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# Strategic Intelligence Monitor on Personal Health Systems Phase 3 (SIMPHS3)

*INAA (The Netherlands)*
*Case Study Report*

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Abstract
The aim of INAA is to improve the quality of life (reducing feelings of loneliness, maintaining a meaningful life, creating a feeling of solidarity) and autonomy of frail elderly people living independently, allowing them to maintain a high level of physical functioning. In addition, this approach also aims to reduce the burden on informal caregivers who can benefit from the expertise of active elderly people (social/community participation) and contribute to enhancing cohesion in the suburb/neighbourhood. INAA aims to reinforce the coordination between residents, the social care and the healthcare systems at a neighbourhood level, improving the social network around frail older people and their informal caregivers in order to detect potential problems early on.

## Acknowledgments

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## Preface

The Strategic Intelligence Monitor on Personal Health Systems (SIMPHS) research started in 2009 with the analysis of the market for Remote Patient Monitoring and Treatment (RMT) within Personal Health Systems (PHS). This approach was complemented in a second phase (SIMPHS2) with the analysis of the demand side, focusing on needs, demands and experiences of PHS by healthcare producing units (e.g. hospitals, primary care centres), healthcare professionals, healthcare authorities and patients amongst others.

Building on the lessons learnt from SIMPHS2 and from the European Innovation Partnership on Active and Healthy Ageing initiative, SIMPHS3 aims to explore the factors that lead to successful deployment of integrated care and independent living, and define the best operational practices and guidelines for further deployment in Europe. This case study report is one of a series of case studies developed to achieve these objectives.

The outcomes of SIMPHS2 are presented in a series of public reports which discuss the role of governance, innovation and impact assessment in enabling integrated care deployment. In addition, through the qualitative analysis of 27 Telehealth, Telecare and Integrated Care projects implemented across 20 regions in eight European countries investigated in SIMPHS2, eight facilitators have been identified, based on Suter's ten key principles for successful health systems integration.

The eight main facilitators identified among these as necessary for successful deployment and adoption of telehealth, telecare and integrated care in European regions are:

- Reorganisation of services
- Patient focus
- Governance mechanisms
- Interoperable information systems
- Policy commitment,
- Engaged professionals
- National investments and funding programmes, and
- Incentives and financing.

These eight facilitators have guided the analysis of the cases studied in SIMPHS3 and a graph showing the relative importance of each facilitator is presented in each case study.

In addition to the above facilitators analysed in each case report, a specific section is dedicated to the analysis of care integration. It should be noted that the definition of vertical and horizontal integration used in this research is taken from the scientific literature in the field of integrated care.[1] This definition differs from the one mentioned in the European Innovation Partnership on Active and Healthy Ageing Strategic Implementation Plan.[2] We define horizontal integration as the situation where similar organisations/units at the same level join together (e.g. two hospitals) and vertical integration as the combination of different organizations/units at different level (e.g. hospital, primary care and social care).

[1] Kodner, D. (2009). All together now: A conceptual Exploration of Integrated Care.

[2] http://ec.europa.eu/research/innovation-union/pdf/active-healthy-ageing/steering-group/operational_plan.pdf (page 27)

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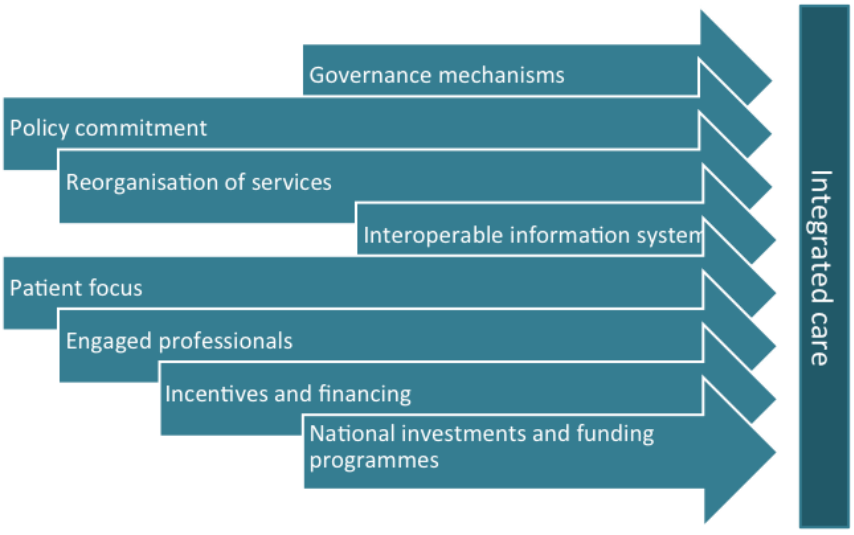
## Case outlook

The aim of Integrated Neighbourhood Approach for Ageing population (INAA) is to improve the quality of life (reducing feelings of loneliness, maintaining a meaningful life, creating a feeling of solidarity) and autonomy of frail elderly people who live independently, allowing them to maintain a high level of physical functioning. In addition, this approach aims to reduce the burden on informal caregivers who can benefit from the expertise of active elderly people (social/community participation) and contribute to enhancing cohesion in the suburb/neighbourhood. INAA aims to reinforce the coordination between residents, and the social care and the healthcare systems at a neighbourhood level, improving the social network around frail older people and their informal caregivers in order to detect potential problems early on.

