



## Two projects of the Belgian PROTOCOL 3 Programme, Belgium

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Currently, an estimated 50 million people in the European Union live with multiple chronic diseases (multimorbidity), and this number is expected to increase further in the near future. As multimorbidity deeply impacts on people’s quality of life –not only physically, but also mentally and socially –, there is a growing demand for multidisciplinary care that is tailored to the specific health and social needs of these people. Integrated care programmes have the potential to adequately respond to the comprehensive needs of people with multimorbidity by taking a holistic approach while making efficient use of resources. Such programmes are characterised by providing patient-centred, proactive and coordinated multidisciplinary care, using new technologies to support patients’ self-management and improve collaboration between care providers.

In order to inform policymakers, managers and professionals working in health and social care as well as patients’ and informal carers’ representatives throughout Europe about promising initiatives providing integrated care for people with multimorbidity, a series of case reports describing these initiatives was written as part of the ICARE4EU project (see Colophon). This case report describes two exemplary projects of the Belgian national (federal) PROTOCOL 3 programme (entitled “Alternative and supportive care”), implemented by the National Institute for Health and Disability Insurance.



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### **Summary of the PROTOCOL 3 Programme**

- The aim of the Belgian PROTOCOL 3 Programme is to reduce the risk of frail older people for institutionalisation by stimulating the development and provision of alternative types of care for frail elderly. For this, the PROTOCOL 3 programme funds multiple bottom-up innovative projects for community-dwelling frail older people's care and support in the entire country. Four types of alternative care models are eligible for the PROTOCOL 3 Programme:
- Model 1: diversification of the existing residential care facilities via new home care supporting modules, e.g. short stay, temporary admission in crisis situations, day care, and overnight stay;
- Model 2: diversification of the existing residential care facilities via additional care services, care activities, and care support at home, e.g. occupational therapy, nursing and allied health care;
- Model 3: development of new home care support modules and/or care functions and care activities via collaboration between care providers;
- Model 4: alternative residential facilities in-between the private home and residential home.
- A first call for projects was launched in 2009; 63 projects were awarded. A second call was launched in 2013, from which 26 projects received funding (partly as continuation of a project from the first call).
- The PROTOCOL 3 Programme was based on an agreement between the federal state, regions and communities and is managed by the National Institute for Health and Disability Insurance. The total budget was approximately 35 million Euro.
- The 63 first-call projects were scientifically evaluated by a consortium of Belgian universities. The evaluation showed that the PROTOCOL 3 Programme was effective in terms of reducing the risk for institutionalization with a positive benefit-cost ratio, except for projects which focused on providing night care services.

## **1. Relevant developments in health and social care for people with multimorbidity in Belgium<sup>1</sup>**

Currently, 18% of the total Belgian population of 11.2 million people is 65 years or older. In 2004, 19% of the women and 10% of the men aged 50 years and older was in need of care services<sup>2</sup> (1). It is expected that these rates will increase towards 2060 to 15% and 27% respectively.

The care for persons with chronic diseases and multimorbidity is provided in a mixed system of medical care, publicly financed formal care services and informal care provided by mainly family members. The organisation of long-term care (LTC) services is divided among the federal, regional and local levels according to the division of responsibilities in Belgian constitutional law. As a general rule, health care is a federal responsibility, and personal care a regional one. As a result, LTC services that require the intervention of medical doctors and paramedical and nursing staff are in principal organised at the federal level (2).

The bulk of LTC services is provided as part of the public, compulsory health insurance system at the federal level (Federal Compulsory Health Insurance Law of 14 July 1994), which is financed by social security contributions and general taxes. As public health care insurance practically covers the entire population, LTC coverage is also nearly universal (especially since 'small risk' insurance has recently been extended to cover self-employed persons, who were not covered for these risks by the public, compulsory health insurance scheme prior to 2008). However, given that long-term care services provided by the health insurance system only cover nursing care (as well as paramedical and rehabilitation care) for dependent persons (in both residential and home care), a broad spectrum of services has been organised and is provided at the regional and local levels. Indeed, while there is no specific long-term care legislation at the federal level, the regional governments have issued decrees that regulate a wide range of issues related to LTC services: the certification of facilities such as nursing homes, integration and coordination of services at the local level and quality monitoring systems (2).

