotten Region's healthcare system

Dimension	Score	Description	Justification & Reflections
Readiness to Change	3	Vision or plan embedded in policy; leaders and champions emerging	Models for managing change are established. From a political point of view there is an acknowledgement of the unsustainability of current healthcare system to address the need to change have been adopted to some extent. Also, on an operational level several initiatives have been implemented and are running.
Structure& Governance	3	Governance established at regional or national level.	A national strategy for eHealth is developed and implemented in addition to Regional Development Strategy and Regional Innovation Strategy. There is a need for the municipalities to reach the same level of progress to use eHealth services as at the regional level. There is a structure in place to facilitate collaboration between the region and municipalities to overcome organizational boundaries. A clear roadmap and specific mandates of different stakeholders involved needs to be defined are to ensure successful implementation of eHealth services.
eHealth Services	3	eHealth services to support integrated care are piloted but there is no yet region wide coverage.	National innovative ICT solutions to increase patients´ access to their medical records have been developed and implemented in Region Norrbotten. Regional ICT solutions to share patient related information between different care providers have been developed and implemented. The Region has also very well progressed with building on existing platforms and infrastructure and creating new services to empower patients and ensure their ability to participate in the decision-making on their care as well as supporting self-care. However, scalability of these solutions remains the issue.
Standardisation & Simplification	3	A recommended set of agreed technical standards at regional/national level; some shared procurements of new systems at regional/national level; some large-scale consolidations of ICT underway	A recommended set of agreed information standards at regional/national level exist at the regional level which support the development and implementation of a common system to exchange patient related data between the region and municipalities.
Funding	2	Consolidated innovation funding available through competitions/grants for individual care providers and small-scale implementation.	External funding is most often limited to pilot eHealth projects rather than up-scaling. Internally, within the organisation, the budget is set for a year. Sometimes there is an opportunity to receive funding for early phases of the projects externally and internally but mostly for testing and piloting of the services.
Removal of inhibitors	1	Awareness of inhibitors but no systematic approach to their management is in place.	There is no specific model or existing project in Norrbotten with a clear mandate to remove inhibitors; there are different models used with different results.

Dimension	Score	Description	Justification & Reflections
Population Approach	2	Risk stratification approach is used in certain projects on an experimental basis.	Models for identifying the patients at risks and standardised care plans are implemented for some categories of patients.
Citizen Empowerment	4	Incentives and tools exist to motivate and support citizens to co-create healthcare services and use these services to participate in decision-making process about their own health.	Incentives and tools that motivate and support citizens to co-create healthcare services and use these services to participate in decision-making process about their own health are in place. Citizens do have access to health information and health data.
Evaluation Methods	1	Evaluation of integrated care services is planned to take place and be established as part of a systematic approach.	No common evaluation model or innovation management is used in Region Norrbotten. There are some evaluations methods applied, but not as a part of a systematic approach.
Breadth of Ambition	4	Integration includes both social care service and health care service needs.	There are fully integrated health and social care services with collaboration established on all three levels of care but the integration of care services can still improve.
Innovation Management	2	Innovations are captured and there are some mechanisms in place to encourage knowledge transfer.	Innovation is encouraged but there is no overall plan to formalise innovation processes. Procurement remains a challenge.
Capacity Building	2	Cooperation on capacity-building for integrated care is growing across region.	There is still at the point where we need better support for creating a learning organisation and supporting "change managers" continuously.

4.   Benefits and opportunities of improving eHealth services in Olomouc Region

A number of opportunities for improvement of eHealth services in Olomouc Region and the Czech Republic were identified at both strategic and implementation level.

Electronic exchange of health information between a variety of healthcare providers is an inherent part of implementation of eHealth services in Norrbotten Region as well as across Sweden. As the implementation of this concept in Olomouc Region does not progress sufficiently, compared to other EU countries, further efforts will need to be made around the promotion of benefits of using eHealth services as part of the routine operation of all healthcare providers. As a result, both the healthcare system as well as patients will benefit from this opportunity in terms of accessing the accurate health data in the right time and right place.

The study visit to Norrbotten Region inspired the visiting clinicians which suggested to promote and inherit this concept of data exchange in order to improve current workflow. This new concept should be tested in Moravia in Olomouc Region for the patients with advanced heart failure. In addition, the University Hospital in Olomouc Region is planning to upgrade its ICT system and introduce a concept of data exchange. Outcomes of the twinning activities with Norrbotten Region will directly inform these developments.