In Twente, the pilot follows a three-pillar approach: (1) a house inspection, including an assessment of dangerous situations that may lead to falls; (2) an activity programme offered to those who have had a house inspection (gathered in local groups), including a fall prevention course, and (3) a screening of the elderly within their community through a technology-based self-management programme, currently under development. The INAA initiative targets the elderly population, especially the frail elderly, who in many cases suffer from other pathologies such as chronic diseases and comorbidities. In addition to these pathologies, the initiative covers not only care and cure but also lifestyle and prevention (physical, cognitive and nutrition aspects).

This approach requires communication, information-sharing and collaboration among the different actors of the social care and the health care system. INAA integrates the relationships between different organisations at the level of service delivery, vertically. It involves GP's, neighbourhood councils, hospitals, home care organisations, local governments and healthcare insurers. All these actors work together on the basis of service delivery integration, including to some extent clinical integration, but excluding funding, administrative and organisational integration.

The business case has not been proven yet. However, the expected impact on functional status, health outcomes and quality of life of the patients and cost reduction, will be assessed through a cost-effectiveness analysis. The results may encourage the deployment of the initiative at national level.



# 1 Background

## 1.1 Social and health care system in the Netherlands

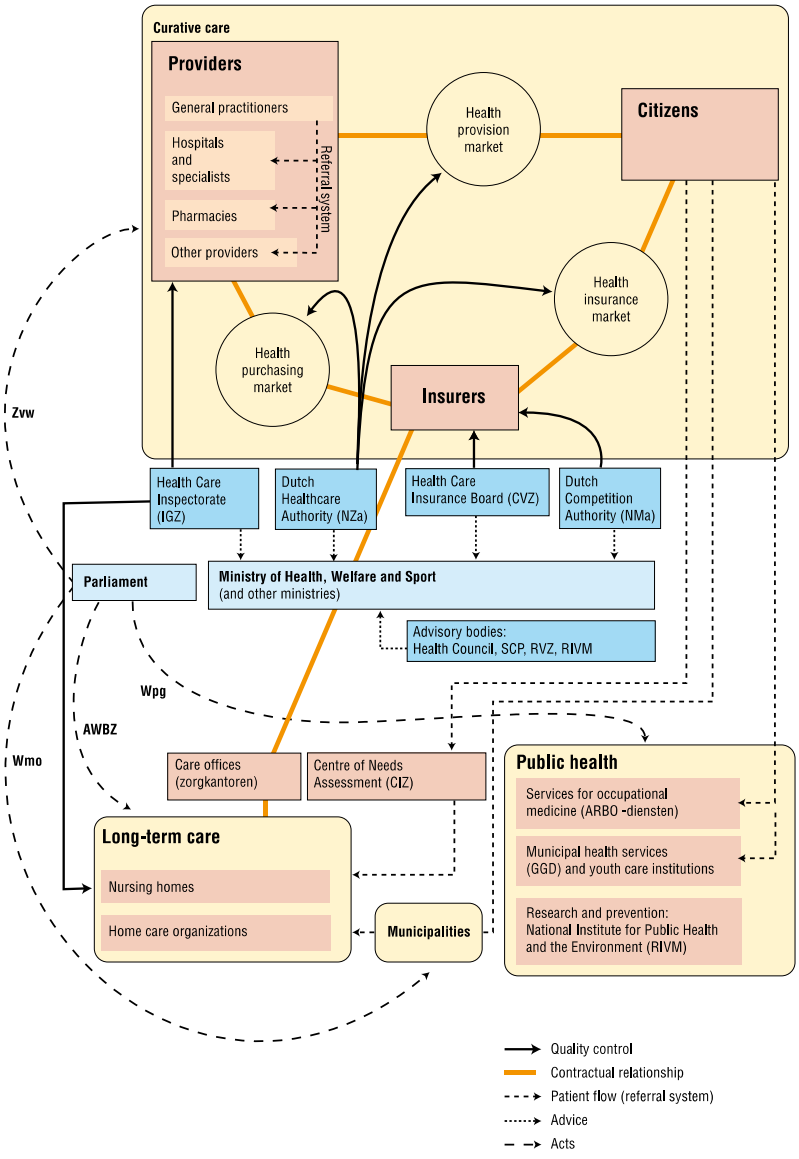
In the Dutch health care system which offers universal medical care coverage for the whole population, the main entities responsible for the provision of care services are private health care providers. There is a single health insurance system in place (Zorgverzekeringswet, ZVW), and it is compulsory for anyone registered in the Netherlands to be insured for healthcare by a Dutch insurer. All regular (short-term) medical treatments are covered by the mandatory health insurance, whereas supplementary care provision (e.g. dentistry) is largely dependent on the insurance policy paid for, and can therefore be subject to out-of-pocket payments. Individuals can choose among approximately forty health insurers across the country.

A distinction is made between preventive care, primary care, secondary care, and long-term care for chronic conditions. Primary care has a strong foundation in the Netherlands, with GPs functioning as gatekeepers for healthcare access. The rationale underlying the strong position of primary care is to prevent unnecessary costs as secondary care is more expensive, and to promote consistency and coordination of individual care. This is why patients have access to hospital and specialist care only in case of referral by the GPs, though access to dentists or midwives, and since 2006 physiotherapists also, is exempted from this provision. Provided patients get a referral from their GP, they are able to choose which hospital they prefer. Hospitals provide inpatient and outpatient care services, and have emergency departments. Specialised health professionals at hospitals are mostly organised in partnerships. As more than 90% of the hospitals are managed and owned on a private, not-for-profit basis, specialists are generally self-employed.

