MasterMind

Deliverable D3.6

Deployment Plan

PROJECT ACRONYM:	MasterMind
CONTRACT NUMBER:	621000
DISSEMINATION LEVEL:	Public
NATURE OF DOCUMENT:	Report

TITLE OF DOCUMENT:	D3.6 MasterMind Deployment plan
REFERENCE NUMBER:	D3.6
WORKPACKAGE CONTRIBUTING TO THE DOCUMENT:	WP3
VERSION:	V1.0
EXPECTED DELIVERY DATE:	31/01/2017
DATE:	25/01/2017
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MasterMind Deployment Plan: Deployment Plan for moving from the large scale pilot stage to the routine use of the patient-centred, sustainable mental health telemedicine services that have been trialled (month 35)

REVISION HISTORY			
REVISION	DATE	COMMENTS	AUTHOR
V0.1	01/09/2016	Table of content	Line Thomsen, RSD
V0.2	03/10/2016	Input from partners inserted	Mette Atipei Craggs, RSD
V0.3	01/11/2016	Summaries of deployment plans described	Claus Duedal Pedersen, RSD Mette Atipei Craggs, RSD
V0.4	22/11/2016	Conclusions described	Claus Duedal Pedersen, RSD Mette Atipei Craggs, RSD
V0.5	06/12/2016	Version for feedback from partners	Mette Atipei Craggs, RSD
V0.6	16/01/2017	Feedback from Quality Manager	John Oates, HIM SA
V0.7	24/01/2017	Additional text for figures	Mette Atipei Craggs, RSD
V1.0	25/01/2017	Version for issue	John Oates, HIM SA

Outstanding Issues: None.

Filename: MasterMind D3.6 v1.0 Deployment plan

Statement of originality:

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

EXECUTIVE SUMMARY

For many of the partners, MasterMind has been their first big initiative in eMental health, and a stepping stone to not only cCBT and/or ccVC for depression, but also other clinical areas and applications of eMental health. For this reason, MasterMind has made a difference to the partners' ability and possibility to implement eMental health services at scale.

This report provides the plans for further deployment at individual partner level, as well as summaries at an overall level of six central themes: change management and organisational aspects, policy, technical aspects, communication, clinical areas, and financial aspects.

In general, the deployment plans show that the project has created movement and expansion in the provision of eMental health services, i.e. towards greater coverage in the population and across geographical areas, additional clinical areas, additional organisation types, and additional technical platforms.

The report presents a number of significant findings, which have an impact both at an EU / general level, and at partner level. These include examples of:

- How reimbursement systems have been adapted or changed to accommodate the new services.

- How the market for the ICT systems is under development towards greater variety and thereby greater competition.

- How communication has been applied as a valuable tool for implementation.

- How important change management processes and organisational aspects are and will be in the further deployment.

In addition, the report gives several examples of how participation in an EU project in general, and a project with a focus on knowledge exchange and implementation processes in particular, has had a significant impact on the implementation of innovative services in a great variety of healthcare systems. This calls for continued collaboration at European or international level in order to support the further deployment foreseen in each of the partner regions.

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1. Introduction

1.1. Purpose of this document

This document uncovers and collects the plans for further deployment of the eMental health services trialled and implemented during the MasterMind project by the individual partners. The deployment plans are structured around six central themes: change management and organisational aspects, policy, technical aspects, communication, clinical areas, and financial aspects.

1.2. Structure of this document

This deliverable consists of three main chapters:

- Chapter 2: Local (regional and national) deployment plans. This chapter provides the deployment plans as developed and described by the individual implementation sites. All sites have provided information about their deployment plans in the following areas: scope for the deployment, change management, policy level, further technical development and integration, communication and dissemination activities, the clinical area, the financial area, and national level (if applicable).

- Chapter 3: Summary of local deployment plans. This chapter provides summaries of the local deployment plans under the different subject areas mentioned above.

- Chapter 4: Conclusion. This final chapter presents the main conclusions drawn from the information gathered and processed in this report.

1.3. Glossary

AHP	Agency for Health and Prevention
ASL	Aziende Sanitarie Locali
bGGZ	Basis geestelijke gezondheidszorg (basic mental healthcare)
cCBT	Computerised Cognitive Behavioural Therapy
ccVC	Video Conference for Collaborative Care and treatment of depression
CM	CognuseManager
DGPPN	German Association for Psychiatry, Psychotherapy and Psychosomatics
DIH	Dronning Ingrids Hospital Nuuk
DSM	Dipartimento di Salute Mentale
GP	General Practitioner
LEA	Livelli Essenziali di Assistenza (Essential Levels of Care)
LMS	Learning Management System
NHS	National Health Service

PC	Personal Computer
PHF	Personal Health Folder (Osakidetza)
RSD	Region of Southern Denmark
RTC	Real Time Communication
sGGZ	Specialistische geestelijke gezondheidszorg (specialised mental healthcare)
TUT	Tallinn University of Technology
QOL	Quality of Life

2. Local (regional and national) deployment plans

This section contains the local (i.e. regional and/or national) deployment plans as described by the individual implementation sites. All sites have been asked to describe the scope for the deployment, change management, the policy level, further technical development and integration, communication and dissemination activities, the clinical area, the financial area, and national level (if applicable).

2.1. Region of Southern Denmark

Pilot context and scope for the scale-up/deployment

The cCBT service for the Region of Southern Denmark (RSD) is implemented in the public mental healthcare services at regional level. As such, its uptake area covers the entire region with a background population of 1.2 m. The service predates MasterMind, and as such is a wave one partner. During MasterMind, the aim has been to upscale the service by increasing awareness and uptake among a multitude of public stakeholders, such as job centres and GPs, as well as patients and patient organisations for the purpose of ensuring patient awareness and use of the service.

The cCBT service has thus been deployed to a large degree during and with the help of the MasterMind project. Many of the initiatives described in this section covering RSD will therefore already be in process or even fully implemented at a regional level. Most of the remaining deployment plans are at national level, and are outlined in the final part of the section.

The ccVC service in RSD started in 2014 in a few areas. In 2015, ccVC was presented as a supplement to the treatment in the region and, in this period, the use of ccVC increased. This implementation is not yet at any sort of large scale, as these are, at the present, pilot tests used in the individual treatment of patients by the outpatient clinics and a few individual teams in selected hospital departments. The implementation of ccVC started before the MasterMind pilot started. The implementation is conducted in different outpatient teams all over RSD. The MasterMind ccVC will support an ongoing implementation strategy in the region. The established knowledge on barriers and facilitators will be included in this strategy.

Change management

The cCBT service is implemented as a centralised unit specifically and exclusively specialising in cCBT. As such, a highly qualified team of clinical psychologists has been trained for cCBT and continues to develop and collect knowledge on best practice. Additionally, by forming a central and specialised team, clinician uptake has not been an issue, given that this is their sole format of treatment.

The clinic has been implemented in a newly established department, Centre for Telepsychiatry, in the Mental Health Services of Southern Denmark. The purpose of the centre is to further the use of technology in psychiatry and psychology. The centre is a multidisciplinary department including different clinical professions as well as administrative, technical, and academic resources. Lately, a research unit has also been added to the Centre. The cCBT service has undergone a change from being a self-contained project to being implemented into the Centre with ties to all other teams. This change has

and still does require close management, motivating all involved to perform a united effort of upscaling, constantly improving quality, developing the clinical practice, ensuring continuous communication, and collaboration with external stakeholders, etc. This unified collective massive effort could give rise to the practice of cCBT becoming so clearly defined and well known that it could be dispersed out into clinics in primary and secondary care. However, looking at the experiences from other European regions and the maturity of cCBT in Denmark, this is presently not considered to be wise.

The implementation of the ccVC service is also part of the aim of Centre for Telepsychiatry in RSD. A special team of professionals has the responsibility for the development and implementation of the ccVC service. The team is presently working on development of clinical guidelines for use of ccVC, new areas of use, education and motivation of the regional staff, as well as technical support.

Plans for the policy level

It was decided politically from the central administration in 2012 that cCBT for depression should be tested and possibly established throughout the country as part of a national action plan for telemedicine. One of the five regions in Denmark was to demonstrate the feasibility; it was decided politically at regional level that the Region of Southern Denmark would take on such a demonstration project. Consequently, the cCBT service was initially funded as a project. Following the conclusion of the initial demonstration project, it was decided to continue the operation of the service on a framework budget until at least 2018 as part of the routine care of the Mental Health Services of Southern Denmark. A possible national roll-out is presently being discussed as a joint operation of all five Danish regions. For elaboration on initiatives at national level, please refer to the final section.

RSD was the first region to give the same reimbursement for video-conducted consultations as for face-to-face consultations. This was established in January 2015. Thus the use of ccVC was highly prioritised during the timescale of the MasterMind pilot. One of the leading groups where MasterMind was conducted decided to give all patients in outpatient clinics the option if they wanted to participate in ccVC if possible.

Plans for further technical development and/or integration

The software for the depression treatment was developed during the initial demonstration project. It consists of an integration of software platform and content as one web application. It delivers six mandatory modules and two optional modules for patients comprising e.g. a/v clips; exercises; homework assignments; pre, post, and weekly monitoring by questionnaires; as well as a text module for therapist support. It is based on cognitive behavioural therapy for depression as described by Aaron T. Beck, Niel S. Jacobsen, and others. Additionally, a clinician side is included for administration of patients, written support, monitoring of patients, etc. The software initially suffered from several technical difficulties, including faulty or no data collection from questionnaires, and stability problems. A new and completely rewritten version of the software was developed and implemented in March 2016.

The Mental Health Services of Southern Denmark have a licence agreement for the program until the summer of 2018. A public procurement process, possibly on a European level, is planned. The specifications for this will build directly on the knowledge and experiences from the cCBT service and the initial programme.

In the summer of 2015, the cCBT service was expanded to also include anxiety disorders. Licences were obtained for the English programme FearFighter, which had previously been

translated and adapted to the Danish language by Aarhus University Hospital. This expands the target group for the service by a different set of diagnoses. Future plans for expansion includes different age groups and different treatment formats (e.g. blended care, in which face-to-face sessions and online modules alternate).

Additionally, two new mobile applications are presently being developed for anxiety disorders and borderline personality disorder.

The technical solution for ccVC is Cisco Jabber. This is a well-known and secure system for ccVC. The patient and the staff have to install the system on a PC or an iPad. The system makes it possible to communicate quickly and safely. There have been some problems when the patients did not have a personal computer supporting the Jabber version. Thus some patients were excluded from the pilot because of this problem. A solution could be to use a totally web based video consultation system. We will discuss the problems experienced with those responsible for implementing ccVC in the region.

Plans for communication and dissemination activities

While working on initial deployment of the cCBT clinic, a communication strategy was followed, in which three waves of communication were carried out over the course of 2014 and 2015. In each wave, multiple communication channels were used, including news media (TV, radio, and newspapers), sending out information materials, direct meetings with stakeholders, and participation in national and international conferences. Stakeholders included the general population, GPs, departments in the Mental Health Services, patient organisations, job centres, and regional level cooperation bodies internally, as well as with the municipalities.

The future communication strategy builds on more direct relations with one stakeholder at a time, by means of meetings, updates, and events. Additionally, research projects attached to the service undertake considerable communication efforts, which are coordinated with the cCBT service, thereby exploiting the synergy effect of multiple communication channels.

Use of ccVC is presently in the early stages of the implementation phase. The Centre of Telepsychiatry works on initiating additional minor pilot studies. The staff and management have the possibility for back up and technical support from the Centre, and from the region's IT support staff.

Plans for the clinical area

The service initially only targeted depression, as was also the aim of the MasterMind project. However, in the summer of 2015, the target group was expanded to also include anxiety patients. As a consequence, the clinic nearly doubled in size and intake. The clinical knowledge gained by experience with the depression treatment was transferred to the anxiety treatment. This was accomplished in several ways. Firstly, clinicians already experienced in depression treatment were included in the group running the anxiety treatments. Additionally, new clinicians were trained by the experienced staff. Finally, all procedures for the anxiety treatments were built on the existing procedures from the depression treatments.

Additional future plans for expansion are being explored. Research is in progress on blended care, which would enable the translation of the knowledge gained in the cCBT service for decentralised use in the other departments of the Mental Health Services. Also, the application of new technologies is being explored, e.g. virtual reality. Additionally, other

age groups are being explored, e.g. video conferencing for the elderly, and virtual reality for eating disorders in adolescents. Finally, it is planned to explore the possibilities of using the same treatment programmes for other time points in the patient flow, such as post treatment care.

As described above, the plans are to widen the use of ccVC in the region. ccVC will be distributed to all possible clinical areas, e.g. anxiety, psychoses, and stress.

Plans for the financial area

Initially, the cCBT service was financed as a project aimed at demonstrating the feasibility of cCBT for depression in Denmark. The financing model has since been changed to a framework budget running until 2018. Until then, a business case will be developed describing the economy of the service. Along with the results of the MasterMind project and an additional analysis of the clinical data, this will form the foundation for further decisions on financing model and possible national roll-out.

The management of the region has decided that ccVC should release the same payment as face-to-face consultations. The aim is to widen the use of ccVC in the diagnosis, monitoring, and treatment of patients in the region.

National level

Towards 2018, analyses on economic, organisational, and clinical effectiveness are being conducted. In parallel, policy processes are in progress preparing for the possible national roll-out of the service. At present, a model in which the cCBT service of Southern Denmark undertakes treatment at national level is being explored. This would mean a five-fold doubling in the size of the clinic, transforming it to a centralised national clinic. Many considerations are involved in such a process, including reimbursement models.

The major challenge in a PhD project made by two geronto-psychiatric teams has been the implementation of the use of ccVC. As an example, staff experienced a large cultural barrier in using ccVC, while the patients are generally satisfied using ccVC as part of the treatment. In general, technical issues have been challenging, and technical support could have been used in the start-up period. In connection with the future implementation, it would be advised to complete more pilot studies before a large-scale implementation. In addition, it may be an advantage to have a few key persons using the system first to identify areas where ccVC is usable. Finally, the use and the aim of the use of ccVC must be established.

Comments

The work conducted demonstrating and upscaling cCBT for depression, and now anxiety, has brought about a considerable knowledge base, which others in Denmark can learn from. Given that this service is run in the public healthcare system, dissemination of knowledge is possible to all other public actors, and to a certain degree also to private ones. As such, the Centre for Telepsychiatry now functions as a resource centre for cCBT in Denmark.

Additionally, the experiences gained around the challenges in the implementation of ccVC will be useful for future projects.

2.2. NHS 24, Scotland

Pilot context and scope for the scale-up/deployment

The cCBT MasterMind services were deployed across four of the 14 territorial Health Boards in Scotland; NHS Grampian, NHS Fife, NHS Lanarkshire, and NHS Shetland. This built on services originally established in NHS Forth Valley and NHS Tayside, which have been offering cCBT as one of their core, mainstreamed psychological therapies since 2005 and 2007. As a combined total, cCBT services cover 44% of the Scottish population.

While the deployment of the services has been local, the project and the implementation has been coordinated at national level through NHS 24, a specialist health board providing telehealth and telecare service across Scotland. NHS 24 hosts the national "implementation team" responsible for ensuring that Scottish objectives for cCBT are met, including the expansion of the MasterMind services to the remaining 56% of the population situated in eight territorial Health Boards. The team contains clinical and implementation expertise specific to cCBT.

Change management

Further deployment of the MasterMind cCBT services has already begun in Scotland, with change management occurring at three distinct organisational levels; at territorial / regional level, across national health structures, and at government level.

The cCBT services are delivered and managed at regional level. In order to establish these services in the remaining eight Scottish Health Boards, there are a number of logistical, strategic, and managerial changes that will need to be implemented. This will include the redesign of clinical pathways to reflect the new cCBT service, the development of the service infrastructure, administration and referral pathways, the integration of cCBT into local mental health strategies and local delivery plans, the training of key staff, and the process of marketing/disseminating the service to key referrer groups, such as GPs.

At a national healthcare level, the main changes include the incorporation of cCBT services into national strategies, performance targets, and national reporting mechanisms. This will include the incorporation of cCBT into national targets such as the 18 Week Referral to Treatment target for psychological therapies, or the government usage target for the increased use of telehealth or telecare solutions. These are currently imposed across territorial and specialist health boards by the Scottish Government.

At Government levels, one of the key changes being managed is the inclusion of cCBT into national strategies and national bodies of work. This includes the incorporation of cCBT into the national Mental Health Strategy, and the inclusion of cCBT implementation into the Technology Enabled Care Programme, a Scottish Government programme which is currently responsible for funding and monitoring the cCBT expansion work being carried out in Scotland.

Plans for the policy level

The decision has been made by Scottish Government to stabilise the existing MasterMind services and expand the coverage of cCBT into the remaining eight Health Boards providing full geographical and population coverage. Based on the success of MasterMind, the decision was made to fund the expansion through a specific programme of work called the Technological Enables Care Programme (TEC). This programme is government led and aims

to upscale and embed existing technological services that have been proven effective in either supporting the care of patients or treating prevalent conditions such as depression.