LTC service provision remains complex and fragmented (partly because of the division of responsibilities between the federal and the regional levels). As a consequence, elderly persons and their relatives may have a hard time to obtain the help they need, despite the relative abundance of its potential supply.

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<sup>1</sup> This paragraph is a summary of parts of the report by Willemé, 2010.

<sup>2</sup> 'in need of care' is defined as having ADL difficulties expected to last at least three months (at least difficulties with bathing/showering and dressing) or experiencing severe cognitive limitation

Belgium's long-term care system provides sufficient and high quality care services given the current needs. The main immediate challenges are the coordination and integration of care in different settings and the affordability of care for financially vulnerable groups. In the longer run, however, given the projected share of elderly persons in the population in the decades to come, the overall financial burden of the system will become a major challenge. Moreover, the projected growing numbers of dependent elderly persons will pose the problem of finding equally growing numbers of informal and formal carers in order to maintain the current levels and quality of long-term care in the future (2).

## **2. The PROTOCOL 3 Programme**

### ***Main characteristics of the PROTOCOL 3 programme***

The overall aim of the PROTOCOL 3 Programme was to stimulate the development and provision of alternative types of care for frail elderly with the aim of allowing people to stay at home and to reduce the risk of institutionalisation in nursing homes. The Programme was launched on a national scale by INAMI/RIZIV, the National Institute for Health and Disability Insurance following an agreement between the federal state, regions and communities (the so-called Protocol 3 agreement). The Programme includes funding of multiple bottom-up innovative projects for community-dwelling frail older people's care and support in the entire country. Local and regional initiatives throughout the country could apply for funding.

Four models were eligible to be financed by this programme:

- Model 1: diversification of the existing residential care facilities via new home care supporting modules, e.g. short stay, temporary admission in crisis situations, day care, and overnight stay;
- Model 2: diversification of the existing residential care facilities via additional care services, care activities, and care support at home, e.g. occupational therapy, nursing and allied health care;
- Model 3: development of new home care support modules and/or care functions and care activities via collaboration between care providers;
- Model 4: alternative residential facilities in-between the private home and residential home.

A first national call for projects in the PROTOCOL 3 Programme was launched in 2009; 63 projects were awarded. A second call was launched in 2013, where more emphasis was put on the collaboration between health care providers; 26 projects were awarded. For the ICARE4EU project we have performed a site visit to two of these bottom-up projects, proposed by the national PROTOCOL3 programme

management, one in the Walloon region (the ADS project, La Louvière) and one in Flanders (the SOM+ project, Zele).

### ***Results of the evaluation of the PROTOCOL 3 Programme***

The projects awarded under the first call of the PROTOCOL 3 Programme have been evaluated by researchers of a consortium of Belgian Universities (3). These evaluations, based on two national databases (a database indicating the health care needs of participants – based on the BEL RAI assessment instrument – and IMA, an administrative database of health insurance claims data), aim to assess the cost effectiveness of the entire programme. Outcomes or performance of individual projects cannot be identified in this evaluation.

In total, 10,773 persons were included in the 63 projects, with a relatively high number of people with severe IADL limitations and/or a high care burden of informal carers. Their mean age was 81 years, and 68% were women.

The projects were classified on the basis of the core services provided:

- Case management (N=22 projects)
- Occupational therapy and physical therapy (N=7)
- Psychosocial support (N=7)
- Home night care or overnight stay (N=11)
- Day care (N=10)

The remaining projects provided miscellaneous services.

To assess the effects of the projects, a comparison with data from two comparable groups was carried out. These data were derived from the BELRAI database, and from the IMA database respectively. On the level of groups of projects of the same type, positive outcomes regarding institutionalization and costs were found for most types of projects. However, the provision of night care was not effective and more expensive when compared with the reference group, probably due to the characteristics of the target population for night care services (severely impaired older people).

Process evaluations of the projects revealed that the implementation of many case management projects was sub-optimal.