Public health services are the main providers of preventive care, and the municipalities take care of disease prevention, health promotion and health protection. There are 403 municipalities in total in the Netherlands and altogether 29 municipal health services (Gemeentelijke Gezondheidsdiensten, GGDs) performing these services on their behalf. Long-term care provision lies with nursing homes, residential homes or home care organisations. In addition, a lot of people provide informal care visiting the elderly on a voluntary basis, and providing emotional support, help with household work or assistance.

A regulatory reform was implemented in 2006, which introduced extensive changes in terms of regulatory mechanisms and structures governing health care. It meant that health insurers, health care providers and policy holders became market players, who would interact under the new legislative framework. A single compulsory insurance scheme was introduced, which enabled multiple private health insurers to compete for policy holders. It also enabled health insurers to negotiate price, volume and quality of care with healthcare providers, allowing them to make a profit and share dividends with shareholders. The Dutch Care Authority, however, controls the quality of the services provided in order to ensure accessibility and affordability for citizens. Health insurance companies are obliged to accept anyone asking for the standard package of health care services (basisverzekering), which is determined by the government and revised in accordance with population needs. Generally, the standard package that must be offered by insurers under reasonable costs must include: medical care including GP appointments, hospital care, prescribed specialist care; dentistry (<18 years); ambulance services; post-natal care and midwifery; certain medications; rehabilitation care; and smoking cessation schemes.

**Figure 1: The Netherlands Health System characterisation**




Source: Schäfer (2010)

Next to the basic insurance package, which can be offered under three types of insurance policies, the policy holder can buy additional insurance packages covering more services. However, standard and additional packages taken together do not cover all medical expenses.

The regulatory changes had a further impact on long-term care services, with increased competition among health care providers for outpatient services. With the responsibility for domestic services delegated to the municipalities, a range of different care arrangements was established. Since the reform of 2006, the funding of health care providers has changed considerably. GPs are paid through a combination of capitation fees and fees-for-service, whereas long-term care providers are paid in relation to an assessment of the intensity of care required for a given patient. Hospital and mental care follow a sophisticated diagnosis-related groups (DRG) type of system called Diagnosis and Treatment Combinations (Diagnose Behandel Combinaties, DBCs) which links prices to real

costs and increasingly allows insurers to negotiate prices for the services offered by hospitals.

All individual are required to purchase at least the basic package of health insurance, and providers can set their own nominal premiums for the package. This fosters competition among insurance companies who should strive to offer the best value for money. All Dutch citizens pay a flat-rate premium (nominal premium) to the statutory health insurance scheme through the health insurer of their choice. In addition to this, an income-dependent employer contribution is deducted from the payroll and goes directly to the Health Insurance Fund which allocates the funds to the health insurers according to a risk-adjusted system.

## 1.2 Region of Twente

The Twente region has a population of 626,500 people, half of whom lives in the three biggest cities (Enschede, Almelo and Hengelo). The population is forecasted to grow until 2030, although not in rural areas. Twente has an ageing population especially in the rural areas. The health status of the Twente population is among the worst in the Netherlands as shown by the significant lower life expectancy (77.0 for men and 81.8 for women) compared to the national average (77.9 and 82.2 respectively) and higher mortality rates, mainly caused by cardiovascular diseases and cancer. People in Twente are at higher risk of dying from cardiovascular diseases, psychological disorders, COPD and Diabetes (GGD Twente, 2011). Due to the population ageing process, the number of people with illnesses will increase in the future. 33% of the elderly experience physical impairments mainly related to mobility. Three quarters of the elderly have one or more chronic conditions. 61% of the older population are obese and 37% of them do not exercise enough to stay healthy. 72% have a low level of education which is connected to lower income levels and to more physical impairments, obesity, falls and chronic illnesses (GGD Twente, 2011). Loneliness is experienced by 40% of the older population. 4% have a high risk and 32% a moderate risk of depression or anxiety disorder. Higher risks of loneliness and depression/anxiety are also connected to lower levels of education (GGD Twente, 2011).

**Table 1: General information about Twente**

| | |
|---|---|
| **Geographical coverage km²** | 1,500 |
| **Inhabitants per km²** | 400 |
| **Number of inhabitants** | 626,500 |
| **Life expectancy at birth, years** | 77.0 males – 81.8 females |
| **Regional GDP (2012), billion €** | 18.4 |
| **Regional GDP per inhabitant (2012) €/inhabitants** | 30,670 |
| **General Practitioners /1.000 inhabitants (2010)** | 0.72 |
| **Specialists /1.000 inhabitants (2010)** | 2.17 |
| **Regional Budget for Health services management (2013), billion €** | 1.7 |
| **Health care professionals / 100.000 inhabitants** | 288 |
| **Regional health care budget, € per inhabitants (2013)** | 2,800 |
| **Hospital beds (2012)** | 2,800 |
| **Hospital beds/1.000 habitants (2012)** | 4.5 |

Source: GGD Twente (2011)

## 1.3 Integrated Neighborhood Approach for the Ageing population (INAA)

The Integrated Neighbourhood Approach for the Ageing population (INAA) aims to implement both effective screening services and effective support and treatments for elderly people in their own daily environments through an integrated approach. More specifically, it seeks to support independent living for the ageing population by focussing on physical, cognitive and nutrition aspects. Social innovation has been key in implementing these services in a sustainable way, by facilitating the transition from fragmented reactive disease management to preventive personalised services supported by a proactive team of (informal) caregivers and health professionals.

