



ICARE4EU

Innovating care for people with multiple chronic conditions
in Europe

Caring for people with multiple chronic conditions in the United Kingdom: policy and practices with a focus on England and Scotland

Bramwell C^a, Don RM^b, Porter I^a, Lloyd H^c, Kadam U^d, Rijken M^e, Valderas JM^a

^a Health Services & Policy Research Group, University of Exeter Medical School, Exeter, England

^b Forth Valley National Health Service (NHS), Scotland

^c PenCLAHRC Peninsula Medical School, University of Plymouth, England

^d University of Keele, England

^e NIVEL (Netherlands institute for health services research), The Netherlands

Key points

- General Practice (Primary Care) is responsible for the provision of health care for people with chronic conditions in the UK. General Practitioners (GPs) and practice nurses play a key role in the coordination of care with input from secondary care specialists.
- The prevalence of coexisting chronic health conditions (multimorbidity) is rising and is a challenge facing health care in the UK.
- All four UK countries have a strategic emphasis at government level on the investigation of current provision and the redesign of healthcare delivery for patients with chronic conditions, including those with multimorbidity.
- Several initiatives focusing specifically on the care of patients with multimorbidity have been developed within the last 5 years in the UK with the aim of improving their care and quality of life. These initiatives are often provided by multi-disciplinary teams and by integrated teams, including health care, social care and the voluntary sector.



Co-funded by
the Health Programme
of the European Union

This report arises from the project Innovating care for people with multiple chronic conditions in Europe (ICARE4EU) which has received funding from the European Union, in the framework of the Health Programme.

1. Multimorbidity: a challenge for care delivery

Until recently, multimorbidity — the occurrence of multiple chronic diseases within an individual — has not received much attention from European policy-makers. However, this seems to be changing, now that it has become clear that the number of people with multimorbidity is rapidly increasing. Currently, an estimated 50 million (mostly older) people in the European Union live with multiple chronic diseases¹, which deeply impacts their quality of life in many ways (physically, but also mentally and socially). This implies an increasing demand for multidisciplinary care that is tailored to the specific health and social needs of people with multimorbidity. Yet interdisciplinary collaboration across sectors (e.g. primary care, hospital care, social care, home care, community services) is often hindered by differences in organisational and financing arrangements between sectors. Moreover, most care delivery models are based on a single disease approach, which could bring about fragmentation, gaps or overlap in care delivery for people with multimorbidity with negative consequences for the quality of care, patient outcomes, efficiency and costs. Integrated care models have the potential to overcome these problems by taking a holistic approach while making efficient use of resources. Such models are characterised by proactive patient-centred and well-coordinated inter- and multidisciplinary care, using new technologies to support patients' self-management and improving collaboration between caregivers.

The ICARE4EU project (see Box 1) explores new models and care practices aimed at delivering integrated care for people with multimorbidity in 30 European countries. This factsheet describes how policy and practices are developing in the UK and in its constituent countries.

Box 1: The ICARE4EU project

The ICARE4EU project aims to identify, describe, and analyse innovative, integrated care models for people with multimorbidity in 30 European countries, and to contribute to more effective implementation of such models. For this purpose, country experts have been contracted to identify programmes at a national, regional or local level in their country that focus on providing care for adult (or older) people with multimorbidity, or contain specific elements for this target group. Multimorbidity is defined for this project as the presence of two or more medically (somatic or psychiatric) diagnosed chronic (not fully curable) or long lasting (at least six months) diseases, of which at least one is of a primarily somatic nature. Programmes should involve a formalised cooperation between two or more services, of which at least one medical service, and they should be evaluated — or have an evaluation planned — in some way. For each eligible programme, the country expert or the programme manager completed an online questionnaire. In addition, country level data were provided by the country experts and partly collected by the project team from European databases. For more information: www.icare4eu.org

2. The multimorbidity challenge in the UK

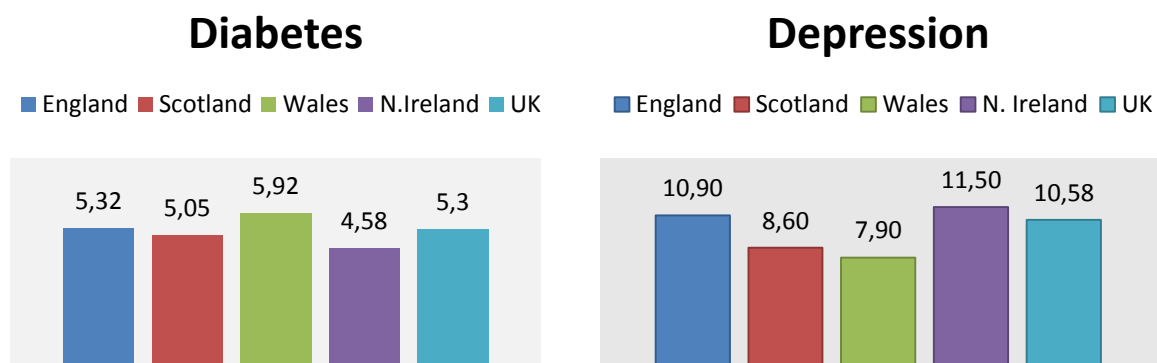
The United Kingdom is made up of England, Scotland, Wales and Northern Ireland, with central government based in London, England for the whole of the UK. Each government is responsible for the health care in each of the four countries, with the UK Government having responsibility for health care in England. The NHS is a publicly funded body that provides free health care at the point of care for all UK citizens. The National Health Services for each country are: NHS England, NHS Scotland, NHS Wales and Health and Social Care (HSC) Northern Ireland. Appendix 1 presents selected characteristics of the UK health and social care system.

In 2014 the total UK population was 64.4 million inhabitants, with 11.3 million (17.5%) aged 65 and over, and 3 million (4.7%) aged 85 years and older² (comparative EU-27 population rates: 18.5% (65yrs+) and 5.1% (80yrs+). An estimated 15 million (about 23%) of people in England were reported to have at least one chronic or long term condition (LTC)³.

In England, the number of people with one chronic is projected to be relatively stable over the next ten years. However, those with multiple chronic health conditions are set to rise to 2.9 million in 2018 from 1.9 million in 2008³. The Scottish Health Survey shows that 46% of those aged 16 and over have at least one chronic health condition, and that prevalence increases with age, from 25% of adults aged 16-24 to 77% of those aged 75 and over⁴. However, there are more people in Scotland with multimorbidity who are under 65 years of age than people who are over 65 years of age⁵.

Individual UK countries govern their health care in their own unique ways and data are collected in their individual country specific ways. UK wide data regarding specific conditions are thus not collected in one single place.

