

Dependency Care Systems Situation In the European Union

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1. Executive Summary

- Most of the 27 EU member states belong to the group of countries with the highest life expectancy in the world side. A significant achievement.
- The same countries are experiencing the lowest fertility worldwide. Europe is experiencing demographic ageing which is a rise in the median age of the population and a growing share of the population over 65 years.
- Like Europe, Spain is ageing fast. Today 17% of the population is over 65. By 2050 it is predicted that this figure will be 30%.
- Spain spends the second lowest amount in the EU on long term care as % of GDP
- Spain has 1.2 million dependent people. This is estimated to climb to 1.5 m in 10 years
- Spain is not alone. All of Europe is grappling with the issue of a growing need for dependency care due to an ageing population. This is leading to pressure on health and social services and a dramatic increase in cost. This report outlines how 12 different countries across Europe structure their dependency care.
- A significant step was taken in Spain to address the growing issue of dependency and to improve the quality of life of individuals relying on care and their carers by enacting rights and benefits in a dependency law - Promotion of Personal Autonomy and Care for Dependent Persons (law 39/2006). This law is being implemented in a staged approach.
- Putting proper care in place for dependent people is vital. Looking at what can be put in place to prevent people from becoming dependent people is crucial both from an individual and a societal perspective.
- Dependency in old age is not inevitable. Managing the impacts of a chronic illness, depression, a sedentary lifestyle and functional decline will have a huge impact in preventing a person becoming dependent person in old age. Prevention is the cure.
- Initiatives preventing dependency are not new to Spain and some good examples can be found in different regions.
- Best practise prevention initiatives from across Europe focus on a range of areas: managing disease and health screening, encouraging physical exercise, creating opportunities for social interaction and support, encouraging volunteering and peer support and using technology to live independently. Interesting examples include Patient Hotels (Nordic countries), Café Alzheimer's (The Netherlands), Keep Walking (Finland) and Senior Help Line (Ireland).

- Particular initiatives are recommended for implementation in Spain.
- Dependency is a humanitarian as well as a financial issue. Independent living is the goal. It is too important not to address with a sense of urgency.

2. Introduction

How does Europe take care of its dependent population? This question was the starting point of this study. With a new law introduced in Spain in 2006 Promotion of Personal Autonomy and Care for People in Situation of Dependency (law 39/2006), *Fundación Caser para la Dependencia* wanted to look at how the care of dependent people is organised in different countries throughout Europe.

In addition to a comparative analysis of different systems in Europe, the scope of the study was to look at best practice in the area of caring for dependent people, but also to go further and look at what interesting initiatives are taking place in European countries to prevent dependency.

According to Eurostat approximately 4% of the adult population across Europe would be considered dependent population. This percentage is only an indication and uses a wide definition of dependency.

For the purposes of this study the definition of dependent person is someone who needs support in coping with daily living tasks. Dependency does increase with age. The Statistical Office of the European Union (Eurostat) estimates that approximately 15% to 16% of persons aged over 65 are dependent people and this rises to 25% or 26% for persons aged over 75.

Though we sought to look at the whole population of dependent people we quickly found that most of the studies, statistics and examples of best practice focus on elderly dependent people. Therefore most of the examples of preventive initiatives found were focused on preventing dependency in older people.

Spain has been very progressive in enshrining in law rights to services for dependent people. Building an infrastructure to ensure access to quality services across the regions is now the focus.

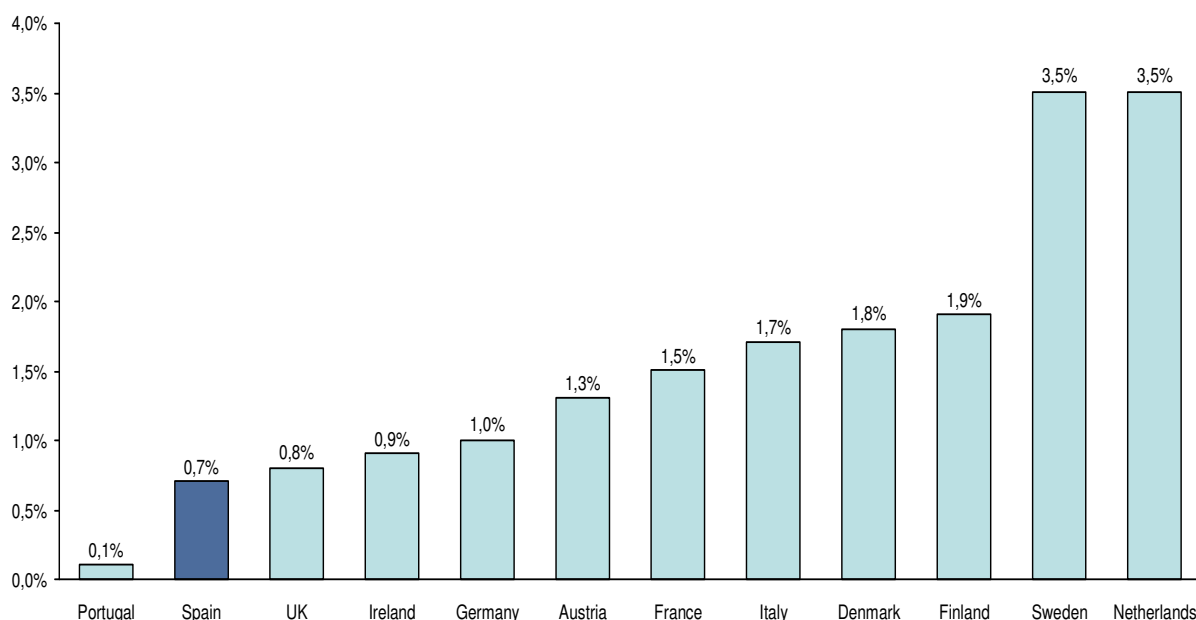
This report is in four parts. The first part gives a background to the study. The second part is a benchmark analysis describing the dependency care systems across 12 chosen countries. These are: Austria, Denmark, Finland, France, Germany, Ireland, Italy, Portugal, Spain, Sweden, The Netherlands and the United Kingdom. The third part looks at dependency prevention initiatives, first in Spain and then across Europe. The fourth and final part of the report gives details on four prevention initiatives that we believe Spain should seriously look at implementing.

Context

EU countries experience important future demographic changes, such as increasing older populations. The European Commission estimates that by 2025 about one-third of Europe's population will be aged 60 years and over. Such demographic trends have enormous impact on many different sectors, including health care and social services.

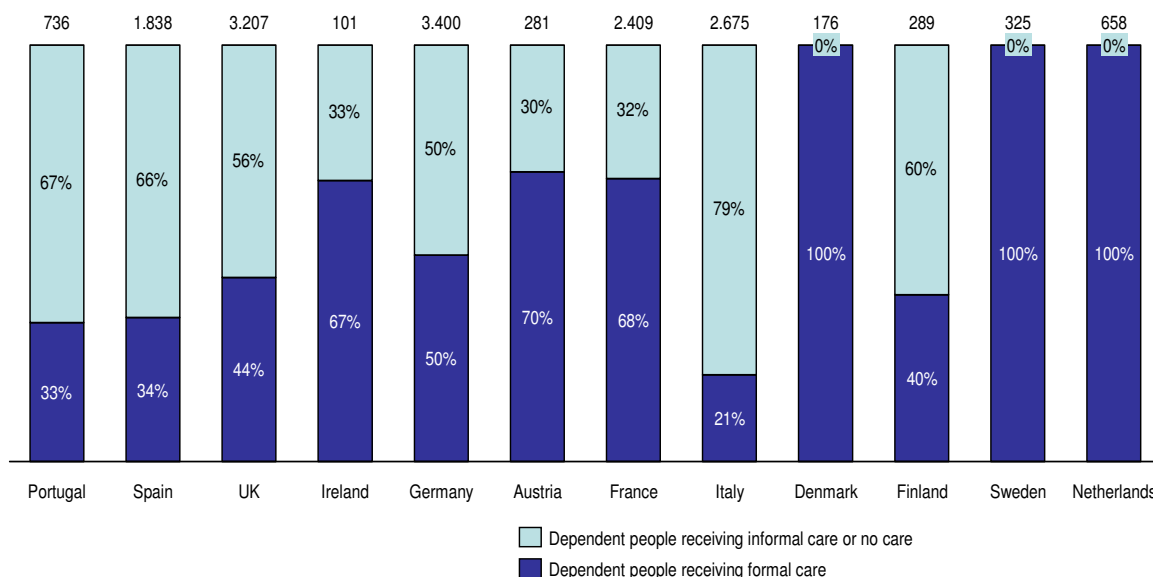
The way countries provide and organise for health care and social services differs amongst EU countries. This is partly driven by, amongst others, differences in national laws, differences in culture, differences in organisation (for instance, the way care is made a responsibility of regions or municipalities), and by difference in the availability of funding via (a combination of) social premiums, taxes and co-payments. The large difference between EU countries is illustrated by the share of GDP that is spent in each country on long term care (see table 1.1) and the amount of dependent people and the accompanying share in formal and informal/no care that is provided.

Table 1.1 Spending (2010 estimate) on Long Term Care as % of GDP in EU countries



Source: Economic and Financial Affairs of the European Commission, 2009 Ageing Report, 2009

Table 1.2 Amount of dependent people (2010 estimate in thousands) with split per type of care



Source: Economic and Financial Affairs of the European Commission, 2009 Ageing Report, 2009

Because of the tendency of a future aging population, it seems important to develop initiatives to prevent people from becoming (even more) dependent people. Prevention could potentially limit expenses made on health care and social services, which helps to get the business model of taking care of people -such as elderly- to be more sustainable over time. EU countries acknowledge the potential of dependency prevention as increasing attention is being given to facilitating healthy and active ageing. In Spain for instance, in February 2011 a new law has been established –as part of the general “Law 39/2007 on the Promotion of Personal Autonomy and Care for people in Situation of Dependency”- that governs the promotion and prevention of low dependent people to become more dependent.

Differences in dependency prevention initiatives across EU countries can be regarded as a source of opportunity: knowledge and best practices in one country can potentially be exported to other countries. This research, which has been sponsored by *Fundación Caser para la Dependencia*, has the main goal to investigate different examples of good practices of dependency prevention in different EU countries. Based on these examples, ideas are generated that may contribute to effective and successful healthy and active ageing of people in Spain.

This report starts with an overview of different systems of health care and social services in EU countries. This analysis provides a general framework on how EU countries organise health care and social services. The remainder of this report focuses on dependency prevention initiatives. For this, the report starts with an initial description of some significant prevention initiatives available in Spain. Following this analysis, a list of prevention initiatives available in the EU is presented. From this list, a few initiatives have been selected for in-depth analysis, with the goal to see how and to what extent these initiatives may be considered for implementation in Spain.

3.1 Austria

In Austria, the dependency care is ruled by federal law since July 1st 1993 (the so-called *Bundespflegegesetz*). By an agreement between the government and the nine Austrian provinces, dependency care services are split: the government provides cash allowance while social services are organised by the provinces.

In 2007, 351,057 persons received long term care from the government and 60,919 received aid from the provinces. Together this is 4.8% of the Austrian population – and 67.5% of the dependent, elderly persons are women. But since these data only contain people who need at least 50 hours of care per month (the minimum of care to get the right to claim money from the state), the actual number will be much higher and is estimated to be more than half a million.

While the cash allowance is only based on the degree of dependency of a person – the cash amount is between 154 Euro and 1,655 Euro per month – the social services differ through Austria by province. This is due to the fact that quality standards are organised by each province itself.

Social services can be both institutional care (by province or perhaps a religious organisation) and home-based care (by non-profit organisations like the Red Cross).

All provinces must assure the following:

- Elderly, dependent persons may choose freely among the services offered ;
- Home-based services shall expand with higher priority than institutional-based facilities ;
- Nursing homes shall be small and integrated into residential areas.

Since cash allowance may not be sufficient to cover the costs of long term care, social aid helps people who decide to ask for institutional care.

Institutional caretakers only get some kind of “basic allowance” (around 50 Euro per month) and the rest of the income, pensions or cash allowance is paid directly to the institution (they may be private or co-financed by the state; nevertheless citizens have to pay money to use them). If this does not suffice, the difference is paid by social aid. Financial services are even available for (family) caregivers who also have the possibility for a six months job leave when close relatives become dependent.

Cash allowance by the government is completely financed by taxes. For 2010, Austria calculated with a total of 4.23 billion Euro for long term care, divided into 2.42 billion Euro for cash allowances and 1.81 billion Euro for service offers.

The Austrian social ministry published a study that outsourcing of financing of long-term care from tax-based to insurance-based (by public insurance as in Germany, see below) will lead to a fixed percentage of about 2.2% of the salary of each Austrian employee.

Innovation and prevention

An innovative concept is “supported living” which is available in each province. There, people can more or less live their own life in apartments close to or in residential areas. Caregivers look after the residents in predefined hours, so the people being cared for have control over their own lives.

Until now prevention initiatives in Austria do not exist. There are some discussions and remarks, especially lead by the Austrian health and nursing federation.

Sources:

- ◆ [3.1-A] Riedle, M. and Kraus, M. “Long Term Care System for the Elderly in Austria”. 2010
- ◆ [3.1-B] Schneider, U., and Österle, A., Schober, D. “Die Kosten der Pflege in Österreich“. 2006

3.2 Denmark

The consolidation Act of social services contains the Danish regulations for long term care. This act was many times reviewed, at last 2007 with the local government reform and 2009 with the care-home guarantee (see below).

In Denmark, local councils are responsible for long-term care and social care. The government only gives legislation concerning social services and assistance.

In 2007, 206,000 persons (3.8% of the population) received help, where from 87% were of age 65 or more. 80% of the beneficiaries still live at home since Denmark has explicit priority to promote persons living in their own homes: from 1987 on, no new nursing homes has been constructed in Denmark.

Available services in Denmark are conventional nursing homes, modern close-care accommodations and service at home. Permanent help at home and living in nursing homes is usually free, but local authorities may take few charges.

The Danish system follows two main ideas:

- Helps recipients to help themselves (supplementary assistance for tasks the person is unable to perform by him- or herself).
- Aims to help recipients to remain active and enable them to greatest extent possible to perform as many tasks as possible.

By the frequent reviews of the law, the Danish system improved its standards. Some really good practices are the following:

- Since 1996, every person at age 75 or more is visited twice a year by an employer of the municipality in order to evaluate individual need and assist with planning for independent living – regardless the person is dependent or not. These preventive home visits are one of the best prevention methods in Europe and thus described more detailed in chapter 5.1 Preventive Home Visits. Nevertheless, 30% of these visits were refused in 2007, so there is still some work to do.
- Since 2003, elderly may choose freely between a private and a municipal provider for accessing services.
- In 2009, a care-home guarantee was introduced. Older people with special needs for dwelling in a nurse home must receive an accommodation offer at least after two months since the visit of a specialist.

Denmark's long term care system is financed by local taxes and block grants from the state. In 2003, about 4.33 billion Euro (DKK 32.3 billion) were spent, in 2005 still 4.055 billion Euro, where from 4.044 billion were spent for home care and only 11.2 million for nursing homes.

Innovation and prevention

The main goal of the Danish system is to provide care service for everyone in need of care, generally free of charge and independent of income, age, family situation and potential caregivers. This guarantees a complete coverage of the needs of elderly and dependent persons – but means high costs for the government, since about 100,000 persons are employed in measures for elderly people.

As already mentioned the concept of preventive home visits, which also exists in Finland and Sweden, is a very good but also expensive step in the line of prevention methods. It is described in detail in chapter 5.1 Preventive Home Visits.

Sources:

- ◆ [3.2-A] Schulz, E. "The long-term care system for the elderly in Denmark". 2010.
- ◆ [3.2-B] OECD. "Help Wanted? Providing and Paying for long-term care". 2011.

3.3 Finland

In Finland, the state bears responsibility for dependent elderly care. The key laws about this are the Primary Health Care act and the Social Welfare act. The central state regulates via broad, but not detailed guidelines while the operational matters are due to municipalities. Guidelines for example contain what is considered to be good practice in assessment of the need for care.