The integrated care approach in Twente is based on the vision that older people should be able to remain independent longer in their own environment, if networks between social care, health care, informal care and community members in neighbourhoods are reinforced, current services are optimised and the (frail) elderly involved. Thus, primary, secondary, and tertiary care actors as well as informal carers and their networks need to work well together throughout the whole process, from signalling problems to prevention, cure, care, promotion of well-being, and independent living. This approach has required the development of specific protocols and care pathways that facilitate coordination among health professionals.

INAA can be described as a demand-driven approach which offers older people tailored care in their local context, including related services such as housing, to enhance self-management abilities and well-being.

The aim of INAA is to improve the quality of life (reducing feelings of loneliness, maintaining a meaningful life, creating a feeling of solidarity), and autonomy of frail elderly people who live independently, allowing them to maintain a high level of physical functioning. In addition, this approach aims to reduce the burden on informal caregivers, who can benefit from the expertise of active older people (social/community participation) and contribute to enhancing cohesion in the suburb/neighbourhood. INAA aims to reinforce the coordination between residents, social care and healthcare at a neighbourhood level, improving the social network around the frail elderly and their informal caregiver so as to detect potential problems early on.

In Twente the pilot follows a three-pillar approach: (1) a house inspection, including an assessment of dangerous situations that may lead to risk of falls; (2) an activity programme offered to the people (gathered in local groups) who have had a house inspection, including a fall prevention course and (3) a screening of the elderly within their community through a technology-based self- management programme.

The last step is currently under development. The technology-based self-management programme enables early diagnosis of frailty through a web-based instrument that includes a well-being and physical fitness test and provides advice on how to improve physical fitness. The module also contains 50 exercises to improve general physical fitness, mobility, strength and endurance. The module will be expanded to include up to 200 exercises and will also include triage of the type of exercises. The content will also be enhanced with modules on nutrition, cancer rehabilitation and geriatric rehabilitation.

# 2 Integrated care analysis

## 2.1 Dimensions

The INAA initiative targets the elderly population, especially the pre-frail elderly who in many cases suffer from other pathologies such as chronic diseases and comorbidities. In addition to these pathologies, the initiative covers not only care and cure but also lifestyle and prevention (physical, cognitive and nutrition aspects).

The INAA three-pillar approach requires communication, information-sharing and collaboration among the different actors of the social and health care systems. INAA integrates the relations between different organisations vertically, at the level of service delivery. It involves GPs, neighbourhood councils, hospital, home care organisations, local governments and healthcare insurer. All these actors work together, effectively delivering integrated services, which include to some extent clinical integration. INAA has not led to any funding, administrative or organisational integration.

This project is grounded to some extent within the new tasks assigned to the municipalities. The focus of the integrated care approach lies on health and social services integration, which also covers preventive care, chronic disease management and home care management. This requires strong cooperation between social care and healthcare at a neighbourhood level and fosters organisational collaboration between health and social care providers (especially primary care and social care); it also promotes professional collaboration (GPs, nurses and social care workers) and service integration for the provision of a continuum of care in a single/seamless process across time, place, and discipline.

## 2.2 Impact

All three elements (house inspection, activity programme and screening) of the approach have been nearly fully implemented. However, the business case has not been proven yet. Based on the results of existing models used for fall prevention, the leaders of the initiative expect a reduction in hospitalisations and emergency visits. Furthermore, house inspection combined with the activity programme, including social network support from the neighbourhood should lead to a falls reduction of at least 20%. This also means a cost reduction for the healthcare insurer.

A positive impact is also expected on health outcomes, functional status and patients' quality of life. Health outcomes, functioning and abilities would be measured using the Cognitive functioning questionnaire; the Katz Index of Independence in Activities of Daily Living (ADL) and the Self Management Ability Scale Short version (SMAS-S) while quality of life would be measured using Short Form 20 (SF-20), EuroQol (EQ-6D), Visual Analogue Scale (VAS) and Social Production Function Instrument for Level of wellbeing (SPF-IL).

The impact of the screening element will be assessed through scientific research (PERSSILAA FP7 project[3]). The Groningen Frailty Index will be used to assess frailty and the effect of the modules offered will be measured as well. The validation phase will start in September 2014 in Enschede and Hengelo. An important aspect of this validation phase will be the gathering of evidence on the cost-effectiveness of the programme.

[3] See http://www.perssilaa.eu

## 2.3 Drivers and barriers

The Dutch health system has a strong tradition of GPs working as gatekeepers of health care provision. The INAA initiative has added to this set-up the establishment of inter-professional teams (social workers and district nurses and specialists) working together to develop protocols and care pathways designed specifically to support the collaboration between care professionals so as to facilitate the continuum of care. In this regard, the INAA initiative has engaged professionals in a leading role in the reorganisation of the services.

The Municipality of Enschede has acted as an enabler of the project by establishing a cooperation agreement with the healthcare insurer, and agreements with health and social care providers and the ecosystem of research institutions and Small and Medium Enterprises (SMEs).