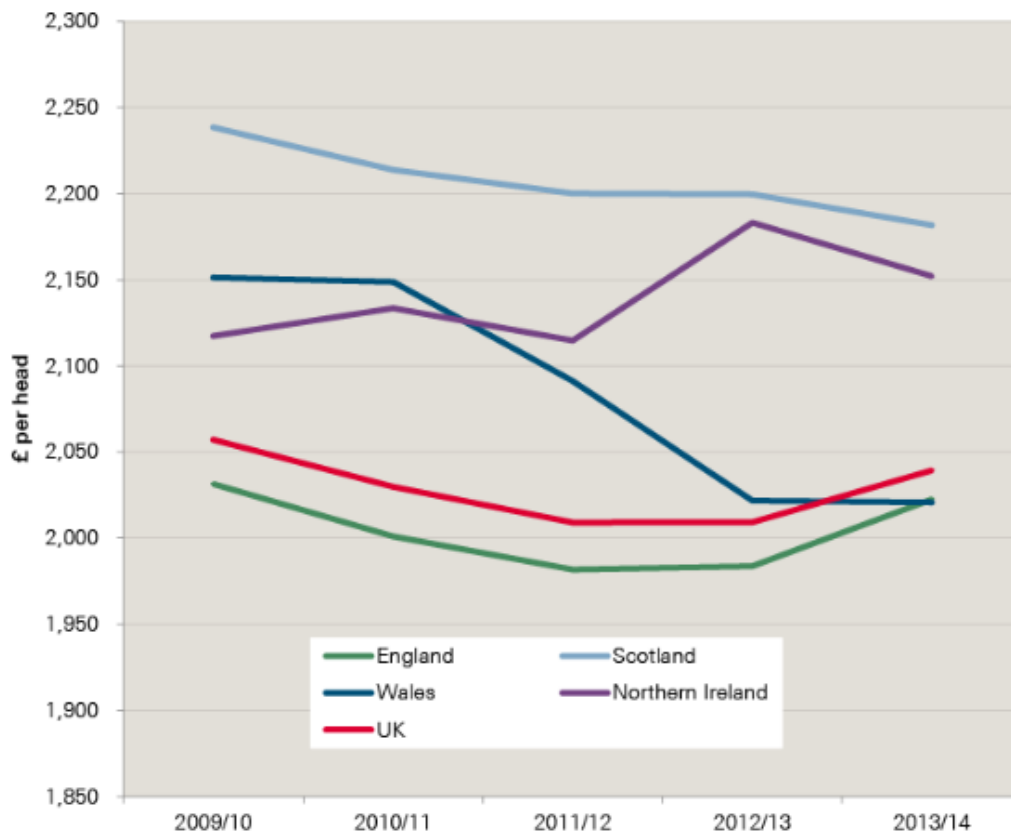
Figure 1: Prevalence (%) of diabetes and depression in the UK in 2015



Source: *Diabetes UK⁶ and Office of National Statistics*

Total health spending accounted for 9.9% of GDP in the United Kingdom in 2014⁸, above the Organisation for Economic Co-operation and Development (OECD) countries average (8.7%), and up from 8.4% level for the UK recorded in 2011. The health spending % of GDP varies across the four different countries within the UK, as illustrated in Figure 2.

Figure 2. Identifiable spending on health in the four countries of the UK per head (2014/15 prices)

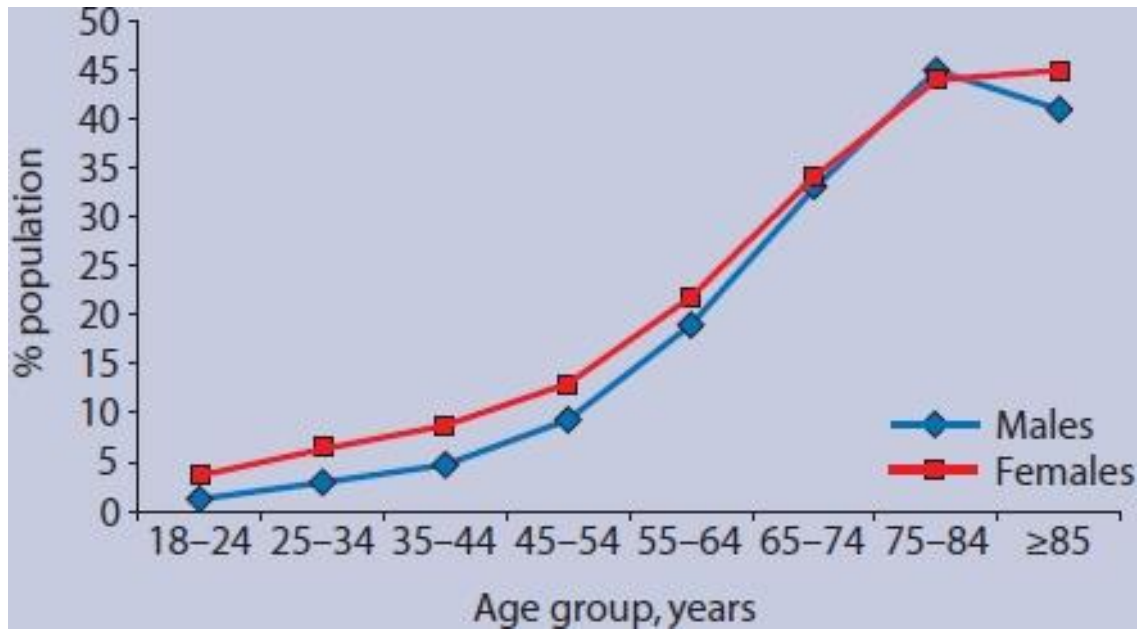


Source: HM Treasury, UK⁹

Research has shown that the prevalence of multimorbidity is rising at a dramatic pace¹⁰, and therefore a focus is needed regarding how this growing population is cared for within the UK health system. Established determinants include age, lower socioeconomic status and gender¹¹, and it has been shown that patients with multiple chronic health conditions have worse clinical outcomes¹². The associated problems such as poly-pharmacy and multiple appointments with a number of different specialists, make this patient group both challenging and complex to treat effectively¹³. There are further complexities surrounding the definition of multimorbidity and how we can measure the impact of multimorbidity on our healthcare system¹⁴.

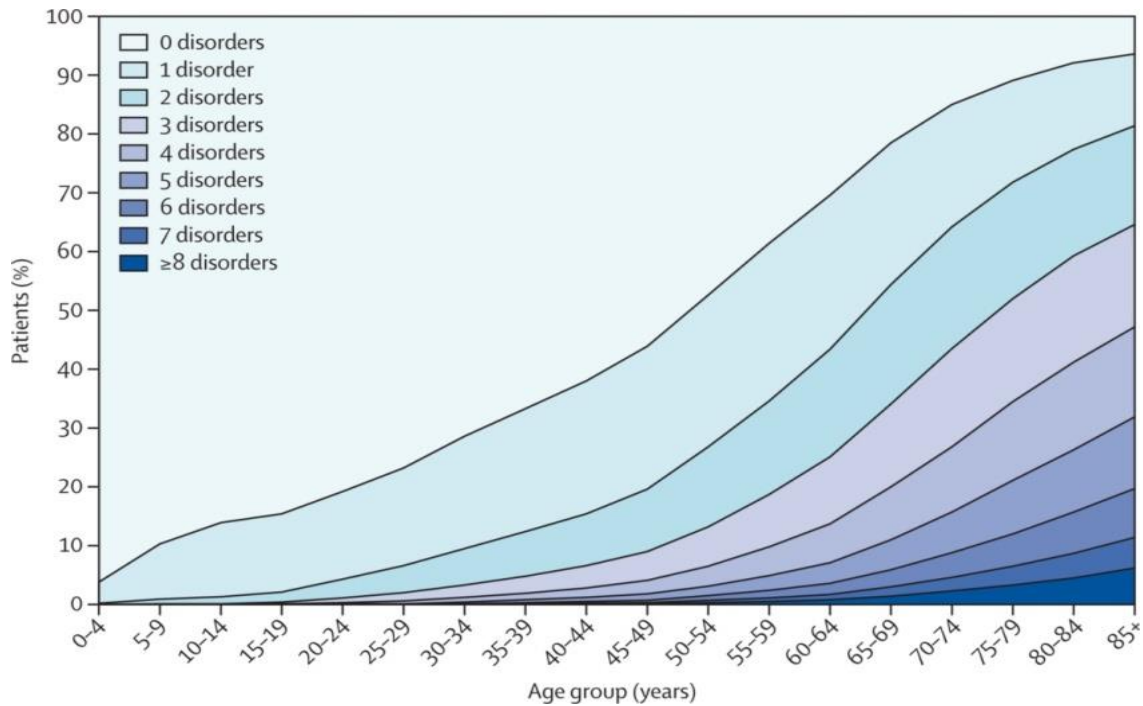
The figures below provide information on the distribution of the burden of multimorbidity in England and Scotland.