There is few more influence for the state by the six State Provincial offices which evaluate the quality and accessibility of basic services offered in the regions and the National Supervisory Authority for Welfare and Health (Valvira) which deals with severe problems and cases with future implications for the sector.

On the other hand, municipalities are responsible for providing health care and social services. In terms of specialised health care, they are divided into twenty hospital districts. The autonomy of municipalities is perceived to be higher than in any other country.

The Finnish municipalities decide together with the dependent which services should be provided. There are as well institutional care in nursing homes and health care centres as home-based care and nursing homes supplied by the municipalities. About 25% of them are offered from the private sector.

Care services are mostly in-kind, but some cash benefits exist, paid out by the Social Security Institution KELA. The whole system is tilted towards formal care, but informal care also exists, for which an allowance from 336 to 637 Euro per month is available.

In Finland, every resident is insured for catastrophic expenses, making care accessible in general. Elderly strive to live independent from their children. The shift to in-home care helps to reduce expenses and supported elderly to sustain an independent life longer – but this is, of course, also a matter of culture.

The strong autonomy of municipalities leads to great differences of amount and quality of care received in different regions. National guidelines are so broad that it depends on the region which service a dependent person gets. Other problems in Finland are the lack of personnel and the quality of services, which is still not optimal. A merge and decrease of municipalities may help to solve these problems, since larger organisations may be more attractive for employees and could increase productivity.

Finland's long term care services are funded by municipality tax, national tax and co-payments. The maximal fees which municipalities are allowed to charge are fixed by law. Fees of dependent people are based on income, type of care and size of household.

The whole expenditure is about 1.5% of the Finnish GDP. However, recent cost issues lead to cost-cutting. But still, people can reimburse up to 33% of their expenses. About 28-29% of the total expenses are provided by the private sector.

Innovation and prevention

As Denmark, Finland tries to increase home care and higher quality of services which may contribute to prevention. But moreover, there are some prevention initiatives in Finland which are described in chapter 4.2 Prevention Initiatives all over Europe:

- Patient Hotels, designed to accommodate low dependent people;
- Preventive Home Visits as described above in Denmark, where specialists visit people to evaluate individual needs (see chapter 5.1 Preventive Home Visits);
- Home Care Umbrella project which refers to information groups and guided self-care courses to recognise an early treatment of depression of elderly;
- Sheltered Housing offers self-contained units in Finland usually equipped with smart technology like automatic fire alarm systems and automatic light switches.

Sources:

- ◆ [3.3-A] The Research Institute of the Finnish Economy. “Overview of long-term care systems: country report Finland”. 2010.
- ◆ [3.3-B] Raad voor de Volksgezondheid en Zorg. “De AWBT internationaal bekeken”. 2005.
- ◆ [3.3-C] Chung, Ed, and Cristina Ciocirlan, Ruth McKay. “Elder care as a Policy Priority: Lessons from Around the World”. 2009.

3.4 France

In 1997 with the “Specific allowance for dependency” (PSD) the first allowance was introduced and extended in 2002 with a universal right, the personalised allowance of autonomy (APA).

The government introduced a scale called “AGGIR” as an instrument to determinate the degree of dependency of old people (age at least 60). AGGIR contains six degrees of dependency, from GIR1 (very dependent) to GIR6 (not dependent). Only people from GIR1 to GIR4 can receive the APA.

In France, the state defines the major priorities for long term care (LTC). It is responsible for the improvement of LTC services, in quantity and quality. The local department authorities are considered as “leaders” in the field of dependency. They define policy, planning and financing.

LTC services in France include:

- nursing and residential homes (costs about 9.3 billion Euro in 2008); hospitals and day care centres;
- home nursing care services and home care services (costs around 6.6 billion Euro);
- support for informal carers (85% of them belong to the family of the cared-for old person).

These services are provided by social and health sectors and by the families. The provision by the social sectors is the key role of local and departmental authorities; it can be arranged by public or private. In France the survival of the family as the main supplier of services (the traditional role) is a big goal in LTC services.

Other benefits granted in France are the APA (see above), personalised allowance for autonomy (costs about 6 billion Euro in 2008) and the PCH, a disability compensation benefit.

The goal of empowering the role of the family is reached by the APA grants. Moreover, beneficiaries can decide which service they want to get.

On the other hand, the French system has some mistakes. The AGGIR scale does not take into consideration psychological dependency and there is a lack of coordination between departmental authorities and the central government. There are also big differences in the regions since there is no “national level” of fees, which may differ between rural and urban areas or public and private providers.

The French LTC system is mixed-financed by taxes, contributions (employer's social insurance) and co-payments of families. Next to the government, municipalities and social insurance, a main actor for the expenditure is the CNSA: The National Solidarity Fund for Autonomy, a special national fund.

The total expenditure on LTC in 2007 was about 25 billion Euro, 19 billion Euro by public stakeholders (1% GNP): 60% was paid by health insurance, 20% by local government, 15% by the CNSA and only about 2% by central government.

Innovation and prevention

Prevention initiatives are not common in France. A setting up to regional health agencies is aspired and may at least help to solve the lack of coordination.

Sources:

- ◆ [3.4-A] Joël, M., and Dufour-Kippelen, S., Duchêne, C., Marmier, M. “The LTC system for the Elderly in France”. Ancien Project. 2010.
- ◆ [3.4-B] OECD. “Help Wanted? Providing and Paying for long-term care”. 2011.

3.5 Germany

In 1995, social long-term care insurance (LTCI) was introduced as the fifth pillar of the social security system in Germany (so called Sozialgesetzbuch, Part XI). In 2008, a reform of the LTCI improved the conditions and services. A further reform was expected for July 2011 but is delayed due to changes in the ministry of health.

The current system is split; members of the public health insurance become members of the public LTCI while members of the private health insurance are obliged to buy private LTCI. The German system divided between three levels of dependency.

Long term care in Germany is mostly regulated by the state. Laws, amounts of cash benefits and other regulations are directly decided by the government and hold for all provinces.

The provinces (Bundesländer) are responsible for the Pflegekassen, public institutions which receive the fees for the LTCI and pay cash benefits to the caretakers.

LTC services in Germany can be cash benefits (directly to the dependent person), day- or night-care and nursing homes. Only persons who at least paid two years into the LTCI may get these services.

Cash allowance for dependent in 2010 is between 225 Euro and 1,918 Euro, but costs for dependent people are estimated to be up to 3,200 Euro.

It is a big problem that the monthly cash allowance does not suffice for good care, so people have to use private insurances or look for other solutions.

Otherwise, there are some good practices in Germany. If a family caregiver is on holiday, the LTCI pays a professional caregiver for up to four weeks (at most 1,470 Euro) and to improve quality of long term care facilities, inspections without prior notice once a year are held in each facility. Nursing homes must show the results of this inspection (from “very good” to “poor”) in a highly visible location.

In December 2009, 2.34 million citizens received long-term care in Germany. 53.5% were in the lowest dependency level, 34% in the medium and 12.5% in the highest level. Since 2007, the number of caretakers increased by 4.1%.

The whole system is financed by social or private insurance. People in the public LTCI have to pay 1.95% of the monthly income to the insurance company. Half of this is paid by the employer, half by the employee. Persons without children have to pay an additional 0.25% fee (completely by the employee). If the monthly income is above 3,712.50 Euro (2011), 1.95% (resp. additional 0.25%) is only paid up to this value (contribution ceiling – BBG). The government can increase or decrease the percentage and the BBG. The BBG is usually linked to the income situation in Germany. People in private LTCI pay insurance rates depending on the calculation of the insurance company.

Innovation and prevention

By now, prevention initiatives only exist by welfare institutions or health insurance companies. These are mostly for prevention of becoming ill and do not directly try to prevent dependency.

There are some “innovative” initiatives like training courses for family carers and voluntary carers which are paid to some extent by the LTCI or initiatives to improve the job status of employers in the LTC sector with a high quality standard.

Sources:

- ◆ [3.5-A] Gothaer Health Insurance Company. “Statistisches Bundesamt”.
- ◆ [3.5-B] Bundesministerium für Gesundheit. “Das bringt die Pflegereform“. 2008.
- ◆ [3.5-C] OECD. “Help Wanted? Providing and Paying for long-term care”. 2011.
- ◆ [3.5-D] Schulz, E. “The long-term care system for the elderly in Germany”. 2010.

3.6 Ireland

In Ireland, no specific legal framework for care of dependent people exists. Care is (legally) covered in health legislation and there is some specific legislation covering nursing homes.

Long term care is provided by the National Government with the Health Service Executive (HSE) specifically responsible for the allocation of funds to LTC services. In the regions, the range of service providers using private, public and voluntary sector can be confusing. It is difficult to access the required service.

Services cover institutional care, community based supports and cash benefits for carers (not for dependent persons). Long-term institutional care is provided by both public and private sectors, but places in the public system are limited. About 7.5% of the long-term care beds are occupied by people under 65 years.

Community based supports include home-help, home care packages, meals on wheels and day/respice care. Assessment to these services is mostly done by a public health nurse.

Cash benefits for carers allow an income support for carers of a dependent person. Insured employees can receive non-means tested benefits for a period between six weeks and two years when providing care. All resident carers can get annual, tax-based grants which are not subject to a means test.

As in the Nordic countries, the focus is on supporting dependent people in their own homes. Moreover, the Irish system is support carers. But in practice, it is difficult to access information about services. No standard assessment of needs for home care or long term residential care exists and too many organisations are involved in the delivery of services.

The expenditure for LTC in Ireland was the second lowest in OECD countries in 2005. Public services are funded by central taxation. In 2009, a new system for financing nursing home care was introduced which requires both income and asset assessment of the dependent person: 80% of the income and 5% of the value of assets per annum including principal residence for the first three years.

Innovation and prevention

The income support for carers and respite allowance are a key part of the LTC system which makes family care affordable. Moreover, the health service authority funds voluntary groups to train their volunteers in caring skills.

There are two prevention initiatives worth a closer look in Ireland (and therefore described in more detail in chapter 4.2 Prevention Initiatives all over Europe):

- Sheltered Housing are self-contained units with 24 hours access to help and support;
- Senior Help Line is a confidential listening service for older people.

Sources:

- ◆ [3.6-B] OECD. "Help Wanted? Providing and Paying for long-term care". 2011.
- ◆ [3.6-C] Report of the Interdepartmental Working Group on Long Term Care. 2006.

3.7 Italy

In Italy there is also no general legal framework for long term care. In 2000, there was an attempt to implement a national framework for LTC to establish a minimum level of social care services, but the law was considered weak and did not pass.

Thus, the Italian system is characterised by multiple institutional arrangements at various levels of government.

A wide variation among regions and areas in both funding levels and structure of services is provided. The recent OECD report recommends improving coordination across social and health care services and across different authorities.

Currently the services are provided by the National Health Service (SSN) while the central government has the power to set entitlements. Twenty one regions with an average population of three million citizens organise and administer service through local health authorities called ASL. The ASL purchase and deliver services. Even below the regional level there are health districts.

Services can be divided into health services, cash benefits and social care services. Health services for elderly and dependent people (including home-based care services and residential services) are managed by the SSN through a variety of locally-based health units. All services of SSN are free of charge.

Cash benefits are usually granted by the state (national institute of social security) to all disabled dependent people who are not in a residential institution. In 2009, the monthly benefit was about 472 Euro in average.

Other payments can be made by regions and municipalities, but without uniform approach in defining and meeting needs of persons.

Social care services are provided locally by municipalities like nursing homes for elderly, semi-residential institutions and home-based care. Service users and their relatives are charged co-payments based on the level of disability and the family financial situation.

Still a significant part of LTC is provided by family caregivers (about 16.2% - the highest rate in the European Union). But due to the regional differences in access to public LTC and the missing of an overall legal framework, services vary a lot. Another problem is that the cash benefits from the state are non-means tested.

The expenditure on LTC is about 1.7% of the GDP (being 25.6 billion Euro) and is predicted to be about 4% of the GDP in 2050. At the moment, 27% are paid for institutional care, 30% for home and semi-residential care and 43% for cash payments. It is funded by taxation and co-payments.

There is no official data on private expenditure on LTC, but it is estimated at about 12.8 billion Euro.

Innovation and prevention

In Italy it is realized that 72% of the LTC workers are foreign born, incentives for legalization of these workers started to keep them. Some regions are even implementing home tutoring for LTC migrant workers.

Moreover, there is the Filo d'Argento, a Senior Help Line which provides confidential listening services for older people, see chapter 4.2 Prevention Initiatives all over Europe.

Sources:

- ◆ [3.7-A] Teodosi, F. and Gabriele, S. "Long term care system for the elderly in Italy". 2010.
- ◆ [3.7-B] OECD. "Help Wanted? Providing and Paying for long-term care". 2011.

3.8 Portugal

Historically the welfare provision and care services were under the responsibility of informal networks like families and charity organisations (Misericordias – the Holy Churches). The public sector played only a minor role.

This changed in 2006 when the Ministry of Health and the Ministry of Labour and Social Solidarity established the National Network for Long-term Care (RNCCI).

Since 2006, the government is in charge of the National Network for Continuous Integrated Care, but the relationship to the different regions is not really deep. In Portugal, there are two degrees of dependency. The difference is the consideration of severe dementia. Everyone who is dependent is eligible to receive aid.

The Portuguese system includes several services like nursing homes, residential care, day care centres, home-based services and family accommodation. Financial benefits as the “supplement for dependency” are also available for pensioners who need permanent care. Families paying for care services for a member in the ascending line may receive tax deductions.

In each region, the Ministry of Labour and Social Solidarity provides social services (except in Lisbon, where it is still provided by Misericordias). Non-profit institutions and Misericordias provide health and social care.

In the last years, significant changes took place in Portugal. The way leads from informal to institutional care. Still the informal carers (families) are the main actors of this system. On the other hand, the contribution of the state is not important yet and the quality of care is not as good as it should be, especially in residential care and nursing homes.

The system is financed by the Ministry of Health and Ministry of Labour and Social Solidarity (for the public sector) but also needs co-payments from the recipients.

Innovation and prevention

Unluckily, prevention is not well defined in Portugal and there are no initiatives. Since the system is quite new and about to establish, even innovative ideas could not be identified.

Sources:

- ◆ [3.8-A] Ribeiro, F. “The LTC System for the Elderly in Portugal”. 2010.
- ◆ [3.8-B] OECD. “Help Wanted? Providing and Paying for long-term care”. 2011.
- ◆ [3.8-C] Barros, P., and De Almeida, J. “Portugal: Health system review.” 2007.

3.9 Spain

The dependency law is the fourth pillar of the social welfare in Spain. The law 39/2006 on the Promotion of Personal Autonomy and Care for People in Situation of Dependency passed in December 2006. It introduced the System of Dependence Care and Care for Dependency (SAAD).

The law, which is about to be implemented from 2007 to 2013, distinguishes three different degrees of dependency: moderate, severe and major dependency.

In Spain, the government regulates basis aspects while the communities develop the norms in depth. The Territorial Council defines the framework, the intensity of services, the conditions to access and the co-payment. For this reason, there are obviously big differences between the communities.

The new law established a Service Catalogue with the following services:

- Services for prevention of dependency and for promotion of personal autonomy;
- Personal alert system;
- Home Help Service;
- Day and Night Centre Service;
- Residential Care Service.

Should these services be not available, dependent people may receive cash allowances. These are financial benefits linked to the service, for care in the family (if non-professional carers look for the beneficiary) or for personalised care.

These services are both offered by public and private sector (and of course by family carers). In the public sector communities and local entities exist as well as state centres for the promotion of personal autonomy and care for the dependent persons. Besides this, local social services are sometimes offered.

The private sector offers chartered and non-chartered centres with a previous accreditation.

By introducing the law, the family role of giving and taking care was not intended to be substituted. Another aspect of the law is the expectancy of increasing the employment rate. Until now 156,253 non-professional family carers are affiliated to Social Security. Caretakers profit by the law since it also established quality criteria for private suppliers.