In addition to this funding, it is important to mention the compensation provided by Menzis (healthcare insurer) as an incentive for GP's and nurses to participate in the screening project, which is funded through the Modernisation and Innovation (M&I) budget of Menzis. Besides compensation, the screening project allows GPs to get a better insight into the (pre-)frail elderly population in their catchment area. Participation in the project also provides "brand recognition" for the physiotherapists and homecare institutions involved and has helped obtain funds from the Perssilaa project.

However, this stimulus package is about to expire so the lack of investments and funding programmes could hamper the full deployment of the initiative. The development of the INAA business case, especially once cost-effectiveness evidence becomes available, and the new Social Support Act may provide new opportunities for funding. Nevertheless, the uncertainty this situation creates together with the lack of a clear legal and regulatory framework makes it difficult to secure adequate resources for sustainable change and up-front costs. Moreover, the lack of common outcome-oriented incentive schemes for the care managers and healthcare and social care professionals involved also acts as a barrier.

Lastly, it is worth pointing out that putting individuals at the centre of the health and social system has been an important driver in the INAA initiative. This includes the social network in the neighbourhood which can be considered as social capital that impacts on the health status and quality of life of the elderly. The INAA initiative has raised awareness about the integrated care concept among the population so that citizens can become ambassadors of integrated care and request that their providers deliver this type of care.

## 2.4 Organisation, health professional and patients

INAA aims to organise the delivery of services efficiently within the patient's own environment through a seamlessly integrated care plan, in which the boundaries between different tiers of care disappear. This implies that all healthcare actors have to be involved to some extent in the INAA initiative.

The following organisations and care professionals are involved in the initiative:

**General Practitioners** (there are about 330 GPs in Twente), who are the gatekeepers of the healthcare system and cooperate with many other healthcare professionals as they refer patients for specialised care. More than a third of the GP's (135) belong to a GP organisation called THOON, whose goal is to strengthen GPs' position in primary care. Others belong to the "Huisartsenkring", a professional association which represents the interests of the local GPs. It is worth mentioning that there are more than 600

physiotherapists in Twente who actively cooperate with each other and with other care professionals, especially GPs.

Specialist care is provided by two main organisations. The first organisation, **Ziekenhuis Groep Twente (ZGT),** has approximately 200 medical specialists and 754 beds, employs 3,500 general employees, and provides healthcare to roughly 250,000 patients a year. They run two hospitals, one in Almelo and the other one in Hengelo, and six field clinics throughout Twente. The hospitals work in close cooperation with GPs (primary care), home care organisations and nursing homes. The second organisation, **Medisch Spectrum Twente (MST),** is one of the largest non-academic hospitals in the Netherlands. MST has locations in Enschede and Oldenzaal and two field clinics in Twente. It has a catchment area of about 264,000 citizens, 1,070 beds and employs 3,700 people of which 235 medical specialists.

There are several **homecare institutions** in the Twente region, providing inpatient and outpatient care for the mentally disabled, the physically disabled and for the elderly. Their services include assisted living arrangements, nursing homes, nursing and personal care at home, domestic care, palliative care and day care. The following table summarises the characteristics of the main home care organisations in the Twente region.

**Table 2: Main home care organisations**

| Name organization | Inpatient capacity | Outpatient capacity | Employees | Volunteers |
|---|---|---|---|---|
| **Livio**[4] | 1,192 | 6,180 | 2,681 | 947 |
| **De Posten**[5] | 110 homes | | 670 | 294 |
| **TSN**[6] | 60,000 clients nationally | | 20,000 direct care providers nationally | |
| **Stichting Zorggroep Manna**[7] | 104 | 2,408 | 935 | |
| **CarintReggeland**[8] | 1,624 | 5,413 | 4,723 | |
| **Trivium Meulenbelt Groep**[9] | 820 (excl. 363 day care) | 2,243 | 1,164 FTE | |

Source: Authors elaboration

Further actors play an important role in the Twente health system organisation:

- The **Menzis healthcare insurer,** which covers 66% of the population in the region
- The **municipality of Enschede** which has been promoting active and health ageing and fostering innovation
- The **VVVS Foundation** (*Stichting Vitaliteit en Veiligheid Voor Senioren)* which is responsible for the delivery of the integrated care services (house inspection and activity programme).

It should be noted that the Twente region is considered a R&D hub with an ecosystem of SMEs, research centres and universities fostering innovation on the healthy aging sector. This ecosystem is comprised of **Roessingh Research & Development (RRD)**, a research

4 http://www.livio.nl/images/brochures/Over_ons/jaardocument_2013.pdf
5 http://www.deposten.nl/userfiles/file/Directieverslag%20jaarrekening%20en%20accountantsverslag%202013.pdf
6 http://www.tsn-thuiszorg.nl/over-tsn/onze-kwaliteit/Jaarverslag_2013.pdf/
7 http://www.zorggroep-manna.nl/over-manna/jaarverantwoording/
8 http://www.carintreggeland.nl/dbimages/Bijlagen/Bestuursverslag%202013%20Carintreggeland.pdf
9 http://www.triviummeulenbeltzorg.nl/uploads/downloads/DEF_Maatschappelijk_Jaarverslag_2013_versie_23_mei.pdf

company which receives international credits as a research institute for rehabilitation technology and telemedicine; **Saxion University of Applied Science** and the **University of Twente,** among others.