Figure 3. England – Proportion of population (%) with more than one chronic condition by age group and gender



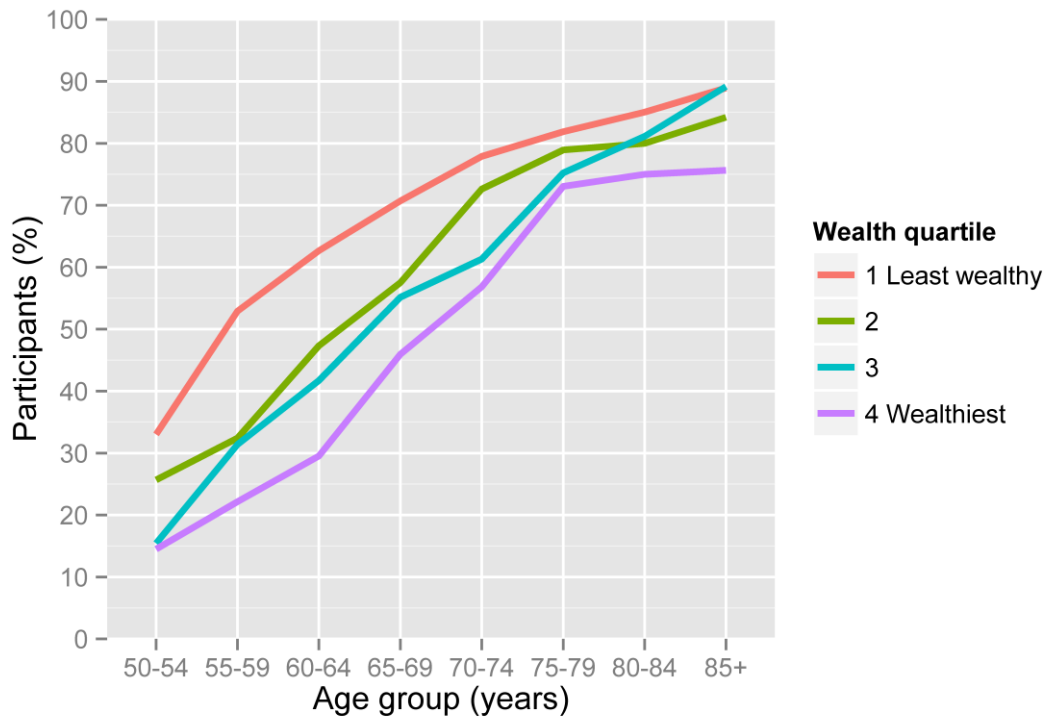
Source: Reproduced from Salisbury et al¹⁶

Figure 4. Scotland – Burden of long term conditions (%) by age group



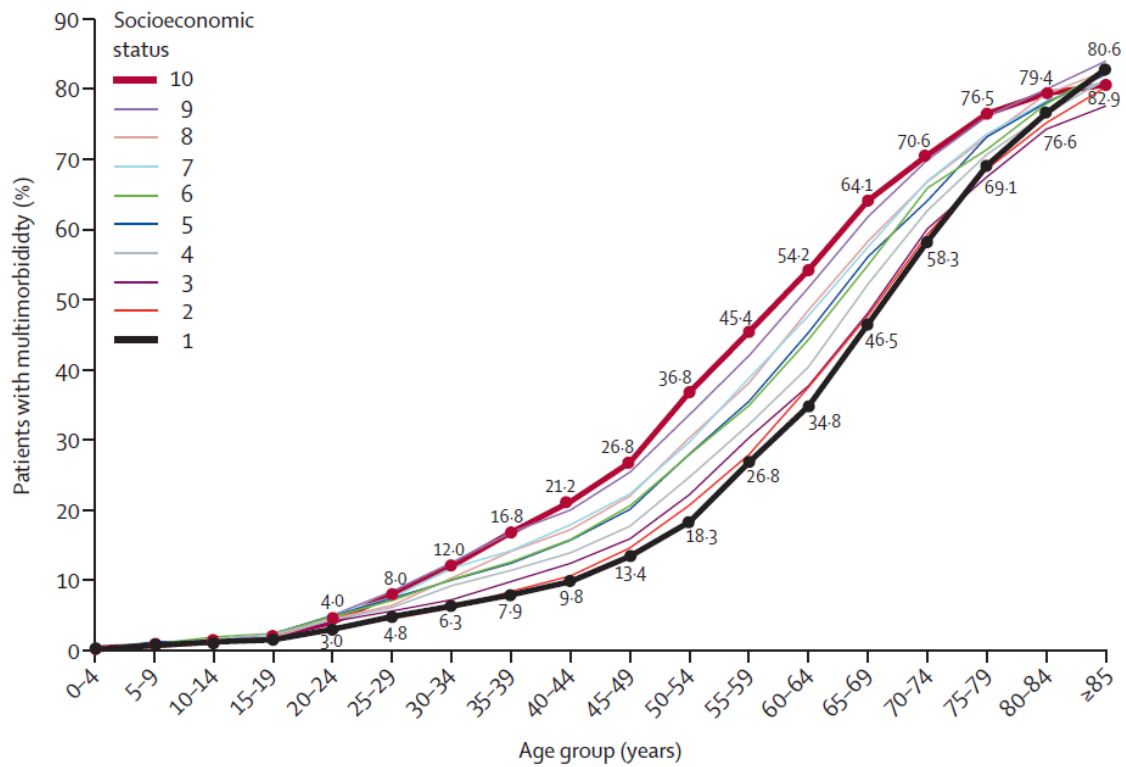
Source: Reproduced from Barnett et al¹⁵

Figure 5. Prevalence of multimorbidity by age and socioeconomic status in England



Source: Mounce L¹⁷

Figure 6. Prevalence of multimorbidity by age and socioeconomic status in Scotland



Source: Reproduced from Barnett et al¹⁵

3. The UK response to the challenge of multimorbidity

New policies and initiatives have been introduced to increase the responsiveness of the health care system to the challenge of multimorbidity.

3.1. Policies on multimorbidity related health and social care

There has been a strong drive from the governments to examine current practice of care in relation to multimorbidity based on the realisation that this group may not be having their needs met¹⁸. The growing amount of research in this area and the predicted increase in numbers of this population group over the coming years¹¹ has led government to steer policy in this area. Each four of the UK country's governments have raised integrated care and provision for people with, amongst others, multiple chronic health conditions in their recent agendas.

3.1.1. England

The Health and Social Care Act 2012 is a crucial part of the Government's vision to modernise the NHS so that it is built around patients, led by health professionals and focused on delivering world-class healthcare outcomes. The Act contains provisions covering five main themes, one of which is strengthening commissioning of NHS services through clinical commissioning. Clinical commissioning will empower NHS professionals to improve health services for the benefit of patients - including those with multiple chronic conditions - and communities, through securing continuous improvements in the quality of services commissioned; reducing inequalities; enabling choice and promoting patient involvement. A chronic condition model has the following key elements that should be adopted for all conditions and care pathways including those with multimorbidity:

- Commissioners understanding the needs of their populations and managing those at risk using risk prediction techniques
- Supporting people to be more confident and in control of their condition using information and self-care as part of personalised care planning
- Providing integrated neighbourhood care teams and joined up and personal services particularly in community and primary care and working closely and effectively with social care
- Strong professional and clinical leadership and workforce development to deliver new models of care

- Using new technologies – i.e. Information from Whole System Demonstrator Programme on the benefits of telehealth and telecare to support people to be more independent and in control.

Key pieces of work in England that impact care for patients with multimorbidity, either through a specific focus on multimorbidity or a more general focus on chronic conditions include:

- Integrated care pioneers – several different initiatives, some of which are focused on patients with multiple chronic health conditions¹⁹
- Year of Care commissioning model - development of evidence base for a capitated budget approach within chronic health conditions for people with complex needs²⁰
- Better Care Fund – there is a drive to reduce emergency admissions, and evidence shows that multimorbidity is a confounding factor for increased admissions. Also one of the themes for the better care fund is producing a personalised care plan for those with long term conditions, including those with multimorbidity²¹
- Proactive care programme - strategy to avoid unplanned admission to hospital, which is a particularly acute problem for people with complex needs²²
- House of Care – enhancing quality of life for people with chronic health conditions, including those with multiple conditions²³
- Realising the Value Programme -initiative to empower people and communities to take more control of their health with a special commitment to patients with chronic health conditions²⁴
- Improving General Practice – enabling general practice to play an even stronger role at the heart of more integrated out-of-hospital services, delivering better health outcomes, more personalised care, excellent patient experience and the most efficient possible use of NHS resources²⁵
- Community Pharmacy -Ensure pharmacists, GPs and patients work together to manage chronic health conditions²⁶.