But still not everything is fine in Spain. The initial estimation of costs was not well calculated (about 200,000 dependent citizens were estimated; by October 2011 almost 1 million people were receiving a benefit, according to IMSERSO database) and there is a lack of professionals in the business of caregivers. Since cash allowances are cheaper than establishing services, they are more often paid.

Overall, financing is an issue in Spain. The government only gives a minimum of protection (1st level); everything above this (2nd level) has to be figured out via conventions between the government and the communities. Beneficiaries must contribute depending on their acquisitive level and the cost of the services. This co-payment can vary among the communities.

Innovation and prevention

The Spanish Law 39/2006 for dependency “Promotion of Personal Autonomy and Care for People in Situation of Dependency” reports this reality when including prevention as one of its inspirational principles “Establishing the adequate measures for prevention, rehabilitation, social and mental stimulation” (article 3 of the Act). The catalogue of available services also includes “prevention of dependency situations and promotion of personal autonomy” (article 15, developed in article 21 of the Law), although maybe, it is fair to say it might seem a light or superficial definition of the available services, establishing as essential the correct collaboration of health and social resources, and delegating the responsibility and the services intensity to the diverse Regions Dependency Situations Prevention Plans. This situation is the origin of important challenges for Spain: differences between communities, but also coordination and cooperation in order to increase the effectiveness.

There is a wide consensus that considers that the measures to promote health, individual autonomy and illness control, contribute to diminish the incidence of possible illness and with it, the dependency, hence the close relation between prevention and promotion of personal autonomy (Essential Aim of the Law, as demonstrates the inclusion of this in the Law’s 39/2006 title). The definition of the services of personal autonomy promotion is included in the composition of Royal Decree 175/2011, although it establishes that to accede to these services it is necessary to have a moderate or grade 1 dependency situation recognized. In other words, these services do not aim for a primary dependency prevention (established on non-dependent persons), but it is focused in intervention when there are still possibilities of correcting it or reverting it (also called secondary dependency). In other words, prevention and promotion of autonomy are not developed to some extent in depth until 2011.

In the following part of the report, prevention initiatives that are already introduced in Spain are described in chapter 4.1 Prevention Initiatives in Spain. Some initiatives and prevention ideas that seem to work fine in the European Union are described and proposed to be settled in Spain as well in chapter 5. Relevant Prevention Initiatives that could be Implemented in Spain.

Sources:

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3.10 Sweden

In Sweden, the state bears responsibility for dependent elderly care. The key national law is the Ädel-reformen (Social Services Act) which defines the responsibilities of county counsels and local municipalities. It also provides the framework for taxes and fees that may be used for financing the regional or local activities.

The central state has the responsibility to legislate, facilitate and control. It defines the maximum fee for care and additional conditions. Laws are set by the Ministry of Health and Social affairs, while evaluation of the system is made by the National Board of Health and Safety.

Between counties and municipalities no formal hierarchy exists. Together they have the responsibility for detailed planning, funding and allocating the resources. Municipalities are obliged to respect and cooperate with informal care givers in order to reduce workload, prevent illness and provide knowledge.

They are responsible for housing and home care even if it is run by private health and other social care providers (like trusts and cooperatives).

Formal care in Sweden is divided into institutional, home and home nursing care. At the moment and in the past, institutional care plays a relatively heavy role in Sweden, but in-home care becomes more and more important. Moreover the attention which is given to informal care increases.

The 18 county counsels take care of medical treatment via specialised institutional services such as hospitals and care centres. The 280 local municipalities take care of social services, being 90% of all elderly care. The main task is to select providers for these services.

There is a long list of services offered by the providers like the following:

- Organising day activities;
- Meal services;
- Personal safety alarms;
- Home adaptation and Transportation Services.

Care is assessed by evaluators on a discretionary basis, only after request of assessment from the local municipalities. Since 2010, local municipalities need to draw up an individual plan for each care recipient.

The Swedish system bases on independent help for everyone. Every resident is insured in case of catastrophic expenses making care accessible. Elderly strive to live independent from their children: the shift to in-home care helps to reduce expenses and supports elderly to sustain an independent life longer.

The other side of the coin is that such a system is very expensive and in the Swedish case very tax dependent (see below), so quite vulnerable to ageing demographics. Going against this, numbers of places in institutions decreased which led to waiting times an inadequate care.

The responsibility between county counsels and municipalities is not always clear, especially where medical treatment (counsels) and social care (municipalities) begins. Lack of definition and explicit rules and incentives to keep costs down led to inefficient utilization of resources and cooperation or coordination issues. This resulted in insufficient care; users got stuck in bureaucracy and care is unequal in different regions.

The expenditure on long term care of elderly is about 3.5% of the Swedish GDP (2006). In the last years, the pressure on social budgets increased. More than 95% are paid by public funds; only 5% are paid by private health. The system is tax-financed, where the tax is levied by county counsels (10.5%) and local municipalities (20.7%). Municipal expenses are paid for by 90% of local tax and 10% national tax.

About 64% of the expenses are due to institutional care; 34% are spend for in-home care and only 2% are spent for prevention.

Costs of institutional care for dependent elderly are about 3,000 Euro per capita, costs of in-home care are about 1,900 Euro per capita (2007). Co-payment is maximised at 405 Euro. The fee that a service provider may charge is fixed by the state and is not dependent on the income of the user.

Innovation and prevention

In Sweden, employees can take up to one month time off (paid), per family member they care for. Employees also receive influence over the scheduling of their work to suit their individual needs.

As it was realized that people sometimes do not feel secure enough at home but are still too healthy for an institution, "secure housing" was installed. It aims to provide alternative residence (with staff and common lounge) for these people.

Sweden is quite busy in prevention initiatives as described in chapter 4.2 Prevention Initiatives all over Europe:

- Patient Hotels, designed to accommodate low dependent people

- Preventive Home Visits as described above in Denmark and Finland, where specialists visit people to evaluate individual needs (see chapter 5.1 Preventive Home Visits)
- Social interaction and support like the Bozorgan Day Centre which promotes health and well-being of older Iranian women and their integration into Swedish society.

Sources:

- ◆ [3.10-A] Fukushima, N., and Adami, J., Palme, M. “The LTC system for the Elderly in Sweden”. 2010.
- ◆ [3.10-B] Raad voor de Volksgezondheid en Zorg. “De AWBT internationaal bekeken”. 2005.
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3.11 The Netherlands

Also in the Netherlands, the state bears responsibility for dependent elderly care. The national key laws are the exceptional medical expenses act (AWBZ, 1968) and the law on social assistance (WMO, 2007).

The central state defines the law and semi-regulates the sector. The Dutch Health Authority (NZa) monitors competition and determines maximal tariffs. The WMO is carried out by local municipalities, who are free to organise care in their own way. But they have the obligation to compensate for the effects of limitations in functioning of dependent elderly.

The AWBZ covers a lot of services:

- personal care (help with showering, clothing, toilets), nursing (medical help at home), assistance (to organise the day), treatment, temporary/long term stay in institutions and rehabilitative care;
- users can choose between in-kind care or cash (being 75% of in-kind budget). They receive care or cash benefits after the request has been assessed by a central independent organisation (CIZ). The CIZ has no financial incentive and determines the amount of care necessary, besides the “usual” informal care that family members are supposed to provide.
- in-kind care is delivered via regional care offices who pre-select care suppliers out of which final users can choose;
- cash benefits can be spend freely, but patients are obliged to be able to show that they actually did spend the money on care.

Some domestic help moved to WMO (provision of wheelchairs, home adjustments, transports, meals, social activities, help in household) creating room for integration with social services organised by local counsels.

In general, institutional care plays a relatively heavy role in The Netherlands, but in-home care has been stimulated by the government because elderly strive to live independent from their children.

Basically – as in Sweden – every resident is insured for catastrophic expenses making care accessible. Cash benefits and co-payments stimulate the right use of care or improve the position of care users (in terms of flexibility). The centralization via CIZ improves fairness and uniform assessment of demand.

But on the other hand costs are difficult to control. Due to the cash option, formerly informal care became paid by the caretakers. As a result, macro AWBZ budgets were insufficient, co-payments had to increase and regional budgets have been introduced. In addition regional care offices lack efficiency as they have no financial incentive. Due to inadequate staff and lack of control on standards and guidelines, quality problems arise.

The expenditure on long term care for elderly is about 2.5% of the GDP. The AWBZ is funded by social security premiums (70%), taxes (22%) and co-payments (8%). The Dutch government determines budgets for care for periods about four years. If the expenditures exceed the budgets, Ministry of Health, Welfare and Sports has to formulate a new policy to contain the costs (like tariff cuts, higher co-payments and so on).

The WMO is funded by taxes and co-payments. Local municipalities receive a not-earmarked budget, providing incentive to organise care efficiently. If expenditures are below the budget, a council can spend the money on other goals. Co-payments depend on the income, so care-users will not run in severe financial difficulties.

Innovation and prevention

Big companies like Philips made in-home care possible by technical developments which enable living more comfortably at home without extra public funding. Architects design housing complexes in a way that it is fun to live in them, preventing elderly to become dependent too soon.

There are quite many prevention initiatives in the Netherlands like the following, described in more detail in chapter 4.2 Prevention Initiatives all over Europe:

- Preventive screening, where people were early and periodically screened. By the advices of health experts, the general feeling of loneliness decreased and self-reliance increased
- Groningen Active Living Model is a encouraging physical exercise in the city of Groningen which leads non-active or insufficiently active seniors (age 55 to 65) to become more active if they suffer from a disability

- Café Alzheimer's is a social interaction programme where people affected by Alzheimer's disease meet once a month together with their carers, family and professionals.

Sources:

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- ◆ [3.11-B] Raad voor de Volksgezondheid en Zorg. "De AWBT internationaal bekeken". 2005.
- ◆ [3.11-C] Interview with Lou Spoor, Achmea, 2011.

3.12 United Kingdom

British long term care contains several pieces of legislation amending and refining a complex system that evolved from welfare systems for the poor. In 2009, Green Paper published "Shaping the Future of Care Together", proposals to radically reform the care and support system for adults in England.

There is a national framework for eligibility for services. But there is a lot variation between what is provided by local councils. A new Green Paper proposes to establish a National Care Service and to take more central control.

England, Scotland, Wales and Northern Ireland manage their care systems separately, so the following mostly holds for England.

The British system is characterised as some kind of "safety net" which only supports people with severe needs. Services are provided by local councils, health authorities, voluntary organisations and private agencies: home help, day care (in or outside hospitals), community nursing services, meals on wheels, lunch clubs and domestic help. Local authority funding for these services is means tested.

In Britain three types of institutional care exist: residential care, nursing homes and long-stay hospitals.

Moreover, cash benefits can be granted as:

- disability living allowance (for under 65 years old people) which provides a contribution towards disability-related extra costs. The level of allowance is determined by the level of needs in personal care or mobility. This allowance is non-means tested and non-contributory;
- attendance allowance (for over 65 years old people) for help with personal care. This allowance is tax-free and non-means tested;
- Independent Living Fund, direct cash payments to enable severely disabled people to live independently in the community. This fund is operated by local authorities as a discretionary trust.

The current system provides support very late when there is a high level of need. Opportunities for prevention are missing. Like in many other countries, there are big regional differences so people with same needs get different levels of care. But the government has issued a Green Paper and is engaging stakeholders in the long term care debate. The proposal includes prevention services, national assessment and funding options.

The expenditure of long term care for elderly is about 1.3% of the GDP in England. It is financed by central taxation, local taxation and user charges.

Innovation and prevention

The Work and Families Act gives a right to employees to request a flexible work schedule to carers. Like in many other countries described above the government offers by this a good option for informal care by family members.

Even more promising sound the intentions of the Green Paper which does not only cover funding but focuses on prevention services. The aim is to provide free support to stay well and independent.

By now there already exist some prevention initiatives in the United Kingdom as described in detail in chapter 4.2 Prevention Initiatives all over Europe:

- Preventive screening (as in the Netherlands) means Health checks for all citizens over the age of 40 to prevent heart disease, stroke, diabetes and kidney disease. Pilot projects started in 2009, the roll-out in the UK is planned for 2012 and 2013;
- Hambleton Strollers Walking for Health is an encouraging physical exercise. Led walks which start from the GP surgeries and leisure centres are organised for older people;
- Sheltered Housing as in Finland or Ireland;
- Health Promotion like the Scottish Mental Health Well-Being in later Life Programme, where older people are directly involved and empowered.

Sources:

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4. Best Practices in Prevention Initiatives

In the chapter before, for each country innovation and prevention topics were highlighted at the end of the description. This report deals mainly with innovation opportunities since these seem to be a good chance to avoid further dependency and therefore keep the costs which have been described above as well in future down.

This chapter starts with an overview of prevention initiatives in Spain, followed by a broad view on whole Europe (with a focus on EU).

4.1 Prevention Initiatives in Spain

As a starting point to this chapter, before proceeding to the description and analysis of some of the initiatives about prevention launched in Spain, it is advisable to remind the current picture of the Spanish population, and Spanish situation when dealing with prevention.

Spain represents one of the highest aging rates in the world, with a 17% of people over 65 years old and 4% over 80 years old (Data from Imserso, Social Security Administration Body in Spain). In the year 2050, all the predictions indicate these percentages will be at a 30% and 10%, respectively.

Even though nowadays there are enough scientific researches to state that age itself is not a cause of dependency, and the appearance of an illness is, a correlation between aging and dependency can be established. The elderly population segment, specifically people over 80 years old, is the most vulnerable to illness episodes or disabilities, therefore to dependency situations.

In a context where life expectancy increases regularly (always a positive fact), and with a perspective of a very aged population for the near future, it is logic to think that the best way to influence on the delay or decrease of dependency is prevention. In other words, dedicating efforts to prevent the appearance of dependency should be considered equally or even more important than mitigating its effects, and delaying the effects of the illness or diminishing its consequences, should be one of the basic aims.

From a financial point of view, the system's viability would be controlling or reducing the future health expense. Here prevention would have a major role, because investing on prevention could contribute to relieve the Health and Social Services systems dedicated to dependency situations related to aging.

All these considerations, justify the fact that even though the dependency phenomena could happen at any age, most ongoing initiatives to prevent or reduce its consequences, are centred on elderly people, and even institutions such as the World Health Organization has coined the term active aging promoting a whole series of recommendations about the characteristics and aims that the services offered should have. In Spain, the Health and Social Politics Ministry has developed the called White Paper on Active Ageing a mainly technical document that compiles a series of initiatives to introduce models in attention to elderly people. The aim is for these proposals to be debated by the system's leaders (whether it is Public Administration,

Private entities, non-profit organizations, professionals of the sector, etc) so that different performance politics and agreed services can be obtained.

The possible services offered to prevent dependency are divided between those destined to persons that are not yet in a dependency situation (in other words, primary dependency prevention as it is called in Sanitary terms, or it could be called pure prevention), and those services offered to persons already in a dependency situation, that pursue reversing that situation or mitigating its effects (the called secondary and tertiary prevention).

There is a broad consensus that promoting health, individual autonomy and illnesses control, contributes to the decrease of possible illnesses and with it, dependency, that is the reason of the tight relation between prevention and promotion of personal autonomy.

Spanish Initiatives List

Detailed below there are some of the Prevention initiatives going on in some regions of Spain. The common aim of all these examples is for people to stay at their homes as long as possible and with the highest grade of autonomy possible.

All the initiatives are based on these basic aims: the promotion of peoples' health and social integration or participation in the community.

Some of the actions are promoted exclusively by the Regional or Local Administrations, while in most cases there is cooperation between Public Administrations and a private organization, especially foundations, Savings Banks Social Welfare or other non-profit organizations.

There are also examples of international programmes financed with European funds, to which diverse localities and regions have received.

a) [Dependency Prevention Programmes developed by Social Welfare held together by Public Administrations and Foundations](#)

Programmes developed through an Elderly Day Care Centres net, in collaboration with Public Administrations, aiming for elderly people to keep having a good personal autonomy or social life, through cognitive capabilities deterioration prevention measures.

There are two kinds of workshops: 1) Prevention (quarterly) and 2) follow up and monitoring (quarterly) for those who have already attended the prevention workshop, in order to consolidate what was learnt.

There is a transport service as well to attend these workshops, to avoid excluding people due to lack of mobility.