### **3. The ADS project (La Louvière)**

#### **3.1 General characteristics**

The ADS project («*ALTERNATIVE DE SOINS de la zone du CENTRE ET SOIGNIES; Patients-Soignants-Aidants: Une relation intégrée à domicile*») is carried out by a home care organisation (*Centrale de Services à Domicile MUT*) based in La Louvière (Belgium). The aim of the project is to organise supportive care for patients and their informal care givers in order to enable patients to stay at home and to delay or prevent institutionalisation. The ADS project was awarded in the first call of the PROTOCOL 3 Programme, and a proposal for extending the project for a second phase was awarded from the second call in 2014. According to the emphasis of the second call of the PROTOCOL3 Programme, the second phase ADS project pays more attention to the role of the general practitioner as potential care coordinator. Since its start in 2011 the ADS project has delivered interventions to approximately 250 patients in the region “Centre et Soignies” and to their social system. The target number was 52 patients per year.

The typical intervention of the ADS project is temporary with an intended maximum duration of 6 months (in most cases, however, more time is needed). The episodic intervention by a small multidisciplinary team aims to restore the capacity of the patient and his or her social system to cope with (the deteriorated) health situation that endangered the ability to keep on living in the home situation.

The target group for the ADS project is defined by the following criteria:

- 60 years and older
- Diagnosed with dementia by a medical specialist or a score of 6 or higher on the Edmonton frailty scale
- Dependent on nursing care (defined as a nurse being already involved or dependency in at least one domain of the Katz ADL scale)

In practice, these criteria usually refer to patients with multiple chronic conditions.

The initial identification of patients and the first referral to the ADS project is usually made by general practitioners (GPs), neurologists, social workers or independent nurses working in the community.

#### **3.2 The typical care pathway**

Patients who enrol in the project are visited at home by a psychologist, who carries out (among other activities) a health care needs assessment (with the BEL RAI [Belgian Resident Assessment Instrument] –

an instrument that is uniformly and obligatorily used in all PROTOCOL 3 projects), and an assessment of the burden of the informal care giver (with the so-called ZARIT/ZBI-12 questionnaire). After this initial visit, the patient case is presented and discussed in the multidisciplinary project team (consisting of a psychologist, a social nurse and an occupational therapist). Subsequently, a draft care plan (based on the CAPs of the BEL RAI) is made. Before any intervention can start each individual patient needs to be notified to INAMI/RIZIV and must have received permission to be included in the project.

The 'most appropriate team member' (depending on the priorities in the care plan) is the designated care coordinator who then pays the next visit to the patient to discuss and finalize the care plan, and to take the necessary steps for implementing the care plan (e.g. contacting other care providers, purchase of tools for supporting ADL functions, instructing informal caregivers, etc.).

The care coordinator visits the patient once every 1-2 months to monitor the progress and the implementation of the care plan. Other team members and care providers visit the patient on their own initiative, based on the perceived needs of the patient. Six months after the initial visit, a reassessment of the health care needs is carried out. Depending on the outcome, participation of the patient in the ADS project is terminated, or the care plan is revised and the involvement of the ADS project team continues. The occupational therapist has shown to play the most important role in meeting the patients' needs.

### ***3.3 Patient centeredness***

The ADS project aims to actively involve patients throughout the period of participation in the project. First, participation in the project is subject to explicit consent of the patient. Furthermore, the draft care plan (based on the CAPs of the BEL RAI) is discussed with the patient, and – if considered useful – with the informal carer. Priorities in the care plan are being set by the patients themselves. All actions need approval from the patient. No specific tools or instruments are being used to formalise the involvement of patients or to generate feedback from patients or their informal care givers. Obviously, during their contacts with patients team members speak about how patients experience the intervention.

According to the experiences of the team members, patients are often reluctant to accept support from professionals. However, if patients have had a positive experience, they will accept support more easily.

### ***3.4 Integration, management, competencies***

The links between the ADS project and other health and social care facilities and providers in the region is relatively loose and ad hoc. Potentially, many (regional) organisations can be involved in the project

(e.g. the regional federation of GPs, residential homes, day care facilities, hospitals, home care technology centres, organisations of elderly) as well as individual independent health care providers (in particular, GPs and community nurses). Most of these partners, however, effectively participate in the project only in case there is a need for an individual patient to call upon their support. The project team has encountered difficulties in recruiting structural participation, especially of GPs, who are supposed to be core members of the multidisciplinary project team (when one of their patients is discussed). This collaboration has turned out to be difficult despite the availability of a financial compensation from the project funds for participation of GPs.