5.   Conditions for the improvement of eHealth services in Olomouc Region

5.1   Maturity of local health and social care system in Olomouc Region

Receiving region: Maturity of health and social care system in Olomouc Region, highlighting the strengths and weaknesses of the local system is captured in the spider diagram below:

Figure 2: Maturity of healthcare system in Olomouc Region

5.2 Conditions enabling the improvement of eHealth services in Olomouc Region

Receiving region: Maturity of healthcare system in Olomouc and Norrbotten Region is captured in the spider diagram below:
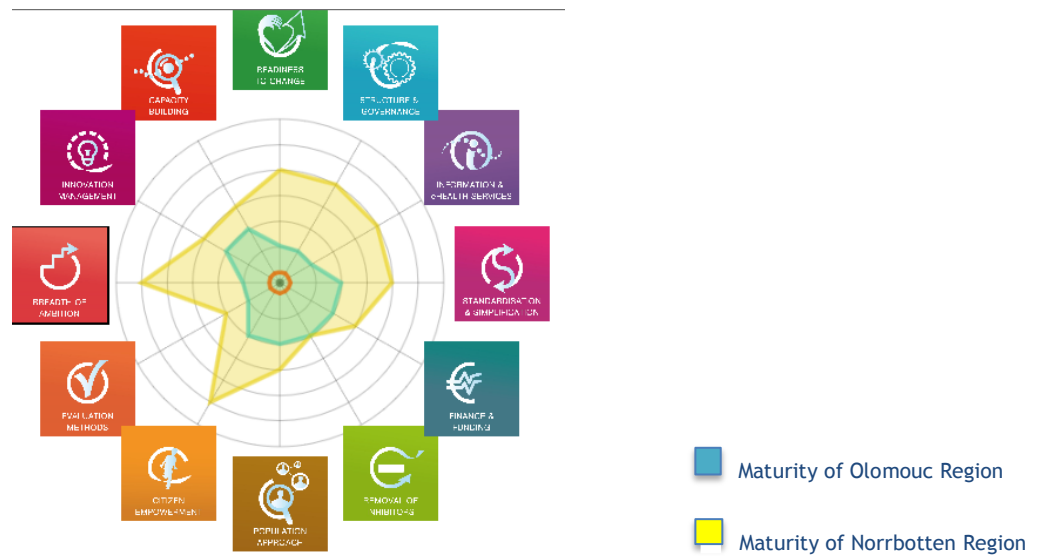

Figure 3: Comparison of maturity of Olomouc's healthcare system and maturity of healthcare system in Norrbotten Region

5.3 Feasibility of transferring the learning about eHealth services in Norrbotten Region to local context in Olomouc Region

Dimension	Score Norrbotten	Feature(s) of Norrbotten healthcare system	Score Olomouc	Feature(s) of Olomouc healthcare system	Feasibility of the transfer and rationale
Readiness to Change	3	Several innovational projects are running but there is a lack of collaboration and learning between the projects which often result in the different levels of existing knowledge and performance of innovation management in the region. Models for managing change are established. From a political point of view there is an acknowledgement of the unsustainability of current healthcare system to address the need to change.	1	There is a leadership in place, however, the concept of integrated care is not reflected in legislation, hence the vision of policy makers is lacking as well.	Yes; the transferability of is feasible with lot of efforts. This is a very complex feature to be introduced as there has been lack of political willingness to address the need for eHealth services for long time. However, awareness raising activities may active a change and the need for change has already been recognised by many experts and managers actively participating in health and social care. New eHealth strategy was developed and is going to be implemented in the next three years.
Structure & Governance	3	A clear roadmap and specific mandates are needed to ensure implementation of innovation management.	0	Roadmap for change programme is missing hence it is difficult to create a shared vision and organisational structure for integrated care; the structure is fragmented. Some rare integrated care initiatives are active at the level of municipalities but there is no national/regional structure in place.	Yes; the transferability is feasible with lot of efforts. The first step to be introduced can be around the awareness raising about the need and benefits of eHealth services, similarly as in case of Domain 1. Developing the roadmap for change is a part of the project mentioned above.
eHealth Services	3	Innovative ICT solutions to increase patients´ access to their medical records have been implemented. Regional ICT solutions to share patient related information between different care providers have been implemented. The Region has also very well progressed with building on existing platforms and infrastructure and creating new services to empower patients and ensure their ability to participate in the decision-making as well as supporting self-care. However, scalability remains the issue.	0	There is a national eHealth strategy approved (in November 2016) and gradually being implemented, however electronic health records are not available. As such, electronic sharing of health information across the care providers is a challenge and not really happening between health providers of diverse ownerships be they general practitioners, hospitals, clinics or other providers.	Yes; the transferability is feasible with lot of efforts. ICT infrastructure to allow data exchange is part of new eHealth strategy but its implementation is weak. Sharing of health data with social care is not planned. The ICT platforms are not yet designed or projected. Patient's empowerment focuses mainly on access to electronic health records.