Teaching materials composed of a dvd and a guide, allows attendees to keep review the information when there are at home.

- Specific Examples: Andalusia's Regional Government and Guipzcoa's Public Administration

Programme financed by public administration in collaboration with the La Caixa's Social Welfare.

It is aimed at persons over 65 years old that are at an initial state of dependency or minor dependency (therefore, secondary prevention), that are starting to have problems carrying out normal daily activities, and it is aimed to prevent the deterioration of cognitive capabilities, guaranteeing an autonomous life and a social environment.

The programme is centred not only on dependent persons, but also on their families, providing the necessary support to family life.

The programme has been introduced in to eight Day Care Centres, where the workshops take place twice or three times a week. The dependent people are selected in advance. The activities developed relate to sensory and cognitive stimulations, to stimulate the senses, coordination, balance, language, memory, etc.

All assistants get their documentation, specifically made for these workshops, and they get tasks to do at home.

b) Knowing How to Get Old Programme ("SABER ENVEJECER")

From the collaboration between the Geriatric and Gerontology Spanish Society (SEGG), Caja Madrid's Social Welfare and the World Health Organization, 21 educational booklets have been created developing across a diverse range of subjects to promote a healthy ageing and raising the quality of life both physically and psychologically

The target audience of these booklets are people over 55-60 years old, who would like to share their experiences and it takes place in day care centres.

It is considered to be a pioneering initiative at a National level, because it is taught with coaching techniques, making easier the reflexion and collective collaboration.

Training material has been developed (21 booklets) for participants as well as for professionals and teachers (instructional guide), and other audiovisual aids are available giving practical advice.

Among the subjects covered are: Family, Preventing falls, making decisions, taking care of our body, healthy eating, depression, participating is living...always for learning and accepting the changes that take place with ageing.

According to Caja Madrid's Social Welfare numbers, there are over 2.000 persons that have benefit of this programme. There have started already or they are going to start soon courses in the different regions, such as Castile- La Mancha, Castile and León, Madrid, Galicia, Extremadura y Asturias.

In the case of Castile- La Mancha, there are going to be 160 persons benefiting of the total of 8 courses already closed.

c) ZAINDUZ Programme of Cognitive Stimulation

Started in January 2011, it is an individualized programme of cognitive stimulation that takes place at home of the interested.

It is working already in four villages of Biscay (Abanto-Zierbena, Amorebieta, Muskiz y Ugao-Miraballes) and it is a pioneer activity in this region.

Elderly with no option to benefit of Day Care Centres have been selected. The aim is to prevent and avoid dependency situations derived of a deterioration of the cognitive capabilities by stimulating memory, language and light arithmetic.

A professional psychologist will come every week to the participants' home to give information, orientation, formation, psychological support. After a few months, once the programme is over, a test on the results would take place.

d) High Risk Dependency Elderly Programme (Region of Madrid)

Initiative taking place in 4 elderly centres in the city of Madrid, to encourage elderly to participate in society, through workshops, most of them in groups, although there are some individual. Among the subjects imparted, there is cognitive stimulation, maintenance gym and functional recovery, Health care education, computer science and manual and cultural creating, among others.

The results of this programme show that it has been particularly effective among people that could suffer depression or loneliness.

This programme can be complemented with other programmes developed by the Region of Madrid, such as Elderly University, Cultural routes or Elderly cinema.

According to the Region of Madrid's data, over 5.6 million people have participated of these initiatives from 2003 to 2010

Workshops and camps for intergenerational relationships have been going on in every region of Spain. Their aims are clear:

- Getting elderly to participate in society,
- increasing their self-esteem making them feel useful and
- improving the image that this collective sometimes gives.

As an example of this kind of programme, we can mention:

e) Intergenerational Work Camp (Provincial Council of Biscay)

Youngsters between 18 and 25 years old volunteer for this work camp with people housed in residencies. Besides sharing educational and recreational assignments typical of work camps, it will encourage life together incorporating a social component: Supporting elderly residing in a welfare centre with different degrees of dependency, cognitive deterioration or any other support necessities. Psychomotricity and cognitive stimulation activities will be held in addition to the ones offered to the residents of the centre.

This interaction of people from different generations is to encourage respect, self acceptance and old age acceptance as a positive value, as well as the concept of helping others.

Geographic situation should not be an element taken into account in a negative way for the access to the available services related to dependency. But reality shows that most of occasions, services available in the cities are more than the ones available in villages or towns, and the difference is bigger if we compare it with people living in mountainous areas.

In these mountainous areas, people live in a very disperse way, communications are limited, the small rural centres are sparsely populated by youngsters and the services offered tend to be very short.

All these factors put at risk people's interaction with one and other, encouraging social isolation. The difficult access to these areas makes the services offered lesser than the ones offered in cities, and also sometimes the resources and programmes applied in the cities that work there correctly does not do so in rural areas.

For a long time, there have been initiatives going on, mostly in the north of Spain, to try and mitigate the differences observed and offer adequate services for mountainous areas. An example for this is:

f) Breaking Distances: Comprehensive Programme for Rural Areas in Asturias

Introduced as a pilot experience since 2001, the Administration tried to eradicate the discrimination produced by the simple fact of living in rural areas with difficult access, in relation to lack of services and social interaction with other people opportunities.

The programme targeted people over 65 years old who lived in three rural areas in the Asturias Region, totalling over 3.200 persons.

The proposed aim was twofold. Firstly, supporting those people who were in a dependency situation, and secondly introducing services and activities to help prevent dependency, by encouraging interpersonal and intergenerational relations and volunteering. In conclusion, it tried to take to these areas all the services for dependent person that are available in the cities.

To do this, Home Care and Remote Care services, transportation, food or laundry for those who need help in these tasks were made available.

Participation in community was a main focus of the programme, so associations and meeting centres were boosted and created, in order to develop workshops to encourage healthy lifestyles, and other cultural and leisure activities to share experiences with other people (access to new technologies, acting classes, folklore, etc.). Intergenerational relations as a means to getting to know the elderly people in the community better, improving their image in society and respect were also an important element in this programme, including through the concept of volunteering (for example, with weeks of teaching)

The programme lasted for three years and was based on a sequential approach of necessities search, starting the most adequate actions and evaluating the results.

The results were widely satisfactory, even if it was only because numerous resources were created (meeting centres, people's transportations, escorting, meals services,...) that until then were not available, and helped maintain autonomy and propelled the participation in community.

More and more new Technologies are acquiring more importance in services for dependency. Although its introduction is not generalized, there is a wide range of resources available that are progressively starting as pilot experiences, which in a near future could be available for more people and will contribute to a great extent to encourage every day's personal autonomy and therefore encouraging the prevention of dependency situations.

g) SILVER Platform

This project comes out of the collaboration between *Vodafone Foundation, Spanish Red Cross and Health Institute Carlos III*, supported by Industry, Tourism and Commerce Ministry and it counted on its pilot experience with more than 100 people.

It consists in a platform from which to offer comprehensive attention, joining forces of the social and sanitary services, with the ultimate aim of encouraging an independent life and a healthy aging, encouraging a pro-active participation of the users in relation with health.

The Spanish Red Cross Care Centre (*CRE platform*) supports all the services offered, among which there are found:

- Information Service: Reception of interesting information regarding food, leisure, technical help, etc, through Mobile phones and texting. This way it stimulates at the same time the use of the mobile phones by Elderly people.
- High Blood Pressure Monitoring Services: Remittance to the centre or platform of the measuring of the blood pressure, pulse and weight data that every person takes by her/his self, to have monitored the evolution through time. Also, the remittance can be done via mobile phone.
- Video Surveillance Service: By means of a television and video camera connected, each person can have visual contact with their relatives, favouring communication and social participation.
- Encouraging Personal Activity Service: By measuring the steps given by a person each day, the physical activity progress can be monitored, and in order to establish weekly and monthly aims in order to give a personalized attention through the platform. For this,

the daily steps are stored by a pedometer, and this information is sent weekly via text message by the mobile phone.

- Prevention and Life style Service:
Using environmental sensors to check the use of the bed or armchair, opening of doors, use of domestic appliances, etc, that allows monitoring physical activity, food, social activity and rest of the participants. With all the information, individual plans are develop to improve mobility.

h) TELE-ASSISTANCE Service of Andalusia

Andalusia's Social Services Foundation, a non-profit organization founded by the Regional Government, is getting started this system that consist of a console or fixed terminal install by the telephone and a remote control unit that the person wears when being at home. The aim is to be able to get in touch through the telephone anywhere inside the house for emergency situations, o just to monitor any treatment with the call centre service.

Over 2.500 calls are received every day and around 1.000 new users try this service each month, of a total of 100.000 persons that are already using this service in Andalusia.

The system has been improved since its creation and now it gives the possibility of complementing it with different sensors (gas, fire, etc), monitoring persons that have been discharged from the hospital recently or connecting the device with the national emergencies system 112.

Nowadays, to dispose of this service, a monthly payment has to be made, existing discounts for those people over 65 years old holders of the *called "Junta Andalusia 65" card ("Andalusia Region 65" card)*, or for other dependent people. The service is for free for people over 80 in a dependency situation with an income lower than 75% *"IPREM"*.

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4.2 Prevention Initiatives all over Europe

The project team has researched available information and documentation of existing prevention initiatives in EU countries. Although available information on this topic is limited, we have been able to prepare the following summary of available initiatives.

1. Patient Hotels is a concept which has been first developed in Scandinavia and can now be found in several countries including Norway (Norlandia Care), Sweden (Skane University Hospital in Lund), Denmark (Odense University Hospital, operating since 1997), Finland and the UK (Well-Tel).

These are hotels designed to accommodate low dependent people who do not need full services of a hospital, but need to be close by just in case. This includes patients who are recovering from illness or are recuperating after a medical procedure. Patient hotels are supposed to be cheaper than hospitals, while monitoring services and nurse availability can prevent people from becoming more dependent.

2. Preventive Home Visits are used as a preventive measure throughout Scandinavia, including Finland, Sweden and Denmark. This refers to preventive visits by a social welfare professional to the home of an elderly, who assess the situation from all aspects and encourages the elderly to use own resources. In Sweden, the visits are voluntary, planned in advance and are financed by the municipalities. Elderly are of the opinion that preventive house calls increase their feeling of safety as well as their trust in municipal operations.

The evaluation on house calls further strengthened the view that the elderly wish to live at their homes for as long as possible. In the future, the format of preventive visits shall be standardized, and the training and education of professionals making house calls shall be developed further. Since this initiative is very important in the author's eyes, it is described in detail in chapter 5.1 Preventive Home Visits.

3. The Home Care Umbrella project refers to a project that has been executed in Finland. Information groups and guided self-care courses are offered to recognise and early treatment of depression of elderly. Courses compromise c. 8-10 meetings with experienced tutors and home work assignments (the most important is a daily mood assessment).

Based on various studies, a number of treatments are effective for treating the depression of the elderly: Drug therapy alleviates the symptoms of depression in more than half the cases. In addition, group therapy has been helpful, since it has the big advantage of maintaining social interaction. This initiative can be linked to the Preventive Home Visits above and is hence also regarded in chapter 5.1 Preventive Home Visits.

4. Falls prevention programmes, which is implemented in many countries worldwide. Various types of intervention strategies have been implemented with different target populations and in a variety of settings.

Intervention strategies include, amongst others, providing fall risk assessment and management (including medication management), physical activity-based interventions, environmental modifications, providing education, developing assistance

devices and providing footwear interventions. This initiative is described in more detail in chapter 5.2 Falls Prevention Programmes.

5. Day care centres, which are implemented in many countries worldwide. Day care centres focus on the prevention of dependency in order to help senior citizens maintain their autonomy and life quality for as long as possible.

A good example is the Bozorgan Day Centre (see no. 12 below) which combines daily care with immigration of a minority.

6. Preventive screening is a commonly used initiative for prevention and has been implemented in several countries. Preventive screening refers to early and periodic screening of older persons to get insight in their health. Education and preventive advice was followed up by 74-91% in The Netherlands.

Experienced health did not change after the intervention, but general feeling of loneliness decreased and self-reliance increased. Also in UK health checks are performed for all citizens over 40 years old to prevent heart disease, stroke, diabetes and kidney disease.

7. Sheltered Housing is implemented in for instance Ireland (*Housing with Care*), the United Kingdom (e.g. *Yorkshire Housing*) and Finland.

There have been developed self-contained units carefully designed for elderly people with 24 hours access to help and support. Sheltered Housing offers a safe and secure living combining with common space where elderly people can meet and enjoy social activities.

In Finland, Sheltered Housing is equipped with smart technology. The units contain barrier free design, automatic fire alarm systems, alarm phone with wrist bands, automatic light switches and door opening systems, as well as sometimes occasional additional sensors. Nokia developed new systems like the Nokia Home Control Center to bring the home management under the control of a mobile device.

8. Senior Help Line is an initiative that has been implemented in many countries, outside the EU as in USA and Singapore and within the EU as in Italy and Ireland. This refers to a confidential service, where trained older volunteers can listen to older people.

The Irish Senior Help Line was founded in 1998 (after noticing the Italian *Filo d'Argento*, a well running Senior Help Line in Italy) with a pilot programme and is now operating throughout whole Ireland. In 2004, more than 300 voluntary older people provide this telephone support where callers are encouraged and get council but must still decide on their own.

9. Encouraging physical exercise is a common initiative to prevent elderly become dependent. Initiatives include the *Hambleton Strollers Walking for Health* in the UK. This initiative organises led walks for older people which start from GP surgeries and leisure centres. In Finland there is the *Keep Walking* project, which aims to improve functional capacity, quality of life and autonomy among frail 75+ people living at home by increasing their opportunities to walk and move outside their homes.

In the Netherlands, the **Groningen Active Living Model** has been developed. This initiative aims to get insufficiently active seniors between 55 and 65 years old or people suffering from a disability to become more active in order to prevent diseases and disabilities in later life.

The first phase in the execution of this project was to select older adults between the ages of 55 and 65 in certain neighbourhoods, which were sent written information about the project and a complementary short questionnaire. Within ten days after receiving this information, trained students visited all these addresses door to door to answer remaining questions and to collect the short questionnaires, which were used to check if people were already meeting the physical activity recommendations. If not, people were invited to come to the fitness test for older adults called the Groningen Fitness Test for the Elderly. The goal of the test was to check for the health status of the participants (and whether it was safe to participate in the project), and also to provide information on health and fitness of the participants. Since 1997, more than 500,000 older adults have been visited door to door as part of the recruitment phase. Through the physical activity readiness questionnaire, blood pressure has been measured and determined if a physical examination was necessary.

By measuring parameters such as leg strength, flexibility, and walking endurance, and conducting an interview afterwards, participants received personal feedback on their health and fitness status. After this, a “menu” has been provided to people that gives them the possibility to learn what type of sports or physical activity they enjoy most. In the menu, individual sports (jogging, swimming) as well as group-playing activities (indoor hockey, indoor soccer) are found, with and without competition elements. The goal is to teach people to be active in an all-around manner. An investigation has shown that the project has had positive effects, with improved endurance, fitness, leg-power, dynamic, balance, BMI and nutrition on the target group.

10. Flexible working, gradual retirement, lifelong learning is a general recommendation by the OECD. It shall help to keep people working for longer time, but according to their capabilities. Older employees may do their job part-time and take the free time to pursue their other interests. They can guide younger employees and share experience.

By this, OECD hopes that older employees stay physically and mentally healthy since they are challenged day by day. It might be possible to extend this concept to the retirement phase. This initiative is described in more detail in chapter 5.3 Flexible Working, Gradual Retirement, Lifelong Learning.

11. Technology can enhance innovation in dependency prevention. A typical example is the **CAALYX project** (Complete Ambient Assisting Living Experiment), which is funded by the EU (€1.3 million) and is coordinated by Telefónica Investigación y Desarrollo in Spain. General goal of the project is to facilitate elderly to live at home before having to go to a care facility.

In this project, a prototype system has been developed consisting of a home monitoring system, a mobile roaming monitoring system and a caretaker centre. This very interesting and new idea of prevention is described in more detail in chapter 5.4 Prevention By Technology.