The project team considers their multidisciplinary character as an essential factor of the success of the project. Discussing the health care needs of a patient with professionals from different disciplines has shown to have added value in a fragmented health care context. In the second phase of the ADS project the multidisciplinary approach has been extended by the involvement of dieticians and speech therapists in the team. The intentions of the 2<sup>nd</sup> project phase have not resulted yet in a stronger involvement of GPs, especially as coordinators of the care. The liaison between the project and the medical professions, as far as their patients are included in the project, is currently maintained by the social nurse in the project team. This nurse ensures that the physicians are informed about the participation of the patient in the ADS project and about the care plan.

The core project team (psychologist, social nurse, occupational therapist) has sufficient competences and expertise to implement the project activities. No additional training was needed, except for the application of the BEL RAI instrument.

### ***3.5 Use of e-Health technology***

Patients who are included in the ADS programme are eligible to use a tablet with software to raise their activation and health awareness which is provided free of charge. However, only relatively few patients make use of this facility. Most patients in the ADS project lack sufficient experience and competence to use this device.

The tablet computer is a stand-alone facility, on a 'plug and play' basis. It provides the following services: e-mail, pictures, and some medical features (blood pressure, oxygen saturation, blood glucose). Video-communication with health care providers (including sharing health information and test results) is theoretically included in the software of the tablet, but not yet working. The software for this tablet was not developed specifically for the ADS project; it is an existing e-Health tool. The occupational therapists provides instructions and support for using this tool.



### ***3.6 Financing***

The ADS project is financed as part of the national PROTOCOL 3 Programme. This means that the work, carried out by the project team is financed and therefore free of charge for patients during their participation in the project. However, the use of regular care services and facilities, such as visits to the GP, nursing, day care and social activities, is subject to the usual regulations of (co)payment and reimbursement.

### ***3.7 Evaluation and sustainability***

The ADS project in itself has not been evaluated, but the overall PROTOCOL 3 Programme has been evaluated by a scientific consortium. The published results of this evaluation have not shown that the entire Programme is cost-effective.

Local health care providers, patients and team members in the ADS project, however, are convinced of the relevance of their project activities. It will depend on the willingness of the health care insurance funds whether the project activities in the longer run can be structurally embedded in the existing health care delivery system. Continuation of the activities will require additional funding and today such additional resources have not been safeguarded yet.

## **4. The SOM + project**

### ***4.1 General characteristics***

The SOM+ project (“Tailored Cooperation Results in a ‘plus’”) aims to search for and develop new alternative modes of supportive care and guidance for fragile elderly people, in order to enable them to keep on living at home. This alternative care supply can be realized as the result of the close collaboration between five residential care centres (centres for living and care), three home care agencies and one ‘mutuality’ (health insurance fund) in eight municipalities in the Waas and Dender Region (East Flanders , near Dendermonde). Such collaboration is unusual in the regular Belgian health care system. From the start of the project about 500 patients have participated in the SOM+ project (with a maximum case load of 130 participants at the same time). The SOM+ project set as goal to delay institutionalisation by one year. After 4 years, the project succeeded in delaying institutionalisation of participants by 270 days on average [personal communication by the SOM+ project representatives].

### ***4.2 The typical care pathway***

Eligible for the services provided by the SOM+ project are people of 60 years and older who have difficulties in living independently at home (as measured by the Katz ADL instrument, a frailty index (Edmonton scale) or if diagnosed with dementia by a medical specialist). Usually, the provision of home care for eligible patients has reached its maximum. Clients are pre-selected for participation in the project by each of the partners in the project. To be effectively included in the project, clients need to submit a written permission. RIZIV/INAMI eventually decides about inclusion.

The typical care pathway in the project starts with an intake by a ‘pathway coach’ (comparable to a case manager) to check whether participation in the SOM+ project could be useful, and whether the client and/or informal care givers are prepared to participate and to invest in project activities. After inclusion, a health care needs assessment takes place by a nurse and an occupational therapist with the use of the (digital) BEL RAI (Belgian Residence Assessment Instrument; repeated every 6 months) and the COPM (Canadian Occupational Performance Measure), during a home visit. A care plan is drafted, and finalized in a multidisciplinary team meeting, for which the client and informal care givers are also invited.

Professionals of different disciplines are involved in the care for clients according to the care plan. During a multidisciplinary meeting every 6 weeks all clients participating in the project are discussed to monitor the implementation of the care plan. A comprehensive electronic system for patient monitoring has been developed in which all care providers involved in the project can find all relevant documents

regarding the client (e.g. care plan, actions implemented), and regarding the project (documents, instruments, documents for meetings, contact details of professionals, etc.).