This funding stream will be available until 2018, at which point the expectation is that the costs of the services will be mainstreamed at local and national levels. cCBT has been integrated into the Scottish Government Mental Health Strategy, a 10 year strategy with cCBT playing a key role in one of its primary objectives: increasing patient access to evidence based psychological therapies.

Plans for further technical development and/or integration

At this point, there are no further plans to develop or integrate the platform. Within the Scottish context, the cCBT product called "Beating the Blues" is used across all sites. The platform works as a stand-alone treatment, and is not integrated into the healthcare ICT systems. The contractual arrangements are to be evaluated during 2017, and a decision is to be taken as to the future use of the current platform with the potential to change to a cCBT product that better fits our requirements.

Plans for communication and dissemination activities

Dissemination activities will take place on several levels in order to foster the deployment of cCBT across the remaining regions of Scotland. At government level, work will continue to communicate the success of the MasterMind project and the needs of cCBT in relation to local service demand and its role in achieving strategic government aims. During the deployment process, the Scottish Government will receive continual updates on the progress in relation to agreed targets.

To ensure the longer term commitment and funding for cCBT, work will be carried out to communicate and disseminate MasterMind to the highest levels within NHS Scotland and the territorial Health Boards. This will include, not limited to, the Chief Executives Group, Finance Directors Group, and many of the national clinical forums for key referring groups. These groups will have the influence to ensure that cCBT is maintained and developed beyond the lifecycle of the current funding.

At a territorial level, dissemination will occur across a range of clinical groups working at varying levels within local regional Health Boards. The purpose of this activity will be to ensure engagement firstly in the service development phase, and secondly to increase the use and impact of the local services. Dissemination will be coordinated at a local level, and will initially target managerial levels both clinically and operationally, and eventually progress to GP practices, clinical psychology, and mental health teams, and finally to the general public.

Plans for the clinical area

During the course of MasterMind, funding has been secured to enable the rollout of cCBT across the remaining sites in Scotland. During this deployment, it is planned to evaluate the use of cCBT in a number of additional clinical areas. Initially the referral guidelines will be expanded to include anxiety-related disorders as well as depression. In addition, the use of cCBT in other clinical settings will be explored beyond its use in primary care. This may include its use with long-term conditions, such as diabetes, or the use of cCBT in prisons.

Plans for the financial area

Finance of cCBT services in Scotland will be divided into two distinct funding streams:

- The first, from within the Scottish Government, will be used to secure a national cCBT software licence that can be used across NHS Scotland and its territorial Health Boards. This funding will also cover any additional costs at national level, such as the national implementation team responsible for ensuring that Scottish objectives for cCBT are met.

- The second stream covers all logistical and infrastructure costs at local level, and is the responsibility of each individual territorial Health Board running the service. These costs will include all administration and daily running costs, with the amount of funding required related directly to scale of service use within each of the regional areas.

Healthcare through the NHS in Scotland is free to all citizens; therefore there is no reimbursement model.

National level

The process of securing funding and support for an expanded deployment of cCBT in Scotland started early in the MasterMind project. Dissemination work has been continuous through a number of channels to ensure that the key decision makers have been kept informed of the progress and success of the MasterMind project. It was important to achieve more than the original specification of the project in Scotland. The project needed to be perceived as a genuine success going beyond its initial expectations. For this purpose, the implementation process needed to be efficient and at a scale that would indicate the potential impact which cCBT services could have in direct relation to key strategic aims.

Comments

It is important to have a clear strategy that engages a range of stakeholders from senior clinicians to service managers and policy makers. Developing the understanding of what the service can achieve in the context of national strategies and local objectives / demands has been important to ensure that there is an overall consensus and agreement that the deployment of a solution such as cCBT will be the appropriate and most beneficial course of action rather than other potential options.

2.3. Powys Teaching Health Board, Wales

Pilot context and scope for the scale-up/deployment

Powys Teaching Health Board is part of the National Health Service (NHS), therefore it is a public service. With regards to the implementation of online CBT, the scope of the pilot focused largely on the local primary mental health support service (LPMHSS). The pilot was implemented mostly within these teams, but also included some other service areas, e.g. Occupational Health, Pain & Fatigue Management, and some GPs, on a smaller scale.

With the scale up and further deployment of this service, we intend to include all primary care services within Powys Teaching Health Board, as well as explore the possibility of rolling the service out to other Health Boards in Wales.

Change management

Prior to the scale up / further deployment of this service, we need to engage primarily with the Executive Team to ensure they are in agreement with the roll-out of the service, and are aware of the perceived benefits, to both patients and the Health Board.

After the Executive Team, we need to engage and liaise with the senior managers of all primary care services and specialist areas to ensure that they are aware of the service and have an understanding of the programme and the benefits of rolling this out to ensure their ownership of the service. We would then need to begin engagement with clinicians and healthcare professionals within these teams, to provide information on the service and the referral process, answer any queries there may be with regards to the programme, and provide assurances in order to remove any apprehensions. There are some departments that have already shown an interest in the service; however, there are other service areas that are unaware of the benefits that could be realised by this programme; they therefore feel apprehensive and less enthusiastic about the implementation / roll-out.

We need to ensure target dates are set with regards to the implementation and further deployment of this service within each department, and ensure that ongoing support, information, and advice is available to all staff within all departments. This could be done by setting up regular review / feedback sessions.

Plans for the policy level

The first stage in the policy development is to convince the Executive Team of the benefits of continuing the online CBT service and the advantages that could be gained by implementing this service in other departments within the Health Board. This would include benefits, not only for our patients, but also for the workforce through occupational health.

Following the agreement of the Executive Team, the heads of service will need to be consulted to assure them of the implementation within their specialty. A different intensity will be required for each department; this will be determined by their knowledge and use of the service thus far.

Departments outside of the Health Board who are interested in implementing this service, or at least signposting to it, such as job centres, police, and local authority, have approached us. We will develop a strategy to engage with each of the interested parties in turn to clarify the operational and governance requirements.

Plans for further technical development and/or integration

The licensing contract with our current online CBT software provider comes to an end in August 2017. We have therefore already started to explore what other software providers / online CBT programmes are available. We will look at the options available, taking into account evidence base, usability, sustainability, and cost effectiveness, and make the decision as to which programme would be most suited to us for the scale up of the service and implementation into other departments.

Should the decision be made to stay with our current programme, Beating the Blues, then some technical aspects of the programme would need to be considered and updated. This would include the need for the software to be compatible with iPads, tablets, and smartphones, as it currently only works on computers and laptops. It would also be hoped that the videos within the programme would not be as reliant on a particular version of Adobe Flash Player as they currently are, and that the videos are updated with a more modern look. We would also look for the programme to have an updated interface and fewer requirements to print worksheets, with an option for all tasks / worksheets to be completed on the device.

We have done a lot of work with local libraries, and have a commitment from them to continue to work with us in providing a community setting for patients to attend to complete the programme if they do not have access to the necessary technical equipment at home, but we would also hope to further explore the use of other organisations for this purpose such as MIND Resource Centres, job centres, GP surgeries, etc.

As we will need to go out to tender for the platform at the end of our current contract, this will give us the opportunity to explore the quality and scope of other technical solutions.

Plans for communication and dissemination activities

We would be looking to attend any events taking place that involves healthcare, whether these events are organised within the Health Board, or by external organisations such as the local authority, police, voluntary organisations, etc. If we were unable to attend the event in person, we would at least want to ensure that there were some posters displayed or leaflets given out at the event to promote the service.

Regular 'learning' events are held for GPs, and we would hope that attendance at these would assist in the further deployment of this service within GP practices, and encourage direct GP referrals.

We would hope to hold workshops, not only to provide information on the service, the benefits, and the referral process, but to receive feedback from healthcare professionals currently using the service, and to offer the opportunity for clinicians and healthcare professionals to ask any questions or raise any concerns they have surrounding the service, or more specifically, the programme used.

We have designed new posters which we will look to display in all Health Board sites, GP surgeries, libraries, job centres, local authority offices, etc.

We will also need to ensure that we offer ongoing support to all departments already using the programme, by ensuring that we make regular visits to teams, as well as continuing to provide weekly update reports. We are also focusing on ensuring that healthcare professionals have sufficient information on who to contact should they have any queries or wish to raise a concern, and ensuring that we are continually addressing concerns raised and efficiently offering reassurance and problem solving to any practical issues.

Plans for the clinical area

During the implementation of this pilot, we concentrated on the use of this programme for patients who are 18+ and suffering from mild / moderate depression. In the scale up / deployment of this service, we would look to extend this to include mild / moderate anxiety, as well as stress-related illness. The focus to-date has been on primary care mental health, but moving forward, we would look to share with secondary care.

We have been approached by the Midwifery Department, who are interested in exploring the use of the service for patients suffering with perinatal mental health related illnesses.

We would look to further develop our support to GPs for patients suffering with mild / moderate depression and/or anxiety that they are managing themselves.

We would also be interested in exploring the opportunity to introduce a similar programme for teenagers and adolescents with similar anxiety and/or depressive issues.

Plans for the financial area

Powys Teaching Health Board is within the National Health Service. Therefore no costs are directly charged to patients or service providers.

The current contract we have with our online CBT software provider comes to an end in August 2017; a tendering process for a new contract would therefore need to begin prior to the expiry of our existing contract. This will give us the opportunity to renegotiate the cost of the product.

We are in the process of drafting a Business Case paper, which will be submitted to the Executive Team. This paper outlines the expected costs related to maintaining the service within the Mental Health department as it is currently run, but also identifies other costs that may occur or need to be considered in the scale up of the service.

With regards to the cost of the service, funding would be need to be found within the Welsh Government Mental Health allocation for the Health Board unless a bid for external funding could be applied for. The possibility of applying for external funding for the scale up of the online CBT service is currently being pursued through a couple of different Welsh Government initiatives.

National level

We want to explore the possibility of leading in Wales in the implementation of cCBT, as well as collaborative services. Thus far, we have engaged with two other Health Boards, with one expressing a very keen interest in starting a pilot site within their organisation as soon as possible, but using the infrastructure support from Powys Teaching Health Board. We would expect similar enthusiasm from other Health Boards in Wales, which could involve PTHB being a pioneer in the implementation of online CBT.

Comments

As we now have around 18 months experience in collaborative services, we believe we have the knowledge and experience to offer a key role within NHS Wales in the introduction of these innovative platforms.

2.4. GGZ InGeest, Netherlands

Pilot context and scope for the scale-up/deployment

In the Netherlands, nine mental health organisations participated in MasterMind. They are spread throughout the whole country (except the North Eastern part). These mental health care organisations treat patients who have a depressive disorder and are referred by their GP. Eight are public services, one is a private practice. The majority have a contract with Minddistrict, and most of their therapists were already trained in using the platform before the start of MasterMind. One organisation uses a self-developed platform (Interapy). Two organisations use the research platform Moodbuster, and were trained as part of MasterMind. In all organisations, MasterMind supported the upscaling. Although there are differences, approximately 10% of the depressed patients in the participating organisations are now being treated with (blended) eHealth for depression. Most of the organisations aim to reach higher percentages (range 15-40%). All organisations expect that the deployment of blended CBT and eHealth will continue to grow over the next couple of years.

Change management

The mental health organisations all agree that the implementation of eHealth will need ongoing effort. The implementation takes time, and is not easy. It is agreed that an important focus should be supporting for therapists to practice internet based treatment.

In the mental health organisations, most of the therapists are trained in using an online platform, and there is a good infrastructure for ICT. Almost every team has an attention officer or ambassador for eHealth. In one mental health care organisation, this had proven to be insufficient. Therefore, a separate outpatient clinic, the ehealth@mind clinic, was created (March 2016) in order to collect expertise and skills around eHealth, to be a central expertise centre for eHealth within the organisation, and to have a front-runner position. This clinic also has its own 'front door', with an online registration route, to attract more people to eHealth who are specifically looking for online help (Start: November 2016).

From a management perspective, the communication to the teams is viewed as important. Within the communication, managers try to:

- Lower the pressure on therapists as much as possible. Therapists have a high caseload, and already feel pressure because of other organisational demands such as Routine Outcome Monitoring and increased registration obligations.

- Prevent any resistance from therapists, e.g. by not communicating an eHealth norm as a requirement, and more focus in the communication of the quality improvement of the eHealth treatments. The level of resistance varies across teams, locations and organisations.

- Stimulate the therapists to discuss how to integrate eHealth. For some therapists, using eHealth interferes with their routine practice and with their own ideas of delivering treatment. Some organisations feel that eHealth is imposed too quickly; they think it would be better to give the therapists more time to practice and discuss experiences with colleagues.

- Make result-oriented reports based on SMART goals that are achievable, but also desirable, for routine practice. One organisation has a so-called 'dashboard'. Therapists can see their eHealth treatment percentage and other performance indicators, such as the ROM scores and treatment time on the dashboard online. This is in order to support therapists at both a personal level and a team level. It is easy to see whether everyone is on track, and if adjustments are necessary.

- Gain more insight into the costs and effects of eHealth.

Most of the participating mental health organisations decided to implement most of the following actions:

- Involving the Board of Directors.

- Contract with eHealth provider.

- eHealth project team at an organisation level.

- Training staff.

- Monthly intervision after the training.

- Implementing eHealth in the primary process.

- Participating in research by stimulating staff to use eHealth.

- eHealth attention officers in every team.
- Blended consultation hour.

One organisation has decided for the next years to look, with each team, at what they need in a tailored approach, with more focus on training and regular meetings. There are also plans for smarter use of management information on eHealth, so that the teams easily get an insight into their work, and their managers have more steering information.

All of the organisations still feel that the implementation of eHealth is very new and far from perfect. However, when blended treatment has proved itself in routine practice, and patients and therapists are positive, it can be expected that the scope of eHealth and blended treatment will be deployed further in the future.

Plans for the policy level

The generic approach to eMental health service provision in the Netherlands is that it fits within the routine practice and legal criteria set for care as usual. It is reimbursed in the regular manner. Since 2012, the national guidelines for depression mention eHealth interventions as additional recommendation in the first step of treatment.

As from January 2015, the Dutch government issued a transfer from a large subgroup of patients (mostly common mental disorders such as mild to moderate depression) treated in the more expensive specialised care to more efficient basic care delivered by GPs with specialist support (POH-GGZ). In this service delivery constellation, eMental health in general, and iCBT in particular, are seen as valuable tools for more efficient and effective mental healthcare. The eHealth monitor 2016 (Nictiz, Nivel, 2016) shows that in 2015, 92% of the support specialists applied some form of eMental health in their work. However, this was applied in only 10% of the service users.

Health insurance companies play a big part in the further deployment of eHealth. They can help motivate the patient for eHealth. Norms for eHealth may be needed for further implementation; in addition to this, organisations would be granted a bonus or a fine, based on whether they achieved this norm. How we should further scale-up eHealth is a shared problem, it is our patients' and their policyholders' problem. An important aspect is that health insurance companies hope that deployment of eHealth is a cost-effective treatment. However, this is still in debate. Mental health care should state that instead of cost-effectiveness:

- eHealth provides an improvement in quality.
- eHealth is an addition to the existing care, is patient friendly, empowers patients, and lowers access barriers to treatment.

All organisations feel that at a national level there is awareness of implementation of eHealth, as there are many symposia, conferences, and meetings. Maybe there is not much more benefit to be gained in this area. The focus should now be at a more local level, on how to provide quality care in which eHealth is an integral part based on guidelines and quality marks.

In a five-year perspective, most probably e-modules will be even more integrated in the treatment of depression at all levels. The more severe and complex the depression, the higher the probability of a blended treatment with face-to-face sessions. Within the near future, mobile applications might also be integrated that have a function in motivation, monitoring, and feedback of patients.

Plans for further technical development and/or integration

The Minddistrict platform is chosen by many mental health organisations because: 1) it offers a diversity of treatment modules for many psychiatric problems; 2) it has an integrated videoconferencing tool; and 3) it has the protocols for treatment. The organisations are quite satisfied with the platform, and apart from the VC tool, they feel that the technology of the online platform is not a risk factor in the implementation. The organisations have the following wishes regarding the technical deployment and integration of eHealth and bCBT:

- Link to the electronic medical records, and other data systems.

- Link to other (mobile) applications.

- Link between different platforms of the GP, bGGZ, and sGGZ for secure information transfer (e.g. referral letters).

- Link to provide access to other stakeholders on the platform (e.g. partner, or doctor of the patient) for secure message traffic.

- Use specific components of the modules (diary, activation).

- Adjust the content of the modules.

- Adaptive content, based on the problems and preferences of the patient.

- Clear overview of the module catalogue.

- Enlarge the self-management of patients on the platform.

