



Multimorbidity

Overview

Multimorbidity, defined as a co-occurrence of two or more chronic conditions, is an increasing problem worldwide and is already a significant epidemiological problem in Europe related to the increase of life-expectancy and rapidly aging population. Observational study reviews have estimated that up to 95% of people older than 65 years may be affected by multimorbidity. Although multimorbidity prevalence increases with age and frailty, it is not only associated with aging and can affect younger people too, where frailty assessment tools are not well developed. It is also strongly associated with social determinants and people from deprived areas are in higher risk of complex conditions, less access to care delivery system and poorer health outcomes. However, there is a lack of effective risk stratification tools.

In the following we will define the care delivery shortcomings ("pain points") and person-centred integrated care procurement objective with the modified sections and components based on the recommendations from the consensus meeting of the Joint Action on Chronic Diseases and Promoting Healthy Ageing across the Life Cycle (JA-CHRODIS).

Care Delivery Shortcomings

Delivery of the Care Model System

There are shortcomings in the care delivery system at design level that prevent from a comprehensive assessment of patients:

Patients with multimorbidity need regular comprehensive assessment. Current services are not designed to offer this holistic approach. They lack multidisciplinary team organisation, coordination and information sharing strategies, decision-making process definition, adaptive and personalised IT systems, personalised patient monitoring strategies and capacity and training in the workforce.

Care providers do not have enough training and guidance to offer and follow a personalised care plan to their patients. Service organisations do not always support trust among professionals and there are no strategies to support team building and team working. There is no information integration among different professionals and care providers involved in the care of the patient and resources for assessment, planning and updating information and care plan are lacking.

During the assessment, patient risk stratification should include social and health information, patients' and their social network's capacity and capability to face the treatment burden, and it should be able to detect target groups for eHealth strategies or other support tools. There are no tools to integrate the whole information and to offer a holistic overview of patients' situation nowadays. The fragmentation of risk stratification processes, which are disease-specific or excluding the social component does not offer enough information to develop an adequate care plan. There are no standardised tools based on evidence in multimorbidity beyond the sum of different disease-specific tools, and the information about disease interactions and drug interactions is not addressed properly.



Multidisciplinary, coordinated team:

Multidisciplinary teams are necessary to assess and treat all the complex needs patients with multimorbidity have including medical, pharmacological, social and psychological perspective. The core team should include a clinician with a generalist approach (primary health or specialist level -internal medicine or geriatrics-depending on complexity) who should be able to centralise and optimise all clinical components of patients' care. The team could be supported by external specialist if needed. High level of coordination and information sharing should prevent from duplications of tests, drug interaction, contradictory information and errors, and should also decrease patients' and systems burden.

Professional appointed as coordinator of the individualized care plan and contact person for patient and family ("case manager"):

The care team should include one nominated clinician to coordinate the medical treatment, make medical decisions and agree on the care plan with the patient, as well as a case manager who should be the first contact with the patient. Case manager would guarantee a single entry in the system and act as a link between the patient and the team.

Individualized Care Plans:

There is a cultural shift in society regarding to the relationship with health providers from paternalistic to co-production. In the case of patients with chronic conditions and multimorbidity the co-design of their care plan provides support and confidence to both the care providers and patients. The individualised care plan should be written, updated live to show the latest decision, accessible for all the care providers and it should include all the decisions agreed with the patient. The care plan should address the risk stratification and risk prevention discussions, the progression of the disease and negative outcome predictions and plan the response. The current information sharing tools do not usually offer the needed flexibility to include individualised care plans and the access to the information is frequently limited to the care team.

The guidelines for multimorbidity should include different possible pathways based on evidence to support health providers and patients to make an informed decision. There is no availability of such guidelines nowadays.

Electronic patient records, exchange of patient information and uniform coding of patients' health problems:

As explained above, one of the most challenging aspect of the design of new care models are information sharing systems that need to be safe due to their sensitive information as well as accessible from all the care providers. In most of the current systems electronic health records are not accessible to the whole care team and different stakeholders use different IT systems making the exchange of information cumbersome. Professionals do not receive appropriate training in the coding system and duplications and errors are frequent. Information systems do not offer options to summarise patient's progression and status data effectively. Suboptimal information sharing increases the risk of adverse effects in the care and treatment such as drug-drug interaction, increases patients and care providers uncertainty and decreases trust in the system and therefore patient's compliance with their treatment.

From the system perspective, ineffective data collection and coding undermine the possibilities of system.