In addition, the integrated personal commissioning programme, announced by NHS England in July 2014, aims to demonstrate how the NHS and social care can work with individuals and communities to deliver person-centred care and integration at the level of the individual. From April 2015, the programme was aimed at key groups including people with multiple chronic health conditions (particularly older people with frailty), people with learning disabilities with high support needs, users of mental health services and children with complex needs. It will allow funding to be pooled

across local authorities, Care Commissioning Groups (CCGs) and specialised commissioning, and will explore how individuals can have more control over how this funding is used through personalised care and support planning, individualised commissioning and personal health budgets²⁷.

NHS England's strategic approach has been to set out and implement a whole system framework for chronic health conditions to deliver proactive, person-centred, coordinated care, especially for those most at risk and with complex care needs. Each component of the Long Term Condition framework contains deliverables and timetables for their completion these are set out in the NHS England Business plan, Putting Patients First 2014-15 - 2015-16²⁷.

3.1.2. Scotland

The Scottish Government committed to integrating health and social care in 2011, in order to address the changing needs of our growing population of people with multiple complex needs⁴. To meet these needs there is a need to shift from hospital care towards community-based services; supported self-management, and preventative services.²⁸ Greater integration could help address, for example: emergency admissions, delayed discharges from acute care to a community setting and delays in accessing required support due to a disconnect between services²⁹. From 1 April 2016 the Health and Social Care Integration legislation came into force. Nine National Health and Wellbeing Outcomes are to be achieved through integration. The second Health and Wellbeing outcome entails: 'people, including those with disabilities or long term conditions, or who are frail, are able to live, as far as reasonably practicable, independently and at home or in a homely setting in their community³⁰. The overarching aim of the nine Health and Wellbeing outcomes is that health and social care services focus on the needs of the individual to promote their health and wellbeing, and in particular, to enable people to live healthier lives in their community³¹. This is in line with the Scottish Government's 2020 Vision, which entails that by 2020 everyone is able to live longer healthier lives at home, or in a homely setting'.³²

In 2016 a National Clinical Strategy for Scotland was published, providing clarity on the priorities of the health and social care services reform. The Strategy is underpinned by the principle, amongst others, that services will be based around supporting people, rather than single disease pathways It notes that 'the accumulation of multi morbidities result in progressive loss of independence and increasing need for social support⁵. It also states the association of socioeconomic status with

prevalence of multimorbidity. The strategy notes that the consequences and implications of multimorbidity will increase the need for health and social care.

Scotland's Chief Medical Officer published their Annual Report 2014-2015, entitled 'Realistic Medicine', which acknowledges the challenges that have emerged with regard to modern medicine, of which multimorbidity is one, and encourages discussion of these challenges⁵. For example, it states that since 2004 Scotland has had incentivised performance related pay based on evidence based guidelines, which are mainly focused on single diseases. These guidelines have been used to treat patients with multimorbidity. The number of medication taken increase the complexity of multiple drug regimes and can result in an increased risk of unintended harm⁴.

Key pieces of work, policy and Funds in Scotland with a specific focus on multimorbidity or a more general focus on chronic conditions include:

- Living Well with Multiple Conditions, which is an action plan to improve care and support for people living with multiple conditions in Scotland.³³
- Delivering Quality in Primary Care: A National Action Plan, which notes the central role of Primary Care in delivering safe, effective and person centred care. One of the actions includes having agreed pathways, e.g. Supporting older people who have multiple long term conditions.³⁴
- In 2010 The Quality Strategy set out an ambitious approach to ensure that NHS Scotland could become one of the best health services in the world. The three Quality Ambitions - safe, person-centred and effective - provide the focus on delivering the best quality healthcare to the people of Scotland (AM - Quality Strategy, p. 7). The Quality Strategy notes, amongst others, that LTCs and people with multiple conditions is one of the future challenges.³⁵
- The Self-Management Strategy for Long Term Conditions in Scotland acknowledges that self management is key to meet the growing challenges regarding LTCs and it puts people with LTCs at the centre. It is developed by people themselves, not by policy makers.³⁶
- Mydiabetesmyway, an interactive website supporting people with diabetes and their family and friends, providing information and education as well as supporting self management.³⁷
- Better Health, Better Care an action plan, which acknowledges long term conditions and multimorbidities as a challenge, presents people of Scotland with the opportunity to take more control of their health and to be more active in deciding how NHS services should be run³⁸.

- House of Care Scotland, which supports self management of people living with multiple long-term conditions. It is an approach that encourages Collaborative Care and Support Planning. The Royal College of General Practitioners is a key stakeholder.³⁹
- Living Well in Communities, a portfolio of improvement activities, which contributes to enable people to spend more time living in a community setting, it identifies key priority areas where pace and scale of improvement can be increased by additional support. It addresses, amongst others, long term conditions.³¹
- Long Term Conditions Collaborative – Improving Care Pathways, which is a collaborative resource to support partnerships. It provides ten approaches to help deliver better outcomes and an enhanced experience of care for people living with long term conditions.⁴⁰
- Managed Clinical Networks (MCNs) enable clinicians, patients and service managers to work together across boundaries to deliver safe, effective and person-centred care and is considered highly relevant in the context of improving quality and care for people with long term conditions.⁴¹
- ‘Prescription for Excellence’, which aims to create a model to provide long term sustainability and encourages integrated working between pharmacists and other health and social care professionals.⁴²
- Mental Health Strategy for Scotland 2012-2015, which notes the challenge of co-morbidity of mental and physical health problems, and addresses the ‘treatment gap’ to ensure people with mental health problems receive treatment.
- Reshaping Care for Older People (RCOP) Change Fund supported the collaboration between third sector, NHS, local authority, housing and independent sector.⁴³
- The Integrated Care Fund supports the partnerships to focus on prevention, early intervention and care and support for people with complex and multiple conditions⁴.

3.2. Technology

Within the UK the use of technology in the care of chronic health conditions is one of the avenues being explored to help patients to manage their own conditions. Research into the benefits of telehealth and telecare in the management of long term conditions has shown that correct use of technology reduced:

- Death rates by 45%.
- Visits to accident and emergency departments by 15%.
- Emergency admissions to hospital by 20%.

Government policy document “long term conditions – compendium of information” states that at least 3 million people with long term conditions could benefit from using telehealth and telecare. In conjunction with the telehealth and telecare industry, the ‘3millionlives campaign’ is aimed at encouraging greater use of remote monitoring information and communication technology in health and social care.⁴⁴

3.3. Integration

All the NHS/HSC within the four countries of the UK have been tasked to ensure better integration of health and care services, and there are currently a range of initiatives underway designed to achieve this. NHS England and the Department of Health are the key partners on the National Collaboration for Integrated Care and Support (NCICS), which has set out the first system wide shared commitment to support local areas in delivering integrated care. The NCICS has led to the establishment of 14 integration pioneers to address barriers to delivering integrated care and support locally, and to highlight barriers that exist nationally, that integration partners can work to address. In addition to this, the £3.8 billion Better Care Fund will provide the largest ever financial incentive for the NHS and local government to work together. The fund will help shift resources from the acute sector by tackling expensive pressure points in the system like A&E (Accident and Emergency) Departments, providing greater investment in improving prevention services, reducing unplanned hospital admissions and by helping people to stay in their homes and live independently. The fund mandates local areas, through their Health and Wellbeing Boards, to agree the joint use of £3.8 billion for this purpose in 2015-16.²⁷

3.4. Other initiatives

The National Institute of Health and Care Excellence (NICE) have published guidelines in September 2016 regarding:

The management of multimorbidity within primary care⁴⁵

Older people with social care needs and multiple long-term conditions⁴⁶

The National Institute for Health Research (NIHR) issued a themed call for research in 2015 with a focus on multimorbidity in older people.⁴⁷

Overall, the higher level policies and strategies acknowledge the challenges that patients with multimorbidity bring and note that services have to adapt to requirements of this patient group. However, the process of collecting information on policy documents, policy actions, websites and data, indicated the focus has historically been on singular long term conditions. The next section illustrates local initiatives and programmes addressing multimorbidity.

