Director of Public Health
Annual Report

2013

www.cornwall.gov.uk

one and all onen hag oll
CORNWALL COUNCIL

Council of the ISLES OF SCILLY

Contents

	Page
Chapter One: Overview	4
Chapter One: Overview in Cornish langage	6
Chapter Two: Improving outcomes around major health conditions	32
Chapter Three: The power of prevention	68
Chapter Four: Everyday public health	82
Chapter Five: Back to the future	98
Appendix tables	107

Chapter One
Overview

A. Introduction

As I write the introduction for this 2013 annual public health report we have just received data on health inequalities from Public Health England. This shows that the gap in life expectancy between our poorer and richer communities has narrowed. The gap in Cornwall for men is now 5.3 years reduced from 5.7 years and for women is now 4.4 years reduced from 5.2 years. This is most welcome news but there is still much to do.

We spend a part of this report looking at life expectancy and also healthy life expectancy; that is the number of years people live in good or fairly good health. The best predictors for a healthy old age are being physically active, drinking alcohol in moderation, being a healthy weight and eating fruit and vegetables, and having a good network of family and friends.

In 1901 the average life expectancy for both sexes was 50 years. The current average life expectancy for men in Cornwall is 79.5 years. Healthy life expectancy however, is 62.6 years, meaning that men on average will spend 16.9 years in poor health. For women those figures are 83.5 and 64.6 giving 18.9 years in poor health on average (PHE Segment Tool). The gap in healthy life expectancy between our poorer and richer communities is also present. Not being in good health has impacts on the quality of our lives, but also on wider society in lost productivity, and health and social care costs. Whilst we have seen a very welcome closing of the gap in inequalities, we have also seen the figure of 69.8% of people in Cornwall and 64.4% in the Isles of Scilly who are overweight or obese, and predictions if this continues that 60% of men and 50% of women will be obese by 2050 (Foresight report). Whilst levels of obesity and overweight are not climbing as rapidly as they were this is a major challenge for us to increase the number of people of a healthy weight.

Cornwall and the Isles of Scilly each have their own Health and Wellbeing Boards. Both boards are focused on improving health and tackling inequalities. Their strategies have been co-designed with communities and, together with the tackling inequalities strategy are the public sector's response to working with the communities we serve to create healthier lives. The Local Enterprise Partnership, the Local Nature Partnership and the Health and

Wellbeing Boards are the three partnerships that have responsibility for the economy, the environment and health and wellbeing and work closely with our democratically elected councils to deliver the very best for Cornwall and the Isles of Scilly.

Across England, April 2013 saw the return of public health to its roots in local government. This provides a very important home within the democratic process and a Member-led vision for public health action. Public health returns at a time of financial challenge but never has the importance of prevention been greater in not only improving the health and wellbeing of the population but also helping funding go further with action at an earlier stage. The importance of the best start in life is critical as so much of our lives are determined and influenced by this. What happens in the first two years of life has a powerful effect on health and wellbeing later in life.

Community ownership and involvement in service design are essential in delivering public services that work for local people. 2014 will see us take our joint strategic needs assessment (JSNA) to a joint strategic assessment with greater buy in from across the public sector, and with stronger community involvement in its design. Good data and evidence-based information is an important part of ensuring services are effective and doing what we need them to, to help us be happy, healthy and thrive. Major interlinked themes in the next annual public health report will be mental health and social isolation, and if you have any suggestions for issues you would like covered, we look forward to hearing from you.

2014 is going to be a very challenging year for us all, for the population, for the public sector, the voluntary and community sector, and private industry. This challenge however brings great opportunities to do things better: our gift will be in doing better with less.

Felicity Owen

Director of Public Health
Cornwall Council and the Council of the Isles of Scilly

fowen@cornwall.gov.uk

The **gap** in **life expectancy** between our poorer and richer communities has **narrowed**

In 1901 the average life expectancy for both sexes was **50 years**

Raglavar

Ha my ow skrifa an raglavar dhe'n derivas bledhynnyek 2013 ma a-dro dhe yeghes poblek, ni re dhegemeras namnygen derivadow a-dro dhe dhibarderyow yeghes dhyworth yeghes Poblek Pow Sows. Hemm a dhiskwa fatel ynnhas an aswa yn gwaytyans bewnans ynter agan boghosekka ha'gan ryccha kemenethow. 5.3 bledhen yw an aswa rag gwer lemmyn, lehes dhyworth 5.7 bledhen, ha 4.4 bledhen yw rag benenes, lehes dhyworth 5.2 bledhen. Nowodhow fest wolkom yw hemma mes yma hwath meur dhe wul.