- Make the lay-out more attractive, by making use of illustrations instead of pictures.

- Accessibility on multiple devices.

The use of videoconferencing is starting up, and is still in a pilot phase. Technical problems and failing equipment complicate the deployment of videoconferencing. This is mainly because it depends on the system and set-up of the videoconferencing at the patient's home. Patients use all different kind of devices, with different settings and internet connections, so there are many factors that can cause technical problems.

For all the organisations, the link between the platform and the Electronic Medical Record has high priority, but at the same time this has so far proven to be difficult. This would be a first major benefit, and let the therapists report more easily within one integrated system instead of having to use multiple systems that are not linked to one another. For the patient, being able to log in to one patient portal is also very much wanted. The optimal solution would be one system that integrates all databases and presents only the data that is needed. For this, it is necessary that the platform and other parties give full access to their data. The organisations expect that these supporting technologies could give a boost to the use of eHealth.

Plans for communication and dissemination activities

In general, results of the MasterMind study are and will be disseminated by presenting at meetings of patients and professionals. The results will be given as feedback to the participating mental health care organisations, and will be spread by scientific publications, publications in other media, and social media.

In general in the Netherlands, most of the patients can find (general) information about the use of eHealth and/or blended treatment on the website of mental health organisations or

patient organisations. The organisations indicate that there are plans to further develop their websites, to facilitate access to relevant information, but these processes take time. One organisation wants to appeal more to people who are familiar with the internet, people who like to decide how and when they want help for their problems. They would also like to reach people who have not yet been to the GP for their symptoms, and to offer these people free advice that they can take to their GP, so the doctor can refer them specifically to the clinic. In addition to the plans for the website, social media channels will be used that are appropriate to the target group, such as Facebook, Twitter and LinkedIn. And they will contact the (local) press and relevant national patient associations.

Some organisations give their patients an invitation to the online platform after they have received the referral from their GP, but before the face-to-face intake session. Patients can follow the first module and read information about the intake procedure and the treatment procedures. One organisation also gives patients the possibility to enrol themselves through the website for several free online preventive self-help modules on the platform. These modules are for moderate symptoms of depression, sleep, and worrying.

At the other organisations, patients are only informed about the eHealth options by their therapist. Yet, they also want to realise in the near future that patients get direct and easy access to the platform before intake. One organisation wants to give patients more responsibility in this process, for example, by offering the patients a portal where they can have a look at the multiple treatment modalities, such as eHealth. With this approach, a client is asked to be more pro-active in choosing their treatment.

Up to now, the therapist and organisations report that they do not often see patients who explicitly ask for eHealth treatment. This may change when organisation focus more on the dissemination activities. Several organisations indicate that it is important to organise meetings with the local GPs, because all patients need to be referred to mental health care. One organisation recently hired someone who will visit the GPs to promote eHealth treatment and blended treatment in mental health care.

Plans for the clinical area

At the moment, blended treatment is mostly deployed for depression and anxiety disorders. Many teams are already planning further implementation, for:

- Schema therapy (a form of psychotherapy for persons with personality disorders).
- FACT teams (Functional Assertive Community Treatment, an intensive community mental health service delivery for persons with chronic and severe mental illnesses).
- Trauma teams.
- Addictions.
- Personality disorders.
- Somatoform disorders.
- Children & youths.

For these disorders, eHealth modules are available, but are only used on a small scale.

It is important to assure and integrate the blended treatment protocols into routine practice. Many of the organisations have no short term plans to change the blended depression-treatment. As patients often have multiple problems and disorders, more trans-diagnostic modules will be added, such as short modules for example about sleep, self-

esteem, or emotion regulation. Organisations agree that the care pathways need more clear descriptions, to help therapists integrate the eHealth modules. This can be based on a trans-diagnostic or more stepped care approach.

Plans for the financial area

All the mental healt care organisations do not (yet) have a specific business model for eHealth available, although they know that it is important to have a good business case. With respect to the financial implementation, they state that it is important that: 1) staff keep getting training for eHealth; and 2) someone must remain responsible for implementation and future developments.

One organisation states: The eHealth workgroup will exist until the end of 2016. We have to keep an eye on what is important for the implementation. We use eHealth because: 1) we want to join the digitalisation of the world and of healthcare; 2) our patients and financiers expect us to; and 3) we think that through deployment of eHealth, the quality and efficiency of care will increase.

Organisations will continue to use the platforms to follow new technical developments, but it is a big financial investment to implement the platform, and this investment is not paid back by health insurance companies, because they reimburse less when the care is more efficient (shorter treatments). In the long run, hopefully eHealth will make healthcare in general more cost-effective. Yet this still has to be proven. With regard to videoconferencing, there is a lot of investment needed, and its benefit in depression care in the Netherlands is not yet clear.

At this moment, it is difficult for the organisations to foresee what will be needed in the future.

National level

Nationally it is necessary that organisations will:

- exchange their experiences about implementation;
- give each other a look behind the scenes;
- keep each other updated about the latest developments and innovations.

Sometimes organisations have the impression that the ideas that are created at a national policy level have a distant connection to routine practice. GGZ Netherlands indicates for example that it is necessary to give the patient more control and give them an 'account for life', that links with other providers and the Electronic Medical Record. From within the organisation, patients indicate that they might (at a maximum) need the online relapse prevention plan, and that when they are finished with treatment, they often are 'done' with mental healthcare. It is therefore especially necessary to implement eHealth as personalised as possible in routine mental healthcare.

Finally, organisations need more dissemination of research results, more knowledge about implementing eHealth, and more (financial) space to innovate within an organisation. This is something health insurance companies should take into account and support.

Comments

Table 1: Overview of Dutch mental healthcare organisations involved in MasterMind

Mental health care organisation	Region in the Netherlands	Locations involved in MasterMind	eHealth norm in 2016
Emergis	Zeeland	Goes	15%
GGZ Oost Brabant	Oost Brabant	Oss	25%
GGZ inGeest	Amsterdam, Amstelveen, Haarlem, Hoofddorp, Bennebroek	Amsterdam, Haarlem, Amstelveen	30%
Prezens	Amsterdam, Amstelveen, Haarlem, Hoofddorp, Bennebroek	Amsterdam, Haarlem	30%
Mondriaan	Limburg	Heerlen	No norm
GR1PP	Delfland	Bergschenhoek, Delft, Den Haag, Leiden, Maassluis, Rotterdam, Schiedam, Naaldwijk	40%
PsyQ	Across the Netherlands	Heerlen	25%
GGZ Noord Holland Noord	Noord Holland	Den Helder, Schagen, Hoorn	unknown
Interapy	Across the Netherlands	Across the Netherlands	N/A
Bosgroep (private)	Amsterdam	Amsterdam	No norm

2.5. SALUD – Servicio Aragones de Salud, Spain

Pilot context and scope for the scale-up/deployment

The SALUD is the public healthcare provider for the whole Aragonese region (47,719 km², 1.3m inhabitants). MasterMind services have been piloted at five out of the 15 healthcare centres, and at the Mental Healthcare Unit of Barbastro Healthcare Sector (BHS) (8,500 km², 107,428 inhabitants) which is one of the eight areas making up the Aragonese territory.

MasterMind is one of the first experiences in the field of telemedicine services in the mental health area within the region. In the case of Aragón, the pilots have helped to confirm their effectiveness and to tailor and adapt the services to the specific characteristics of the region and of the organisation.

Change management

The next steps in the upscaling of the MasterMind services are:

● The extension of the services to other healthcare centres which meet the requirements for a successful implementation. These requirements have been identified for each service, and include, among others (so far):

- o ccVC
  - – Healthcare centre located at least 25 km away from the Mental Healthcare Unit.
  - – Videoconference equipment / PC with internet connection and headphones / microphone.
  - – Healthcare Centre not exceeding five GPs so as to ease the arrangement of the sessions in a productive and suitable procedure.
- o ccBT
  - – Personnel trained in the use of the cCBT tool:
    - ▪ Nurse to perform the administrative tasks and the patient follow-up.
    - ▪ Clinician responsible for recruitment and final assessment.
  - – Room available with a computer with headphones and internet connection so as to help the patient to perform the initial training session.
  - – Printed materials (leaflets).
- o Both services
  - – Technical personnel trained and available to solve technical incidents.

- To extend the services to the healthcare centres and mental health units belonging to the other seven healthcare areas which compose the whole Aragonese Region.

The challenges to be faced in the process of upscaling the services models include:

- New roles for the personnel involved:
  - o The nurses play an important role in the adoption of the cCBT service, as they are the personnel in charge of the initial training of the patient and of the follow-up of patient adherence.
  - o Technical support from technical personnel and accessible to both carers and patients must be available in order to solve any problems that might appear.

- Investment. The model and the tool used in MasterMind do not require a big investment, as there is no per-licence cost, and most of the developments have been made adapting freeware to the specific needs.

- Maintenance costs related to server (main and backups), internet connection and PCs. All these costs are already being covered by the organisation, and there is no need for an increase because of the inclusion of the MasterMind services.

The cCBT MasterMind pilot in Aragón has gone through three different phases:

- An initial phase with a few patients trying to invest as few resources as possible that helped to tailor the service and to make adjustments to the model.

- A second phase of piloting with the recruitment of the majority of the patients and important changes in the model so as to increase adherence to the treatment (training session by a nurse, periodic mail reinforcement, and telephone follow-up each fortnight).

- A third phase (once the target was reached) in which the model is being adapted so as to make it sustainable in the long term (reduction of the time for the training session, automating the users' email delivery, and telephone calls only in case of alarms). This third phase will include a final assessment oriented to evaluating the sustainability of the services.

Plans for the policy level

The regional management team of the SALUD has manifested its interest in the project, and will receive the report with the final results of MasterMind in Aragón so as to make decisions about the next steps to scale-up the project. The regional management team is involved in the development of the regional strategy on mental health in Aragón for the years 2015-2020.

Clear and objective evidence about the sustainability, the effectiveness, the cost-effectiveness, and the added value (for patients, professionals and the organisation) of the services piloted in MasterMind will pave the way for the effective deployment of the service.

Plans for further technical development and/or integration

ccVC

InterConsultation through videoconference has already been deployed in the region in other areas such as in the Tele-Stroke Management service. The specific developments carried out in MasterMind have been validated during the pilot lifetime (mental health inter-consultation form and sessions listings), and will be included progressively in other centres and areas.

cCBT

The cCBT tool (Supera tu Depresión / Get Over your Depression) in the MasterMind Aragonese pilot can be used free of charge within the whole SALUD organisation thanks to the agreement signed among all the partners who have participated in its adaptation.

Only a few technical activities are foreseen in the deployment to other sectors / healthcare centres:

- Adaptation of the software to other healthcare areas (adjustment of parameters to specific contexts).
- One installation of the software (contents and adapted platform) for each sector / area.
- Security tests at the individual installations.
- Load tests (bandwidth and users) in the individual installations.
- Backup tests.

Plans for communication and dissemination activities

Results of MasterMind will be published, and will also be made available to SALUD personnel through different channels:

- Publications on the Intranet and website.
- Local conferences.
- Regional conferences.

The dissemination material created for the clinical staff (leaflets, video and training materials) will also be made available for the whole organisation so as to ease the scale-up process.

Plans for the clinical area

The results of MasterMind have encouraged the mental health professionals to work on the extension of the use of ICT to the treatment of other disorders.

The use of the tool Supera (with small adaptations) to other areas and disorders, such as anxiety or follow-up of patients with suicide risk, is being evaluated. Today there are no deployed interventions (based on ICT) in the region treating these diseases. One of the most important preliminary results of MasterMind is the added value of the alarms management based on the patient's answers to formulaic questions. These alarms ease the follow-up of the patient, and they allow the change from consultations scheduled on a periodic basis to consultations programmed based on objective information (alarms and/or other results gathered from the ICT tools).

The Innovation Unit of the hospital is looking for new funding opportunities that would allow the development of new models based on the pilot experiences that might arise.

Plans for the financial area

The SALUD organisation provides the service directly, so no reimbursement structure is needed.

The deployment of the service might involve investments in the following:

- Equipment for training sessions of the cCBT services.
- Servers, backup servers, and related ICT to make the service available to more users.
- Personnel costs to cover: technical support, contact centre support, professionals' time for the training sessions for patients and for the alarms management (phone calls).

National level

The regions involved in MasterMind are preparing some joint actions to disseminate the MasterMind results and to encourage other regions to use the contents of Supera and to integrate them into their daily practice.

It is planned to make a presentation of the MasterMind contents to representatives of the Spanish Ministry of Health and the National Health Institute Carlos III so as to inform them about MasterMind, and to encourage them to make the Supera contents the reference tool for the whole Spanish territory in the field of cCBT.

The area of influence of the SALUD is the Aragón region. Each region has its own EHR and proprietary information systems, which can interoperate under the National Network. Deployment at national level in Spain under the current organisation would imply an individual adoption of the tool by each of the 17 autonomous communities / regions.

The results of MasterMind will be presented at different events at national level so as to inform policy makers, clinicians, and patients about the results of the piloting of the services in the four Spanish regions which have participated in the project.

Comments

The amount of resources invested during the project lifetime should not be the same for the deployment phases. The time restrictions, the tight deadlines, the scale of the sample,

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and the learning curve have implications that are being evaluated to implement a sustainable and effective model for the service.

2.6.   Osakidetza, Basque Country, Spain

Pilot context and scope for the scale-up/deployment

The Basque Country has a universal health insurance system financed through general taxes. The public healthcare provider is Servicio Vasco de Salud - Osakidetza. All the public hospitals and primary care centres of the Basque Region are under this government organisation. The Basque health system includes 320 primary care centres, 14 acute hospitals (4,278 beds), four sub-acute hospitals (524 beds), four psychiatric hospitals (777 beds), and two contracted long-term mental hospitals. Since 2012, the primary care centres of a given area and its reference hospital have been integrated in Integrated Care Organisations (ICOs). Today, there are 13 ICOs distributed in the three provinces of the Basque Country. Osakidetza has a target population of more than 2 million inhabitants. Currently, aging and chronic conditions account for 80% of the medical consultations in the Basque Country, taking 75% of the total health budget.

The MasterMind project is the biggest and most ambitious experience in the field of eMental Health in the Basque Country. Several organisations have participated in the implementation of the cCBT: five ICOs and the three mental health networks.

The pilot has allowed Osakidetza to assess the effectiveness, the acceptance of users (patients and professionals), as well as the sustainability for further deployment.

Change management

The implementation of the cCBT service in the Basque Country has required a significant change in the existing organisational model. The main objective of the new care pathway defined was to provide GPs with more capacity to tackle depression in terms of diagnosis, provision of therapy, and monitoring of the progress, supported by mental health professionals when needed. This approach allows primary care professionals to lead the treatment of mild and moderate depression, while reducing the overload on specialists and permitting them to focus on more complex and severe cases.

In summary the main new roles are:

- GPs and GP practice nurses, in tandem, are responsible for the identification, diagnosis, cCBT explanation, and training of patients, and follow-up of the therapy.

- Specialists support GPs in any of the steps described previously.

- Nurses from the eHealth Centre support GPs during the monitoring of the patient (e.g. phone calls to the patient for reminders).

- Technical staff provide both a help desk for any incidents in the application, and maintenance of the software and hardware.

The reorganisation of roles and the task-shifting mentioned requires intense training of all professionals involved. The staff participating in the MasterMind project have attended at least one training session, however, it has been noted that this is not enough to ensure that all professionals feel confident with the tasks they are supposed to carry out. Therefore, new training programmes for professionals will be necessary to solve the deficiencies

detected. This programme will consist of theoretical and practical sessions, so all professionals develop the skills required to provide cCBT.

The investment associated with the deployment of cCBT in the Basque Country will be fully assumed by the ICOs which decide to adopt the service. However, the costs do not appear to be high. Since reorganisation of existing resources is the core of the new care pathway, no staff hiring is expected. In terms of technology, as explained in the section on "Plans for further technical development and/or integration", the Personal Health Folder (PHF), which is a corporate platform, will function as the cCBT application. The Directorate of Healthcare and the Information System Department of Osakidetza will meet the expenses related to the adaptation of the PHF, if they decide to boost and support the deployment of the service, for which positive results from the evaluation are required.

Today five ICOs have deployed the cCBT service to some extent. The up-scaling will consider that the cCBT is newly adopted in the remaining nine ICOs in a stepped process, and expanded more in the organisations involved in MasterMind.

Plans for the policy level

The Directorate of Healthcare of Osakidetza has shown interest in the deployment of cCBT; however, the final decision will be delayed until the results of the project are available. The Directorate needs evidence on how beneficial the service is from distinct perspectives: patient (safety, quality of life, clinical outcomes, usability), professional (usability, perception, clinical relevance), and organisation (workflows, costs, sustainability).