Dimension	Score Norrbotten	Feature(s) of Norrbotten healthcare system	Score Olomouc	Feature(s) of Olomouc healthcare system	Feasibility of the transfer and rationale
Standardisation & Simplification	3	There is a lack of common standards between the healthcare providers at local and regional level and often even among the providers at the same level.	1	There is some initial work around the standards; the need for standards is recognised.	Yes; the transferability is feasible with lot of efforts. Effective health data sharing is recognised as a strong element supporting integration; national standards will then have to be agreed as part of new eHealth Strategy.
Funding	2	External funding is most often limited to pilot innovation projects rather than up-scaling. Internally, the budget is set for a year. Sometimes there is an opportunity to receive funding for early phases of the projects externally and internally but mostly for testing and piloting of the services.	1	Lack of funding is the biggest barrier to implement any changes in the care models; sustainability remains an issue. Regardless of the funding some innovation is still happening at small scale.	Yes; the transferability is feasible with lot of efforts. Considering lack of coordination of key stakeholders of Czech national healthcare system and political sensitivity of eHealth agenda it is very difficult to commit the right budget and investments in this area/
Removal of inhibitors	1	There is no specific model or existing project in Norrbotten with a clear mandate to remove inhibitors.	1	Culture plays a major role here; it is very difficult to change the day-to-day routine of healthcare professionals.	Yes; the transferability is feasible with lot of efforts. Payment scheme does not well motivate the removal of inhibitors.
Population Approach	2	Models to identify patients at risks are applied in Norrbotten and standardised care plans are implemented for some categories of patients. Both the population health unit as well as care divisions in the Region continuously perform certain risk analysis, followed by statistics and particular types of actions.	1	There are very limited risk stratification initiatives in place.	Yes; the transferability is feasible with some efforts. There is a considerable progress made with the development of Czech Central Health Statistic Institution with the objective to provide better, more accurate data to be used for the business intelligence. The date become available and they can be used also for risk stratification.
Citizen Empowerment	4	Citizens do have access to health information and health data through "Health care in numbers and open comparisons', but this solution is not used systematically for decision-making. Not all data is made available yet.	0	Citizen empowerment is recognised in national strategy Health 2020 but its implementation remains a challenge. Healthcare by law still focuses on care and not on support of citizens in improving their health. There is a lack of capacity to support citizen empowerment initiatives.	Yes; the transferability is feasible with some efforts. There is some work under the preparation at the University Hospital Olomouc (UHO) around the development of ICT tools to support citizen empowerment. Some elements supporting patient empowerment, especially for better information about the health status and communication with care providers are subjects of

Dimension	Score Norrbotten	Feature(s) of Norrbotten healthcare system	Score Olomouc	Feature(s) of Olomouc healthcare system	Feasibility of the transfer and rationale
					several initiatives in wider Czech Republic.
Evaluation Methods	1	No common evaluation model or innovation management is used in Region Norrbotten. There are some evaluations methods applied, but not as a part of a systematic approach.	0	There is no systematic evaluation in place; the health insurances pay usually for the cheapest or otherwise justified services. Olomouc already uses MAST (a model derived from HTA) for internal purposes of UHO – usually projects.	Yes; the transferability is feasible with some efforts. Some evaluation tools are already at the place; broad spectrum of data is collected and processed by central institution. but the introduction of systematic evaluation would require further efforts at national level.
Breadth of Ambition	4	There are fully integrated health and care services but the collaboration and services between different health and social care providers can still improve.	1	There is some level of interactions/coordination of care at the level of hospitals.	Yes; the transferability is feasible with lot of efforts. A new reform of primary care has been developed at the Ministry of Health and it is expected that it will include some important elements enabling coordination of care, particularly of chronically ill patients.
Innovation Management	2	Innovation is encouraged but there is no overall plan to formalise innovation processes. Procurement remains a challenge.	1	Municipality in Olomouc Region widely recognised the need and benefits of innovation. However, the implementation of concrete actions is very difficult.	Yes; the transferability is feasible with lot of efforts. Problems of the current healthcare system regarding the care of chronically ill are mapped by acting experts and politicians but many relevant amendments addressing the need for change and innovations in the current care models are politically sensitive and require broader consensus in the whole society.
Capacity Building	2	There is still at the point where we need better support for creating a learning organisation and supporting "change managers" continuously.	1	Training of healthcare professionals is on-going; the training on integrated care is already included in the curricula at the Universities, particularly Palacky University Olomouc.	Yes; the transferability is feasible with some efforts. There is training of healthcare professionals in place, even though some Curricula should be upgrade. There is a lot of ad hoc education at the pilot phase which should be expanded to continuous learning and training.