4. Innovative approaches addressing multimorbidity

Through systematic contact with all relevant health authorities in the UK, consultation with experts, internet searches and snowballing, 33 programmes*¹ addressing multimorbidity patients or focusing on multimorbidity management as operationalized in the ICARE4EU project were identified at the end of 2015 in the UK (25 in England; 8 in Scotland)*². We obtained information from 10 of these programmes (6 in England; 4 in Scotland) through a survey about their objectives, characteristics and results so far (see Box 2). All the Scottish programmes and 4 of the English programmes have a key element of collaboration with other sectors (e.g. Social Care or third sector), Presented below are some results of the survey, as reported by the programme managers via an online questionnaire as part of the ICARE4EU project.

4.1 Survey results

All results are based on the programme manager's Responses to the online survey. Five programmes are pilot projects [ID: 3,5,7,8,10] while the other five are characterised as well established and comprehensive programmes [1,2,4,6,9]. Seven programmes are locally implemented [1,2,3,5,7,9,10] and three programmes are both implemented at local/ regional level, and are also part of a national programme [4,6,8]. All programmes operate at the level of direct patient care, seven also involve policy/managerial levels [1,2,3,4,6,7,8].

*1 This term refers to care programmes, projects and interventions that have been developed or adapted for use in (a certain region or municipality of) this country, and are actually running in 2014 (e.g. as a pilot/project or already more structurally implemented), start in 2014 or had been finished in 2013.

*2 We do not assume that all available (eligible) care practices or programmes in the UK were identified.

4.1.1. Multimorbidity orientation

Five programmes focus on multimorbidity in general [3,6,8,9,10], while three programmes focus on a combination of specific chronic diseases such as diabetes, coronary heart disease, chronic obstructive pulmonary disease, asthma, and recurrent urinary tract infection [1,4,5]. Two programmes focus specifically on the co-occurrence of specific diagnoses starting from a so-called ‘index disease’, e.g. one programme classed multimorbidity as the presence of frailty plus any other co-morbidity [2,7].

4.1.2. Programme objectives

According to the definition of programme objectives in the survey, all programmes aimed at improving patient centeredness and patient involvement.

For all programmes, process-related objectives are described, such as improving the identification of the target group [3,6,8] and care coordination [3,5,6,8,10], preventing or reducing misuse of services [1,2,3,4,5,6,8,10] increasing multidisciplinary collaboration and integration across different units [1,2,3,4,5,6,7,8,10] and the promotion of evidence-based practice [3,4,6,7,8,10]. Improved access was aimed for in six programmes [1,3,5,6,8,10].

Objectives related to patient outcomes mainly included decreasing morbidity [5,6,8], improvement of functional status [1,3,5,6,7,8,10], early detection of co-morbid diseases [1,2,3,4,5,6,7,8,9,10] and the delay of complications [3,4,5,6,7,8].

Objectives related to utilisation and costs of services included preventing/reducing over-use of services [3,5,8,10] and reducing acute/emergency care visits [1,3,5,6,10], and four programmes aimed to reduce (public) costs [3,6,8,10].

4.1.3. Target groups

All programmes directly focus on providing care for adult patients with multimorbidity. In seven programmes medical care providers are also directly targeted [1,2,3,5,6,8,10] five of these also targeting non-medical care providers [1,2,3,8,10]), and four programmes target management teams [1,3,6,8]. Informal carers are described as a specific target group in four programmes [1,3,8,10].

4.1.4. Level of integration of care sectors and disciplines

A variety of organisations are involved in the programmes. Four initiatives have a government body and a patient organisation involved [1,3,6,8]. Four programmes include a primary care organisation involved in their initiation [1,2,3,7]. No programmes included; a university hospital, informal carers, home care organisations, insurers, ICT organisations or research institutes (these were categories defined by the questionnaire) within the initiation process. Three programmes have third sector (charities) involvement [1,4,9].

4.1.5. Experiences and results

Evaluation based on process of the programme was stated to have taken place in seven programmes [1,2,5,6,7,8,10].

All programmes used specific indicators to monitor the programme so that quality information was available for evaluation purposes. These indicators were split into three themes, Structural level, Process level & Outcome level. Indicators that were frequently monitored were clinical outcomes at outcome level [1,2,3,5,6,7,8,10], interaction between provider and patient at process level [1,3,4,5,6,7,8,10] and patient satisfaction at outcome level [1,2,3,4,5,6,7,8,10].

All programmes have been evaluated either internally [1,2,7,9], externally [1,2,6,8] or have plans to do it within the next 2 years (either internally [3,10] or externally [4]).

Four programmes were evaluated via outcomes being studied [1,8,9,10]. In four programmes cost-effectiveness was evaluated [1,2,5,10]. Long-term effects were also studied in two programmes [1,5].

The majority of programme managers were mildly positive about reaching the objectives [1,2,3,6,7,8,9,10], except for two programmes [4,6] for which it was felt that none of the objectives set out had been met.

Box 2: Characteristics of programmes addressing multimorbidity in the UK and their results

ID	Programme	Main Objectives	Target Group	Care Providers / Organisations	Results
1	Living Well	Identify people with complex needs and reduce their dependency on high cost, formal care by increasing their sense of purpose through interaction with community and peers.	Patients, Informal Carers, Medical Care Providers, Non-Medical Providers, Management	Governmental body, Primary care organization, Patient organization, Social Care organisation, Public Health Organisation, Community Care Organisation & Voluntary Sector.	<p>The programme improves: Integration of care services, Collaboration between care providers, Competencies of care providers, Patient centeredness, Patient involvement, Involvement of informal carers, Use of e-health tools & Cost effectiveness.</p> <p>The main strength of the programme is focussing on what the individual can do and making their goals central to care planning. Providing opportunities and support for practitioners and people to coproduce the programme & supporting general practitioners to better coordinate care.</p> <p>The programme shows: Improved coordination of care. Improved cooperation between medical and non-medical care. Staff satisfaction. Better outcomes for patients (e.g. mental health, functionality, independent living). Better patient involvement.</p> <p>The programme is transferable (e.g. an embedded way of working, adopted by other units or areas).</p>
2	Frail and Elderly Programme	<ul style="list-style-type: none"> To support patients to identify their own personal outcomes which they perceive will improve their health and well-being To encourage a preventative and pre-emptive approach to care through 	Patients, Medical Care Providers, Non-Medical Providers.	Primary care organization.	<p>The programme improves: Integration of care services. Collaboration between care providers. Competencies of care providers. Patient centeredness. Patient involvement. Involvement of informal carers. Use of e-health tools. Cost effectiveness.</p> <p>The programmes main strengths are: Improved multi-disciplinary</p>