12. Social interaction and support encompasses a broader group of prevention initiatives.

An example is the initiative *Café Alzheimer's*, which originated in the Netherlands in 1997. Nowadays it can be found in other countries as well such as the UK (since 2000), Belgium, Italy, but also outside the EU (USA, and Canada since 2011). The purpose of an "Alzheimer's Café" is to unite those suffering from Alzheimer's disease, their caregivers, and the general public in an informal setting that resembles a café (complete with food, drink, and entertainment) rather than an institutional setting. The objective is to move away from a traditional "support group" model and towards interactions that are more social in nature.

Another typical initiative is the *Bozorgan Day Centre* in Sweden that started in 1996, which promotes health and well-being of older Iranian women and their integration into Swedish society. The aim of this initiative is to help older Iranian women by promoting health, well-being and integration into the Swedish society. The activities are run under municipality management via project staff and voluntary workers. Health-promotion information is given by district nurses, occupational therapists, assistance administrators, dentists, gynaecologists and nutritionists. A voluntary on-call service is manned 24-hours a day and this has helped save several people's lives.

In Scotland, the *Mental Health Well-Being in later Life Programme* is a good example of health promotion programme targeting older people. This initiative aims to improve the health and well-being of older people across Scotland by bringing together evidence of effective promotion of mental health, disseminating the evidence and acting as a catalyst to assist changes in practice and policy. A key area of this programme is to provide research by gathering evidence and knowledge about elderly care, which is done in partnership with older people, policy makers, practitioners, voluntary organisations and academics. Also, several interest groups are established across Scotland, enabling local groups to share learning. An important goal of these efforts is that elderly voices are heard, which encourages confidence and enhances participation and feeling of community belonging.

The focus of this initiative is on sharing research and learning so that there is a lot of research available to inform policy makers. An important part of the approach is that all key stakeholders involved in elderly care are consulted.

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5. Relevant Prevention Initiatives that could be Implemented in Spain

The project team has checked the initiatives described above and agreed with Caser Foundation to look closer on four different initiatives which may work in Spain. First a short overview is given on the initiative. Then concrete initiatives in Europe and also in Spain are noted. Each description closes with opportunities for Spain.

5.1 Preventive Home Visits

Finland has put in place a dependency prevention initiative which aims to support older people in their own homes before the older person has availed of regular home care.

A preventive house call is a planned visit by a health care or social welfare professional to the home of an elderly person. The Finnish Local and Regional Authorities set up a project called “Preventive House Calls” in 2001 and it ran until 2003. Ten different municipalities in Finland participated in the project.

The target population for the preventive house calls in this project was elderly people not included in regular home care. Visits were offered to the 75+ age group. Elderly people in the target group were written to initially and then contacted by phone to make an appointment. The duration of the house call is between 90 and 120 minutes.

Objectives

The objective of the visit is to help the elderly person to cope for as long as possible living in their own home. An assessment of the home living environment is carried out as well as an assessment of the physical, psychological, social and cognitive facilities of the elderly person. Future needs are also assessed and this helps the municipality in its planning for the delivery of services. Information and guidance is given to the elderly person during the visit. In this project, visits were made on a one-time basis. A structured interview process was used to support the visits. In some municipalities the visit also deployed a functional ability indicator and focused on a particular theme e.g. safety and accidents, balance and physical exercise.

The elderly people who participated in the preventive home visits project felt that the visit increased their feeling of safety and their trust in the municipal authorities. The people expressed a wish to stay in their own homes as long as possible and to receive services at home. By 2007, 150 municipalities in Finland had adopted preventive house calls for the elderly. The visits are funded by the municipalities in Finland.

What is interesting about the Home Visits project is that the target group is people who are not availing of regular home care. However, Finland also has a good example of a project which targets users of home care services in order to prevent this target group from becoming more dependent.

Users of Homecare Services – Screening for Depression

Depression is the most common mental-health problem of elderly people. Every fifth elderly person suffers from depression on a level which would be diagnosed as a disease. The World Health Organisation (WHO) has identified depression as a major risk factor contributing to disability in old age.

As well as feeling low, the symptoms of depression include listlessness, lack of initiative, exhaustion and memory problems. Depression can also impact recovery from physical illnesses. People with depression are less physically active and can become isolated. WHO has also identified a sedentary lifestyle and low frequency of social contact as risk factors for disability in old age. Therefore not only is depression a risk factor for disability in old age but it also exacerbates other risk factors as depressed people reduce their physical activity and become reduce their social contacts. Tackling depression is therefore very important in reducing disability and dependency. Though it is clear that depression is a key factor, it often goes unnoticed by both the older person suffering from depression and by the professionals dealing with the older person.

Finland has identified the users of home care services as at risk for depression. The majority of the users of home care services are over 65. Other users would be people with a disability, people recovering from a psychiatric illness and substance abusers.

The Home Care – Umbrella Project was established in Vantaa in 2006. Its objective was to design models for prevention, care and co-operation to be deployed in basic services – giving the delivery of services a prevention focus.

In the Home Care umbrella project, a 15-point geriatric depression scale was used to screen over 65-year-olds for depression. If a person scores 6 points or more in this easy-to-use questionnaire, depression is suspected. The project chose a range of preventions for the targeted group. Included in these were developing information and group activities for relatives and guided courses for sufferers.

These “depression schools” comprised of 8 to 10 meetings with trained tutors as well as homework and assignments. The elderly people were picked up in a taxi and the venue for the meetings was carefully chosen with the target group in mind – as little surrounding noise as possible, nearby toilets and easy access for people with limited mobility.

One of the benefits of group therapy was maintaining social interaction. A therapy particularly successful for the target group was reminiscence and life review. This approach helped promote psychological balance, increased self-esteem and helped people find meaning in life and resolve past conflicts. These measures were focussed on preventing depression and treating mild depression. When the Home Carers were dealing with people who were suffering from more severe depression the workers had access to a dedicated psychiatric nurse to support them.

Similar initiatives

In addition to Finland, Sweden and Denmark have also looked at home visits focusing on prevention.

The Nordmaling study was a randomised control trial involving 200 healthy pensioners in Sweden. At the end of a two year period the trial group was compared to a control group of 350. Each person in the trial group received two preventive visits per year. Two professionals carried out the visits – one district nurse and one social worker. The outcomes were very positive. In the intervention group the following were noted: 1) anxiety gradually decreased, especially among women, 2) the numbers reporting frequent or constant pain decreased, 3) the percentage vaccinated against influenza increased, 4) reduced levels of inpatient care in hospital, nursing homes as well as home care in the intervention group, 5) emergency visits to GPs was three times higher in the control group compared to the intervention group, 6) deaths were half the expected number in the intervention group. The Nordmaling study demonstrates that focusing on prevention is worthwhile.

In Denmark everybody over 75 years of age is entitled to receive at least two home visits annually. As in Finland, the goal of the visits in Denmark is to secure the safety and well-being of the older person by helping them recognise their own resources as well as the services of the municipality that are available to them.

Opportunities for Spain

These interventions have proved successful in other countries. The approach in the Nordic countries has been to pilot the intervention with a small sample of the target group or with a small sample of municipalities. Funding is a key issue. In the countries examined the initiatives were funded by the municipalities.

The Swedish study demonstrated that home visits can not only improve an older person's health and well-being, a very important outcome, but can also be economically feasible due to the positive outcomes in reduced need for in-patient care in hospitals or nursing homes.

Giving the delivery of services a prevention focus, similar to the intervention on depression-screening outlined above, could be the key to a cost effective approach to prevention. Training service delivery professionals in prevention and equipping them with the knowledge and tools to carry out simple assessments of the person using the service could be the key to decreasing dependency for Spain.

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5.2 Falls Prevention Programmes

Falls in the elderly represent a significant health problem, more and more recognized and studied.

The statistics show that each year one in every three adults age 65 and older falls, increasing to approximately 40% for those over 70. Among those age 65 and older, falls are the leading cause of nonfatal injuries and hospital admissions for trauma (such as hip fractures and head traumas), and can even increase the risk of early death. Besides more than 50% of people fall more than once per year. Taking into consideration these figures it is easy to imagine how high the costs of health care are, so the economic impact of falls is significantly increasing.

These figures are important because they show a clear correlation between age and fall possibilities, so ageing becomes a significant risk factor. Falls must be considered as an alert, as a symptom that something does not work well.

The effect of a fall in old people can be a devastating event, resulting in chronic pain, confusion, reduction of life's quality, because falls can lead a person quickly to a dependency situation.

With a perspective of population ageing in many nations throughout the world, falls prevention must be considered as a challenge, because the empiric evidence demonstrates that fall rates can be reduced between 30 – 90 per cent with a multidisciplinary preventive intervention.

The good news is that evidence shows that most falls are preventable. Falls prevention programmes are effective in reducing the number of people who fall and the rate of falls. Under this perspective, many countries concerned about this problem have put in practice several preventive programmes.

The methodology used in all these programmes is always repeated: due to the fact that falls occur as a result of a combination of risk factors (behavioural, biological, environmental and socioeconomic) to be successful there will have to act in all of these dimensions (multifactorial intervention programmes including properly target population evaluation, risk factor assessment and screening appear to be most promising).

On this basis, various types of intervention strategies have been implemented with different target populations and in a variety of settings.

Intervention Strategies:

- Exercise regularly. Regular Physical Activity contributes to maintain good health and to lower the risk of falls. Exercises programmes including balance training, flexibility and strength. Tai Chi programmes are especially indicated for this purpose.
- Eating a balanced diet. Even providing education to achieve an adequate intake of meals, avoiding the use of excessive alcohol. For instance, a diet rich in vitamin D is broadly recommended.
- Medication management. Review and modification of medication for a correct use of them, to reduce side effects and interactions that may cause dizziness or drowsiness.
- Medical checks (especially eyes and ears checks). At least once a year and update their eyeglasses to maximize their vision. Visual interventions are recommended.
- Prescription and teaching the use of assistive devices, such as bed alarms, canes, walkers and hip protectors have demonstrated benefit when used join other measures.
- Modification of environmental hazards. Reducing the number hazards in the home: Giving advice to make their homes safer. Environmental safety in the community is facilitated by some programmes.
- Footwear interventions: Addressing foot problems. For instance, low heeled is recommended to achieve a good balance.

Spanish Experience

Spain has the second lowest rate of falls in Europe, but this would not be an excuse to ignore the investment in this area.

Different programmes have been developed so far at local and regional levels to avoid and to prevent the falls of old people. The common characteristic of these campaigns, from those small to bigger initiatives, is to give information and education to old people about how to prevent the falls. Sometimes occurs that the information is only available on the internet, but many old people do not have access to it. Some of these programmes are listed below:

- **PRECAN Project** was developed with the collaboration of three Foundations: IAVANTE Foundation, PFIZER Foundation and Andaluza de Servicios Sociales Foundation five years ago. Several recommendations were recollected and recorded in a film to avoid the falls in people over 65 years old. Based on the results of a 1.500 people survey, the most frequently causes of fall were analysed, and recommendations explained in a film and brochures were given out to show how to correct habits, footwear, medication management, or environmental hazards. Other ways of reducing the risk of fall such as physical activity, encouraging the relationships within community were also contained. It was expected more than 800.000 people could take advantage of this initiative in Andalusia. The information was distributed through day care centres, nursing homes, and social service net.
- **FIRM STEPS Project** (“Proyecto Pasos Firmes”) developed in 2009 by Objetivo 1 Foundation in collaboration with Social Welfare Counselling of Andalusia. Avoiding falls of aging population was the main target of this programme. Education for old people, their caregivers and relatives were given general recommendations to prevent and or avoid falls.
- Multifunctional Laboratory to evaluate aging people (“**LEMA**: Laboratorio de Evaluacion Multifuncional del Anciano”) developed by Health Counselling of Madrid and located in Getafe Hospital, a pioneer programme in Spain, to detect the causes of falls, and give a tailored and correct treatment to each person: The ultimate resources of Getafe Hospital are available for this initiative: for example, to measure the muscle quality, to analyse the vascular system or to modify wrong postures. Furthermore, it also features the most innovative device called GAITRite. A kind of carpet embedded with electrodes that measure the spatiotemporal aspects of gait. Something like a smart carpet that can capture every detail of the gait of a person: the number of steps, time, which traverses a given segment, the footprint, stability...and improve, for example, the balance.

Falls Prevention Programmes in Europe

All EU countries have developed different initiatives in recent years concerned about the scope and the consequences of falls.

In addition, it must be remarked that the European Commission have funded other projects to support a wide range of private and public participants within the different Framework Programmes focused on this topic.

Two kind of interventions can be distinguished among countries: National Plans have been the formula used by some countries to create a global framework in terms of how to prevent falls, whereas others have focusing on the development of local programmes.

The initiatives launched in the different countries can also be classified in the so-called “multifactorial” programmes (acting on several risk factors at the same time) or single programmes (acting only on one risk component).

A selection of relevant fall prevention initiatives are described below:

Initiatives funded by European Commission (through Framework Programmes):

- **“Prevention of Falls Network Europe (PROFANE)”**, was a four year thematic network which started in January 2003, funded by the EU’s V Framework Programme (1998-2002). This project aimed to improve and standardise health care processes, introducing good practice widely across Europe to reduce falls. There were 25 partners across Europe and network associates who contributed expertise at workshops, seminars and conferences where experts and observers could exchange knowledge for implementation of effective multifactorial interventions. These experts focused on four main themes: 1) taxonomy and coordination of trials (building a network of intervention sites for fall, facilitating technology between participants, promoting multi-centre trials across Europe); 2) clinical assessment and management (promoting practical and generalizable approaches to the assessment of older people, embracing at national level the different political agendas so that recommendations could be translated into working models of practice in each country or deriving consensus for assessment of older people at risk of falling based on the knowledge of experts in this field); 3) assessment of balance function (cooperating in research, identifying areas, instruments and procedures where further development and consensus was needed); and 4) psychological aspects of falling (identifying psychological factors which promote falls, behaviour of old people or developing self -test indices to evaluate the risk of falling of each person, for example, the development of the new questionnaire “Falls Efficacy Scale FES” already validated in some European countries).

The relevance achieved by this network was considerable: many key publications written by Profane members were published, including a key document for policy makers around Europe (published by World Health Organisation). Over the four years, 2.000 members from 30 countries had joined the web community and nearly 1.000 references were ready to download. Following the suggestions and

recommendations of Profane works, many countries have adopted new national strategies to prevent falls.

- **“Self mobility Improvement in the Elderly by Counteracting Falls (SMILING)”**. Within this project funded by the EU’s VII Framework Programme (2007-2013), experts from six EU and non-EU countries (Italy, the Netherlands, Slovakia, UK, Israel and Switzerland) are focusing on the training as the best system for fall prevention. To achieve this goal, they are developing a *“pair of computer-controlled shoes that simulate changes in the height and slope of the ground beneath a user’s foot during active walking”* (following the definition of the experts).



It is expected at least 30.000 potential customers from clinics and geriatric hospitals in Europe, and another 68.000 from elderly fitness centres.

Future researches will focus on weight and size reduction of the prototype, as well as on the improvement of the reliability.

The final product will improve mobility and functional status of target populations significantly prolonging independent living.

- A technology research: **SensAction-AAL**, funded by EU and developed in Italy (University of Bologna). Based on the new technologies, it consists of a new wireless monitor work around the waist to control, detect and help prevent whether a person has suffered a fall. If the sensors of the device detect a fall, an alarm will be send to the emergency services or relatives using SMS and email messaging or by Bluetooth. The system can also be used to assist people undergoing rehabilitation programmes by encouraging them to perform prescribed exercises. It has been piloted with people of sufferers of Parkinson’s disease at three different sites in the Netherlands, Germany and Israel, and the results have been completely satisfactory.

Initiatives across EU countries:

- **National polices and guidelines in UK:** The National Service Framework for Older People (NSF) (2001) aims to reduce the number of falls which resulted in serious injury, remarking the importance of the cooperation between local health and care services. A strategy with deadlines for implementation of fall injury reduction was presented within this framework as a part of practice covering medical procedures for all older adults.