5.4   Priority areas for the transferability of learning

Receiving region: List of the prioritised features to be considered for the transferability of learning in order to improve eHealth services in Olomouc Region is outlined in the Table below:

List of the prioritised features of Olomouc's healthcare system for improvement of eHealth services
eHealth services
• Implementation of national ICT solutions to increase the patients´ access to their medical records
• Implementation of regional ICT solutions to share patient related information between different health and social care providers
• Existence of platforms, infrastructure and services to empower patients to participate in the decision-making on their care as well as supporting self-care

6.   Adaptation of local environment to enable transferability of learning

Receiving region: List of suggested changes to enable the creation of conditions for the improvement of eHealth services in Olomouc Region, informed by the learning about the features of Norrbotten's healthcare system is outlined in the Table below:

Features of the Norrbotten's healthcare system	Adaptation of features to Olomouc' local context
eHealth services • Implementation of national ICT solutions to increase the patients´ access to their medical records • Implementation of regional ICT solutions to share patient related information between different health and social care providers • Existence of platforms, infrastructure and services to empower patients to participate in the decision-making on their care as well as supporting self-care	• Raise awareness and promote the benefits of eHealth services in order to speed up the implementation of new national eHealth strategy. • Develop mechanisms to reduce the complexity of introducing the concept of eHealth services. The ICT solutions to allow information sharing between various healthcare providers are expected to be soon developed, however, their implementation requires a complex change and is part of two crucial reforms: a) primary care reform which is currently under preparation and; b) introduction of integrated care concept as part of the Structural Reform Support Programme (SRSS) 2017-2020. • Develop mechanisms to improve the communication and collaboration of key stakeholders by creating a joint committee between Ministry of Labour and Social Affairs and the Ministry of Health in order to better coordinate implementation of ICT solutions and raise awareness about the need to extend the sharing of health data to social care providers. This is currently not envisaged in eHealth strategy. • Develop mechanisms to enhance citizens empowerment and proactive approach of citizens to manage their own health and self-care. Currently, the system is very reactive, and citizens have a freedom of choice only in terms of choosing their specialists, GPs or hospital. Changes in the reimbursement system and payment schemes can be seen as one of the incentives.

7.   Priority actions to enable conditions for the transferability of learning

Receiving region: List of the proposed actions to enable conditions for improvement of eHealth services in Olomouc Region, including objectives, anticipated outcomes and policy implications is outlined in the Table below:

Priority Action	Objective of the Action	Anticipated outcomes	Policy implications, including the responsible actor and anticipated duration
Improved awareness and recognition of the need for eHealth services	The objective of this action is to increase awareness of the key stakeholders of the benefits of eHealth services in order to speed up the adoption of new eHealth strategy.	Improved implementation of eHealth strategy and better strategic positioning of eHealth agenda as part of the on-going reforms, e.g. in the area of primary care or integrated care.	Positioning of eHealth agenda in Olomouc Region and wider Czech Republic is a very complex and long process. The main issue remains political sensitiveness of this agenda which strongly affects the allocation of budget and planned investments in this area. In addition, the coordination and clear definition of responsibilities of various stakeholders involved in the implementation process need to be addressed in order to manage this change effectively. This in particular involves the collaboration of four key stakeholders: Ministry of Health, insurance companies, healthcare providers and medical societies.

However, the introduction of new eHealth strategy in 2016 as a legal framework for the implementation of ICT solutions may help to address this issue. The University Hospital Olomouc plays a very active role in contributing to the implementation of strategy and is one of the key players that can help to implement the priority actions defined in this plan. |
| Position the role of the University Hospital Olomouc (UHO) | The objective of this action is to raise the profile of the UHO in developing ICT infrastructure for information sharing. | Availability of ICT infrastructure to allow information sharing between healthcare providers. | |
| Inform about new technology enabled care services | The objective of this action is to raise awareness about new technology enabled care services and their benefits, e.g. video-conferencing system. | Establishment of sustainable videoconferencing infrastructure and network for cardiologists in Moravia in Olomouc Region; four hospitals were selected for the initial testing. | |

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