		<p>systematic offer of public health advice and support</p> <ul style="list-style-type: none"> • To reduce the prevalence gap • To tackle health inequalities by offering equitable access to proactive care for all patients with long term conditions • To achieve better management and outcomes for people with long term conditions 			<p>working, including breaking down barriers between hospitals, social work & mental health. Good satisfaction with these new ways of working. Reduced A & E admissions and time spent in hospital.</p> <p>The programme shows: Improved cooperation between medical and non-medical care. Staff satisfaction. Better outcomes for patients (e.g. mental health, functionality, independent living). Changes in utilization of resources (e.g. reduced hospitalisations, reduced nursing home placements). Cost savings.</p>
3	Symphony South Somerset Program Somerset UK	<p>The aim of the programme is to develop and perform integrated services for older patients with frailty and complex needs in the borough of Camden. These services cover medical, social, nursing, mental health and voluntary sectors, with the aim of delivering patient-led value-based outcomes.</p>	<p>Patients, Informal Carers, Medical Care Providers, Non-Medical Providers, Management</p>	<p>Governmental body, General Hospital, Primary care organization, Patient organization, Social Care Organisation & Community Care Organisation.</p>	<p>The programme improves: Integration of care services. Collaboration between care providers. Competencies of care providers. Patient centeredness Patient involvement. Involvement of informal carers. Use of e-health tools. Cost effectiveness.</p> <p>The Programmes main strengths are: Integration and collaboration of health and social services and voluntary sector, allowing an increase in community support to prevent costly hospital admissions. Person centred care is at heart of model, aiming to improve patient activation and hence self-management and quality of life. Development of new roles such as health coaches, to help absorb some of the work and support with patients, allowing for</p>

					example doctors (who are in short supply) to work to the " top of their licence".
4	British Heart Foundation House of Care Programme (Hardwick CCG site)	To provide integrated care across all health interfaces, improve continuity of care & promote person centred care- using new models of care, to meet the differing needs of the population, By improving the management of patients we hope to reduce the need for acute hospital admissions and therefore save resources which can then be reinvested into primary care to support preventative care and self-management.	Patients.	Third Sector Organisation – British Heart Foundation	<p>The programme improves: Integration of care services. Collaboration between care providers. Competencies of care providers. Patient centeredness. Patient involvement.</p> <p>The programmes main strengths are: Clear planning and development objectives which have been localised to fit the population involved. Dedicated project management to steer the programme. A range of stakeholders from primary care, secondary care, public health, community/voluntary sector and patients are involved throughout the project.</p>
5	Multiple Long Term Conditions Service - Torbay	The BHF funded 5 sites over 2 years to develop the House of Care model for patients diagnosed with, or at risk of developing CVD. Care and Support Planning (CSP) forms the core of the programme supported by effective	Patients, Medical Care Providers.	General Hospital	<p>The programme improves: Integration of care services. Collaboration between care providers. Competencies of care providers. Patient centeredness. Patient involvement. Involvement of informal carers. Cost effectiveness.</p> <p>The programmes main strengths are: Patient centred. Treatment at the right place, right time, first time.</p>

		<p>organisational processes, commissioned services, engaged and informed patients and trained health care professionals. Service redesign is driven by CSP including integration of CVD services, self-management services are developed in partnership with community and 3rd sector partners</p>			<p>Patients only have to tell story once.</p>
6	Year of Care Programme	<p>The aims of the service are to provide a high quality service for a person with Multiple LTCs, integrated from the perspective of the individual and with 'what matters to them' at the heart of care planning.</p>	Medical Care Providers, Management	<p>Governmental body, Patient organization & Team of healthcare professionals working across Primary Care & Specialist Care.</p>	<p>The programme improves: Integration of care services. Collaboration between care providers. Competencies of care providers. Patient centeredness. Patient involvement. Involvement of informal carers. Cost effectiveness.</p> <p>The programmes main strengths are: It addresses the need for patient centred, coordinated care as routine within general practice. It is described as 'a better way to work' by staff and increases motivation and staff satisfaction. It provides a systematic, reproducible and transferable approach</p> <p>The programme shows: Improved cooperation between medical and non-medical care. Staff satisfaction Better outcomes for patients (e.g. mental health, functionality,</p>

					<p>independent living). Better patient involvement. Satisfaction of patients. Changes in utilization of resources (e.g. reduced hospitalisations, reduced nursing home placements).</p> <p>The programme is transferable (e.g. an embedded way of working, adopted by other units or area's).</p>
7	<p>Health and Wellbeing programme for Individuals with Multi-Morbidity – NHS Ayrshire and Arran</p>	<p>Improving professional knowledge on multi morbidity; Increasing multi-disciplinary collaboration; improving patient involvement; improving functional status (preventing or reducing functional disability); decreasing/delaying complications; decreasing morbidity; reducing hospital admissions; reducing emergency/acute care visits.</p>	<p>Patients and volunteers.</p> <p>Target Groups: All patients should have at least one diagnosis from CHD, COPD, Cancer, Stroke or Falls With an additional problem such as: Hypertension Heart failure Stroke Diabetes Painful condition Anxiety/ depression</p>	<p>Organisations/units involved in the programme: Primary care practice, Polyclinic, outpatient clinic, ambulatory care, Patient organisation, Social care organisation, Pharmacy.</p> <p>Care providers involved: Hospital nurses, specialised nurses, Pharmacists, Physiotherapist,, exercise therapists, Dieticians, Psychologists, psychotherapist, Exercise specialists.</p>	<p>The programme improves:</p> <ul style="list-style-type: none"> - Integration of care services - Collaboration between care providers - Patient centeredness - Patient involvement <p>The programme's main strengths are:</p> <ul style="list-style-type: none"> - working with the third sector and piloting volunteers in the delivery of the classes - staff desire to make this a success - the breadth of experience of the team delivering the intervention <p>The programme is transferable (e.g. an embedded way of working, adopted by other units or area's).</p>
8	<p>Scotland's House of Care – The Health and Social Care Alliances Scotland</p>	<p>Improving professional knowledge on multi morbidity; reducing inequalities in access to care</p>	<p>Informal carers, medical care providers, non-medical providers, management</p>	<p>Care Providers involved in the programme: GPs, Medical specialists (cardiologist, surgeon,</p>	<p>The programme shows:</p> <ul style="list-style-type: none"> - improved coordination of care - improved cooperation between medical and non-medical care - staff satisfaction - better outcomes for patients (eg. Mental health, functionality,

		<p>and support services; improving accessibility of services; preventing or reducing over-use of services; preventing or reducing misuse of services; improving care coordination; improving integration of different units (within an organisation); improving integration of different organisations; Increasing multi-disciplinary collaboration; improving early detection of additional/co-morbid diseases; improving patient involvement; improving involvement of informal carers; improving functional status; decreasing/delaying complications; decreasing morbidity decreasing mortality; reducing hospital admissions; reducing emergency/acute care visits; improving patient safety.</p>		<p>internist, E.N.T. specialist, pulmonologist, neurologist, ophthalmologist, orthopaedist, rheumatologist), informal carers, home helps, social workers, community workers, district/community nurses, hospital nurses/specialised nurses, pharmacists, physiotherapists/exercise therapists, dieticians, psychologist/psychotherapists, the person (through self management).</p> <p>Organisations involved in the programme: Primarily GP practices with a view to expand.</p>	<p>independent living).</p> <ul style="list-style-type: none"> - better patient involvement - satisfaction of patients - satisfaction of informal carers - changes in utilization of resources (e.g. reduced hospitalisations, reduced nursing home placements) - cost savings <p>The programme is transferable (eg. An embedded way of working, adopted by other units or areas).</p> <p>The programme improves:</p> <ul style="list-style-type: none"> - Integration of services - Collaboration between care providers - Competencies of care providers - Patient centeredness - Patient involvement - Involvement of informal carers - Cost effectiveness <p>Strengths of the programme include: The improvement in the quality of the care planning conversations. The whole system transformation which involves all relevant parties involved in care and support planning. The care and support planning conversation revolves around the unique goals of the individual, who is supported to self-manage and live well.</p>
9	Health and	Reducing	Patients	Organisations	The programme shows:

	<p>Wellbeing Service - Thistle Foundation</p>	<p>inequalities in access to care and support services; Improving patient involvement; Improving functional status (preventing or reducing functional disability); supporting people to find what works for them in managing their health condition.</p>		<p>involved in the programme: Third sector</p> <p>Care providers involved in the programme: The Health and Wellbeing team is a team of mixed professionals some but not all with a health background.</p>	<ul style="list-style-type: none"> - Improved cooperation between medical and non-medical care - Staff satisfaction - Better outcomes for patients (eg. Mental health, functionality, independent living) - Better patient involvement - Satisfaction of patients <p>The programme improves:</p> <ul style="list-style-type: none"> - Collaboration between care providers - Patient centeredness - Patient involvement - Competencies of care providers - Involvement of informal carers - Cost effectiveness <p>The strengths of the programme include:</p> <ul style="list-style-type: none"> - Person centred personal outcome focussed approach - Focussing on the person not the condition - Open door policy - so anyone over 18years who wants to explore managing their health condition can refer themselves to the service <p>From evaluation data over the short term people report improved confidence and coping in dealing with their health condition. The social return on investments albeit of a small number of people demonstrated the long term benefits of the programme in managing health but also in other aspects including community involvement and contribution. Our aim for the future is to continue to explore the long term benefits in larger numbers.</p>
--	---	---	--	---	---

10	Long Term Conditions Shared Management Project – NHS Borders	Promoting evidence-based practice ; improving professional knowledge on multi morbidity; reducing inequalities in access to care and support services; improving accessibility of services; preventing or reducing over-use of services; preventing or reducing misuse of services; improving care coordination; improving integration of different units (within an organisation); improving integration of different organisations; Increasing multi-disciplinary collaboration; identification of target group patients; improving patient involvement; improving involvement of informal carers; improving functional status; decreasing/delaying complications; reducing emergency/acute care visits/ reducing (public)	Patients, informal carers, medical care providers, non-medical care providers.	Organisations/units involved in the programme: <ul style="list-style-type: none"> - Primary care practice - Health centre - Social care organisation - Community/home care organisation - Pharmacy - Red cross Care providers (disciplines) involved: <ul style="list-style-type: none"> - General Practitioners - Informal carers - Social workers - Pharmacists - Practice Nurses - Trainee health psychologists Red Cross	<p>The programme shows:</p> <ul style="list-style-type: none"> - Improved coordination of care - Improved cooperation between medical and non-medical care - Staff satisfaction - Better outcomes for patients (eg. Mental health, functionality, independent living) - Better patient involvement - Satisfaction of patients <p>The programme is transferable (e.g an embedded way of working, adopted by other units or areas).</p> <p>The programme improves:</p> <ul style="list-style-type: none"> - Integration of care services - Collaboration between care providers - Competencies of care providers - Patient centeredness - Patient involvement - Involvement of informal carers <p>The strengths of the programme include:</p> <ul style="list-style-type: none"> - It is on a very small scale so allows detailed involvement of core members of the project team. - The small size of the project has helped to established close and trusting working relationships between the individuals/disciplines/sectors <p>Membership has been consistent, aiding continuity.</p>
----	--	--	--	---	---

		costs; improving patient safety; promoting self-management and stability of conditions, adherence to treatment plans, promoting lives.			
--	--	--	--	--	--

Appendix 1: Health and Social Care

In England a new Health & Social Care system became fully operational from 1 April 2013 to deliver the ambitions set out in the Health and Social Care Act. This consists of: NHS England, Public Health England, the NHS Trust Development Authority and Health Education. At a local level, Clinical Commissioning Groups (CCGs) run regional healthcare – of which there are 211, made up of doctors, nurses and other professionals – buying services for patients. Local councils have the role of promoting public health. NHS England reports to the Department of Health (DOH) which enables health and social care bodies to deliver services according to national priorities and work with other parts of government to achieve this. They set objectives and budgets and hold the system to account on behalf of the Secretary of State. The Secretary of State for Health has ultimate responsibility for ensuring the whole system works together to meet the needs of patients and the public and reflect their experiences. In 2012, the UK government stated they would produce a national strategy for long term conditions. Since then the way the health system works has been changed. Organisations such as NHS England and Public Health England have responsibility for parts of the health service that the government previously had responsibility for. As a result long term conditions are the responsibility of NHS England, and the government have decided they will no longer produce a national strategy⁴³.

Scotland has fourteen regional NHS boards, seven special boards, for example NHS Education Scotland and Health Scotland, and one public health body. Scotland has a Scottish Parliament and each NHS Board is accountable to Scottish Ministers. The NHS Boards are supported by the Scottish Government's Health and Social Care Directorates. Scotland has 32 Local Authorities.

The Public Bodies (Joint Working) (Scotland) Bill, introduced in 2013 in the Scottish Parliament, had the policy ambition: 'to improve the quality and consistency of services for patients, carers, service users and their families; to provide seamless, joined up quality health and social care services in order to care for people in their homes or a homely setting where it is safe to do so; and to ensure resources are used effectively and efficiently to deliver services that meet the increasing number of people with longer term and often complex needs, many of whom are older'²⁸. The Public Bodies (Joint Working) (Scotland) Act 2014 sets out a framework for integrating adult health and social care services. As of 1st April 2016 the Health and Social Care Partnerships are legal entities. In total 31 local partnerships have been set up across Scotland and they will manage almost £8 billion of health and social care resources. NHS and local council care services are jointly responsible for the health and care needs of patients. The independent and third sectors will play a key role in the health and social care partnerships.^{47,48} The Integrated Care Fund supports the partnerships to focus on prevention, early intervention and care and support for people with complex and multiple conditions³.

Wales has a National Assembly with the Welsh Government reporting directly to it. The Government Department of health and Social Service has seven Local Health boards that plan and deliver healthcare to local areas within Wales.

Northern Ireland also has an assembly government and within this the Northern Ireland Executive is responsible for the health & social care board (HSCB). The HSCB oversees the five Healthcare and Social Care trusts (HSC) – these are responsible for the regional delivery and planning of healthcare in local regions.

The National Institute for Health and Care Excellence (NICE) provides guidance to help health and social care professionals deliver the best possible care for patients based on the best available evidence. NICE involves patients, carers and the public in the development of its guidance and other products. NICE works with all four countries within the United Kingdom.

The National Institute for Health Research (NIHR) is funded through the department of health and has transformed research in the NHS. There was a themed call for research in 2015 with a focus on multimorbidity in older people⁴⁶.

References

1. Rijken M, Struckmann V, Dyakova M, Melchiorre MG, Rissanen S, van Ginneken E, on behalf of the ICARE4EU project. ICARE4EU: Improving care for people with multiple chronic conditions in Europe. *Eurohealth* 2013; 19 (3): 29-31.
2. European commission. Eurostat population data [internet]. 2016 [cited July 2016]. Available from: <http://ec.europa.eu/eurostat/web/population-demography-migration-projections/population-data/main-tables>
3. Department of health. Long term conditions compendium of Information. 3rd ed. Department of health; 2012 [cited June 2016]. Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/216528/dh_134486.pdf
4. The Scottish government. A national clinical strategy for Scotland. The Scottish government; 2016 [cited July 2016]. Available from: <http://www.gov.scot/Resource/0049/00494144.pdf>
5. Chief Medical Officer Annual Report 2014-15. Realistic medicine. The Scottish government; 2016 [cited July 2016]. Available from: <http://www.gov.scot/Resource/0049/00492520.pdf>
6. Diabetes UK. Diabetes prevalence 2015 [internet]. 2016 [cited July 2016]. Available from: https://www.diabetes.org.uk/About_us/What-we-say/Statistics/diabetes-prevalence-2015/
7. Office of national statistics. Health Social Trends 41. Office of national statistics; 2011 [cited June 2016]. Available from: <http://www.ons.gov.uk/ons/rel/social-trends-rd/social-trends/social-trends-41/health.pdf>
8. Organization for economic co-operation and development. OECD Health statistics 2014 frequently requested data [internet]. 2016 [cited July 2015]. Available from: <http://www.oecd.org/els/health-systems/oecd-health-statistics-2014-frequently-requested-data.htm>
9. Public Sector Statistical Analyses 2015 (HM Treasury), GDP deflators at market prices, and money GDP September 2015 (HM Treasury)
10. Ricci-Cabello I, Violan C, Foguet-Boreu Q, Mouce LTA, Valderas JM. Impact of multimorbidity on quality of healthcare and its implications for health policy, research and clinical practice. A scoping review. *Eur J Gen Pract* 2015; 21(3):192-202
11. Violan C, Foguet-Boreu Q, Flores-Mateo G, Salisbury C, Blom J, Freitag M et al. Prevalence, determinants and patterns of multimorbidity in primary care: A systematic review of observational studies . *PLOS ONE* 2014; 9:7:e102149
12. Valderas J, Starfield B, Sibbald B, Salisbury C, Roland M. Defining comorbidity: implications for understanding health and health services. *Ann Fam Med* 2009; 7(4):357-363
13. Valderas JM. Multimorbidity, not a health condition or complexity by another name. *Eur J Gen Pract* 2015;21(4):213-214