Lastly, it is important to emphasise that the INAA initiative promotes a patient-centred philosophy, whereby the social network within the neighbourhood becomes a "new" health and social asset in the value chain. INAA fosters the efficient integration of both formal and informal caregivers that reinforces self-care and improves the quality of life of the elderly.

## 2.5 Information and Communication Technologies

The Region of Twente is currently part of the "Zorginfrastructuur", or care infrastructure, an IT system which allows healthcare providers (GPs, pharmacists and medical specialists) to access patients' medical records after patients have given their consent. The National Switch Point (Landelijk Schakel Punt - LSP) facilitates this exchange of information through regional electronic networks. The information from different healthcare providers is linked through the individual's citizen service number (burgerservicenummer - BSN) without being stored on the LSP.

In Twente, a regional infrastructure has also been implemented which enables patient information exchange between healthcare professionals and gives patients access to their own information (Personal Health Record). It is comprised of:

- E-lab (online laboratory functionalities e.g. to request lab tests, accessible for GPs and the homecare institution Livio)
- E-referral (system for GPs to refer patients to specialists with options for information requests)
- Messaging system (for communication between the MST and ZGT hospitals and the GPs)
- Information transfer (to organise home care after hospital discharge or to support transfers to nursing homes)
- Inter-Company Document Sharing (XDS) (basic component for the standardisation of documents shared between different healthcare organisations such as MRI scans, lab reports, referral letters etc.).
- Care infrastructure (ZorgRingOost) (development of a broadband infrastructure for information sharing between healthcare organisations).

In this context, ICT only plays a role in the screening element which aims to monitor the elderly by offering exercise modules to improve their self-management capacity and keep them physically active (prevention). This part of the system is currently under development in the PERSSILLAA FP7 project whose objective is to develop a screening and prevention module for the pre-frail population. The stakeholders involved (GP's, physiotherapists, Roessingh Research & Development, Enschede municipality) have only recently held their first meeting to discuss how this web-based tool will be developed. The tool is foreseen to include a well-being and physical fitness test and advice on how to improve physical fitness. The tool will be offered to the elderly identified after a screening by their GP's for frailty and pre-frailty.

## 2.6 Governance

There is a long history of healthcare innovation and technology development in Twente which results in a strong ecosystem for healthcare innovation and good relationships between R&D institutes, healthcare institutes, the insurance provider, governments, businesses and the Enschede Municipality.

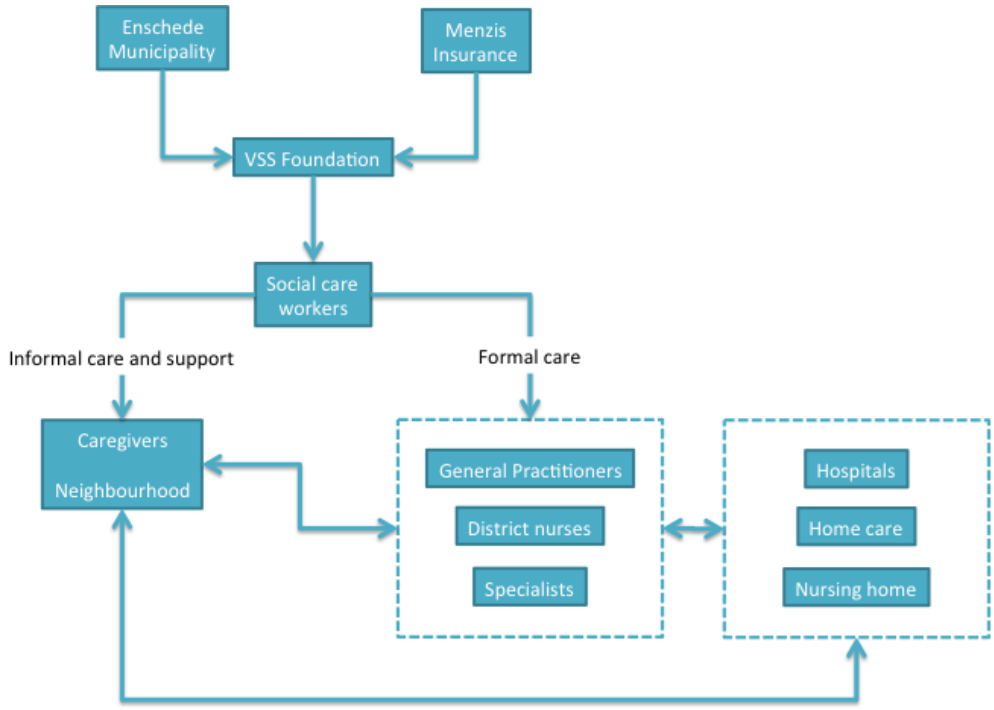
In the INAA initiative, all the institutions mentioned in Section 2.4 have been working together to re-organise service provision and ensure cooperation between the different tiers of care (health and social care) in order to facilitate access to health and social care services for the elderly. This ecosystem of actors, comprised of R&D institutes, healthcare institutions, insurance providers, government bodies and businesses, has helped foster integrated care. In this context, Twente has become a kind of knowledge hub which attracts small and medium enterprises (SMEs) which are able to gather funds to introduce and test new technologies locally.