Participation in the project ends when the client is hospitalised, admitted in a residential centre on a permanent basis or when the client dies. When participation in the project leads to substantial reduction of supportive care and continuation of participation in the project is no longer useful, this is discussed with the patient and may lead to termination of the project activities (and 'referral' to the regular services).

Possible ingredients for care arrangements may include: dietary advice, memory training, pain management, supplementary nursing care during the night and participation in activation activities provided in one of the residential care centres (e.g. meals, physical exercise training, excursions, playing cards or participation in a discussion group). Short stay admissions in a residential care centre is possible during unavailability of the informal care giver (due to illness or holidays), after a stay in a hospital or in a crisis situation.

It should be stressed that, although residential care centres play an important role as participants in the SOM+ project, patient who are permanently admitted to such centres are no longer entitled to be a participant in the project (as they are no longer living at home).

#### ***4.3 Patient centeredness***

The care arrangements that are offered are tuned to the individual needs and priorities of the patients and their informal care givers. Participants and/or their informal care givers are present at the initial multidisciplinary meeting when the draft care plan is discussed. Moreover, the care plan can also include self-management activities or actively supportive activities by informal carers.

#### ***4.4 Integration, management, competencies***

For a uniform and on-line registration of patient's health care needs the BelRAI is in use throughout the PROTOCOL 3 Programme, and also in the SOM+ project. This assessment instrument aims to support professional care givers by systematically recording the capabilities of the patients and informal care givers, their care needs and changes thereof. The system is meant to anticipate on changes in the situation of clients.

Investments have been made in capacity building of staff; that turned to be quite necessary

Safeguard for integration and smooth collaboration among partners in the project are: the expert working group (which can be consulted by care providers) and the steering committee (management level). The latter is necessary to level out competing interests. Cooperation between the professional

carer and the occupational therapist has shown to be crucial. The occupational therapist supervised the implementation of the relevant aspects of the care plan by the carer.

GPs participate ad hoc on a voluntary basis in the multidisciplinary meetings, and not on a regular basis. The team would like to have GPs involved on a regular basis but they are not always able or prepared to do so. Also physiotherapists are often missing in the team. Both professionals work on a self-employed basis.

#### ***4.5 Use of e-Health technology***

E-Health applications are only in use among the professionals. First of all, for a uniform and on-line registration of patient data the digital BelRAI system is in use throughout the PROTOCOL 3 programme, and also in the SOM+ project. A specific information system called Pyxicare (available on the market) is used in SOM+ and mainly based on the BEL RAI. It provides a range of features including electronic health records (EHRs) of the patient, his or her care plan, and individual data analysis as decision support system (DSS) for health professionals. This instrument aims indeed to support professional care givers by systematically recording the capabilities of the patients and informal care givers, their care needs and changes thereof, the specific goals of the care plan. The system is meant also to predict possible changes in the situation of clients, suggesting proactive intervention by care providers. Professionals can access to the information system via the web or tablets available in their facilities. A proper app (for tablets and smartphones) including the system is currently under development, as well as additional features for more sophisticated data analyses on aggregated level. E-Health literacy among health professionals is sometimes an obstacle to the use of the digital BEL RAI system.

The system also provides and shares managerial information (e.g. number of hours worked for the project for each professional involved, number of client contacts, etc.). The clients themselves do not have access to the Pyxicare system.

Besides these eHealth application tools which are related to the SOM+ project, individual professionals participate in external quality systems and management information systems of their own organisations in which ICT applications are used for data management, monitoring and analysis. However, these are not integrated into the SOM+ project system. A practical barrier is that a WiFi connection is not available yet in all participating organisations' premises, which can make it difficult to access the system via available devices and computers.

#### **4.6 Financing**

The SOM+ project is financed as part of the national PROTOCOL 3 Programme. This means that the work, carried out by the pathway coach, and all activities by occupational therapists, physical therapists, nurses and other home care providers, including multidisciplinary meetings is financed, and therefore free of charge for clients during their participation in the project. However, the use of regular care services and facilities, such as visits to the GP, home care nursing, day care and social activities, is subject to the usual regulations of (co)payment and reimbursement.