Yn rann a'n derivas ma yth eson ow mires orth gwaytyans bewnans hag orth gwaytyans a vewnans yagh, henn yw an niver a vledhynnyow may few tus dresta yn yeghes da po da lowr. An gwella darganow rag kothni yagh yw bos gweythresek yn fisegel, eva alkohol yn temprys, perthi poos yagh, dybri frooth ha losow ha kavos rosweyth da a deylu ha kowetha.

Yn 1901 gwaytyans kresek an bewnans o 50 bloodh rag an dhiw reydh. 79.5 bloodh yw gwaytyans kresek an bewnans rag gwer yn Kernow mes 62.6 bloodh yw gwaytyans an bewnans yagh, hag a styr y hwra gwer spena 16.9 bledhen, yn kresek, yn yeghes drog. Rag benenes an niverow yw 83.5 ha 64.6, hag a re yn kresek 18.9 bledhen yn yeghes drog. Yma omma ynwedh an aswa yn gwaytyans an bewnans yagh ynter agan boghosekka ha'gan ryccha kemenethow.

Bos heb yeghes da a'n jeves effeyth war gwalita agan bewnans mes war an ledanna kemeneth ynwedh awos askoruster kellys ha'n kostow a with socyal hag a'n yeghes. Kyn hwelsyn an aswa yn dibarderyow ow tegea hag yw pur wolkom, ni re welas ynwedh an niver a 69.8% a'n dus yn Kernow ha 64.4% yn Syllan hag yw gorboos po berrik ha darganow, mar pessyo hemma, y fydh berrik 60% a wer ha 50% a venenes erbynn 2050 (Derivas Ragwel). Kyn nag usi an nivelow a verrikter ha gorboster owth yskyn mar uskis dell esens, hemm a'gan chalenj dhe ynkressya an niver a dus ha dhedha poos yagh.

Kernow ha Syllan a's teves pub hy hesva yeghes ha sewena hy honan ha fogellys yw an dhiw Gesva war wellhe yeghes ha strivya erbynn dibarderyow. Aga stratejiow re beu kesdesinys gans kemenethow ha, gans an strateji a strivya erbynn dibarderyow, gorthyp an ranngylgh poblek yw dhe oberi gans an kemenethow a servyn rag gwruthyl yaggha bewnansow. An Keskowethyans Aventur Leel, an Keskowethyans Natur Leel ha'n kesvaow yeghes & sewena yw an tri heskowethyans a's teves omgemeryans rag an erbysieth, an kerghynnedh ha yeghes ha sewena hag i a ober klos gans agan Konselyow dewisys yn temokratek may teliffrons an gwella rag Kernow ha Syllan.

Mis Ebrel 2013 y hwelas a-hys Pow Sows dehwelans yeghes poblek dh'y wreydh yn awtorita leel. Hemm a brovi tre pur bosek a-berth y'n argerdh demokratek ha gwelesigeth ledys gans Eseli rag gwrians yeghes poblek. Yeghes poblek a dhehwel yn termyn a jalenj arghansek mes bythkweth ny veu brassa an roweth a lestans, na saw rag gwellhe yeghes ha sewena an bobel mes ynwedh rag gweres arghasans dhe vones pella gans gwriansow yn spys a-varra. Troboyntel yw an roweth a'n gwella dhe dhalleth y'n bewnans drefen bos kemmys a'gan bewnans determys ha delenwys gans hemma. An pyth a hwer y'n kynsa diw vledhen a vewnans a'n jeves effeyth war an yeghes ha sewena wosa henna y'n bewnans.

Essensek yw perghenogeth kemenethek hag omvyskans yn desin a wonisyow rag delivra gonisyow poblek a ober rag tus leel. Yn 2014 ni a wra displegya agan arvreusyans a edhommow kesunys ha stratejek dhe arvreusyans kesunys ha stratejek gans moy unverheans dhyworth a-hys an ranngylgh poblek ha gans omvyskans kreffa an gemeneth yn y dhesin.

Rannow posek yw derivadow da ha kedhlow selys war dhustuni rag surhe bos gonisyow effeythus hag a wra an pyth yw res rag agan gweres dhe vos lowen ha yagh ha dhe seweni. Y'n nessa derivas bledhynnyek yeghes poblek, y fydh themow meur kesvellys a yeghes brysel hag enysekter socyal, ha mara'gas beus profyansow rag daldraow a vynsewgh aga dadhla, mall yw genen a glewes dhyworthowgh.