The Enschede Municipality also plays a major role in the above ecosystem. As mentioned in the background section, municipalities in the Netherlands are responsible for disease prevention, health promotion and health protection. In this context, long-term care provision is the remit of nursing homes, residential homes or home care organisations. For the INAA initiative, however a foundation (*Stichting Vitaliteit en Veiligheid Voor Senioren - VVS*) has been established to deliver integrated care services (house inspection and activity programme). The Enschede municipality is in charge of controlling the quality of the intervention and the healthcare insurer (Menzis) of the funding of the initiative. VVS actively collaborates with the GPs who are the gateway to integrated care service delivery.

Nevertheless, the role of district nurses and social care workers is equally important as they identify and monitor patients' needs, and reinforce the social network of the elderly and the caregivers within the neighbourhood. It is important to emphasise that in the Netherlands a lot of people provide informal care visiting the elderly on a voluntary basis, and providing emotional support, help with household work or assistance.

The following figure summarises the governance model of the initiative.

**Figure 2: Governance model**




Source: Authors elaboration

## 2.7 Organisational processes

The aim of INAA is to implement both effective screening services and effective support and treatment services for older people in their own daily environment through an integrated approach. More specifically, it seeks to support independent living for the ageing population by focussing on physical, cognitive and nutrition aspects. This process is organised in three steps: (1) house inspection and assessment; (2) activity programme and (3) screening of the elderly. The first step consists of a visit from professionals with a care or social care background (social care workers) to the elderly in their homes in order to carry out a phased interview and map their wishes and needs. After this, the social care worker in consultation with the elderly looks for solutions within the network of formal and informal carers, including social care, health care services and other informal resources. The GPs and the district nurses are also informed about the assessment taking place and could be involved if required e.g. because of the health status of the elderly.

In a second step, the solutions and services identified are implemented through an activity programme tailored to the needs of the elderly. This includes integrated care (protocols and care pathways designed by inter-disciplinary teams of health professionals to support the continuum of care) and support activities reinforcing neighbourhood networks. Finally, the elderly are included in a screening programme consisting of a technology self-management programme, within their community.

In this organisational process, the VVS foundation is responsible for the delivery of the integrated care services of house inspection and the activity programme, while the municipality and the insurance company are in charge of controlling the service delivery. GPs and nurses work in close collaboration with the social workers and also with the specialists if secondary care is needed.

### 2.8 Reimbursement model and economic flow

The project is mostly funded by subsidies. The house inspection and activity programme receive funding from the insurance company (Menzis) and the Enschede municipality while the screening element, including the web-based tool, is co-funded by the European Commission (PRESILLAA FP7 project) and the insurance company. Furthermore, Menzis is currently reimbursing the screening element with its own funds, paying the GPs (or the practice nurses) compensation for the time spent on screening the frailty group.

The current reimbursement is provided as part of a national stimulus package which will expire soon and as such is a fixed term subsidy. Today, the coverage of healthcare costs is in a transition phase in the Netherlands and is currently defined in the following acts:

- The Exceptional Medical Expenses Act (AWBZ)
    - Covers long-term care for disabled, the chronically ill and the elderly
    - Funded by people's income tax payments and Governmental budget.
- The Health Insurance Act (ZVW)
    - Defines the provision of universal compulsory healthcare insurance
    - Covers basic care such as GP visits and medication
    - Funded by people's insurances payments
- The Social Support Act (WMO)
    - Covers long-term care for the disabled, the chronically ill and the elderly
    - Funded by the municipalities through the Municipality Fund and an income-dependent cost-sharing system for home care
    - Implemented by the local municipality

However, from 2015, the AWBZ will no longer apply. The least severe cases of long-term care will be covered by the 'WMO 2015' (the current WMO will be expanded as it has been approved by the Senate) and the ZVW. More severe cases of long-term care (i.e. for the elderly, the physically-ill and the mentally impaired in need of continuous care) will be covered by the Act on Long-term Care (WLZ). The WMO will become the main instrument to regulate long-term care, its aim being to increase people's self-management and social participation.

## 3 Transferability

Should the INAA assessment prove that the initiative is cost-effective, the intervention could be easily deployed in other areas of the Netherlands, provided institutional technological and organisational factors are taken into account. A positive business case can be considered as a driver for the transferability of the project. Beyond cost-effectiveness, lessons learnt from the INAA initiative could be applied to other municipalities in the Netherlands. However, strong partnerships among the different stakeholders of the health and social care ecosystem, as is the case in Twente, are needed to facilitate integrated care deployment.

The establishment of strong relationships should be accompanied by an adequate regulatory framework and financing and reimbursement policies, which in the case of the Netherlands may be provided by the Act on Long-term Care (WLZ). This legislation covers long-term care for the disabled, the chronically ill and the elderly. In addition, the Health Insurance Act (ZVW) and the Social Support Act (WMO) will consolidate the role of municipalities as being responsible for the execution of the programme while funding will

be provided from a governmental budget and people's income tax payments. Another key aspect for transferability is neighbourhood engagement. Even though there is a long tradition of people providing informal care (such as emotional support, help with household work or assistance for family members), the establishment of an organisation like VSS may facilitate social network coordination.

At EU level, the Twente region has been very active in implementing EC-funded projects. The experience gained by collaborating across different countries with different types of health systems could help transfer the initiative to other EU Member States. However, beyond the organisational and institutional challenges inherent to each country, it is worth pointing out that the existence of social networks within the neighbourhood is a must. Such networks and the engagement of individuals in their community may be more typical of the culture in Northern Europe.