#### **4.7 Evaluation and sustainability**

Like all project in the PROTOCOL 3 Programme, the SOM+ project has not been evaluated individually. The PROTOCOL 3 Programme, however, has been independently and scientifically evaluated by a consortium consisting of Belgian universities and results have been published.

The project team considers the following elements of the SOM+ project as the most important success factors:

- Collaboration between professionals results in enriched competencies
- A structured approach (e.g. intake – care plan – monitoring)
- Empowerment of patients and informal carers enables more with the same resources
- Patient centeredness.

All residential care centres that participate in the SOM+ project systematically work on quality assurance. Separate from the PROTOCOL 3 Programme context, these centres have joined a pilot project on a quality system in which aims and actions have been formulated on about 60 themes. The performance of each centre on these themes is measured with indicators and improvement pathways are suggested for each. Examples of action points are: fall prevention; medicines prescribed by GPs; human resources in care centres; care plans for terminal patients. Two times a year the performance measures are submitted to a central agency for the Flemish community. This agency provides each centre with benchmark information. Reports on the quality indicators in each centre are available on the internet.

Regarding the sustainability of the SOM+ project activities, inclusion in regular health care is the intention but there is little optimism among the project team members about its realisation. The projects which were prolonged in the second wave of PROTOCOL 3 Programme already included budget cuts. Potentially, other sources of funding in Flanders could be available, but not much is expected from governmental funds. Crucial is to prove that the project is cost-effective. In that case inclusion could be

realised in a budget neutral and cost efficient way. Unfortunately, when the funding from the PROTOCOL 3 Programme has ended, and there is no continuation, expertise will get lost.

## **5. Reflections on the PROTOCOL 3 Programme**

The nationwide PROTOCOL 3 Programme is characterised by the stimulation and funding of local or regional bottom-up initiatives to develop and implement alternative forms of care for frail older people. A systematic scientific evaluation was carried out (3), and the objectives of the second phase of the programme were slightly adjusted.

The program enabled the implementation of 89 projects, which represent a big variety of objectives, tools, activities and implementation methods. The evaluation showed that most types of projects (when grouped together) were effective in terms of reducing the risk for institutionalisation and were cost-effective. The national PROTOCOL 3 Programme was the result of an agreement on the national (federal) level and can be considered as a potential remedy for the fragmented structure of health and social care in Belgium. The bottom-up nature of the projects has contributed to their success. Local care providers are fully aware of the local context in which the care for frail elderly must be embedded. From the two site visits we learned that the (local) multidisciplinary approach of the care for frail elderly was considered as an innovative and effective element in the care for frail elderly.

The sound evaluation of the PROTOCOL 3 Programme is another strong point. However, the aggregated level of the evaluation (in groups of projects focusing on the same core service) does not allow drawing conclusions about the effectiveness of elements of the individual projects.

The (obligatory) use of a set of assessment instruments and the collection of a minimum data set has enabled the programme managers and the evaluators to monitor and evaluate the programme. However, from the two site visits we learned that this also represents a substantial administrative burden. The PROTOCOL 3 Programme did not focus explicitly on persons with multimorbidity. However, by applying strict and uniform eligibility criteria for persons when enrolling in the Programme, the vast majority of the participants have multimorbidity. Moreover, none of the proposed innovative models for care were disease-specific, and therefore applicable to persons with multimorbidity.

The two projects visited were proposed by the PROTOCOL 3 Programme manager; we do not know to what extent the ADS and SOM+ project can be regarded as 'good practice' within the entire Programme. As the evaluation of the PROTOCOL 3 Programme was not carried out on project level, we were not able to identify these two projects in the overall evaluation documents.

***Challenges***

The challenge for the PROTOCOL 3 Programme will be to put efforts in the sustainability of the projects on the long term, after termination of the Programme funding scheme. As many project types have been shown to be cost-effective, a transition from project based funding to embedding the services in the regular system, including the funding, is a logical step.

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## Colophon    The ICARE4EU project and the selection of ‘high potential’ programmes

The ICARE4EU project aims to identify, describe, and analyse innovative integrated care practices for people with multimorbidity in European countries, and to disseminate knowledge and experiences from these practices to all European countries in order to support further implementation of effective and sustainable care approaches for European citizens with multimorbidity ([www.icare4eu.org](http://www.icare4eu.org)).