The National Institute for Clinical Excellence (NICE) issued clinical practice guidelines for the NHS in England and Wales regarding the assessment and

prevention of falls in older people (2004). The guidance recommends a multifactorial risk assessment performed by trained professional at a specialist falls services. One of the last to date best practice guidance is “Guidance on best practice in care homes for the prevention and reduction of falls and fractures (2010)”, produced by NHS East Midlands, where some key points related to falls are given to commissioners in charge of services from care homes: falls prevention strategy in place; screening process to identify residents at risks, training for staff, environmental assessments, support for residents, systems to monitor and learn from falls.

A national qualification, for physiotherapist and advanced exercise instructors, exists to ensure safe and effective rehabilitation. In addition, an interactive training programme exists for geriatricians and other medical staff assessing fallers (“Off his legs”).

- **Prevention of Falls in the Elderly Trial (PROFET)**, implemented in London (UK), provides medical assessments for fall risk factors with referrals to relevant services and recommendations for reducing home hazards. The target population is seniors who had been in a hospital treated for a fall. Two assessment are provided: medical (conducted in the hospital) and home assessment (conducted during a single visit) to detect problems related to balance, cognition, medication problems, visual acuity and even depression in order to identify factors that could encourage the falls. The programme provides advice, education, and safety modifications to the home (such as hand rails, grab bars and raised toilet seats, etc). After twelve months, those in the intervention group were 60% less likely to fall once and 67% to fall repeatedly, compared with those who did not receive the intervention.
- **The French Federation of Sports for All**, supported by the Ministry of Youth, Sports and Community Life, set up the “**Program Integrated dynamic equilibrium (foot)**” in France, to prevent falls among people over 65 (2005-2008). The aim is to enable health conscious seniors to participate in workouts designed to prevent falls. These interventions took place in 13 pilot regions. This is a multifactorial programme which includes physical exercises, prevention workshops, key factors risk and exercise maintenance home. Validated assessment tests are included in the first session with old people, and the improvements in the balance are checked in the last session. More than 7.000 seniors (Level GIR5 and 6 in AGGIR scale, the French scale to determinate the degree of dependence of old people) followed this programme.
- **Fall Prevention Programmes in Germany** (2002-2005) within the largest health care fund so far. The target population was more than 60.000, in the south of the country. The programmes included balance, physical activities, education and advice on home hazards (multifactorial programme).
- **Falls-Hit (Home intervention Team) Program**, in a mid-sized town in Germany. This initiative provided home visits to identify environmental hazards that could increase the risk of falling, offered assistance with home modifications, and provided

training in using safety devices and mobility aids. Participants were adults who had been hospitalized for causes unrelated to a fall, and then discharged to home (but showing functional decline, especially in mobility). Two or three home visits were necessary to complete the programme (the team was composed of a physical therapist, occupational therapist, nurses, and a social worker). The fall rate for participants was reduced 31%.

- In **Denmark, another multifactorial strategy** took place, where a community health programme aimed at community-dwellers over 65 reduced the rate of lower limb fractures. Written information, home visits and group meetings were the resources used for it and it was estimated that 60%-70% of older people took advantage of this action, and a significant decrease of 33% was recorded for lower extremity fractures.
- **In Sweden, a research** is trying to go one step further in terms of prevention: a recent study tries to demonstrate the connection between the number of falls and the amount of daylight. The rate of falls varied from month to month and the average length of daylight is the explanation for it (the daylight could impact on biological rhythms). The conclusions of this research will help to develop new prevention initiatives in this country.

Conclusions:

In general, we have found that falls prevention programmes in Spain are relatively developed although we have not found a national plan in terms of prevention launched so far.

Whereas other countries have a national plan to prevent the falls, with a multifactorial attention on risk factors and with the coordination of health care and social services, Spain does not have this complete policy yet.

The initiatives focused on only one risk factor are the most common in Spain. The multifactorial programmes are almost always developed by foundations and non-profit organisations (collaborating with Local or Regional Government). Due to the fact that the list of available services in one region varies from others, the definition and standardization of the services among communities should be a priority (defining a common framework).

Based on the experience of other countries, it appears that for fall prevention strategies to be effective, the initiatives should be taken as a whole, instead of implementing programmes to prevent only one risk factor of falls.

Regarding new technologies applied to falls prevention, in Spain some initiatives are being developed, most of them are still in a pilot phase. Similar to Italian programme described before, a mobile system device already exists within "Caalyx" project (see more detailed information in ICT chapter, page 39 of this report).

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5.3 Flexible Working, Gradual Retirement, Lifelong Learning

This really broad topic is less a prevention initiative but more a whole field of challenges and ideas to keep people healthy. Originally considered by OECD to respond to the increasing life expectancy and thereby increasing age of retirements, it can also be used as a prevention initiative for dependent persons.

The core elements of this topic are:

- People should work according to their capabilities (by flexibility or gradual retirement);
- They should follow the concept of lifelong learning, even in higher ages.

Several companies throughout Europe already follow these ideas, for example:

- Voestalpine, an Austrian steel producing company introduced the concept “Formula 33”. This means, that every employee may have 33 hours (about 2% of the annual working time) per year for education on the job, near the job and off the job. Even employees close to retirement receive this educational time.
- BMW group, German car producer, started a programme “Today for Tomorrow” where working conditions were improved and employees can create their working time more flexible by up 20 extra vacancy days per year (and salary reduction in the same level), up to six months lasting sabbaticals or job-sharing and part-time jobs for a limited or unlimited time period.
- KSB, a German pump producing company, made a questionnaire with their older employees and improved afterwards the working situation for them. Employees older than 55 get a free health check every year and may change their working times; employees older than 63 get three additional vacancy days every year.

The original idea of supporting employees and keep their value in the company until they retire may also work as a prevention initiative. Elderly people who follow the concept of “lifelong learning” and give their experience as volunteers will feel challenged. There is a highly social component, avoiding loneliness in higher ages, as well as the intellectual component keeping the elderly mentally active.

The European Commission launched in 2000 the Grundtvig programme which is about practical learning for adults. Next to typical goals as higher employment rate for seniors, the Grundtvig programme as well aims for improvement of conditions for mobility and for development of innovative adult education practices. The programme offers possibilities of exchange and cooperation between EU-wide senior projects (see below).

Current situation in Spain

Although lifelong learning and volunteering is already debated in Spain, a direct approach to prevent dependency could not be found by the project team. It seems that mostly universities cover this field and create new ideas.

The Biomechanics Institute of Valencia (*Instituto de Biomecánica de Valencia*) leads a project called **AWARE** (Ageing Workforce towards an Active Retirement) which is developing a network hosted on a telematic platform for older workers and retired people, co-funded by AAL Joint Programme Europe (by authorities of Spain, Germany, Italy and the UK). This project is supported in Spain by the municipality of Gandia.

Aim of the AWARE project is to adapt social network services (like chatting, blogging, social pages like facebook or so on) to the needs of older workers and active retired people by specific services. Benefits which could arise from the AWARE-Platform are due to the project:

- Maintaining elderly persons active after retirement, hence promoting an active ageing.
- Create web communities of retired workers to share experience, skills and expertise.
- Respond to current trends of the Ageing workforce, by maintaining mentally and economically active the elder person.
- Support the companies during the whole retirement process. The benefits derived from the implementation of this technology will result in the possibility of improving expertise transfer as well as maintaining the relationship with the retired worker.

Responsible for the EC-Grundtvig programme in Spain is the so called OAPEE (“Organismo Autónomo Programas Educativos Europeos”), a National Agency from the Ministry of Education.

Examples from other European countries

There already exist some programmes for lifelong learning in other countries which are not run by companies but co-financed by the European Commission:

- **Learning through Volunteering in Senior Age** (Slovakia, Hungary)
This senior volunteer exchange project between associations in Slovakia and Hungary focuses on enhancing lifelong learning and inter-generational dialogue. Six volunteers from each country are placed at hosting associations where they have the opportunity to share their experience with people of different ages. As well as providing enriching experiences for those taking part, it also seeks to overcome and breakdown any prejudices on the basis of age or nationality.

- **The Voice of European Seniors** (Romania, Portugal)
This is an exchange project sending senior volunteers between two associations in Romania and Portugal. The volunteers learn from each other about how they can use their experience and knowledge to make an important contribution as active European citizens.

The project focuses on boosting the enthusiasm and motivation of senior volunteers, improving their quality of life and getting pride from the contribution they can make within their community. The volunteers organise learning events with target groups from economically and socially disadvantaged areas.

Opportunities for Spain

Following this concept, municipalities in Spain could offer a lifelong learning concept to elderly people, perhaps in cooperation with universities or schools. For example by using EC's Grundtvig programme, Spanish municipalities could offer informal senior caregivers exchange projects to experienced caregivers throughout Europe. There the caregivers can learn what is needed for "good care" and may get an idea what they have to do for them to avoid becoming dependent later on. This concept may be linked to special programmes like the falls prevention programme (see below), or the lifelong learners may volunteer for preventive home visits (see chapter 5.1 Preventive Home Visits).

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5.4 Prevention By Technology

There are several ICT related technologies and applications in the dependency prevention domain that are relatively mature and where a certain level of market progress has been made. Core applications in the technology domain can be organised as follows:

- **Social alarms** refer to services/equipment that enable elderly to give a call with a special telephone or portable alarm device to an alarm centre in the event of need (such as a fall). This type of technology is also referred to as ‘first generation telecare’.
- **Telecare**, which refers to a range of enhancements to the basic social alarm service concept. Typical examples include the provision of sensors in the home (e.g. fall detectors, bed/chair occupancy sensors, smoke, gas and flood detectors) that alert social care services in the event of a problem arising, and videophone-based or other remote social care applications. Such applications are called ‘second generation telecare’, whereas the term ‘third generation telecare’ has been used to describe ICT-based solutions of a more preventative nature such as sensing in the home for the purpose of ‘lifestyle monitoring’.
- **Telehealth** refers to the use of ICT in the delivery of medically-oriented care services to older people in their homes, including telemonitoring (e.g. blood pressure, blood glucose, ECG, etc.), teleconsultation (e.g. online, by videophone, by telephone) and telerehabilitation (e.g. by videophone), as well as self-care devices to be used by people in their own homes to help them monitor and manage their health themselves.
- **Smart homes** refer to a range of environmental control, home automation and home network systems that can help older people to remain living independently in their own homes. This includes standalone applications that can help older people to remain independent, including computer-based or other electronic communication aids, object locators, and reminder systems.

Technology related prevention initiatives in Spain

The “Law on the Promotion of Personal Autonomy and Care of Those in Dependent Situations (39/2006)” defines the use of social alarms (called “tele-alarms” in Spain) and telecare (called “tele-assistance” in Spain) services in order to avoid unnecessary admission to residential care. The status of these applications in Spain can be summarised as follows:

Tele-alarms (social alarms) are a common form of technology and are available throughout the country. The main providers are municipalities under the Autonomous Communities of Spain, who subsidise the service. With regard to charging/reimbursement, each Autonomous Community determines the price of the tele-alarm service and the requirements for users to qualify for discounts.

Tele-assistance (telecare) services are also available nationally, although in practice only installed in the case of greatest need. Tele-assistance is an extension of tele-alarm service and service provision and reimbursement arrangements are similar. Tele-assistance services are allocated according to the degree of dependence of the user, rather than according to their age. In the case the service provider is a public entity, the service costs are the same as the basic tele-alarm.

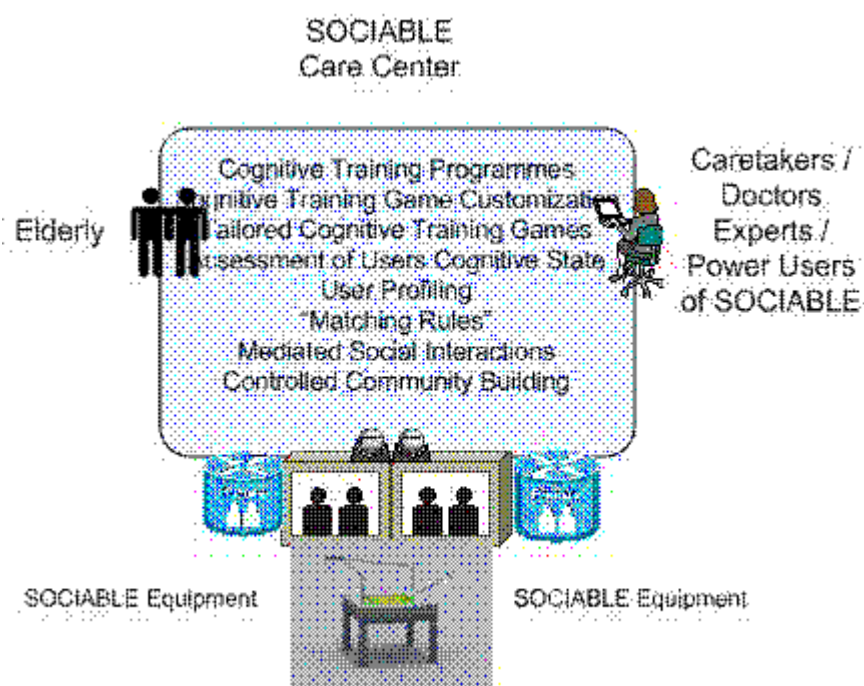
Telehealth is at an early stage of development in Spain since most initiatives are still in a pilot phase. Pilot projects include the following:

- **COMMONWELL** (Granada (100 users); costs € 5.4 million): integrated ICT services, such as integrated chronic disease management and services for independent living (including safety at home, reminders for essential activities and (social) interaction support) and interorganisational services (including vital signs monitoring and patient transfer information service provided by emergency services to manage transfers of clients away from and back to their homes)
- **DREAMING™** (Barbastro (80 users); costs € 5.5 million): Environmental Monitoring Subsystem which detects and reports changes in user movement patterns as well as a Health Monitoring Subsystem. Monitoring and Alarm Handling services are provided through a combination of medical devices and environmental sensors and a powerful Decision Support System which is able to detect risk situations based on the specific profile of the individual user or of the category to which the user belongs and on any combination of sensors measurements including trends over a certain period of time. Elderly-friendly videoconferencing services have been specifically designed for elderly people and provide the most familiar user interface one can imagine: a TV set and an infrared remote control that almost any elderly person uses in his/her daily life.
- **LONGLASTINGMEMORIES** (Zamora/Salamanca (200 users); costs € 4.7 million): merged ICT device, offering cognitive training (through 'Brain Fitness' software), scheduled physical training with tailored motivational support through interactive screens and training equipment, and a e-Home Solution (using small sensors to detect abnormal movement and falls)



- **SOCIABLE** (Velluters residential homes (40 users); costs € 4.6 million): SOCIABLE will integrate, deploy and operate an innovative ICT-enabled on-line service for assessing and accordingly reinforcing the mental state of the elderly through pleasant gaming activities for cognitive training, while at the same time boosting their social networking and activating their day-to-day interpersonal interactions.

SOCIABLE is envisaged as a service with high potential for societal impact that could add significant value to current service offerings of care services providers. Furthermore, it is associated with a clear business potential for sustainability and wider use by care service providers within (but also outside of) the SOCIABLE consortium.



- **T-SENIORITY** (30.000 low interaction users and 1.600 high interaction); costs € 5.3 million): expanding the benefits of information society to older people through digital TV channels (Wii).