Plans for further technical development and/or integration

The application of cCBT used in the MasterMind project has been co-designed between Osakidetza's healthcare professionals (mainly psychiatrists and psychologists) and a Basque technological centre (Tekniker). This application has been hosted within Osakidetza's servers during the project.

If the Directorate of Healthcare of Osakidetza decides to further deploy cCBT and include it in the service portfolio of the health service, based on the results of the evaluation, the technical solution will be changed. The new solution will use corporate technological platforms already in use in Osakidetza, ensuring sustainability in the long term. Probably, the Personal Health Folder (PHF) will replace the application used in MasterMind.

To do so, first an analysis of the functionalities of the existing application will be performed, in order to define what requirements the PHF will have to meet. The requirements will also include learning from MasterMind, meaning that the potential improvements detected will be considered as new or upgrade requirements. Once this study is completed, the corresponding developments, fine-tuning, and/or adaptations will be carried out to the PHF.

Having the PHF available to provide cCBT online, Osakidetza will broaden the spectrum of the target population, meaning that this service will focus on more diseases, such as bipolar disorder. For this, new clinical content will be developed by experts. In the end, Osakidetza will have a platform (PHF), which facilitates the provision of cCBT to several health needs.

With respect to the videoconferencing, Osakidetza already has in place the software required (Lync server, Microsoft) on the PCs of all professionals. Therefore, no integration or technical developments are necessary.

Plans for communication and dissemination activities

MasterMind results will be published and disseminated across Osakidetza in order to reach healthcare professionals (specialists, GPs, GP practice nurses, eHealth Centre, managers) though different channels:

- Local and regional conferences.

- Newsletters and news published in Kronikgune's website.

- Twitter and Facebook managed by Kronikgune.

In addition, the training material created for the clinical staff (leaflets, videos, documents, and presentations) will also be available for Osakidetza's community.

Finally, based on the results, researchers from Kronikgune together with healthcare professionals of Osakidetza will work on distinct scientific articles.

Plans for the clinical area

All specialists involved in the development of the "Supera tu depresión" programme agreed that this core application could be used for other mental health conditions such as anxiety, stress, bipolar disorders, etc.

In fact, in addition to the experience in tackling depression with cCBT, Osakidetza already has knowledge in computerised therapies for bipolar disorder.

So, if managers of Osakidetza decide that the PHF is the corporate platform to provide cCBT, the clinical content of the programme could be easily adapted to other pathologies from our specialists' perspectives.

Plans for the financial area

No reimbursement structure or model is expected since Osakidetza provides the cCBT service directly to patients, and no intermediate actors are involved. The further deployment of the service requires, as mentioned above, mainly:

- Reorganisation of existing human resources and creation of new roles

- Dedicated staff to lead training sessions.

- Technical support.

- Adaptation of the PHF to serve as a cCTB platform.

Of these key points, the last one implies some investment; however, this is not estimated yet.

National level

The Spanish regions involved in MasterMind are preparing some joint actions to inform about the MasterMind results and encourage other national regions to use the contents of the "Supera tu depresión" programme, and integrate them into their daily practice.

It is planned to make a presentation of the MasterMind contents to representatives of the Spanish Ministry of Health and the National Health Institute Carlos III so as to inform them about MasterMind, and to encourage them to make the "Supera tu depresión" programme the reference tool for the whole Spanish territory in the field of cCBT.

Comments

N/A

2.7. Badalona Serveis Assistencials, Catalonia, Spain

Pilot context and scope for the scale-up/deployment

BSA is an integrated private health and social care organisation with entirely public capital that manages the Hospital Municipal de Badalona, the Homecare Integrated service, the Socio Health Centre El Carme, and seven Primary Care Centres. The sole owner of this organisation is the City Council of Badalona. It provides care to a total population of almost 420,000 inhabitants in a very populated suburban area of Barcelona. BSA also has a special characteristic that distinguishes it from all the rest of the healthcare providers in Catalonia, which is that it also provides social care services for the region of Badalona and three other towns surrounding it. Due to its public-private nature, it has been able to forge alliances with private insurances and laboratories; many initiatives have been developed with the main objective of improving citizens' quality of life (QOL) while ensuring sustainability and cost-effectiveness.

Taking advantage of MasterMind, BSA has engaged in partnerships with other local entities, such as Institut Municipal de Serveis Personals (IMSP). This is a public organisation operating in the Badalona region, which is in charge of providing the most specialised mental care support. This organisation is working very closely with BSA because it is also owned by the City Council of Badalona.

At BSA, Supera tu Depresión (Get over your depression) will become a new tool within the health and social services portfolio. With the results of the study, the management team will adapt some issues to improve the programme, such as the rhythm and other improvements suggested by professionals and users during the pilot. Collaborative care in BSA was put in place several years ago, but the experience with MasterMind has opened a new work group to improve the videoconferencing connection in order to do multicentre videoconferences with other regional entities specialised in Mental Health.

Change management

The organisation, and especially the medical management, are convinced about the benefits of Supera tu Depresión and the videoconference for collaborative care and treatment of depression in order to optimise care for patients with depression, and even other illnesses and diseases.

The challenges to be faced in the process of up-scaling the service models include:

- New roles for the personnel involved:
  - The psychologist will be able to play a more active role in the cCBT service.
  - Enlarge the number of nurses who will be in charge of the initial training of the patient and the follow-up of the patient's adherence.
- Maintenance costs related to server, internet connection and PCs.

Plans for the policy level

The Autonomous government is implementing a new model of care, based on the integration of services and defining new programmes having patient oriented telemedicine

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services as an essential element. This policy, running for the last seven years, has promoted alliances between the main players in the healthcare arena, and generated a number of initiatives to promote the integration of different systems. The Autonomous government knows the project, and will receive the report with the final results of MasterMind.

Plans for further technical development and/or integration

Supera tu Depresión has been integrated in our existing ICT infrastructures. The cCBT can be used free of charge within BSA.

For ccVC, we are using a free tool, but as mentioned, we have opened a new work group to improve the videoconference connection in order to do multicentre videoconferences with other regional entities specialised in Mental Health.

Plans for communication and dissemination activities

BSA will use different channels to publish the results of MasterMind:

- Publications on the Intranet, corporate website, international websites, newsletter, social media, local and regional media, etc.

- Conferences at the local level.

- Communications at the Regional and European Conferences. Soon, BSA will host the ETC.

The dissemination material created for the professionals, and also for users (leaflets, video and training materials) will also be made available for the whole organisation so as to ease the scale-up process.

Plans for the clinical area

There is an innovative and clinical group in BSA that works to realise the transfer of knowledge from a range of European projects. They are convinced about the benefits of Supera tu Depresión and the video conference for collaborative care and treatment of depression in order to optimise care for patients with depression. They are thinking especially about using the cCBT tool, with some adaptations, to treat other illnesses and diseases (some of them caused by unemployment).

On the other hand, the Institut Municipal de Serveis Personals (IMSP) will study the results to decide if they will participate in scaling-up process.

Plans for the financial area

BSA provides the service, so no reimbursement structure is needed, especially because the cCBT tool has been developed internally. The model and the tool used in MasterMind do not require a big investment as there is no per-licence cost. The deployment of the service might involve investments if:

- The improvement of the videoconference connection, in order to do multicentre videoconferences with other regional entities specialised in Mental Health, means that we have to buy a new private system.

- We have to use servers, backup servers and related ICT to make the service available to more users.

- We take into account the personnel costs to cover technical support, professionals' time for the training sessions for patients, and for the management of alarms.

National level

The regions involved in MasterMind are preparing some joint actions to inform about the MasterMind results, and encourage other regions to use the contents of Supera tu Depresión and integrate them into their daily practice.

It is planned to make a presentation of the MasterMind contents to representatives of the Spanish Ministry of Health and the National Health Institute Carlos III so as to inform them about MasterMind, and encourage them to make the Supera contents the reference tool for the whole Spanish territory in the field of cCBT.

The results of MasterMind will be presented at different events at national level to inform policy makers, clinicians, and patients about the results of the pilot of the services in the four regions which have participated in the project.

Comments

The deployment phase is essentially different because the features and context are different. It is not easy to foresee all the implications because some decisions will depend on the results of the project.

2.8. Conselleria de Sanidade de Galicia, Spain

Pilot context and scope for the scale-up/deployment

The SERGAS (Servizo Galego de Saúde – Galician Health Service) is the public health system in the region. 95% of the Galician population is covered by this primary and specialised care public network.

Galicia is committed to innovation in the health system in order to adapt it to the new requirements of an increasingly ageing population (22.86% are older than 65 years), which is also highly dispersed (94.05 persons/km^2). In this context, the use of new information technologies is indispensable, and as far as the provision of patient-related services is concerned, a decision has been made to favour telecare and telemonitoring. These services have been integrated in the MasterMind project.

Change management

It is envisaged that the MasterMind services will be integrated as part of the regular healthcare in the whole of the region.

Collaborative care services based on new technologies are spreading to new specialties and areas in our community. It is essential, therefore, that this deployment be regulated, building on past experiences, by defining models that adapt to everyone's needs.

Consequently, the organisation, in implementing these systems, has developed a standard for the proper introduction and operation of these care services that will use a collaborative model. Protocols have been put in place to regulate the implementation of this system across the organisation in a homogeneous manner by establishing the management procedures for these care services, itemising the persons and areas involved, the tools that will be used, the documents, forms, and a description of the processing

flows. This procedure, which has been started in the A Coruña area with the Psychiatry-Primary Care consultancy, is expected to be implemented in the remaining areas (Santiago, Ferrol, Lugo, Ourense, Pontevedra and Vigo) soon, to spread slowly to other areas and medical specialities until these services are generally available in regular medical practice.

Plans for the policy level

In the organisation's Health Priority Plans set out for 2014-2016, depression ranks fifth after ischemic heart disease, lung cancer, stroke, and diabetes.

This plan also includes actions to make improvements in the priorities. Thus, as far as depression is concerned, the following improvement actions have been established:

- Improving knowledge about the disease by society at large.

- Improving early diagnosis.

- Improving the specific training provided to professionals.

- Improving the quality of care at both diagnosis and treatment.

- Writing action guides for affective disorders.

- Defining the implementation of the comprehensive care process.

- Specific training in brief psychotherapy actions for primary care professionals.

- Psycho-educational activities aimed at both patients and their relatives.

- Increasing the prevention of complications: Suicide Prevention Plan.

- Improving scientific knowledge on the disease.

- Participating in research projects.

In the Sergas Strategies 2020, the following strategic lines are mentioned, among others:

- "Guiding the provision of care services towards the needs of the patients", and within it, a specific mention is made of an improvement in the care of patients suffering from depression, and the writing and implementation of a comprehensive care procedure for depression. In this vein, emphasis is put on an improvement of the follow-up of chronic patients through specific follow-up schemes.

- "Promoting knowledge and innovation management", by fostering clinical research, simplifying and streamlining procedures, unifying documents and procedures, and focusing the organisation on the use of methodologies that lead to resolving problems or challenges in an innovative way, thus helping professionals to redefine the problems they encounter, and generating new ideas and approaches to work that result in an improvement in the care we provide, consolidating the collaborative and innovative model.

- "Encouraging communication with professionals, users, and the society at large". Creating the E-SAUDE platform, which will lead to an improvement as far as information and communication with people is concerned, providing access to all existing services and the whole of information so that people can make decisions that improve their health. The platform with telecare will mean, among other things, that patients, as well as members of the public, will be informed and trained. In turn, the FOGAR DIXITAL platform will enable communication between patients and professionals.

- "Introduction of the new technologies" through a technological renewal, the modernisation of the equipment in healthcare centres in order to achieve greater diagnostic and therapeutic efficiency, and provide better care to patients.

Plans for further technical development and/or integration

In order to implement the cCBT and ccVc protocols put in place by the Galician Health Service, two solutions have been implemented that provide support to the activities: on the one hand, the CETIR system, the videoconference activities used in the ccVC protocol. On the other hand, the TELEA system, a platform oriented to the programming and following-up on the activities of the patients within a healthcare process.

The main characteristics of these solutions, as well as the main functional targets of the envisaged improvements that will be added to the platform in the future, are given below.

1. CETIR.

CETIR is a platform that makes it possible to establish communications between users in multiple modes: audio and videoconference, electronic messaging, interactive sessions, and online document sharing.

Description of the system:

- Dedicated website for users with all the functionalities of the CETIR platform.

- Checking whether the different users you want to establish any sort of communication with are present and available.

- Using any means of communication available.

- Configuration of the different communication modes.

- Traceability of the communications made.

- Use of the data associated with the variety of communications established.

An array of services for their integration with the organisation's information services to access the functionalities of the platform (configuration, use of data, establishment of communications, etc.) from other applications.

Another layer of integration services to be used by the different communication subsystems that can connect to the platform so that users establish communications among them. The accessible communication systems are the following:

- OpenMeetings (videoconference and instant messaging).

- MS Lync (videoconference and instant messaging).

- IP Alcatel and Cisco phone systems (telephone calls).

Future developments:

- Integration in the consultation module of the electronic clinical history and the programming and diary system for the automatic establishment of sessions and audio or videoconference calls among professionals.

- Managing an instant messaging session among professionals, and integration with the clinical history.

- Integration with the diary systems of the professionals to make direct voice or teleconference calls to patients.

2. TELEA

TELEA is a platform that makes it possible to establish care protocols for outpatients so that the different control or therapeutic activities that these patients make are remotely supervised and followed up by the health care professionals.

System functionalities:

- Module for the definition of clinical protocols for therapeutic activities or follow-up of patients remotely.

- Module for the assignment and personalised configuration of protocols for a patient.

- Module for the follow-up of patients with active protocols.

- Website for patients.

- Website for patient e-training.

Future developments:

- Module for personal healthcare file.

- Module for access profile and patient interaction (CRM)

Plans for communication and dissemination activities

The results of MasterMind will be disseminated through publications on the SERGAS website.

Educational activities related to cognitive behavioural therapy actions will continue to be performed in order to promote their use and increase familiarity with this type of therapy.

Meetings will be held among managers to implement consultancy via videoconference in the different healthcare areas, and informative meetings with the professionals involved.

Dissemination videos will be made to train professionals in the use of these tools that will replace or add to the information provided so far in the form of brochures and presentations.

Plans for the clinical area

The collaborative care services via videoconference have been implemented in mental healthcare within the framework of the MasterMind project in the A Coruña area. Following an initial analysis of this experience, implementation of the service will not remain confined to the treatment of depression, but will also be used as a means to enhance the training of primary care professionals in the prevention of suicidal risk, the use of assessment and diagnostic scales, and training in psychopharmacology.

Further clinical areas prioritised by our organisation, that will take advantage of these newly implemented services, are:

- Child and young people's mental health, with particular attention on developmental disorders (autistic spectrum disorders) and eating disorders.
- Psychogeriatrics.
- Psychological damage arising from disasters.

The TCC service in our region envisages a system of alarms as regards suicidal risk that makes it possible to implement an action protocol that encompasses the different entities involved that will become a part of the suicide prevention plan that is currently being developed in our community.

Plans for the financial area

SERGAS is the public health system of the autonomous community. 95% of Galician population is covered by the primary and specialised health care network of Galicia. This network includes the MasterMind services. Reimbursements do not apply in our region.

As part of the information system deployment plans, SERGAS has allocated a budget of €25 M for 2016-2020, 80% of which is from European funding through its operational programme ERDF Galicia.

These funds will be partially used in the implementation of the TELEA and CETIR platforms, ccVC, cCBT, or other similar protocols.

The MasterMind project is intended to integrate within the regular healthcare provided by the Galician health system and is part of the lines defined by the organisation to the information systems of the foreseeable future. It is not seen as detached from regular practice in the future; consequently its financing will be integrated within healthcare.

National level

The cCBT programme in our region is based on the work conducted by our university (USC: Universidad de Santiago de Compostela), and is shared by the other Spanish collaborators of MasterMind. This means that communication of common projects between the Spanish groups has already materialised in the form of collaborations, taking into account the similarities in our programme.

Comments

N/A

2.9. ULSS / LHA N. 9, Treviso, Italy

Pilot context and scope for the scale-up/deployment

The health service of the Veneto Region provides an organisation for Local Authorities. Each local company provides services of general care: some report to the primary care system, while the mental health reports to the Department of Mental Health. The Department of Mental Health (DSM) is the structure that coordinates territorial and hospital activities to promote health and treatment related to mental health. The Department performs its functions through the strategic planning of prevention, diagnosis, treatment, and rehabilitation for all types of mental disorders in the adult population.

The model, in line with the guidelines of the Veneto Region, is based on community psychiatry, intervening primarily in the territory favouring an outpatient approach, facilitating access to services and continuity of care, with a full integration of interventions in the specific context where the patient lives.