14. Huntley AL, Johnson R, Purdy S, Valderas JM Salisbury C. Measures of multimorbidity and morbidity burden for use in primary care and community settings: A systematic review and guide. *Ann Fam Med* 2012;10(2):134-141
15. Barnett K, Mercer SW, Norbury M, Watt G, Wyke S, Guthrie B. Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study. *Lancet* 2012;380(9836):37-43
16. Salisbury, Johnson L, Purdy S, Valderas JM, Montgomery AA. Epidemiology and impact of multimorbidity in primary care: a retrospective cohort study. *Br J Gen Pract*. 2011 Jan 1; 61(582): e12–e21
17. Mounce L. Associations of prevalence of multimorbidity with age and wealth: data from the English Longitudinal Study of Ageing (ELSA) in 2012-13. Personal communication 2016.
18. Mavaddat N, Valderas JM, Van der Linde R, Khaw KT, Kinmonth AL. Association of self-rated health with multimorbidity, chronic disease and psychosocial factors in a large middle-aged and older cohort from general practice: A cross sectional study. *BMC Family Practice* 2014;15:185
19. NHS England. Integrated Pioneers. [Internet] 2016. [cited June 2016]. Available from: <https://www.england.nhs.uk/2013/11/interg-care-pioneers/>
20. NHS England. The long term conditions commissioning programme implementation handbook. [internet] 2016. [cited July 2016]. Available from: <http://www.nhs.uk/media/2794979/ltc-yoc-commissioning-programme-implementation-handbook-160516.pdf>
21. NHS Improving Quality. Long term conditions year of care commissioning programme. [internet] 2016 [cited July 2016]. Available from: <http://www.nhs.uk/improvement-programmes/long-term-conditions-and-integrated-care/ltc-year-of-care-commissioning-model.aspx>
22. NHS England. Proactive care programme. [internet] 2016. [cited July 2016]. Available from: <https://www.england.nhs.uk/wp-content/uploads/2014/06/avoid-unpln-admss-ccg-guid.pdf>
23. NHS England. Enhancing the quality of life for people living with long term conditions – The house of care. [internet] 2016. [cited July 2016]. Available from: <https://www.england.nhs.uk/house-of-care/>
24. NHS England. Realising the value Programme. . [internet] 2016. [cited July 2016]. Available from: <https://www.england.nhs.uk/2014/11/realising-value/>
25. NHS England. Improving General Practice- a call to action. [internet] 2016. [cited July 2016]. Available from: <https://www.england.nhs.uk/ourwork/qual-clin-lead/calltoaction/igp-cta/>
26. NHS England. Improving Care through Community Pharmacy – a call to action. . [internet] 2016. [cited July 2016]. Available from: <https://www.england.nhs.uk/ourwork/qual-clin-lead/calltoaction/pharm-cta/>
27. Department of Health. Government response to the House of Commons health select committee report into long-term conditions (Second Report of Session 2014-15). [internet] 2014. [cited June 2016]. Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/353394/43105_290279_8_Cm_8937_print_ready.pdf

28. Audit Scotland. Health and social care integration. [internet] 2015. [cited July 2015] Available from: http://www.audit-scotland.gov.uk/uploads/docs/report/2015/nr_151203_health_socialcare.pdf
29. The Scottish parliament. SPICe Briefing Public Bodies (Joint working) (Scotland) Bill. [internet] 2013. [cited July 2016]. Available from: http://www.parliament.scot/ResearchBriefingsAndFactsheets/S4/SB_13-50.pdf
30. The Scottish government. National Health and Wellbeing Outcomes. [internet] 2015. [cited July 2016]. Available from: <http://www.gov.scot/Resource/0047/00470219.pdf>
31. Healthcare improvement Scotland. Living Well in Communities. [internet] 2016. [cited July 2016]. Available from: http://www.healthcareimprovementscotland.org/our_work/person-centred_care/living_well_in_communities.aspx
32. NHS Scotland. Achieving sustainable quality in Scotland's Healthcare – A '20:20' vision. [internet] 2011. [cited July 2016]. Available from: <http://www.gov.scot/Resource/0039/00398668.doc>
33. The health and social care alliance Scotland. Many conditions, one life - Living well with multiple conditions [internet] 2014. [cited July 2016] Available from: <http://www.jitscotland.org.uk/wp-content/uploads/2014/11/Multiple-Conditions-20pp-new.pdf>
34. NHS Scotland. Delivering quality in primary care: A national action plan [internet] 2010. [cited July 2016]. Available from: <http://www.gov.scot/resource/doc/321597/0103382.pdf>
35. NHS Scotland. The healthcare quality strategy for NHS Scotland. [internet] 2010. [cited July 2016]. Available from: <http://www.gov.scot/Resource/Doc/311667/0098354.pdf>
36. The Scottish government. The self-management strategy for long term conditions in Scotland [internet]. 2008 [cited July 2016]. Available from: <http://www.gov.scot/resource/0042/00422988.pdf>
37. NHS Scotland. My diabetes my way. [internet] 2016. [cited July 2016]. Available from: <http://www.mydiabetesmyway.scot.nhs.uk/>
38. NHS Scotland. Better Health, Better Care: an Action Plan. [internet] 2007. [cited July 2016]. Available from: <http://www.gov.scot/Resource/Doc/206458/0054871.pdf>
39. The Scottish government. House of Care. [internet] 2016. [cited July 2016]. Available from: <http://www.gov.scot/Publications/2016/02/8618/7>
40. NHS Scotland. Long term conditions collaborative – Improving care pathways. [internet] 2010. [cited July 2016]. Available from: <http://www.gov.scot/resource/doc/309257/0097421.pdf>
41. The Scottish Government. Managed clinical networks: Supporting and delivering the healthcare quality strategy. [internet] 2012. [cited July 2016]. Available from: http://www.sehd.scot.nhs.uk/mels/CEL2012_29.pdf
42. The Scottish government. Prescription for Excellence. [internet] 2013. [cited July 2016]. Available from: <http://www.gov.scot/Resource/0043/00434053.pdf>

43. NHS Scotland. Reshaping Care for Older People – A programme for change 2011-2021. [internet] 2011. [cited July 2016]. Available from: <http://www.gov.scot/resource/0039/00398295.pdf>
44. Department of health. Long term conditions compendium of Information. 3rd ed. Department of health; 2012 [cited June 2016]. Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/216528/dh_134486.pdf
45. National Institute for health and care excellence (NICE). Multimorbidity: clinical assessment and management. [internet] 2016. [cited July 2016]. Available from: <https://www.nice.org.uk/guidance/indevelopment/gid-cgwave0704>
46. National Institute for health and care excellence (NICE). Social care for older people with multiple long term conditions. [internet] 2016. [cited July 2016]. Available from: <https://www.nice.org.uk/guidance/indevelopment/gid-qsd144>
47. NHS National institute for health research. Multimorbidities in older people themed call. [internet] 2016. [cited July 2016]. Available form: <http://www.themedcalls.nihr.ac.uk/previous-themed-calls/long-term-conditions-in-children-and-young-people2>
48. The Scottish Government. Integration of health and social care [internet] 2016. [cited July 2016]. Available from: <http://www.gov.scot/Topics/Health/Policy/Adult-Health-SocialCare-Integration>
49. NHS Scotland. The healthcare quality strategy for NHS Scotland. [internet] 2010. [cited July 2016]. Available from: <http://www.gov.scot/Resource/Doc/311667/0098354.pdf>