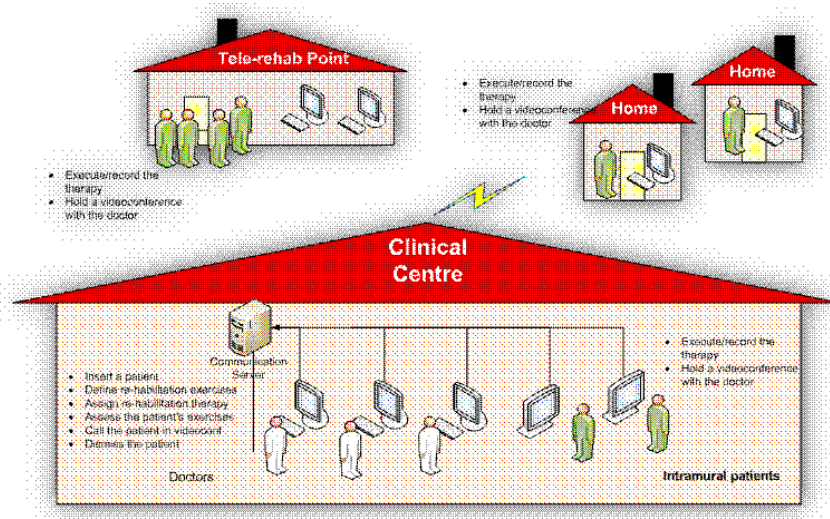
T-Seniority offers a flexible combination of citizen-centric and personalised e-Care Services according to user's preferred or available ICT media: primarily via digital and digital interactive TV. T-Seniority's main target is to create a "user-centric" integration of services, especially focusing on assistance programs for disadvantaged social groups.

By focusing mainly in older people and people in the "early stages of getting older", T-Seniority aims to cover a diverse range of care needs in a wide range of service situations (home care, tele-assistance, mobile telecom services, tele-alarms, nursing services). This service will use digital TV, as it is the most widely available and preferred channel for many. By using digital TV the intend is to address hard-to-reach audiences, such as "disabled people getting older", who may have less access to other forms of digital technology. By using digital TV it will improve the current and meet the demands of a growing elderly population.

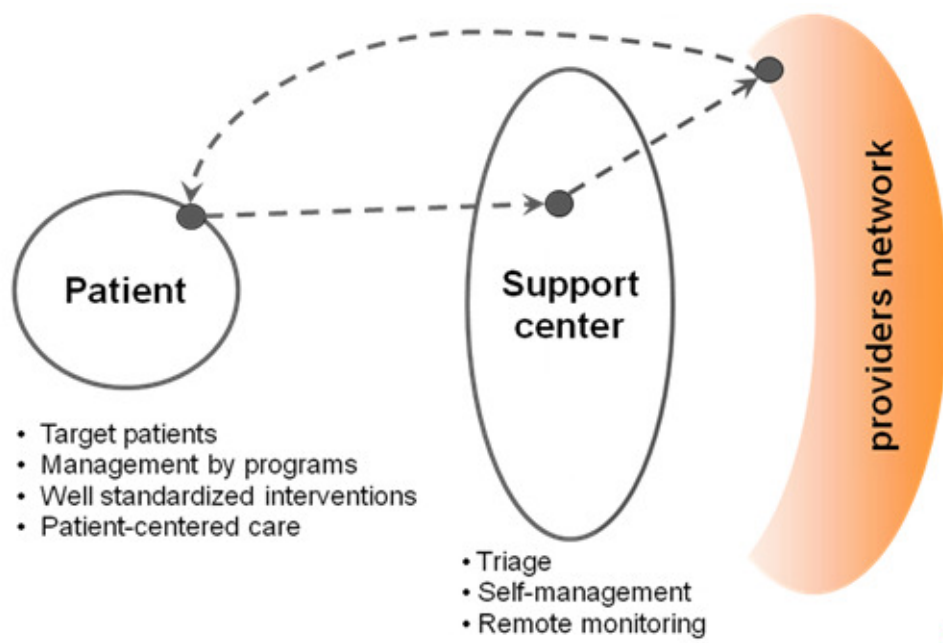
T-Seniority Digital inclusion is, therefore, social inclusion with an ICT TV stream. A citizen or patient sitting in front of TV screen, with a remote control on hand, will be able to choose among many different options of public or personalized services: communicate with their relatives, friends and colleagues; ask for shopping, repairs, appointments, on-line banking, and so forth. Services web-literate PC-users enjoy via the web, but via digital TV. Typical TV users will not need to worry about what kind of technology is behind their personal T-Seniority services at home because it is hidden from them. They can go straight on to the service and undertake a range of interesting and beneficial activities. For example: communicating with their children, just clicking on their photo displayed on the TV screen simply using the familiar remote control.

It is hoped that by using a device -the TV- that people are aware of and used to, the learning curve of how to use the services will be less and the confidence one needs to "believe" in them will already be instilled.

- **CLEAR** (250 users; costs € 5.6 million): e-Health service based on the development of protocols for rehabilitation and chronic disease management therapies, which can be implemented at home following well defined procedures under the control of the medical staff. Such a service has potential to improve the quality of life of patients (reduced need to go to healthcare centres) and to improve the effectiveness and use of resources of healthcare centres (increasing the ability to treat more patients at the same time). Idea is that this service will lead the healthcare professionals to a reduction of time spent per patient and, as a consequence, to a potential savings in money.
- The project will enhance the deployment of e-Health services and optimize healthcare resources through a European platform for the development of "home treatment protocols". Such platform provides health professionals with different tools as a support for the doctors to define and assign tele-rehabilitation treatments to the patients, assess the treatments executed by the patients and monitor their status, monitor the patients compliance and communicate with the patients.



- **NEXES** (Barcelona; costs € 4.8 million): Integrated care services for chronic patients based on structured interventions addressing prevention, healthcare and social support. The services investigated in the different studies of the NEXES project are related to the conceptual integrated care model as seen below.



Under the integrated care model, the role of the patient is highlighted and care is organised around his or her needs. From the organisational perspective this implies a management oriented by programmes where standardised interventions for well defined target patients are scheduled.

Typically there is a support centre that acts as a reference point for the patient and provides responses to unplanned needs. From this centre it is possible to activate and coordinate the networked providers and, thus, provide the most efficient care service. Overall, the demands in terms of coordination and information sharing are high in the model. ICT solutions are a fundamental enabler for its implementation.

- **CAALYX** (Vilanova i la Geltrú (10-20 users); costs € 3.9 million): Complete Ambient Assisting Living Experiment), which is coordinated by Telefónica Investigación y Desarrollo in Spain.

In this project, a prototype system has been developed consisting of a home monitoring system, a mobile roaming monitoring system and a caretaker center. The mobile system is able to collect five different vital signs and can detect falls. Data is transmitted to a caretaker centre where it can be accessed by doctors, caretakers or family members according to the individual circumstances. Global Positioning System (GPS) technologies are used to help locate elderly people in case of emergency. All patient information is encrypted, and despite the continuous monitoring, privacy is maintained. Because many elderly people are not as capable with their fingers as young people the CAALYX partners decided to use the television as a communication interface for video conferences with medical staff and family members, while an adapted version of the Nintendo Wii controller runs the home system.

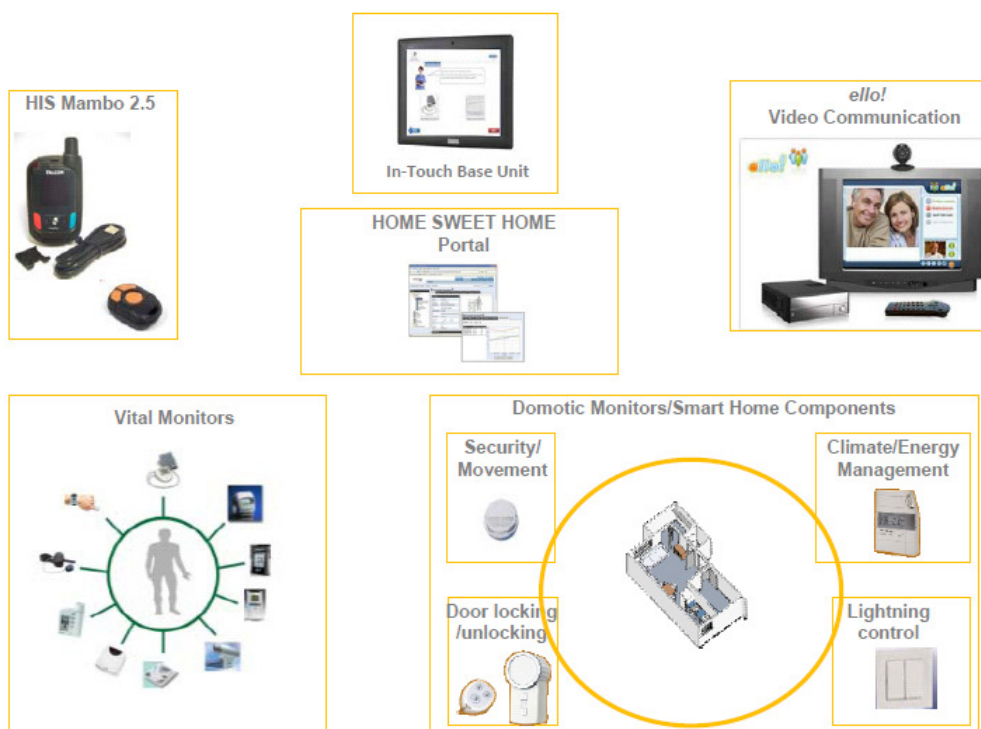
The system also allows doctors to determine which vital signs should be measured and identify the "right thresholds for health alerts". The thresholds are applied in smart mobile phones, developed by the Institute for Systems and Computer Engineering of Porto (INESC Porto) from Portugal.

- **HOMESWEETHOME** (Badalona (15 users); costs € 4.9m): measuring of the real impact of monitoring, cognitive training and e-inclusion services on the quality of life of the elderly, the cost of social and healthcare delivered to them, and on a number of social indicators.

Monitoring and alarm handling is based on a DSS which analysis in real time data collected from medical and environmental sensors, fall detectors and geopositioning systems. Standard behavioural patterns are established for individuals and sudden, major changes triggers alarms. e-Inclusion is achieved through intuitive videoconferencing based on the familiar TV paradigm and adapted to use by people unfamiliar with IT technology.

Domotics and daily scheduler help elders to organise their daily activities and to manage the house in spite of growing physical and mental impairments. The navigation system takes people who got lost to the closest safe place. Cognitive training is implemented through interactive games based on cognitive adaptive technology. Complexity of exercises is adjusted to the performance and current mental level of the user.

Key components of HomeSweetHome



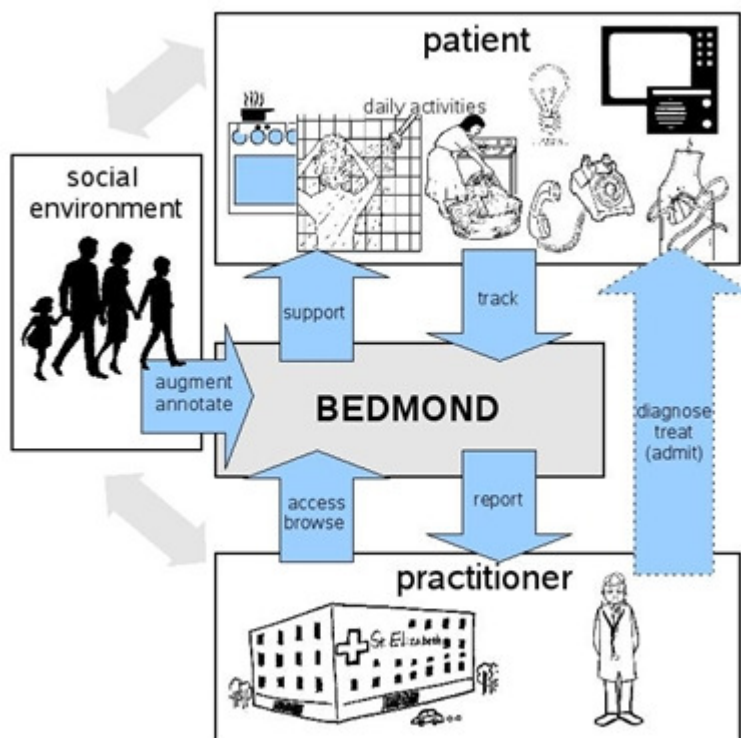
- BEDMOND** (consortium including Ibernex, Ingema, and Robotiker-Tecnalia from Spain; costs € 2.4m)
 The BEDMOND project aims at developing an ICT-based system for an early detection of Alzheimer's disease and other neurodegenerative diseases, focused in elderly people while living at home. With such an early detection health professionals can later on apply an also early treatment which will help the elder to live longer in an independent way at home by delaying as long as possible Alzheimer's disease appearance.

A user profile will be set up at an initial state (training period), and then it will be used as a reference in a continuous match with the elder's behaviour during the entire day. The results of this matching will generate information to be used by doctors, in order to detect whether an Alzheimer's disease at early stage is appearing. All the data gathered by the BEDMOND system, initially taken from home sensors network, later processed to daily activities recognition patterns and finally arranged through a rule-based engine (where doctors' knowledge is the key), will be later, periodically presented to the medical expert for this professional to determine whether, at the sight of the reports, activity by activity, the behaviour changes shown may mean the beginning of a cognitive decline or just a casual deviation.

After detection, doctor will apply a pharmacological treatment to the elderly person and BEDMOND system will keep on monitoring user behaviour in order to assure that the supported treatment takes effect on the delay of Alzheimer's disease appearance. By maintaining the personal autonomy so will self-esteem and self-determination of elderly people. Hence, the system consists of a support tool for medical experts addressed to the early diagnosis of neurodegenerative diseases in

elderly people and posterior monitoring of user evolution after a treatment applied in such an early stage.

The monitoring system should be used as a decision support system during the cognitive decline process by the medical experts, in order to make decisions about early treatments (mainly pharmacological) for the elders that could lead to a longer, independent stay at home on an e-Inclusion framework



- HEALTH AT HOME PROJECT** (H@H, with EU partners from Italy, Slovenia and Spain; costs € 3.0 million):
 The Health at Home project (H@H) aims at solving societal problems related to the provision of healthcare services for elderly citizens affected by Chronic Heart Failure (CHF), providing them with wearable sensor devices for monitoring of pathophysiological cardiovascular and respiratory parameters and, at the same time, enabling the medical staff to monitor their situations at distance and take action in case of necessity by the involvement of the public and private health organizations.
- HEAR-ME-FEEL-ME** (Finland and Spain, costs € 2.2 million):
 Vision impairments are inevitable results of growing old. Physiology of our eyes changes with time when the eye tissues loose their flexibility and suffer from damages caused by everyday life, different health conditions (such as diabetes or blood pressure) and gravity.
 The HearMeFeelMe project explores the possibilities of compensating decline in eyesight with mobile technology - HearMe for replacing visual and textual information with audio, and FeelMe for using touch-based interfaces for accessing information.



- **HOPE** (Greece, Italy and Spain; costs € 2.2 million): integrated platform to support elderly people with Alzheimer's disease for a more independent life
- **EXCITE** (deployed in Italy, Spain and Sweden; costs € 2.9 million): mobile robotic base equipped with a web camera, a microphone and a screen that will help elderly.

The project reference platform is the mobile presence robot Giraff. The robot is a remotely controlled mobile, physical avatar, of human-height, integrated with a videoconferencing system (including a camera, display, speaker and microphone). Giraff is accessed and controlled via a standard computer/laptop over the Internet, using an application, called "the pilot", downloadable for free. From a remote location, a person with quite limited computer training can "visit" a home and intuitively navigate Giraff in the environment.

ExcITE aims to allow the elderly to remain in their home environments, enabling loved ones and caregivers to maintain a higher level of communication and interaction with them. A number of individual, personal health and lifestyle factors may influence perceptions, expectations and acceptance of the Giraff robot. From the HRI point of view, ExcITE addresses a very difficult challenge: the challenge of moving laboratory experiments to real life settings involving real people.

Most of the known experimental results have been either video-based or obtained in restricted and controlled laboratory settings. In contrast, Giraff, with its ease of use and technical robustness, makes possible a long-term fielded evaluation, unusual in robotic research.



- **SI-SCREEN** (consortium including FATEC, Tioman & Partner, Instituto de Biomecánica de Valencia (IBV) and Servicios de Teleasistencia): core idea of the project is support of interaction with the “social web“, to integrate the user-oriented services (e.g. home automation, telecare or other health and leisure related local offers) and to build a bridge between the virtual and the real world through an image-based multimedia device adjusted to the needs of the target group.

The objectives of the project are to simplify, improve and facilitate social interaction through user oriented communication support. Additionally, relevant information shall be filtered and access to local offers shall be improved. Social interaction and an active lifestyle are key for health and well-being at an old age.