The assistance system is a territorial system and involves collaboration between the primary care level and the mental health services. All the systems are supported with computerised infrastructure (medical records and information systems) for specific individual areas, but not communicating with each other. Communication is provided in the ordinary way, and the ability of the primary care system for early detection or diagnosis of risk cases of depression is low. The context of the project involved a pool of about 200,000 inhabitants, with the possibility to expand it to an area of 900,000 inhabitants.

Change management

With the aim of creating a culture of mental health as an essential part of the public health, it is necessary to promote mental health in primary care, because it is the citizen's first point of access for any health problems. The need is related to the introduction of patient-centred sustainable mental health, through the telemedicine services in routine practice and in patients' real life.

It is important to give to GPs the possibility of screening depressive symptoms through the PHQ9 tool, and with the promotion of evidence-based information about common mental disorders, sharing psycho-education material in both paper format and online. Moreover, it would be appropriated to structure follow-up motivational interviews during all the treatment.

From our point of view, change management should be essential for further deployment, especially at an organisational level.

Baseline:

During the MasterMind project, the aim has been to empower collaborative care between GPs and mental health specialists through the recruitment of patients with low and moderate symptoms by screening at the GPs' offices through the PHQ9, and the promotion of mental health as part of health through psycho-educational communications and online materials (www.ifight depression.com/it).

Considering the difficulties in recruitment from GPs during MasterMind, LHA N.9 has implemented recruitment through the support of MasterMind psychologists directly in the office of GPs: after the PHQ9 screening, GPs offer the MasterMind services, starting with a motivational interview with the MasterMind psychologist at the GPs' clinic, who motivates patients in taking care of their mental health through psycho-educational on-line material and computerised low intensity treatment (cCBT). The MasterMind service offers a follow up interview after 30-50 days, and the final follow up interview three months after enrolment.

Expected scope for the deployment:

- Necessity to extend the possibility of PHQ9 screening and videoconference service to all the GPs.

- Need to introduce videoconference within the services of the mental health department indicated as an instrument for easy meetings.

- Involvement of psychologists at the GPs' clinics, with the aim to consolidate mental health awareness, supporting more advanced use of communication tools and access to cCBT.

- Sharing of computerised medical records and clinical information, or at least some parts of it, between GPs and services for mental health.

- Implementation of a user-friendly cCBT tool, and promoting the deep involvement of mental health professionals (for example nurses) in cCBT patient support.

Plans for the policy level

From the political point of view:

- Consolidate the interest of the Veneto Region in the development of telemedicine practices and experiences on investing in opportunities linked to depression and other emotional disorders.

- Definition and revision of information systems: from the point of view of information flows and activity records, it is necessary to create connections between primary care and mental health services. At the moment, regional data are integrated, but the real problem lies in the sharing of information in clinical practice. The GP must have the possibility to report and receive the information from and for mental health services to implement the best clinical decision.

- Make depression care a priority among the social health intervention goals of regional policies. It is necessary to develop and implement a regional plan to fight depression that allows overall interventions and introducing informational possibilities to the population accessing innovative tools such as cCBT: especially, guided cCBT is an evidence-based treatment of low and moderate depression.

- Facilitate communication between local services, promoting collaboration meetings, and the possibility of institutional events by videoconference.

- Engagement of GPs in these mental health goals, even from a contractual point of view.

Plans for further technical development and/or integration

LHA 9's plans for further development of the services (cCBT and ccVC) are:

- Implementing ccVC through Webex for collaborative care between specialists and GPs, not only for patients with depression, but for all mental health diseases.

- Implementing ccVC through Webex for communications between mental health specialists in different departments, providing webcam and microphones in the offices.

- cCBT: continue to use the localisation of IfightDepression.com as a psycho-educational website with evidenced-based information for patients, GPs, and specialists (nurses, psychiatrists, and psychologists).

- cCBT: implementation of a more user-friendly cCBT tool, that is a new version of IFight Depression or a new specific tool, with a specific localisation to the Italian context and with a regional management of data.

Plans for communication and dissemination activities

The communication and dissemination activities to foster deployment in Veneto Region are:

- Promote public communication levels, promote mental health as part of health, evidence-based psycho-educational knowledge about common psychological diseases.

- Social events through media and public discussion with experts at public meeting.

- Dissemination at conferences and scientific congresses related to telemedicine, psychology, and psychiatry.

- Collaboration with University, with internship programme about low intensity treatments and population screening.

- Share experience of the MasterMind project at an institutional level, in particular in the planning and decision activities, both in the mental health and primary care boards.

- Dissemination of MasterMind experiences to mental health associations and users.

Plans for the clinical area

The services implemented in MasterMind could be relevant for anxiety and stress disorders as well. Today, there are many evidence-based cCBT tools, but they need localisation (translation) and support at regional level.

In order to give an efficient service to citizens, it is necessary to provide the presence of psychologists at the GPs' clinics, promoting mental health awareness and prevention of common mental health diseases (for example anxiety and stress), and supporting more advanced use and access to innovative services such as cCBT.

Plans for the financial area

The impact in terms of resources in relation to the results achieved has proved very good.

With the aim to prioritise the goal of fighting depression in public health, it could be that a portion of the resources allocated to support activities of the mental health department are also dedicated to the implementation of tele-psychiatry activities, such as videoconferencing and cCBT.

To achieve this goal, as a public service, it is therefore necessary to include in the budgets of the MHD indicators that can measure these activities and thus allow the use of resources.

National level

The evaluation of the MasterMind results aims to propose a regional and national level acceptance and the ability to supply such services, offering greater efficiency of care at reduced costs. At the national level, projects are carried out which reflect the results and background formed through the various local experiences in mental health issue. The ability of the individual local reality to implement in routine clinical practice new services and new organisations gives the possibility to scale up at regional and national level.

Comments

The cCBT therapy, for the first time introduced in the Veneto Region on a large scale, has enabled us to evaluate the effectiveness and potential of the tool. At the regional and national level, the validation of new technologies for mental health enable us to give new inputs to the development of care and updates, giving new space to regional and local development and services for citizens.

2.10. ASLTO3, Turin, Italy

Pilot context and scope for the scale-up/deployment

In Italy, the National Health System has a public nature, and it provides health services through Local Health Authorities (called "Aziende Sanitarie Locali", ASL). They are financed and controlled by their Regional Government. The Department of Mental Health (Dipartimento di Salute Mentale, DSM) is the health organisation responsible for specialist mental health care in the community. Within the Department, there are various facilities: Community Mental Health Centres, Day Care Facilities, General Hospital Psychiatric Units, and Residential Facilities. The DSM is in charge of the planning and management of all medical and social resources related to prevention, treatment, and rehabilitation of mental health within a defined catchment area. In addition, in the territory covered by the DSM there is around one GP for every 1,500 residents. The collaboration between GPs and DSM operators represents a precious resource for increasing the capacity for early detection of mental disorders.

Starting from this, in the last two years an increased collaboration between the Mental Health Outpatient Services and the network of GPs represented a suitable background for the implementation of new services of the MasterMind pilot (ccVC and cCBT).

If the pilot demonstrates the benefits of using these services at a clinical, economic, and organisational levels, and if new resources are made available, it will be possible in the near future to extend these services to a larger clinical target by involving a higher number of health professionals (psychiatrists, psychologists, and GPs), with a threefold aim: (1) to facilitate the introduction of these services during their daily practice to increase shared decision making between GPs and psychiatrists during the treatment; (2) to facilitate the introduction of ccVC during their daily practice as a support and monitoring tool to improve communication among health professionals and patients; and (3) to allow a significant proportion of patients to benefit from new services (ccVC and/or cBT) for the treatment of mild to moderate depression.

Change management

Regarding the cCBT service, various factors should be considered:

- The clinical target of these services typically refers primarily to GPs: thus, the first important thing will be to foster the collaboration with a larger number of GPs in our unit; to do so, we should be able to enhance GPs' interest in recruiting and pointing patients to these innovative services.

- In addition, it would be relevant not to limit the target to the psychiatric services, but also include different Departments whose patients can present with depressive symptoms (for example, oncology and neurology departments, and other patients with chronic illnesses in comorbidity with psychological symptoms).

- Lastly, it would be relevant to involve a wider spectrum of health professionals in our unit: not only psychiatrists, psychologists, and GPs, but also psychiatric nurses and professional educators.

Regarding the ccVC service, other factors should be considered:

- Fostering psychiatric consultations between different emergency rooms, where specialists are not physically available: in this case, ccVC between an emergency doctor and a specialist in psychiatry could help to reduce significantly the time and efforts for a consultation, as at the moment, patient needs to move physically from one centre to the other.

- To realise this, it would be necessary to have both technical equipment and the permission of all stakeholders involved.

- Lastly, it could be possible to also provide psychological counselling via the ccVC service, and not only monitor patients' cCBT treatment.

Plans for the policy level

In Italy, health policies are regulated at regional level; the upper level is represented by the "State-Regions Conference": thus, the first step would be to discuss at this upper level the

possibility to include these technologically innovative clinical services in the LEA, as all services not included in the LEA are not reimbursed directly by the Health System.[1]

However, regions can decide autonomously to reimburse additional services that are clinically effective but not included in the LEA, if additional economic resources can be allocated to cover their costs. Thus, any possible deployment of MasterMind services should necessarily be approved primarily by regional representatives and officers, provided that economic resources are available. These represent possible alternatives of health policies that aim to re-allocate available resources to cover the services considered clinically strategic.

Stakeholders at all the previously mentioned levels should verify the clinical and economic advantages of these services, in order to give permission to deploy them.

Plans for further technical development and/or integration

If the pilot demonstrates positive results at clinical, economic, and organisational levels related to these services, and if new resources are available, it will be possible in the near future to extend these services to a larger clinical target and to involve a wider spectrum of health professionals.

Within the MasterMind project currently active, we are using the tool iFightDepression© licensed by the European Alliance Against Depression (EAAD). The iFightDepression tool is a guided, internet-based self-management programme for individuals experiencing mild to moderate depression; it was developed based on existing evidence, best practice recommendations, and user and expert consensus. The tool is free to use, and is intended to help individuals to self-manage their symptoms and to promote recovery. The tool is based on principles of cognitive-behavioural therapy (CBT), and consists of six core modules with three additional modules that can be performed by patients, according to their clinical needs. More precisely, the iFightDepression tool consists of informative modules that focus on increasing daily activity, identifying and challenging unhelpful thought patterns, monitoring mood, adopting healthy sleeping patterns, and maintaining a healthy lifestyle. Associated worksheets and exercises encourage users of the tool to practice and consolidate new skills and to promote self-monitoring. In the MasterMind project, we localised and validated the Italian version of the tool (www.ifightdepression.com/it) that is currently used by over 150 patients in our territory. The advantages of this tool include that it is relatively easy to access and use, provided that a PC or tablet with an Internet connection is available, and that a useful psycho-education section is provided to patients.

However, while recognising the strengths of this tool, we also had the opportunity to acknowledge some limitations that have been recently overcome by the design and implementation by EAAD of a new version of the tool. So, if the clinical and economic conditions exist to realise the deployment of this innovative service for our region, we

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[1] The essential levels of care (LEA), are the facilities and services that the NHS has to provide to all citizens free of charge or on payment of a fee (ticket), with public funds collected through the general taxation; these have been defined by the Decree of President of the Council of Ministers of 29 November 2001, which entered into force 23 February 2002.

intend to use on a larger scale the new version of the iFightDepression tool, targeting mild to moderate mood and anxiety disorders both in adults and younger patients.

At the moment, the service is still not integrated into the information system that manages data of patients treated in the mental health department (GASPWIN/SISMA), so a long-term future step could imply integrating information about cCBT service into our current information system.

Plans for communication and dissemination activities

During the MasterMind project, our efforts were focused on setting up a set of actions and communication initiatives with the aim to reach key stakeholder groups, such as clinicians, patients, local and health authorities, etc. A set of dissemination tools has been produced in order to properly disseminate the objectives and the results: printed materials, facebook page, blog, conferences and presentations to GPs and health professionals, scientific publications, and presentations during scientific conferences at national and international level.

Some of these activities, such as publications and presentations during conferences and public events, will be certainly strengthened after the end of the project, particularly concerning the scientific relevance of the pilot experience considered to have the highest impact on specific groups of stakeholders, which play a relevant role for the deployment in our region and over: regional and health authorities, and the scientific community at national and international level.

Plans for the clinical area

If the MasterMind pilot demonstrates positive results (related to these services) at clinical, economic, and organisational levels, and if new economic resources become available, it will be possible in the near future to extend these services to a wider clinical target (i.e. mood and anxiety disorders in both adults and young patients), and to involve a wider spectrum of health professionals (i.e. not only GPs, psychiatrists, and psychologists as in the MasterMind pilot, but also nurses and professional educators specifically trained in providing and supervising these services). Another clinical extension of the use of this tool would be for patients with severe depression, who did not reach a complete clinical recovery from the psychopharmacological treatment prescribed. As many patients show a good response to antidepressant treatment, but nevertheless have a persistence of some depressive and/or anxiety symptoms, this residual symptomatology (such as insomnia or lack of energy) may be treated effectively by computerised psychotherapeutic services such as the cCBT tool considered here.

Plans for the financial area

Financial sustainability of the services implemented in MasterMind represents a big challenge for our territory, both at local and national level. Through MasterMind, tele-psychiatry tools have been introduced for the first time in Italy in the treatment of mental disorders. This was possible thanks to the combination of two basic conditions: on the one side, the availability of external resources from EU level (CIP-ICT-PSP Programme) and on the other side, the partial coverage of the project's effort through the local resources of the Local Health Unit Torino 3 (ASLTO3).

In Italy, the National Health System has a public nature, and it provides health services through Local Health Authorities (called "Aziende Sanitarie Locali", ASL). These are financed and controlled by their Regional Government. The Department of Mental Health

(Dipartimento di Salute Mentale, DSM) is the health organisation responsible for specialist mental health care in the community.

The healthcare services provided by the Local Health Authorities received a partial or total reimbursement from the regional government following the guidelines and rules established by the NHS. The main criterion for the reimbursement of healthcare is represented by providing to patients public healthcare services included in the LEA, which is the common and official basic level of assistance for covering the health needs of the population. Telemedicine services are basically not included in LEA, so they do not receive any form of reimbursement except for a number of specialised disciplines[2], which do not include psychiatry. At the moment, the current rule "Telemedicina - Linee di indirizzo nazionali" does not foresee the introduction of new forms or types of reimbursement for telemedicine services. It established a "consultation table"[3] at national and regional levels to evaluate the development and sustainability of the current experimental eHealth services for the specialised disciplines mentioned above.

On the basis of these aspects, as there is not already a fixed reimbursement model at national level, we intend to sustain a broader deployment of the tele-psychiatry tools through the use of external resources such as innovation funding by regional and EU programmes, support of local foundations, and continuing with the effort of the health professionals already involved in MasterMind to be considered as further availability of local resources.

National level

A further deployment of the services implemented in MasterMind at national level starts from a scaling-up plan at local level in order to strengthen the acceptance and usability of the eHealth tool for both health professionals and patients, especially after the end of the project. Only if we are able to demonstrate the sustainability of the services during daily practice from a clinical point of view and in terms of costs / effectiveness, will it be possible to set up the conditions to strengthen the inclusion of tele-psychiatry in the framework of regional and national guidelines.

Comments

The cCBT tool used (IFightDepression), while presenting some positive features, showed significant disadvantages, mainly related to the technical difficulty to fill in electronically the weekly diaries and to continue to work on a module without starting from the beginning of the module every time. However, the updated version of the tool currently available should be more user-friendly and easier to work with.

2.11. Middle East Technical University, Turkey

Pilot context and scope for the scale-up/deployment

The pilots are performed at the METU counselling centre, AYNA. The scale-up is being initiated at the counselling centres of several universities: Bogazici University BUREM, Baskent University PDR. The scope was intended for university students, mostly

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[2] cardiology, diagnostic imaging, ophthalmology, clinical diagnostics
[3] Intesa tra il Governo, le Regioni e le Province autonome di Trento e Bolzano sul documento recante "Telemedicina – Linee di indirizzo nazionali", 20 febbraio 2014.

undergraduates. However, we have also received participants from outside the university, and we are evaluating the input from this cohort as well.

Change management

A new centre was established at METU to help undergraduates with their educational goals and expectations, and to provide counselling. Our intervention is offered through an LMS (Learning Management System), and is based on problem solving therapy, making it more compatible with the new centre rather than AYNA. We will try to initiate service delivery through this new centre at the end of the MasterMind project.

Plans for the policy level

Therapist fees are not covered in routine healthcare services. There must be political decisions to make counselling and therapy free of charge for the patient, while the therapists receive their payment from the government. It is unlikely that the patient will pay therapist fees for this Internet service, because the patient never sees the therapist, and hence does not develop an obligation to purchase such a service, which is doubtful to satisfy his/her needs.