What is more, the adoption of information and coding systems are costly and difficult. They should adapt easily to new care delivery models and be modifiable to new populations needs. However, they usually offer little flexibility, the changes are costly and time-consuming, so there is a high resistance to change the systems making using tools outdated and inefficient.

Information sharing limitations and legislation beyond health system organisation borders:

In many countries health systems within a country are organised in regions and the boundaries of the information sharing system are limited to the health provider in the region. There is a need to acknowledge that people with multimorbidity travel from one region to another, and from one country to another more easily and frequently than in the past, mostly between European countries for short, intermediate or longer periods. It is necessary to find strategies to share information saved in local health systems among European regions and countries ensuring data safety and patients' confidentiality but providing continuity of care to patients.

Socio-economic disparities:

There is a lack of tools to address the effect social determinant of health and their impact at population health level regarding multimorbidity as well as risk stratification strategies to include socio-economic information to adapt preventive measures.

Medication delivery model:

Drug delivery model need to acknowledge the current challenges regarding to polypharmacy, the need to include drug and disease-interaction in the research agenda and adapt current drug presentation to improve their suitability for complex situations.

Decision support

Implementation of evidence-based practice:

There is a lack of multimorbidity-centred approach in current guidelines which are based on specific diseases so current guidelines need to be applied with caution. Professionals need to be aware of the possible disease-interaction and drug-drug interaction. Computerized standardised clinical charts would help in the decision-making process.

Avoid low-value based diagnostics and therapeutic interventions:

All interventions that have shown to be non-beneficial or harmful need to be avoided. There is a need to systematic review of the existing evidence and guidelines to discourage professionals to offer unnecessary treatments and promote a better use of resources. In the past research has been focus on the underuse of resources but there is an increasing need to tackle the overuse of resources, specifically in complex situations. There are initiatives supporting this approach such as Prudent Health Care in Wales, Choosing Wisely, Smarter Medicine, "Klug entscheiden" for example, but wider dissemination, better training and education tools are necessary.

Training members of the multidisciplinary team:

Multimorbidity situations include a huge variety of combinations and complexity levels. Whereas low and intermediate risk patients are more easily managed by teams, more complex situations increase uncertainty



due to lack of training on technical skills, and team management and coordination. Therefore, high-risk patients are at higher risk of poor-quality health care and outcomes.

Access to external experts by the team to improve their knowledge and to support complex situation management should be guaranteed.

Teams should have clear protocols and pathways on patient management and decision-making processes, good and updated information sharing processes, and clear problem-solving protocols. All team members should be aware and trained on the existing protocols and pathways.

High turnover rates in teams put at risk the stability and smoothness of the team management and coordination and the care of the patients. The system should encourage the creation of stable teams as well as guarantee all new team members are fully trained when they become a new member or the team.

Developing consultation system to consult professional experts:

Access to experts is usually difficult by the teams. On one hand, it may be difficult to know and access the experts in a field. On the other hand, the difficulties in bureaucracy and the delay in responses in the access to the experts may make the effort futile and both the team and the patients may feel abandoned.

Self-management support

Training of care providers to tailor self-management support based on patient preferences and competencies:

The team should be trained in their communication skills, in the adaptation on language levels and in the use of other communication strategies. The team should also have strategies to motivate and support patients in their self-management, to increase treatment compliance as well as to increase their health literacy and empowerment to enable them in the decision making. Many times, team members do not have skill or preparation to engage with patients and it is only based in their personal ability. The health system should support team member training and their access to educational material.

There is also a lack of tools to assess and understand the burden of treatment patients, families and carers have and, to assess the capacity to cope with this treatment burden. There is a need to improve evidence, guidelines, tools and strategies to support care providers and care team in the assessment of treatment burden and in its optimisation.

Providing options for patients and families to improve their self-management:

The availability of training options and material that is adapted and personalised to different conditions is very irregular among health providers and services. The educational material should be adapted to local context and different capabilities, and available for patients and carer to revisit. The better education and knowledge patients have the more enable they will be to make informed decisions in their own care and engage with their care plan and treatment.

Shared decision making (care provider and patients):

Care providers should be trained to offer the best possible information to patients and empower them for the decision-making process. There is a need of training on language and capability adaptation. On the other



hand, the information technologies allow patients easier access to information even though information on internet may be misleading and may increase anxiety to patients. Patient-care provider relationship and trust is also hampered if the information is contradictory. New strategies to lead patients to good quality information are needed and care providers need to be trained to face well informed patients as well as misinformed patients to guide them to good information sources and manage the resulting conflicts.