The significant effects of named factors on primary, secondary and tertiary prevention are undisputed. New lifestyles and globalization effects have an impact on the spatial distance between friends, acquaintances and family increases. The information explosion and the lack of usability in communication devices for senior citizens. While the “Social Web” is expanding everywhere at high speed, elderly people are often excluded from it.

Therefore, simplifying and stimulating social interaction with the help of new information and communication technologies and the inclusion into virtual social networks are of high priority in this project. It is the key objective of this project to develop a new product which supports elderly people in having more social contacts by using the social web. An easy to use user interface motivates the elderly to be more active and have more face-to-face communication.

- **WeCare** (participants in Netherlands, Spain, Ireland and Finland): the service integrates communication, coordination and information, and helps people to participate and cooperate within and between social networks. It includes easy-to-use online calendars and activity planners, video communication, blogs and forums. Special care will be given to privacy and authorization. The service will be built using readily existing applications and prototypes. The key goal of the WeCare project is to empower the elderly to successfully adopt the concept of social networking into their daily lives. Social networking can become a very effective and vital communication and social interaction tool should mobility be reduced due to ill-health or handicap; improving seniors autonomy making it possible for them to live longer at home and enhancing their quality of life. One internet service, WeCare 2.0, will be developed.

The system aims –amongst others- to provide support to family and friends who provide informal care. As a result, the demand for professional care and social services will decrease.

The service integrates communication, coordination and information, and helps people to participate within and between social networks using adaptable Graphical User Interface technologies focusing on the needs and abilities of the end user that can be deployed on multiple types of hardware ranging from mobile phones to interactive displays. The service includes social collaboration Web 2.0 technologies such as easy-to-use activity planners, video communication, forums and news. Seniors and stakeholders will be involved during the project, to ensure that WeCare 2.0 matches their needs and preferences.

User trials will be conducted in The Netherlands, Ireland, Spain and Finland. The project aims to highlight how the WeCare 2.0 system can be easily adapted to meet the needs and requirements of various user groups and thereby increasing the chances for successful commercialisation of the system.

- **SeniorChanel:** an interactive digital TV channel for promoting social interaction amongst elderly people. SeniorChannel is a project funded under call 2 of Ambient Assisted Living Program AAL, whose objective is the development of an Interactive Internet Protocol Television Channel (SENIORCHANNEL) that will not only provide elderly people with a method of interacting but also with a unique means of access to the range of diverse activities in their community including the opportunity to share knowledge and experience, the ability to participate in topical debates, entertainment services, work-shops and discussion groups regardless of their geographical location. Also will be developed and implemented a low cost, easy-to-use, integrated TV studio and production centre that will enable community driven broadcasting.

There has, however, been some mainstreaming of telehealth in a number of regions. In Catalonia, some hospitals have developed hospital-in-the-home services. There is also some telemonitoring available (as a public service) through health centres in Castile and León, Extremadura and Castile-La Mancha. Telephone consultations are available via Regional Health Councils, which are publicly funded and free of charge. These services have only recently been developed and it is expected that provision will continue to expand. Online consultations are available, which are more focused on providing information and medical appointments than on achieving a diagnosis.

The **AVANZA 2006-2011 Plan** sets out an online health work-plan that includes telehealth, consisting of actions to improve the quality of life of patients, to reduce costs, to develop tele-consultation and diagnosis in under-resourced areas and to connect primary and specialist care. The AVANZA Plan is co-ordinated in each Autonomous Region in accordance with their regional strategy for the development of these services. The Regional Health Ministries of the different Autonomous Communities implement different programmes, with a main focus on information and prevention.

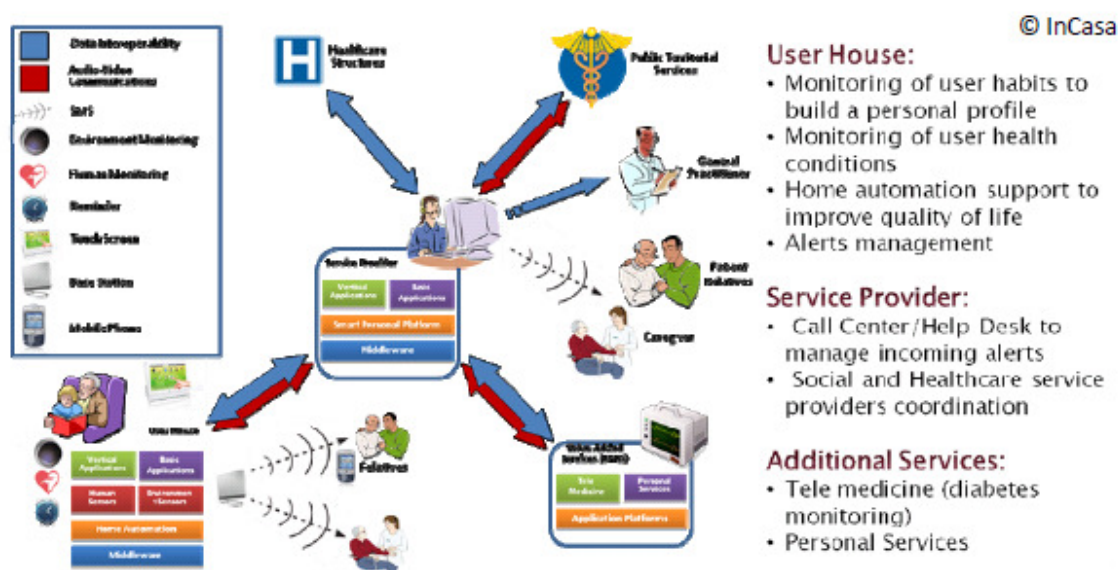
Regarding the domain of **smart homes** (domotics), there are many technologies available at a mature stage of development. However, their implementation in homes, both those being built and those already built, is limited and there has apparently been little direct attention to supporting independent living of older people through these technologies. The installation of domotics is promoted by various associations, such as CEDOM and ASIMELEC through the Smart Home Multi-Sector Commission. There are

also web portals appearing that are specifically directed towards the Smart Home Sector, such as Casadomo. More advanced Smart Homes only exist in the form of pilot projects, one of which is in Madrid.

Technology related Prevention Initiatives in the EU

The European Commission funded the *ICT & Ageing – Users, Markets and Technologies* study, in which several technology related projects have been identified as good practice in address older peoples' needs. These projects focus on both social alarms, telecare, telehealth and smart homes. A selection of relevant initiatives, not yet present in Spain, includes the following:

- **TRIL Centre** (Ireland), which is an example of public-private collaboration with the aim to discover and deliver technology solutions to support independent living for older people.
The Irish Industrial Development Authority (IDA) and Intel Corporation jointly invested € 20 million into the TRIL Centre over a period of three years to collaborate with several leading Irish universities in creating one of the largest research efforts of this kind in the world.
Key take-away of this project is that public-private partnership has combined government and industry support to give good potential for sustainability and access to the market; and involvement of universities ensures that the work is underpinned by high quality, internationally recognised research. The project also indicated that thematic focus is important, including social connectedness, cognitive functioning and falls.
- **HyvinvointiTV®** (Finland), which is an example of cooperation between public institutions, municipalities and commercial parties. This refers to a learning environment via an interactive TV system utilising a safe broadband connection for delivering supportive services into the homes of older people.
- **InCasa** (Fundación Hospital de Calahorra (Spain), Konstantopouleio General Hospital of Nea Ionia Agia Olga (Greece), Chorleywood Health Centre (UK), Institut National de la Santé et de la Recherche Medicale (France), Social Agenzia Territoriale per la Casa della Provincia di Torino (Italy)) or “Integrated Network for Completely Assisted Senior Citizens’ Autonomy” refers to a pilot of a series of integrated solutions and services for health and environment monitoring in the homes of some 200 vulnerable over-65 users. It is testing home sensor networks and personal health sensors to monitor the lifestyles of the elderly and activate customized intelligent multilevel alerts/communication services.
The project is dealing with: day-to-day activity planning; co-ordination of public social and healthcare services; deployment of specialist community-based services; and privacy protection.



- **Go-myLife** (Derby (UK), 11 towns in Poland): develops a mobile social networking platform costumed to the needs of the elderly, allowing interactions with their peers and families, as well as easy access to relevant geographically based information. The architecture consists of a core social networking platform connected to disparate social networking sites through middleware that essentially addresses personalization, security and integration-related requirements, with an easy and accessible interface.

- **TAO** (Third Age Online), consisting of a consortium of Bern University, University of Maastricht, University of Ulm, Seniorweb in the Netherlands and Switzerland, Wikimedia and several other partners in Switzerland.

The project aims at developing effective methods and measures for motivating older persons to participate in online communities and for fostering the intergenerational integration of these communities adapting the design of the user interfaces and the functionalities of online platforms to the specific needs of older persons.

- **SilverGame** is a game-based multimedia application, aimed at enhancing the social connection and interaction of elderly people with society.

The project's approach is to provide a central platform and virtual environment that allows elderly people to share their hobbies such as singing and dancing and helps them to stay in touch with other community members - the goal being to transfer these virtual interactions into real relationships and social inclusion. Additional services like real events in places nearby will help elderly people to get and to stay connected in real life as well.

Conclusion

In general, we have found that ICT related initiatives in Spain are relatively developed, especially in the field of tele-alarms (social alarms) and tele-assistance (telecare).

However, telehealth is still at a relatively early stage of development in Spain. Hence, this could be an area of opportunity. Though, we found several pilot projects in Spain. We also found many (partly similar) pilot projects throughout the EU. We do not know if these projects are truly effectively coordinated from a (inter)national level. To what extent the different pilots are actually successful and to what extent the results may contribute to prevention of dependency remains unclear to us. For this, a comprehensive benchmark of costs and associated benefits could be developed in order to measure all pilots in a consistent way and to assess the true potential of role-out of (to be selected) pilot projects. We think follow-up research on this will be beneficial. This includes the role of social networking initiatives, which gets increasingly attention through pilots throughout the EU. Furthermore, we think it is beneficial that different actors get be involved in such a follow-up analysis (both private and public partners).

Domotics is also a domain where progress can be made. Though implementation is still limited and few pilot projects exist. For this domain, we also think additional research will be useful to assess the future potential of further role-out. The availability of public funding may also help to enhance development in the area of domotics.

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6. Conclusion

The Spanish dependency law is ambitious in its vision, but also practical in its implementation. The rights and benefits are being applied gradually starting with the most severely dependent and then moving on to the more moderately dependent. But the task is great.

In the first part of this study it was demonstrated that Spain needs to be ambitious in this area. Currently Spain has the fourth largest elderly population in the EU. This is estimated to rise by 76% by 2050 and in that year it is estimated that Spain will be one of the EU countries with the most elderly people. At the same time, Spain is spending the second lowest amount in the EU on Long Term Care. This is not sustainable.

The benchmark analysis of the 12 European countries in the second part of the report demonstrates that all countries in Europe are grappling with the challenges of an ageing population bringing a dramatic increase in the number of dependent people. Issues of access, information, quality and financing are heard in each of the 12 countries studied. However, the countries investing a higher % of GDP in Long Term Care (Denmark, Finland, Sweden and The Netherlands) are the ones cited most often for examples of best practice.

However, with many countries in Europe as well as Spain facing a doubling of their 65+ population over the next forty years, preventing dependency has become a very real focus. Promoting independent living and active ageing has become the common goal. It is both a financial and a social issue.

The World Health Organisation (WHO) identified four areas to focus on in tackling disability in old age disabling 1) chronic illnesses, 2) depressive mood 3) functional decline and 4) sedentary lifestyle.

The prevention initiatives outlined in the third part of the report selected from across Europe tackled one or more of these areas. The examples were chosen to show the diversity of initiatives available from the low cost support and social groups like Café Alzheimer's to the more costly screening of particular populations for a dependency risk factor. Prevention initiatives come in all shapes and sizes and will need to be adapted to the local community.

In the fourth part of the report, four initiatives were recommended for implementation in Spain. These were preventive house calls, falls prevention programmes, flexible working/gradual retirement/lifelong learning and technology. These initiatives have been successful in other countries and could become cost-effective. Further research in the area of prevention is needed in Spain, to identify the areas to invest scarce resources.

Spain will have many **challenges** in looking at dependency prevention. We have categorised them into four areas.

a) Funding:

Spain has participated in many pilot projects in this area sponsored by the European Union. However even when the results were positive once the EU Funding disappears the programmes come to an end. Spain is starting at a lower base than other EU countries in its investment in long term care (% of GDP).

b) Cohesion:

Many countries are finding it difficult to co-ordinate the delivery of services between Health Departments, Social Welfare Departments, Regions, Cities and Municipalities. Spain is facing the same issue. The result is that the person who needs help finds it difficult to get the information they need. This leads to differences between regions in the services offered and the quality and of those services. Successes in one Region are not necessarily shared with another Region.

c) Who owns dependency prevention?

From a government point of view it is important to find an answer to this question. What is the role of the Health Service in preventing dependency? What is the role of Social Services? The regions?

d) Where to start?

We found several good examples of initiatives in place in other European countries to prevent dependency. Measuring the effectiveness of the initiatives is an issue. Further research and pilot programmes are needed in Spain to identify the priorities. Prevention is a long term approach that involves the health education and involvement of the whole population.

Spain has demonstrated a willingness to improve the quality of life of individuals relying on care and their carers by enacting rights and benefits in the dependency law. While the structures are still being put in place to deliver what is outlined in the new law, Spain must at the same time look to the future and start exploring the possibility of preventing dependency.

A. Appendix: Overview of the Systems in the chosen EU Countries

	Law situation	Services offered	Financed by
Austria	Federal law from 1993; agreement between state and provinces	Cash allowance (by state) Social services (by province): - institutional care - home-based care	Completely by tax 1.3% of GDP / 3.7 bil. Euro
Denmark	Act of social services, reviewed many times	Permanent help at home or living in nursing homes, usually free of charge	Local taxes and block grants from the state 1.8% of GDP / 4.3 bil. Euro
Finland	Regulation by the state, provinces care for quality and accessibility	Institutional care and home-based care free-of-charge insurance against catastrophic expenses	Municipality and national taxes, co-payments 1.9% of GDP / 3.4 bil. Euro
France	Federal law from 1997; state has to improve ltc and check quality and quantity; provinces define and plan	Several services for institutional and home-based care; cash allowance for extremely dependent people	Mixed -financed by taxes, contribution (employer's social insurance) and co-payments of families 1.5% of GDP / 29 bil. Euro
Germany	Federal law from 1995; state is responsible but provinces care for fees from the insurance and payments	Cash allowance; nursing homes are run by private sector but quality is checked by the state	Insurance-based; partly public (paid both by employer and employee), partly private 1.0% of GDP / 25 bil. Euro
Ireland	No specific legal framework	- Institutional care - community based supports - cash benefits for carers	Central taxation 0.9% of GDP / 1.4 bil. Euro
Italy	No legal framework as well, wide variation among regions	- Health services - cash benefits - social care services	Taxation and co-payments 1.7% of GDP / 26 bil. Euro
Portugal	National network for LTC from 2006	Usually social services, cash allowance only for pensioners	Ministry of Health and co-payments 0.1% of GDP / 0.2 bil. Euro
Spain	Federal law from 2006; state regulates basic aspects, provinces develop norms	Usually social services (like home help, care centres), only if they are not available cash allowances	Basic level by government; above that government and communities figure out 0.7% of GDP / 7.4 bil. Euro
Sweden	Social Service Act developed by the state; provinces plan and allocate	Independent help for everyone via many social services; free-of-charge insurance against catastrophic expenses	Tax-financed; 3.5% of GDP / 13 bil. Euro
The Netherlands	Central state defines law; provinces organise care in their own way	Personal care and nursing as well as cash allowances; free-of-charge insurance against catastrophic expenses	Taxes and co-payments 3.5% of GDP / 21 bil. Euro
United Kingdom	Green Paper from 2009; variation between local councils	Cash benefits; residential care, long-stay hospitals and nursing homes	Central and local taxation s well as user charges 0.8% of GDP / 17 bil. Euro