2014 a vydh bledhen pur jalenjus ragon ni oll, rag an bobel, rag a'n ranngylgh poblek, rag an ranngylgh bodhek ha kemenethek, keffrys ha diwysyans privedh. Byttegyns an challenj ma a dhre spassow splann dhe wul taklow gwell, ha gul gwell gans le a vydh agan kevro.

Felicity Owen

Lewydh Yeghes Poblek
Konsel Kernow & Konsel Syllan

fowen@cornwall.gov.uk

B. Context - organisational changes and budget pressures

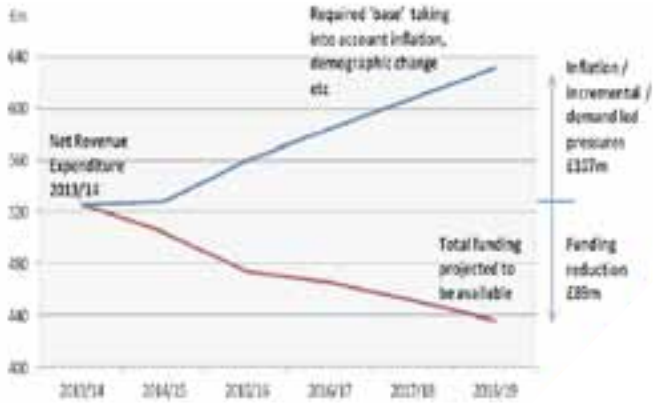
It is important to understand the issues around public sector finances and organisational changes because they fundamentally affect the context for public health action. Many significant changes have taken place over recent years with even more change expected to follow. Managing challenges well and making the most of opportunities to improve the public's health are vital for our community's wellbeing.

Please note the commentary below deliberately concentrates on financial and service issues from a Cornwall Council perspective given the authority's leadership role for both public health and the local community. Similar challenges are being faced by the Council of the Isles of Scilly in managing long-term issues for the Islands with a reduced public sector budget.

Financial climate

Since 2010 Cornwall Council has found savings of £170 million largely due to a significant reduction in the amount of funding it received from the Government. The authority expects another reduction in Government funding which could require further savings of £196 million by 2018/19.

Figure 1.1
Budget context for Cornwall Council



Source: Cornwall Council, Budget presentation for public consultation

During September and October 2013 Cornwall Council asked partners and the public where they think the council can make these future savings. The feedback from the programme of budget consultation and engagement has been used by the Cabinet to help inform the 2014/15 budget.

Every year, the range of pressures on local budgets grows. For example:

- Demographic changes – more adults living longer often with one or more long term conditions, and an increasing birth rate. Some 40% of people over the age of 85 require considerable health and social care assistance.
- Additional responsibilities through national legislation which may not come with additional support for local authorities to deliver the change.
- Welfare changes leading to more pressure on local support services and networks.
- Cost of borrowing for capital programme additions e.g. matched funding for the European Programme.

Cornwall Council is moving towards a four year implementation plan for services in order to see the full journey to the expected end position, rather than cutting each service year on year.

Similarly, the central government grant for the Council of the Isles of Scilly has reduced significantly (by over 20%) between 2012/13 and 2013/14.

Wider factors

Sir Merrick Cockell – Chair of the Local Government Association (LGA) – has stated that the impact of these pressures (across all local authorities) mean: "Local services on which people rely will have to be significantly reduced as a result".

In response, the LGA have launched 'Rewiring Public Services' – an ambitious campaign which provides much-needed solutions to how we can deliver public services within an ever-tightening fiscal environment.

The LGA state that today's model of public services is unsustainable.

- Demand and costs are going up but funding is going down.
- Public services concentrate on trying to handle failure rather than on preventing it.
- People perceive public services as remote, over bureaucratic and bogged down in process.

They want to promote an alternative in order to enhance the quality of life of everyone in England by:

- Rejuvenating democracy and giving back to people real reasons to participate in civic life and their communities
- Transforming public services so they prevent problems instead of just picking up the pieces
- Boosting economic growth in a way that offers prosperity to every place.

The **LGA** state that today's model of public services is **unsustainable**.

Organisational change

The immense challenges ahead will need radical service redesign. Doing the same things is not an option. Cornwall Council has identified a few key factors in this process:

- The level of change needed will require significant time to review, to design and to implement the change.
- Most changes will require significant engagement with service users and staff, followed by formal consultation. This creates opportunities to better understand needs and aspirations of the public, and support them to be well engaged with their health and wellbeing.
- Equality impact assessments, including understanding the needs of different population groups to help reduce inequalities.
- Setting budgets early to allow for appropriate re-design to take place.