Patient-operated technology allowing patients to send information to their care providers:

There is a lack of existing and adapted devices and tools to allow direct communication between patient and care providers. Medical devices, supportive aids and health monitoring tools should be user-friendly and support strategies should be available. Patients should receive adequate training about how and when use the existing tools and there should be a prompt response and easy contact to support and solve patients with errors in patient-operated technology errors.

Care team should have access to the information shared by patients easily and in a simplified way to detect abnormalities that need to be reviewed. The systems should get improved functions and formulas to balance the risk of missing a significant abnormality and the enormous workload if no significant data need to be reviewed regularly. Care team should also be trained in the protocol of the review and react process of the monitoring data they receive.

However, not all patients feel comfortable or prefer using devices and eHealth technologies. There is a need to develop strategies and risk stratification tools to identify target population eHealth strategies should be offered. Professionals need to be trained in the correct and good use of technologies and to balance face-to-face interaction with technology contact adequately.

Social and community resources

Supporting access to community and social-resources:

Assessment tools, information sharing strategies, health and social professional's joint decision support and formal social resource provision should be improved. There are no comprehensive social support assessment risk stratification tools that are also integrated in the holistic health care assessment process. There is a need to detect patients' and carer's social networking and social support, risk stratification for losing of social support and isolation risk. At the population level, a multilateral information sharing strategies and access improving tools should be also developed to improve the co-design of the urban architecture and transport services for instance to improve access to people with diverse difficulties.

Involvement of social network (informal), including friends, patients' associations, family and neighbours:

Strategies to facilitate access to community activities should be enhancing. Local and global communities could play a part in the support of patients and carers. Volunteer work and informal activities should also be better integrated in the community resource planning.

Integrated Care Procurement Objectives



1. Develop strategies and tools to support care teams with specialists for complex case management. Centralised expert team directories and protocols to access (even remotely) should facilitate the care of patients and increase the confidence of the team.

Related Integrated Care keywords :

- CARE TEAM BUILDING
- SERVICE, FUNCTION AND CARE INTEGRATION / COORDINATION – TRANSITIONS
- WORKFORCE RESOURCES, TRAINING AND CAPACITY BUILDING

2. Create and provide tools that promote patients' comprehensive assessment, including health and social variables but also the progression of the conditions and the decision-making processes.

Related Integrated Care keywords :

- HOLISTIC AND COMPREHENSIVE APPROACH
- PERSONALISED CARE
- PERSON-CENTRED

3. Develop drug interaction detection tools and integrate the role of pharmacist in the care team to optimise treatment and avoid risk. Research improvement and evidence-based guidelines for drug interactions are necessary to be included.

Related Integrated Care keywords :

- CARE TEAM BUILDING
- HOLISTIC AND COMPREHENSIVE APPROACH

4. Develop tools to help monitor patients with multimorbidity in real-life situations and share that information with the care team.

Related Integrated Care keywords :

- DATA AND INFORMATION SHARING
- DIGITAL HEALTH

5. Address the difficulties for treatment compliance in long-term and complex situations with polypharmacy. Develop strategies and tools to promote adherence assessment and detection of treatment fatigue as well as providing support for patients and family carers.

Related Integrated Care keywords :

- DIGITAL HEALTH
- HOLISTIC AND COMPREHENSIVE APPROACH
- PERSONALISED CARE
- PERSON-CENTRED
- SELF-CARE AND SELF-MANAGEMENT

6. Address the lack of information integration among different stakeholders and different health and social care providers, resulting in information fragmentation and increase risk of errors. This shall include the development of a summary of a patient's information, (e.g. needs, care plan, medication, care delivery



schedule) with the content being subjected to local role based access rules, and made available to all care practitioners. The solution should also include the development of a standardised coding system to identify the patient's main problems and for the codes to be accurately mapped to the coding of other systems or documentation used by the care team.

Related Integrated Care keywords :

- DATA AND INFORMATION SHARING
- HOLISTIC AND COMPREHENSIVE APPROACH
- SERVICE, FUNCTION AND CARE INTEGRATION / COORDINATION – TRANSITIONS

7. Address the lack of training and resources in care teams to capacity building on technical skills on complex situations as well as team coordination protocols and strategies. Decision-making processes, patient-contact strategies, standardised language and coding system and the use of the existing tools need to be developed and all users need to have updated and regular training. Address the low effectiveness of some of the existing training strategies (such as checking lists to access to a job) and promote engaging and team building training processes.

Related Integrated Care keywords :

- WORKFORCE RESOURCES, TRAINING AND CAPACITY BUILDING