Multimorbidity is defined in this project as *the presence of two or more medically (somatic or psychiatric) diagnosed chronic (not fully curable) or long lasting (at least six months) diseases, of which at least one is of a primarily somatic nature.*

In 2014, country experts in 31 European countries identified programmes at a national, regional or local level that focus(ed) on providing care for adult (or older) people with multimorbidity, or contain(ed) specific elements for this target group. Programmes had to comprise a formalized cooperation between two or more services, of which at least one medical service; and they had to be evaluated – or had an evaluation planned – in some way. Detailed information about these programmes was collected via a survey to be completed by the programme coordinator. In this way, country experts identified 178 programmes, of which 101 (from 24 countries) were considered eligible for analysis by the project team.

As a next step in the project, these 101 programmes were evaluated by the project team based on quantitative and qualitative criteria. For each programme, five quantitative scores were computed, a general score (assessing general aspects such as its evaluation design, perceived sustainability and transferability) and four scores that provided an indication of its level of 1) patient-centredness, 2) integration of care, 3) use of eHealth technologies and 4) its innovativeness in financing integrated care services. Subsequently, members of the project team qualitatively assessed these four aspects again for a selection of programmes that had high quantitative scores. The qualitative evaluation was based on the available descriptive information gathered by the survey (e.g. description of the aims of the programme, the reported strengths and weaknesses) and already published evaluation reports. This resulted in a short list of so called ‘high potential’ programmes. To decide whether or not to select a programme of this list for further study, the project team checked with the country expert and/or verified information by contacting the programme coordinator. In this way, eight programmes were selected for a site visit; all programmes positively responded. The eight programmes that were visited were operational in Belgium, Bulgaria, Cyprus, Denmark, Germany, Finland, the Netherlands and Spain.

This case report is based on information about the Belgian national PROTOCOL 3 Programme and two projects within this Programme (the ADS project and the SOM+ project). For this report, the previously collected survey data were verified and enriched by data from internal or external documents and qualitative interviews with the project managers and representatives of care providers. All interviews were conducted by members of the ICARE4EU project team, and were recorded. Interviewees received the draft text of the case report for validation, and approved the final report. All interviewees signed a written agreement to publish this case report.



## Appendix Characteristics of the health care system in Belgium<sup>1</sup>

Health care policy is both a responsibility of the Belgian federal authorities and federated entities (regions and communities). The federal authorities are responsible for a.o. the regulation and financing of the compulsory health insurance, the financing of hospital budgets, legislation covering professional qualifications, and the registration of pharmaceuticals and their price control. Federated entities are responsible for a.o. health promotion and prevention, social services; different aspects of community care; coordination and collaboration in primary health care and palliative care, and the financing of hospital investment. Almost the whole population (> 99%) is covered for a very broad benefits package.

The organization of health services is characterized by the principles of therapeutic freedom for physicians, freedom of choice for patients, and remuneration based on fee-for-service payments.

The compulsory health insurance is managed by the National Institute for Health and Disability Insurance (NIHDI-RIZIV-INAMI). Patients in Belgium participate in health care financing through official co-payments and diverse supplements. The main payment mechanism is the fee-for-service payment.

The Belgian elderly care infrastructure comprises home care and community services, short-term and long-term residential care and hospital care. Long-term residential care includes service-flats, homes for the elderly and nursing homes. A recent study showed that in Belgium, elderly individuals preferred to be cared for at home with the help of family and friends, as well as with the help of health care professionals. Often, entry into a residential institution is related to a serious health episode or to the inability of informal caregivers to continue to provide care. As a consequence, residential care facilities are reserved for more severely dependent individuals. Currently, in terms of public policy, the last agreement between the different authorities in long-term elderly care (Protocol 3) has clearly stated that integration and coordination between the different types of care (home care, hospital care, residential care, etc.) needs to be considered.

Overall, the health system was recently assessed as having good accessibility and an appropriate level of safety. However, further improvements in effectiveness of preventive care, appropriateness of care, efficiency and sustainability could further enhance the performance of the overall system. Recent reforms to the health system essentially aim to provide a high quality of care to the whole population and, at the same time, protect the sustainability of the system. The reforms that will be carried out in the coming years will likely continue to promote the objectives of accessibility, quality and sustainability. Further changes will also aim at simplifying the system in order to make it more homogeneous.

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