Creative solutions are being sought through local examples of innovation and learning from elsewhere. A good example of this is the successful bid for Cornwall and the Isles of Scilly to be one of 14 national Pioneers for Health and Social Care Integration. The aim is to make health and social care services work together to provide better support at home, and earlier treatment in the community to prevent people needing emergency care in hospital or care homes.

This programme will build on the learning from the Newquay Pathfinder project and recently established Penwith Changing Lives project. In Penwith, GP practices are being supported to identify high-risk patients who would benefit most from co-ordinated support. Important principles include people only having to tell their story once, receiving information at the right time, understanding options, and being in control. The aim is to help people manage their own health and wellbeing better as well as provide more effective and efficient services.

The successful bid for Cornwall and the Isles of Scilly includes a welcome positive vision for change:

> "Instead of waiting for people to fall into ill-health and a cycle of dependency, the pioneer team will work proactively to support people to improve their health and wellbeing. The pioneer will measure success by asking patients about their experiences of care and measuring falls and injuries in the over 65s."

Supporting integration, the Better Care Fund plan requires local areas to formulate a joint plan for integrated health and social care, and to set out how their single pooled Better Care Fund budget will be implemented to facilitate closer working between health and social care services.

Joint plans are approved through the relevant local Health and Wellbeing Board and agreed between NHS Kernow (Clinical Commissioning Group) and the councils. Health and social care providers should also be closely involved in plan development.

The plan should demonstrate clearly how it meets all of the national Better Care Fund conditions, include details of the expected outcomes and benefits of the schemes involved, and confirm how the associated risks to existing NHS services will be managed.

C. Context - demographics and outcomes

The importance of the Joint Strategic Needs Assessment (JSNA)

The JSNAs for both Cornwall and the Isles of Scilly play a vital role in identifying local health and wellbeing needs and inequalities within the local populations, and monitoring changes over time. This intelligence helps to drive local priorities for action as set out in the Health and Wellbeing Strategy and other key strategic plans such as the Children and Young People's Plan. It helps to inform future service planning across the public and community and voluntary sector.

In summary, the JSNA aims to:

- Identify "the big picture" in terms of the current and future health and wellbeing needs and inequalities of the population
- Provide a comprehensive map of local service provision
- Provide an evidence base to guide and inform future service planning, commissioning and investment / disinvestment
- Inform decision makers and commissioners to achieve better health and wellbeing outcomes and reduce inequalities.

The JSNA contains data, information and analysis on a wide range of themes, and for a number of audiences.

To help strengthen the JSNA as a tool for strategic decision making, a number of priorities have been identified for 2014 onwards:

- Work with commissioners to improve the scope of routine recording of information to enhance the JSNA intelligence base.
- Explore ways to link and present information across health, social care and other agencies to improve the analysis of need in Cornwall and the Isles of Scilly.
- Agree a common, consistent geographical unit for the analysis and presentation of information.
- Begin to capture the voice of communities and the public in the JSNA process.
- Ensure that the JSNA supports and informs integration work as part of the Better Care Fund.
- Improve the accessibility of information about needs and the narrative vision of needs and priorities.
- Explore the bringing together of the existing resource in research and intelligence across different council services and other statutory agencies.
- Explore the potential of creating a single strategic needs assessment working across all of the public sector.

Population change in Cornwall and the Isles of Scilly

Between the 2001 and 2011 the overall population of Cornwall has grown by 6.7%. The largest per cent increase was seen in the following age groups; 60-64 (42.1%), 65-69 (34.4%), 20-24 (27.3%), and those over the age of 90 (23.0%) (2011 Census)

Between the **2001** and **2011** the overall population of Cornwall has grown by **6.7%**