Plans for further technical development and/or integration

Our technical solution is available as an open courseware. However, we observe that people from outside the student body of METU are not used to this LMS; they are having difficulty starting up when the modules and exercises are launched for them. This is why half of the people from outside drop out. We need to provide a better LMS for everybody to use. METU students do not have a problem with this, because they are familiar with this system from the courses they take at METU. We need to provide a different technical service if we intend to serve a larger public body beyond METU.

Plans for communication and dissemination activities

We have started dissemination at universities in Ankara and Istanbul. We are targeting university students, mostly undergraduates. At the universities, we visit the counselling centres and hold meetings with the coordinators. Usually the counselling centre will have to seek approval of the university president's office. We provide our ethical board approval, but mostly each site wants to initiate another ethical board approval, unique to their site. This extends the process of recruitment from the patient body, but we go through this with patience, because we really want this service to be widely used.

Plans for the clinical area

For the time being, we do not have any plans and expertise to expand to other clinical areas.

Plans for the financial area

Our main resource was the budget allotment from the MasterMind project. We do not have any funding resource beyond this. Some institutional budget may become available to deploy the intervention at other universities. Still, this budget will have a limited life, about two years. For the future, the best plan would be to convince each university to hold this as a local service for its students, and have it funded locally. We will try this at the end of the MasterMind project.

National level

N/A.

Comments

N/A.

2.12. Schöen Clinic, Germany

Pilot context and scope for the scale-up/deployment

Within three years, three different internet interventions have been implemented into the German health care system with the help of the MasterMind project. Patient data on more than 1,000 patients have been gathered. The data and experiences show that the MasterMind service is an effective and valuable treatment for depressed patients that should be maintained. While the implementation success shows that the integration of the services is possible, many hindering factors have been encountered, such as personnel shortage, German legislation, the division of the German healthcare system, the many different health insurance companies, and the overall business case. These will be significant sticking points for the future deployment of the services.

Change management

Within the MasterMind project, Schoen implemented two internet- and video-based programmes into seven of their psychosomatic clinics. Within the seven clinics, the implementation status of the programmes varies significantly.

The pilot implementation site, Bad Arolsen, provides a stable recruitment of patients and therapists for both programmes. All MasterMind therapists are currently employed in Bad Arolsen. Patients are seen for diagnostic sessions on fixed dates, and inpatients are informed about the online programme on a regular basis. These fixed processes are lacking in the other locations, where, due to personnel changes and shortages, patients are recruited whenever there are resources. Furthermore, the recruitment processes could be more automated by the central patient management, but this department has been undergoing significant restructuring, with the result that a central implementation of patient recruitment processes will only be available by mid 2017. Nonetheless, even with the current recruitment processes, Schoen successfully recruited and treated many patients with the two programmes.

Patient recruitment is still limited, as only two health insurances are cooperating with the programme. Here, major effort is put into converting more health insurance companies into the programmes. Additionally, implementation in the north of Germany showed that recruitment of patients within the health insurance companies worked best by using the patients' case managers in the programme. Therefore, Schoen is now approaching the local case management centres of the health insurance companies in order to win and train more case managers for patient recruitment.

Another significant next step for deployment of the services is a working business case. In the current situation, the implemented MasterMind services are not profitable to the organisation.

Plans for the policy level

Political decisions have been brought forward during the MasterMind project period in Germany, but only to an unsatisfying level. Decision-making processes in this area seem to be especially slow, as strong opposing lobbies are fighting against each other.

The German Ministry of Health issued an "Act on safe digital communication and usage in the health care system", the so called "eHealth act". While the central points of this act concern digital patient files and safe communication within this system, there are also paragraphs on the facilitation of telemedicine and smartphones. Here, medical video consultation will be allowed starting from July 2017 within accredited physicians' services, especially in aftercare. The act stated that a transparent register of safe and useable systems will be provided, and that only their use will be promoted by health insurance companies. Furthermore, the act states plans on reviewing if smartphones should be allowed for access to those systems.

Plans for further technical development and/or integration

Schoen is using the Minddistrict system for the technical deployment. Minddistrict is constantly improving their platform, at the moment with a focus on better usability on smartphones and wearables. The functionalities of the platform have been upgraded so that now e.g. diaries can be structured in a more personalised way.

On the other hand, the Minddisrict platform cannot communicate with any of the Schoen patient file or data collection systems. At the moment, there is no interaction between the clinic system and the Minddistrict platform, which created a considerable amount of extra work, for example with regard to documentation. Then again, this improves patient data security, as personal information and treatment content are not saved in the same place.

Nonetheless, Schoen is considering alternative solutions to the Minddistrict platform, including building their own technical environment in the long run.

Plans for communication and dissemination activities

With further roll-out of the German MasterMind services, the communication of the service will become broader. The hesitation related to a nation-wide advertisement due to the regional implementation of the services is decreasing, and the health insurance companies have published several nation-wide newspaper articles. Patient information is a top priority for deployment activities at the moment. We developed new leaflets, and the webpage will be restructured at the beginning of 2017 to attract all those interested. The online interventions will be advertised earlier in the patients' informational process, right when they are signing in for any Schoen offer.

Information for interested health insurance companies is constantly provided, and different Schoen clinic representatives are in touch with several health insurance companies.

A lot of work is put into the government and political information in order to facilitate the legislative processes needed. Debates and informational sessions are conducted with, for example, the German Association for Psychiatry, Psychotherapy and Psychosomatics (DGPPN). This organisation sees opportunities and risks in the implementation of telemedicine: here, the opportunities to reach set care goals and tasks of psychiatric and psychosomatic care, provision of continuous care for chronic patients, the provision of evidence-based medicine and cross-sectorial care, as well as prevention of mental health conditions, versus the lack of acceptance, information and public relation activities, data

security issues, the debate of voluntariness of the use of telemedicine, and the existence of the "distant treatment legal prohibition". Here, we are actively involved in the discussions and information processes.

Scientific publications on the MasterMind project will bring the first evidence of the practicability of the services under routine care conditions, and therefore enrich the ongoing debate.

Plans for the clinical area

Since the summer of 2016, a MasterMind eating disorder relapse prevention, "Eat.On", has been piloted in the Schoen Clinic Bad Arolsen. For this purpose, the relapse prevention programme for depression has been split into trans-diagnostic content and depression-specific content. The basis of trans-diagnostic content can be used now with any patient suffering from any condition. Then, the relapse prevention treatment has been extended to eating disorder specific content. At the moment, the Eat.On pilot is running, and depending on the outcome, the programme could be extended to outpatients and/or the young. At the same time, Schoen is implementing the use of an eating disorder treatment app, which could be combined with the MasterMind service. Future target disorders for the services will be obsessive-compulsive disorder, post-traumatic stress disorder, and pain, as those are the biggest patient populations at the Schoen Clinics. There are also plans to implement higher functional depression screenings in the Schoen somatic areas, with a focus on depression prevention.

Plans for the financial area

The contracts made with the health insurance companies are temporary, and depend on the outcomes of the trials. After a set target number of patients, the health insurance companies will evaluate the future of the programme, and if they want to take it into their product portfolio. During the process of the project, several additions to the original contracts have been made, e.g. the option for long-term therapy up to 45 sessions, and the billing option for asynchronous therapy contact.

With the end of the MasterMind project, licences for the Minddistrict platform will increase significantly, but no decisions have been taken for future planning at this point.

In order to reduce personnel costs, the therapist contracts will be changed to special-order contracts by the end of the project. Payment for training is not planned within this procedure.

For the reimbursement model, the key is consistent contracts with many different health insurance companies, which is a lot of work and still a long way to go. Legal ground for telemedicine in Germany would help with the process, and we expect changes in this area within the next couple of years.

National level

N/A.

Comments

N/A.

2.13. Norwegian centre for Integrated Care and Telemedicine, Universitetssykehuset Nord-Norge, Norway

Pilot context and scope for the scale-up/deployment

In MasterMind Norway, we have been piloting cCBT and collaborative care via videoconference at a local level, public psychiatric centre, and outpatient clinic. We started out with testing and tuning these methods. The psychologist who participated in the project gave this treatment to 10 patients who were willing to participate. Then we trained five local clinicians in the use of cCBT, and gave them guidelines and monthly supervision. In addition to cCBT training for clinicians in the psychiatric centre, we have offered support to GPs for using cCBT in coping with depression. They can contact a specialist in clinical psychology by using videoconferencing or telephone. This includes the possibility to have collaborative care via Skype for business. We also established a consultation team (psychologist and psychiatrist) that provides support to GPs. This local centre has responsibility for 35,000 inhabitants.

The next step is to deploy these services to two other similar psychiatric centres at a regional level. We will use local clinicians as supervisors, and use the experience from the pilot to implement cCBT and ccVC at a scale that includes 90,000 inhabitants. The experience from this upscaling will be used for an even greater implementation of this service.

Change management

To achieve implementation at large scale, we need to present our experience from the pilot to all stakeholders, and define further work with implementation as a project with dedicated resources. Technical and professional support in a timeframe for two years is considered crucial to succeed. If we can prove some beneficial effects with our own numbers, this could be the start of a national initiative.

Deploying new technology solutions will also change the way work is organised, in all the involved organisations. We are working to get the psychiatrist who has experience in using ccVC in MasterMind hired in a permanent position. Our goal is that she will continue providing the service and train others in doing the same, both at the hospital and the district psychiatric centre.

We are currently offering the service in the area of the district psychiatric centre at Silsand. The next step in deployment is the centres at Narvik and Harstad. After that, the next step will be Troms and Finnmark counties, which comprise the whole area covered by the University Hospital of North Norway.

Plans for the policy level

The Northern Norway Regional Health Authority is preparing a development plan for psychiatric healthcare that is currently out for consultation[4]. This plan states that healthcare must be accessible to the patient, and that the patient should get increased access by using eHealth services. Treatment with solutions such as Skype or Facetime reduces costs and absences from school and work due to travelling.

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[4] https://helse-nord.no/nyheter/horinger/horing-utviklingsplan-for-psykisk-helsevern-og-tsb-rus

It also states that digital media can be used for psycho-education of patients and relatives, as well as training and education of health personnel. Digital media can also increase access to expertise inside the specialist healthcare sector, and increase collaborative care with municipalities. By 2025, eHealth should be an integrated part of the healthcare service, both as e-therapy and e-learning. Patients in the Northern Norway Regional Health Authority have access to their own patient journals on the web page helsenorge.no. This web page can also have other digital healthcare services such as an outpatient e-clinic.

In addition to this, the strategic development plan for the University Hospital of North Norway[5] states that the hospital will transfer competence and provide decision support to primary care and district medical centres.

Plans for further technical development and/or integration

It is a goal to upscale ccVC and establish videoconferencing as a standard possibility at all levels in healthcare, and provide eHealth programmes for a wide range of mental problems / disorders. It is important to integrate eHealth programmes on platforms that communicate with electronic patient health records. The choice of video consultation must be based on standards that do not need any kind of programmes for patients.

Skype for business is being rolled out to all healthcare workers in the Northern Norway Regional Health Authority; so far this is only for administrative use, but the goal is also to use it clinically. MasterMind has been a pilot for clinical use.

WEB RTC solutions will also make videoconferencing more accessible and widespread.

In MasterMind, we have been using the MoodGym cCBT solution. This is a good solution, but in some ways dated. Another large Norwegian project aims to develop a new Norwegian cCBT solution[6]. The result may be relevant for deployment in Northern Norway as well.

Plans for communication and dissemination activities

One of the most important target groups for dissemination is the management of the Northern Norway Regional Health Authority. We want to get their support, to get MasterMind services as a part of the regular health care service in Northern Norway. We are also working on including the management of district psychiatric centres in Harstad and Narvik, and further on, the district psychiatric centres in Finnmark County.

We will also target GP offices in the new areas. Our experience shows that it is important to involve both GPs and the technical staff of the offices. By involving technical staff, we can work with them to set up the technical infrastructure, without involving the GPs more than necessary.

The general population in the affected areas must also be informed of the services, especially the self-help part. In the project, we have used the website iPsyk.no. We have not made the final decision of what will happen to the web site after the project, but it is likely that it will continue to be used. The MasterMind-specific questionnaires will likely be removed, to make it easier to use. We have distributed leaflets and posters to GP offices that promote this website, so we expect it to continue to get visitors.

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[5]   https://unn.no/documents/om-oss/strategisk%20utviklingsplan_endelig%20versjon.pdf
[6]   https://helse-bergen.no/avdelinger/psykisk-helsevern/intromat

Plans for the clinical area

Video conference will be used in other clinical areas as well, for example anxiety, stress, etc. The service will be delivered in the same way.

Most videoconference solutions can share documents, pre-recorded videos, etc. We think that there is a potential for using these features in treatment of patients in the future.

At the moment, we do not have any cCBT programmes for anxiety, but we may include validated programmes when they become available. One relevant cCBT programme for anxiety is eMeistring[7]; this might be used in Northern Norway in the future.

Plans for the financial area

There is already a reimbursement structure in place for ccVC and guiding patients in the use of cCBT. Skype for business is already being rolled out in specialist care in Northern Norway, so it will not lead to any additional costs for the healthcare service. We recommend use of existing equipment when available, both in healthcare institutions and for patients at home. There might be some extra costs for equipment such as web-cameras, speaker phones, etc.

The cCBT programme MoodGym is available free of charge in Norwegian.

There will be some investments in time to train new therapists in using videoconferencing and cCBT. Future deployment is also dependent on the hospital management dedicating personnel resources to continue working on providing care in this way.

National level

Another Norwegian project aims to improve psychiatric healthcare by using interactive and adaptive technology[8].

In 2016, a Directorate of eHealth was established in Norway. One of their main goals is to implement eHealth solutions that improve and simplify the healthcare sector.

Comments

N/A.

2.14. Tallinn University of Technology, Estonia

Pilot context and scope for the scale-up/deployment

During the MasterMind project, TUT has been cooperating with several regional healthcare facilities, providing mental health and general medical care. The deployment strategy was improved in order to overcome technical difficulties, resource deficits, and implementation circumstances during project development process. At the end of the project, TUT has fully integrated new cCBT services available from PC and smartphones, functioning in different operational systems, and uncovering the main restrictions to implementing them in the daily routine care.

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[7] https://helse-bergen.no/avdelinger/psykisk-helsevern/bjorgvin-distriktspsykiatriske-senter/emeistring
[8] https://helse-bergen.no/avdelinger/psykisk-helsevern/intromat

Change management

Deployment of cCBT services depends on several aspects; at an organisational level, TUT works on the basis of individual interview with the head of the clinics.

The main issues that have been emphasised are:

- Awareness of CBT to provide service as general medical care in the GPs' offices.

- During MasterMind, TUT has received feedback according to further deployment that depends on professionals' competence to provide a service. This means that in order to provide CBT, a professional has to be trained and experienced in order to provide any form of CBT; but this does not include cCBT technical training, or training in how to use any software for this purpose.

- Resources.

- As mentioned above, professionals' awareness of CBT/ cCBT and their willingness to take new methods of care into use depends on their competences and time resources. At an organisational level, all GPs have extra time for e-consultations. However, GPs are offering cCBT during appointment time while they observe patients.

- Legal regulation(s).

- There is a potential to foster further deployment of any service if it is regulated by policy makers and health insurance companies in terms of reimbursement. This makes sense at organisational, professional, and individual level to support using software and other applications.

Plans for the policy level

An eHealth vision 2025 and an eHealth strategy deployment plan 2020 have been established and well adopted by the State. Chapter 5 includes the strategy for further deployment of telemedicine: provision of eHealth medical devices, e-consultations, applications, etc.[9]

Plans for further technical development and/or integration

During MasterMind, TUT has piloted iFightDepression (on PC) and CBT Basic app (on smartphones). From the technical point of view, CognuseManager (hereafter CM) platform[10] was selected to provide integrated eHealth services for the public, thus engaging both patients and healthcare providers in the treatment process. The CM platform is constantly improving and expanding its functionalities. More information is available from: www.cognuse.com.

Plans for communication and dissemination activities

From the start, TUT has disseminated information about the MasterMind project and cooperated with institutions such as:

- The Estonian Association for Cognitive Behaviour Therapy (http://www.ekka.ee/en).

- The Estonian-Swedish Mental Health and Suicidology Institute (ERSI) (http://www.suicidology.ee/index.php?page=3).

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[9] https://www.sm.ee/et/eesti-e-tervise-strateegia (only in Estonian)
[10] CognuseManager platform - A Comprehensive Rehabilitation platform for the Continuum of Care

- Hospitals and GPs' centres.

- The Innovation and Business Centre (Mektory): we have a lot of guests from the policy level and business (mostly from EU, USA, India, Australia, and New Zealand). We usually do a presentation for such guests mentioning the MasterMind project goals.

Publishing an analysis of results in a journal (data collected from the focus group interviews and individual interviews) is part of planned dissemination activities.