# 4 Conclusions

The Integrated Neighbourhood Approach for an Ageing population (INAA) aims to implement both effective screening services and effective support and treatments services for elderly people in their own daily environments. INAA seeks to improve the quality of life (reducing feelings of loneliness, maintaining a meaningful life, creating a feeling of solidarity), and autonomy of frail elderly people living independently, allowing them to maintain a high level of physical functioning. In addition, this approach also aims to reduce the burden on informal caregivers who can benefit from the expertise of active elderly people (social/community participation) and contribute to enhancing cohesion in the suburb/neighbourhood.

INAA further aims to reinforce the coordination between residents, social care and healthcare at a neighbourhood level, improving the social network around frail older people and their informal caregivers in order to detect potential problems early on. To achieve this, INAA has developed an integrated approach to support independent living for the ageing population by focussing on physical, cognitive and nutrition aspects and making the transition from fragmented, reactive disease management to preventive personalised services supported by a proactive team of (informal) caregivers and health professionals.

The focus of the integrated care approach lies on health and social services integration, including preventive care, chronic disease and home care management. This has fostered organisational collaboration between health and social care providers (especially primary care and social care); professional collaboration (GPs, nurses and social care workers) and service integration. The latter has been achieved by developing protocols and care pathways that guarantee a continuum of care through a single/seamless process across time, place, and discipline.

The initiative promotes a strong patient-centred philosophy, in which the social network within the neighbourhood becomes a "new" health and social asset in the value chain. INAA fosters the efficient integration of both formal and informal caregivers that reinforces self-care and improves the quality of life of the elderly. GPs are the gatekeepers of the health system but work in close cooperation with social workers and district nurses in order to facilitate the coordination between health and social care.

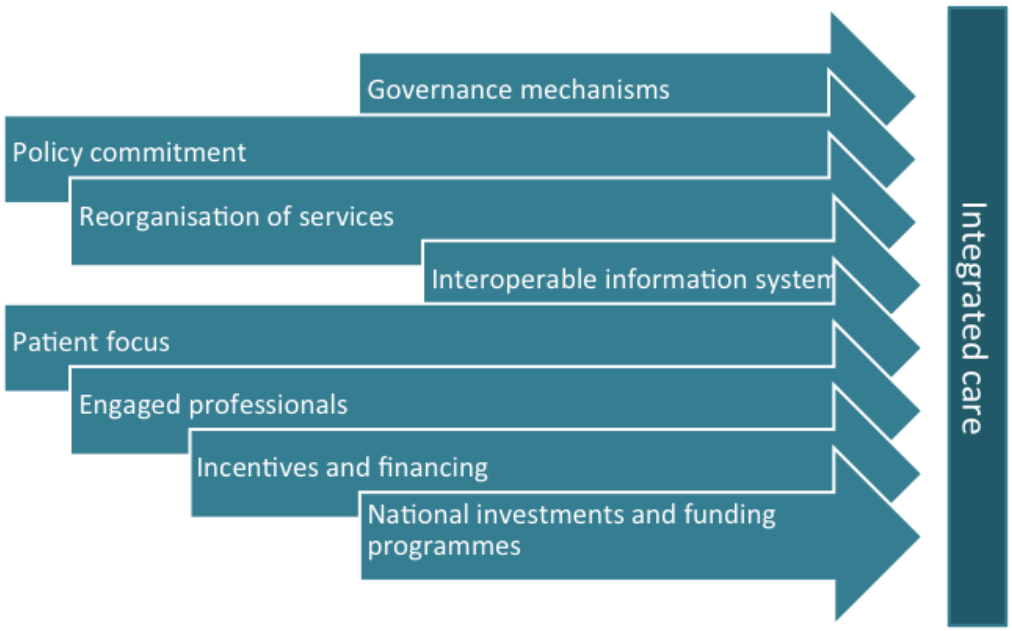
The main facilitators of the initiative have been the policy commitment and the patient focus. The Municipality of Enschede has acted as an enabler of the project by establishing a cooperation agreement with the healthcare insurer, health and social care providers and

the ecosystem of research institutions and SMEs which has facilitated the coordination of the different stakeholders throughout the intervention. The INAA initiative has not only adopted a patient focus but also a community focus, making the neighbourhood social capital a central asset for health and social care provision. This philosophy has contributed to raising awareness about integrated care among the population so that individuals have become ambassadors of the initiative to the extent that health and social care providers now have to participate in the initiative if they want to increase their reputation.

Besides policy commitment and patient focus, the reorganisation of services and the engagement of professionals have been the other two main facilitators of the initiative. The two are clearly interrelated. Inter-professional teams, including GPs, nurses, social workers and specialists have worked together to develop protocols and care pathways enabling the continuum of care, which has helped establish new ways of delivering health and social care services. Even though GPs work as gatekeepers to the health system, social workers also play an important role and act as a kind of gatekeeper for social care. They also coordinate informal care, which could be identified within the neighbourhood. In spite of these achievements, there is still room for improvement with regard to governance mechanisms, something that the new Social Support Act may help tackle.

The reorganisation of the services has been supported by the right incentives as GPs and nurses are paid for performing the screening and some funding has been provided by the national investment and funding programme. However, the uncertainty about funding in the future may hamper the full deployment of the initiative.

**Figure 3: Facilitators of INAA initiative**



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