Plans for the clinical area

Telecommunication (including consultations by phone, emails and video-based communication) is used in each department. cCBT programmes are preferred to use in outpatient clinics (GPs' centres, private practices, and psychological centres) mostly treating mood disorders. In rare cases, anxiety and phobias might be treated in addition to face-to-face therapy and pharmacological treatment using e-medical devices.

Plans for the financial area

cCBT, or any other medical software used as an eHealth service, is included in the healthcare costs. Reimbursement of cCBT is not separated. In Estonia, healthcare costs are reimbursed by the National Health Insurance Fund or by patients (out-of-pocket). After the end of the MasterMind project, patients in private practice will need to pay to use the application on their smartphone (patients pay when they download from App Store or Play Market).

National level

eHealth vision 2025 and strategy deployment 2020 confirmed by the State.

Comments

N/A.

2.15. Agency for Health and Prevention, Greenland

Pilot context and scope for the scale-up/deployment

The Greenlandic MasterMind pilot at Queen Ingrid's Hospital is targeting groups of patients living in remote towns / villages with high transport costs and where there was no prior opportunity for therapeutic sessions.

Thoughts about upscaling have been to develop and investigate how treatment can be done more efficiently through new projects, but also going from one full time ccCV psychologist to two or three working only on ccVC at AHP.

Change management

There is no need for change management; right now at the psychiatric department approximately five patients per day have CBT. Offering 10-15 CBT treatments a day could be handled with the current structure.

Plans for the policy level

At the political level in Greenland, there is a wish for equal access to health services for all citizens, regardless of geographic location. AHP has therefore incorporated video conferencing between the department at Queen Ingrid Hospital in Nuuk and hospitals and health clinics in the rest of the country. There are personnel dedicated to working on the telecommunications psychiatric services with the support of the existing telemedicine and ICT organisation.

Plans for further technical development and/or integration

In the AHP (public healthcare), the bigger health centres have videoconference equipment, like the main hospital in Nuuk. They have a broadband connection. There is usually a videoconference room where the patient can be.

Smaller health centres have ordinary PC equipment and a broadband connection. There the patient will be in an office suitable for the purpose. The smallest health centres have telemedicine equipment, which is an advanced PC system that can also be used for medical examinations (Pipaluk). The system has a satellite connection. The equipment is located in a room that is used for physical examinations.

In general, the AHP is investing in technology for eHealth, but the infrastructure to upscale ccVC is already present.

Plans for communication and dissemination activities & plans for the clinical area

There are plans for the psychiatric area in Greenland to begin a PhD project, where the idea is to offer CBT through video conferencing in different parts of Greenland, in continuation of the MasterMind project. The point of this is to develop more effective treatment for depression / anxiety, but also continuing dissemination for using eHealth.

From the experience gained through MasterMind, it is assumed that there may be a need for more development in relation to adapting treatment to the various Greenlandic own / subcultures. Here, there is the opportunity to investigate how CBT is received in different Greenlandic environments.

Plans for the financial area

A description of treatment, results, and the importance of continuing the project has been delivered to the Home rule (Government) in Greenland. Costs for continuation have been calculated, and the hope is that financing will start at the end of the MasterMind project.

National level

N/A.

Comments

N/A.

3. Summary of local deployment plans

This section provides a summary of the main topics identified in this report, i.e. change management and organisational, policy level, technical aspects, communication, clinical areas, and financial perspectives.

3.1. Change management and organisational aspects

Organisational adaptations and change management are essential elements to take into account in a deployment process. These include new roles and staff composition, process (re)design and new organisations, and hindering and supporting factors. In the deployment plans in this report, these are related to what has been done in the sites and what will be done in the future.

According to the organisational setup and landscape of the different sites, the different change management and organisational aspects are relevant at territorial / regional level, across national health structures, and at government level.

New roles and staff composition

With the introduction of new technology (or new ways to use existing technology), new roles and distribution of tasks and responsibilities often come. New roles, especially at the level of healthcare professionals, are a recurring topic throughout the deployment plans in this report. For most partners, the new roles, such as nurses and GPs taking on greater responsibilities and new tasks, or specialists working directly together with GPs in their surgeries, constitute a challenge which is tackled by training, communication and information, and (technical) support.

Well-established teams, and in some cases, the use of case managers, have shown to produce good results in the enrolment process, while efficient / automated enrolment processes could be a deciding factor in the move to daily operation that many of the partners are facing.

In general, the structure and organisation of the healthcare services are detrimental for the different approaches to change management. In several cases, GPs are considered the most important professionals to target in a change management process, to a large degree because they often have a gatekeeper role for somatic as well as mental health services. However, as other entry points to the services have emerged, and because several other groups of healthcare professionals are relevant to depression treatment, the focus is also on involving a broader spectrum of professionals, e.g. psychiatrists, psychologists, nurses, and professional educators.

Process (re)design and new organisations

For most of the partners, the introduction of eMental health services has entailed some form of (re)design of their treatment processes, and also the introduction of new organisations.

There is a tendency towards the use of stepped processes to some degree mimicking the wave-system in MasterMind, where additional treatment centres or other relevant institutions are gradually included in the new service setup, learning from those who started earlier.

For most partners, this process includes a (re)design of clinical pathways and development of service infrastructure, e.g. moving to or from self-enrolment, a movement that goes in both directions depending on the present / original situation in individual sites.

Several partners also discuss moving the services into other types of organisations, such as job centres, prisons, police, local authorities, libraries, and new (sometimes service / eMental health-specific) clinics or centres. In this connection, and as mentioned above, some partners mention a stepped process as a beneficial implementation approach. The wide range of mentioned organisation types illustrates how eMental health is relevant to sectors other than primary or secondary mental healthcare, and opens up a greater reach than what has been achieved within the project.

Hindering and supporting factors

In their deployment plans, the partners mention many hindering factors, the most prevalent being, in random order: 1) legislation; 2) lacking resources in terms of personnel shortages and turnover; and 3) the division / fragmentation of healthcare systems, including the different payment / reimbursement systems.

However, a great number of supporting factors have also been identified; these will be instrumental in overcoming both the abovementioned and other challenges in deployment. First of all, a positive business case is seen by most partners as a great advantage, and a valuable tool in change management and decision-making processes. Another key motivation is the promise of delivering quick, affordable, and low threshold treatment to the large untreated population of depressed persons, which a recent large scale study revealed constituted 83% of all those suffering from depression[11]. For professional acceptance, time is suggested as a tool, i.e. giving the therapists time to get used to the new services and discuss their experiences with colleagues, as well as ensuring the necessary technical support. Along the same lines, using ambassadors or champions of the services is mentioned as a way to build ownership with key stakeholders such as healthcare professionals. Some partners mention setting targets for use and monitoring progress, possibly with economic incentives (bonus or fine) as a way to boost deployment in specific organisations. Also, local evidence of clinical effectiveness is of crucial importance for clinician uptake.

Patient recruitment, enrolment, and follow-up are topics in many of the deployment plans, and different strategies are in place, e.g. reinforcement and follow-up via phone or email. Still, regulations in this area differ greatly between sites, and what may be considered the only way to reach patients in one site will be unacceptable in another.

Finally, a recurring theme is that these supporting factors, and many others related to topics other than change management and organisation, will have to continue far beyond the implementation phase itself, i.e. the project lifetime, and more or less transform into a long-term / permanent arrangement. A quote from the Danish site reflects this consideration:

"This change has and still does require close management, motivating all involved to perform a united effort of up-scaling, constantly improving quality, developing the

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[11] Thornicroft G, Chatterji S, Evans-Lacko S, Gruber M, Sampson N, Aguilar-Gaxiola S, et al. Undertreatment of people with major depressive disorder in 21 countries. Br J Psychiatry [Internet]. 2016 Dec 1 [cited 2016 Dec 11];bjp.bp.116.188078-. Available from: http://bjp.rcpsych.org/content/early/2016/11/16/bjp.bp.116.188078

clinical practice, ensuring continuous communication and collaboration with external stakeholders, etc."

3.2. Policy

Policy determines the framework and possibilities for further deployment of the MasterMind services by ultimately creating the legal and political foundation for eMental health service provision. Throughout the deployment plans of the sites, there is a clear tendency of mutual influence between the project and the policy processes at local, regional, national, and international levels, which is also reflected in the sections below.

MasterMind influencing policy

Across the consortium, national and regional decision and policymakers have shown interest in the project and the services; but in most cases, new strategies and decisions will include final results from MasterMind in the process, e.g. evidence on cost-effectiveness, added value, user acceptance, sustainability, safety, etc.

Some sites experience difficulties in influencing policies, because of a general "slowness" and conflicting interests in the system, but overall, both the sites' participation in the project itself, and the expectation of a comprehensive evidence base, is used by partners to influence decisions about the future use of eMental health.

Several partners are very engaged in the political process and discussions about the political, clinical, financial, and legal implications of implementing eMental health services. Again, the final results of the project are seen as a useful tool to enrich the debate with evidence, and it is expected that they will play an important role in the process. It is evident that even after the end of the project, continued knowledge sharing at a regional / national level will be important. For the regions involved in MasterMind, international experiences and knowledge have become an important input to local decision and implementation processes.

Policy influencing MasterMind

Many of the sites report on regional or national eHealth or eMental health strategies and policies, which are relevant to the further deployment of the MasterMind services, i.e. either paving the way for further deployment, or acting as barriers to overcome. In any case, the abundance of strategies and policies in the field of eHealth and eMental health shows that the political landscape is mature for innovative and technological solutions to play a greater role in healthcare.

When it comes to policies and decisions related to the sustainability of the MasterMind services, the status of the different partners can be categorised as:

- National decision about roll-out taken or on its way.

- Regional decision about roll-out taken or on its way.

- Decision prepared, but waiting for results of MasterMind.

- Working to create the basis for roll-out (to some degree through MasterMind).

Supporting policy

Some partners mention how MasterMind or the use of eMental health can be a way to reach strategic government aims, such as referral-to-treatment targets. For all regional and

national healthcare systems, it is politically important to create a system that provides equal access to mental healthcare. Here, the MasterMind services are seen as an important tool. The quote below from NHS 24 is one example:

> "At a national health care level, the main changes include the incorporation of cCBT services into national strategies, performance targets, and national reporting mechanisms. This will include the incorporation of cCBT into national targets such as the 18 Week Referral to Treatment target for psychological therapies. or the government usage target for the increased use of telehealth or telecare solutions. These are currently imposed across territorial and specialist health boards by the Scottish Government."

3.3. Technical aspects

As the focus of MasterMind has been on the <u>implementation</u> of eMental health services, the choice or development of the technical solutions has been dealt with at partner level. However, the project has gained useful insights into the technical variations in the market. The experience from the project shows that applicable solutions are available in the market, but at the same time there is a great need for further development and adaptations to local needs and conditions. For all technical considerations, it is clear from the partners' deployment plans that continued technical support will be very important for the process ahead of them.

Changing devices / going mobile

Several partners mention considerations or ongoing activities moving from PCs to mobile apps and technology, either as a replacement or a supplement to the original solutions. The aims are greater accessibility and convenience for the users, as well as greater possibilities in motivation, monitoring, and feedback.

Considerations about continued use of the current solutions

In general, the partners see the solutions they now have as acceptable for the purpose of MasterMind and the first level of up-scaling, but it is clear that there is also a great need for further development, adaptation, and modernisation. This is expressed by the many partners considering whether the solution they have been implementing as part of MasterMind is the right one for their region or country going forward. Some consider developing their own solution based on the knowledge they have gained, or entering into a development process with the supplier of the programme; others will have a closer look at the market, possibly carrying out a procurement process. However, the development of the ICT solutions will build on the MasterMind experiences, and will in most cases be an incremental process starting from the existing solutions.

Equipment utilisation

Especially for the ccVC implementation, the use of existing equipment has been a relevant factor. Some sites have been able to set up the new services on existing VC equipment, thereby making more of a previous investment, while others have had to invest in new equipment, but have also found other uses for it, e.g. meetings between professionals in different locations.

Integration

Technical integration of the new services with existing systems, and the sharing of data across sectors, have played an important role for many sites, and will continue to do so beyond the project lifetime. Some partners have been working on the integration of the services from the very beginning, while the majority are still considering how, when, or if this should be done. Overall, a lack of integration appears to be a barrier to efficient implementation and daily operation, while the efforts to integrate the services have taken up so much time in some sites that the implementation process has become significantly delayed.
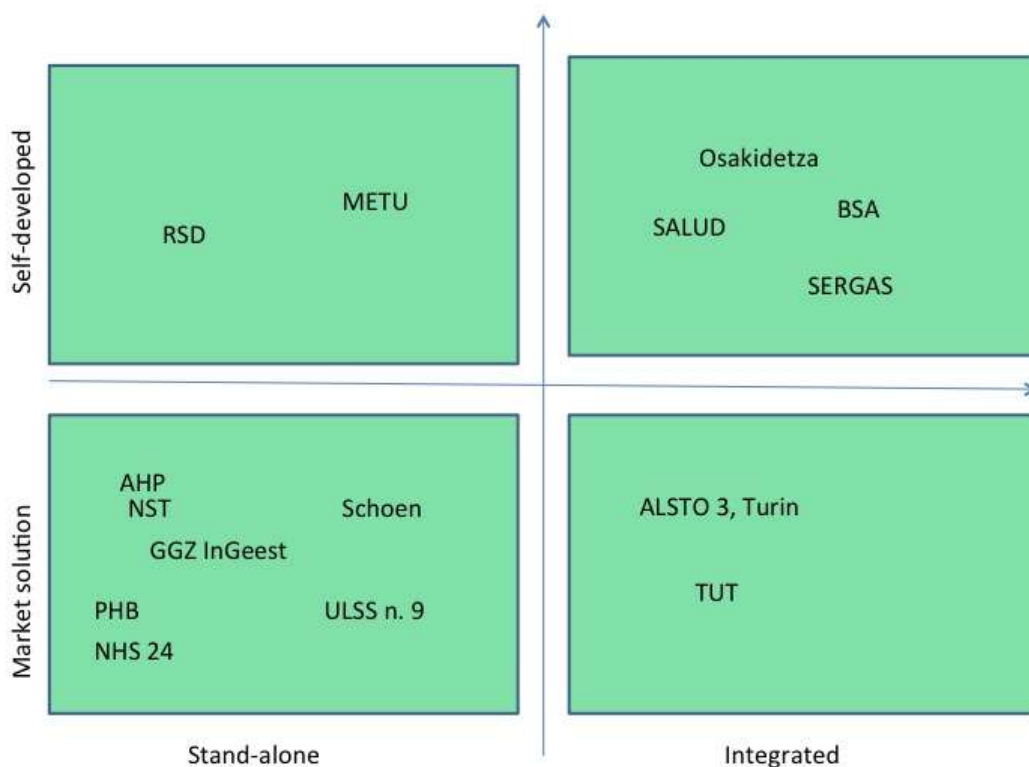

Figure 1: Placement of partners according to cCBT technical characteristics

A look across the implementation of cCBT systems in the MasterMind project shows two main dimensions that have been part of the considerations related to the technical solutions. The first is whether to use an existing system from the market, or go into a self-development process; and the second is the level of integration with existing IT systems. The placement of the MasterMind partners according to these parameters is illustrated in Figure 1.

3.4. Communication

Beyond ensuring visibility of the project and its activities, communication plays a critical role in the implementation and deployment process, especially communication carried out at partner level. Communication efforts in an implementation project can have many different target groups and purposes, e.g. communication with patients and professionals about the use of the service to be implemented versus communication with decision and policy makers to gain the necessary support for the implementation and further deployment. The deployment plans in this report show that partners have used these

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different dimensions of communication to their advantage, and that they see communication as an important tool going forward.

Target groups

All partners have considered which target groups they should be reaching in order to facilitate further deployment; these include management of healthcare provider organisations and health authorities, governments, health boards, decision makers, GP practices, mental health teams, technical staff, (potential) patients, the general public, and "other" organisations such as job centres or prisons. Although great efforts have gone into communicating about the project to external groups, it is clear that internal (to the organisations / sites) and local transfer of information has played an important role in the implementation processes as well.

In general, there is a great focus on decision and policy makers, all the way from local to national / governmental level, and healthcare professionals. Communication to patients has also been and will continue to be a key tool for implementation and further deployment, e.g. through enrolment and recruitment. This is mainly to create awareness of and demand for the services.

Relevant associations, e.g. those of patients and professionals, are also targeted by the partners with a view to building mutually beneficial collaboration and ensuring that the perspectives of end-users are taken into consideration, while the networks of the associations also constitute useful tools for dissemination of the services.

Channels and methods

The relevance of different channels varies across sites, but the majority apply a combination of events / face-to-face meetings, scientific publications, news/web, press and media, social media (including one blog), and their network of relevant organisations and associations. The focus is on a local / regional level, with some cases of national and international activities to reach a larger community and ensure the sharing of experiences beyond national borders. Some partners have carried out nationwide promotion activities, with the resulting demand exceeding their capacity, which has led to plans of more tailored promotion campaigns ensuring that the information reaches the right people. Others are considering going national after long processes to clarify legal issues.

During the project's lifetime, and as part of the implementation activities, a vast collection of MasterMind information and communication material local to the individual sites has been produced. This existing local material, such as leaflets, videos, and training materials, will be disseminated and made available at partner level as a way to foster further implementation.

On a more scientific, and, to some degree, overall level, several partners are also planning scientific publications as part of their dissemination effort. As concurrent activities to the project's main efforts to foster practical implementation of eMental health services, a considerable number of PhDs and other scientific studies have taken place with the project as their basis. These constitute a significant channel for communication and dissemination of the project's findings.

As mentioned above, many partners have taken advantage of their network in terms of relevant institutions and associations to reach healthcare professionals and patients. On an overall level, the project has disseminated through the networks of GAMIAN and EAAD.

All in all, MasterMind has been viewed as a successful project this success is mentioned by some partners as a tool for communication, also beyond the project.

Content

Communication and dissemination activities are expected to be maintained and even strengthened, after the end of the project based on the final results, which are expected to have high relevance to specific stakeholder groups with great influence on the deployment and sustainability of the services, such as regional and health authorities, and the scientific community. Apart from this, the focus will continue to be on the services, their functionalities, and their relevance to mental healthcare in different settings.

Purpose

As during the project, the focus of the partners' communication and dissemination efforts will be to foster continued implementation and deployment. Along these lines, several partners see communication as a way to ensure longer term commitment and funding for the services. At the same time, work will be done to build awareness of mental health issues in general and depression in particular.

3.5. Clinical areas

Based on the experience with eMental health for depression in MasterMind, the deployment plans in this report show that the partners see opportunities in expanding the concept to clinical areas other than those that have been the target in the project.

Going beyond depression

Most partners indicate an interest in expanding the provision of cCBT and/or ccVC to more clinical areas, and some have already branched out to other areas. The clinical areas specifically mentioned include: anxiety, stress, bipolar disorder, obsessive-compulsive disorder, (borderline) personality disorder(s), somatoform disorders, psychoses, disorders related to or caused by unemployment, prevention of suicidal risk, disorders mainly related to children and young people (developmental disorders, such as autistic spectrum disorders, and eating disorders), psychogeriatrics, psychological damage arising from disasters, perinatal mental health relates illness, post-traumatic stress disorder, addictions, and pain. While most of the partners keep their focus within the mental health area, some of them also mention the link to somatic healthcare, and in some cases specific illnesses. In general, there is a large gap between somatic and mental healthcare in many European countries, and, based on the input for this report, there could be a role for eMental health to play in bridging this.

New treatment formats

In addition to new clinical areas, different treatment formats are also considered by some of the partners, e.g. going from purely online treatment to blended care (where online modules and face-to-face sessions alternate) or providing CBT over videoconference. Some consider using ccVC for services than other those they have used in MasterMind, and some are planning to provide CBT through video to geographically isolated and underserved populations.

Some partners mention the multiple problems and disorders of individual patients as a reason for adding trans-diagnostic modules to the services, e.g. also addressing sleep, self-esteem, or emotion regulation.

As a side note to the plans for branching out to other clinical areas, some partners specifically mention using VC for other tasks and adding other features to their VC systems, such as document sharing and pre-recorded videos.

3.6. Financial aspects

The deployment plans reflect the difficult process in going from a pilot / implementation phase to daily operation when it comes to reimbursement and financial models. The plans also reflect the differences across the EU with regards to the structure and basic economic principles of the healthcare systems.

Implementation funding

With several partners, the aim is for the services to become part of routine care, and thus to have investment and operation covered by the healthcare provider, insurance companies, or other relevant authority. However, branching out to other clinical areas or scaling up will in most cases require additional external funding. Still, reaching a point where the services are funded as part of standard healthcare is no easy task. Related to this, several partners mention business cases as a fundamental part of their preparation for decisions on regional / national roll-out. Without a sustainable business case, it can prove very difficult, if not impossible, to get a political decision on a large-scale implementation process.

Running services

During the project, there have been examples of how the health system has supported the implementation of the services by making the necessary changes. For example, Denmark has seen a change in reimbursement for eMental health services in the sense that the same reimbursement rules now apply for video-conducted consultations as for face-to-face consultations. In Germany, some health insurance companies have changed the reimbursement system so that the services have the potential to become economically sustainable.

Some partners experience an extra challenge in rising licensing costs with the ending of the project, while others expect costs and the amount of resources needed to decrease from now on, because the investment has already been made.

Despite a general commitment to the services, many partners are still seeking a sustainable financing model for these services covering both investment and future service delivery, including maintenance costs (servers, Internet, PCs, etc.).
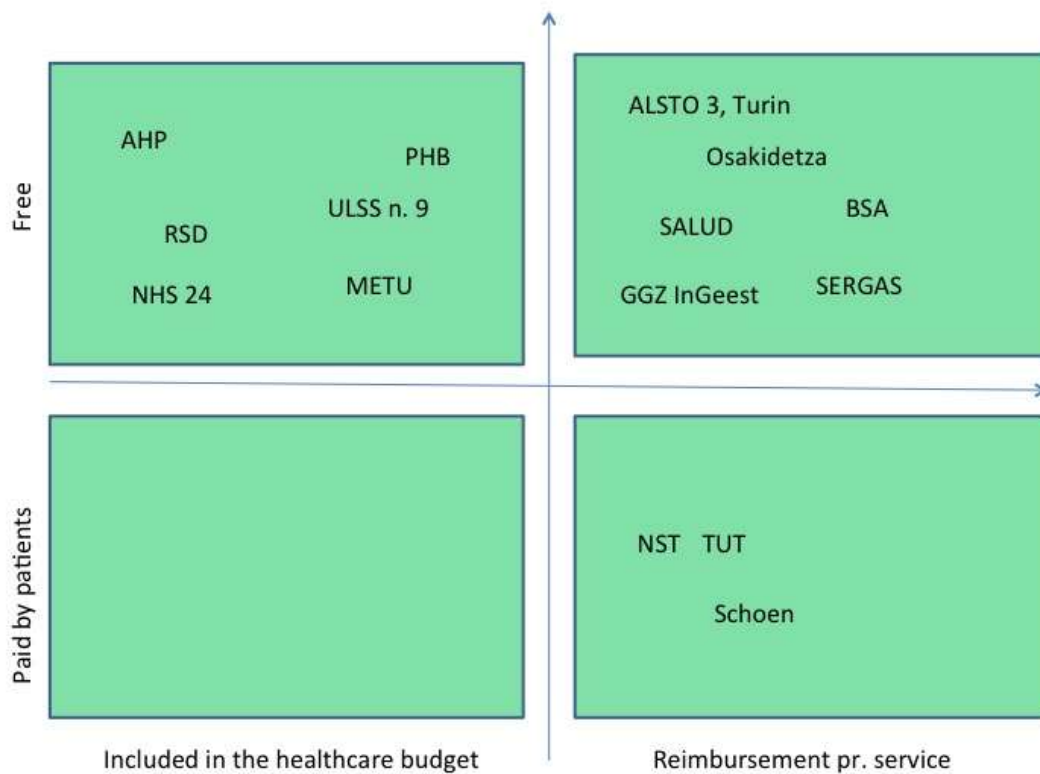
Figure 2: Placement of partners according to key financial aspects of the services

Across the regions participating in MasterMind, the services have been financed in a number of different ways. These can be distributed according to two central dimensions in the finance models. The first is whether there has been direct payment from the users (patients), or the service has been offered for free; and the second is whether the reimbursement system is based on activities or on a fixed budget. The differences across the MasterMind consortium are illustrated in Figure 2.

4.   Conclusions

For many partners, MasterMind has been their first big initiative in eMental health, and a stepping stone to not only cCBT and/or ccVC for depression, but also other clinical areas and applications of eMental health, including the related equipment and infrastructure. Additional to this, the experience from MasterMind has pushed the partners to think about mental healthcare provision differently, which will leave a lasting impression in the participating regions and countries after the project has ended. In general, and across the entire consortium, extensive plans are in place for the continuation of the services beyond the lifespan of the project, both in terms of daily operation, and for further deployment and expansion. For this report, no partners indicates that the provision of cCBT and/or ccVC will stop after the end of the project.

Based on the deployment plans from the MasterMind consortium, it is clear that the services will expand in different directions, including:

- An increase in the number of patients that will be offered the existing services.

- An increase in the clinical services that will be built on the MasterMind technologies, e.g. new disease areas such as anxiety or stress.

- An increase in the type of organisations that will be involved in the delivery of services, e.g. job centres, prisons, industry, etc.

- An increase in the technical devices that the services will be offered on, e.g. smartphones, tablets, or smart TVs.

According to the partners' considerations for this report, the adaptation of the services to other clinical areas is both feasible and desirable. It is therefore evident that their participation in the project will lead to a much greater variety in eMental health service provision than that which lay within the scope of MasterMind, which can be seen as a significant outcome of the project. Some partners mention the link between mental and somatic healthcare, which is currently an underdeveloped area, not just in the eHealth domain.

There is great potential for the utilisation of the services in other sectors, but this demands investments, primarily in implementation processes and organisational changes.

The figure below provides an illustration of the expansion of the services within the project, in the deployment plans, and the total estimated potential.
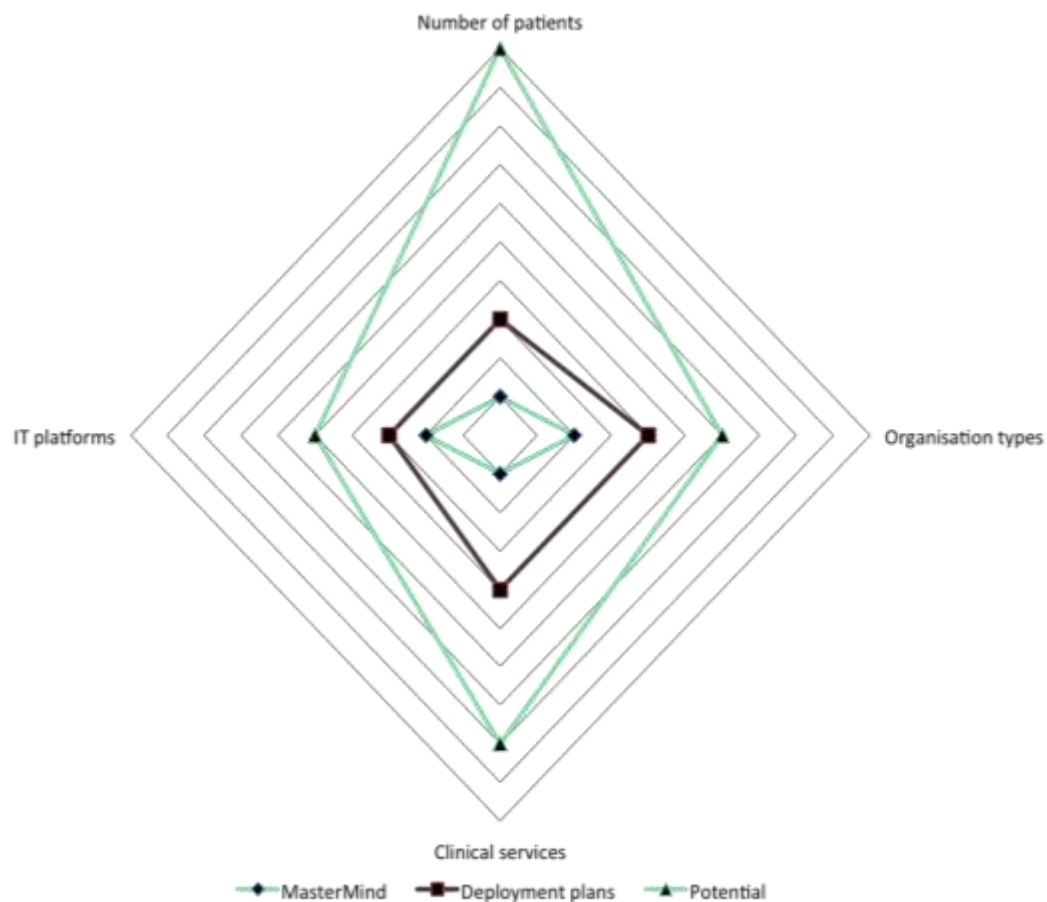
Figure 3: Expansion directions

From the deployment plans, it appears that some regions are planning to move from a referral-based system to self-referral, while some are considering moving in the opposite direction. In both cases, this movement is indicative of paradigm shifts within the local / regional / national healthcare systems. While it is not within the scope of MasterMind to push in any of these directions, it is likely that the exchange of knowledge and experiences within the project has contributed to these considerations across the consortium.

On the financial side, it seems that the regions that have developed their own solutions will have a more cost-efficient setup as their running costs for licences, infrastructure, etc. appear to be significantly lower, and also more in their own control. Whether this will also be the case in the long run depends on what the market will develop.

From the deployment plans, it is clear that the market is not at all closed. Regions are considering how to deal with the further development or adaptation of the technical solutions, a need that is clearly visible from their descriptions. An interesting finding is that there are a lot of considerations about whether to buy an existing product from the market, or go for a self-developed solution. Therefore, there are still opportunities for new companies to enter the market of cCBT, ccVC, and related services.

Communication evidently plays an important role; it has been key in the implementation process, e.g. to develop common understandings of what the services can achieve, and to build ownership with key stakeholders. These activities will continue after the project ends. Many local governments are aware of and interested in the project, and the perceived success of the project has been used as a tool in communication efforts. When available,

the final results will be used to influence them, and push for continued operation and/or further deployment.

> "Key decision makers have been kept informed of the progress and success of the MasterMind project." – NHS 24, Scotland

Different needs for direct communication with primary care (connections between primary care and mental health services, e.g. data sharing) have been identified, and will be part of the deployment processes. It is a key issue for the further up-scaling of the services in most sites that the eMental health solutions are closely integrated and become part of regular care, and are not seen as detached from regular practice, now or in the future. To create sustainable solutions and ensure acceptance, the services will have to be seen as part of the normal health care system. In this process, communication towards all stakeholders plays an important role as a tool for "normalising" the services.

The MasterMind project exhibits the large variation of structures, processes, and cultures within European healthcare systems. However, the project has also shown great potential in learning and transferring knowledge and solutions between the different regions in Europe. In the deployment process ahead of the regions, there is also a need for exchange of knowledge, and this is part of many deployment plans. This need for learning is especially related to other regions' experiences with different treatment formats, organisation of services, reimbursement regimes, technical solutions, training methods, etc.

Along with communication as a tool for implementation, time is suggested as a tool for professional acceptance, i.e. giving therapists time to get used to the new services and discuss their experiences with colleagues.

On the political and practical level, the possibilities that eMental Health offers to ensure equal access is an important factor for all partners, but some partners have made it an explicit part of their decision base for the deployment plans.

An interesting, and maybe not unexpected, area of focus is the need for cultural adaptation of the services. This need exists on many levels, and concerns both the consequences for the relationship between patients and professionals, the relationship between different professions, and the adaptation of the technical solutions and processes to the local culture. It is clear that the cultural adaptation plays a role in deployment; as this has not been investigated in depth in MasterMind, it would be an interesting area to explore further.

The experience of being part of a European project, and what this entails in terms of collaboration, external push, and of course funding, is mentioned by many partners as a factor directly causing eMental health to be implemented or further deployed in their region or country. Throughout the deployment plans, these examples of the "MasterMind effect" include:

- Collaborating with, learning from, and using experiences from other European regions and countries, i.e. added European value.

- Building an arsenal of experiences that can be useful to others, e.g. regions and countries outside of the consortium and new implementation projects within the MasterMind regions and countries.

- Push-effect of the project: economic catalyst, being part of a larger context and community, feeling of obligation, awareness.

- Encouragement of some professionals to extend the use of eMental health to other disorders; in some organisations, new working groups or other initiatives have been established to continue and expand the activities in eMental health.

- Combination of EU and national / regional funding has made it possible to reach the current level of implementation.

In addition to this, and based on the information from the partners in this report, MasterMind has increased their competences and readiness to play an active and central role in potential national implementation processes. Several partners express having gained the experience necessary to take on a leading role in a national / regional roll-out, and can thus be regarded as pioneers in this field.

One important theme in all deployment plans is the need for a tight process in going from a project setup to daily operation. This demands a strong technical consolidation of the services, an efficient and robust back up and support infrastructure, and, in some cases, an update of the ICT infrastructure for the health care providers.

Overall, both the project and the individual partners have gained experiences that can be used in the future, e.g. further deployment and additional implementation projects. It will be important to find a new structure to ensure that the knowledge and results from the project, and not a least the planned deployment projects, can be shared and discussed, not only for the benefit of the MasterMind regions, but for all regions and healthcare providers in Europe wishing to explore the potential and benefit of eMental health services in the future.