The largest increase was seen in the **60-64** age group

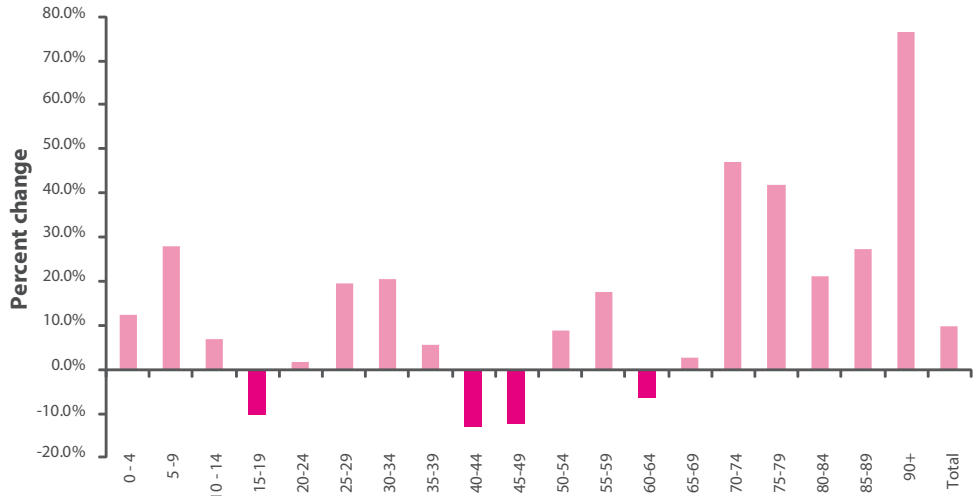
Table 1.1 Population growth by age group- last ten years 2001-2011

Age band	2001	2011	Number change	% change
0-4	26,049	27,366	1,317	5.1%
5-9	28,699	26,073	-2,626	-9.2%
10-14	31,454	29,972	-1,482	-4.7%
15-19	28,653	31,800	3,147	11.0%
20-24	22,280	28,357	6,077	27.3%
25-29	24,942	26,373	1,431	5.7%
30-34	30,966	26,702	-4,264	-13.8%
35-39	34,243	30,276	-3,967	-11.6%
40-44	32,896	36,620	3,724	11.3%
45-49	32,165	38,486	6,321	19.7%
50-54	40,744	36,853	-3,891	-9.5%
55-59	35,719	35,543	-176	-0.5%
60-64	29,979	42,611	12,632	42.1%
65-69	26,797	35,224	8,427	31.4%
70-74	24,751	26,543	1,792	7.2%
75-79	20,956	21,397	441	2.1%
80-84	14,735	16,349	1,614	11.0%
85-89	8,607	10,218	1,611	18.7%
90+	4,479	5,510	1,031	23.0%
Total	**499,114**	**532,300**	**33,159**	**6.7%**

Table 1.2 Projected population by age group for Cornwall, 2011-2021

Age band	2011	2021	Number change	% change
0-4	27,366	30,748	3,382	12%
5-9	26,073	33,384	7,311	28%
10-14	29,972	32,043	2,071	7%
15-19	31,800	28,487	-3,313	-10%
20-24	28,357	28,857	500	2%
25-29	26,373	31,537	5,164	20%
30-34	26,702	32,191	5,489	21%
35-39	30,276	31,960	1,684	6%
40-44	36,620	31,944	-4,676	-13%
45-49	38,486	33,821	-4,665	-12%
50-54	36,853	40,066	3,213	9%
55-59	35,543	41,762	6,219	17%
60-64	42,611	39,892	-2,719	-6%
65-69	35,224	36,110	886	3%
70-74	26,543	39,053	12,510	47%
75-79	21,397	30,358	8,961	42%
80-84	16,349	19,796	3,447	21%
85-89	10,218	13,009	2,791	27%
90+	5,510	9,729	4,219	77%
Total	**532,300**	**584,746**	**52,473**	**10%**

Figure 1.2: Projected population change by age group for Cornwall, 2011-2021



Source: 2011 census and Interim 2011-based Subnational Population Projections.

By 2021, the population of Cornwall is expected to increase by **10%** from the 2011 census levels.

In the coming ten years, the population of Cornwall is expected to increase 10% from the 2011 level. The largest per cent increase will be among older people. Those over the age of 90 will experience a 77% population growth followed by those 70-74 (47%) and those 75-79 (42%).

Between the 2001 and 2011 censuses the overall population of the Isles of Scilly has grown by 2.3%. The largest per cent increase was seen among people 65 years and older. Caution, however, should be used when interpreting per cent increases for the Isles of Scilly by age groups due to small numbers. A small variation in numbers can result in large percentage changes. By 2021, the population of the Isles of Scilly is expected to increase 13.4% from the 2011 census levels.

Table 1.3: Population growth by age for the past ten years for the Isles of Scilly, 2001-2011

Age band	2001	2011	Number change	% change
0-4	119	106	-13	-10.9%
5-9	100	105	5	5.0%
10-14	117	108	-9	-7.7%
15-19	83	63	-20	-24.1%
20-24	130	104	-26	-20.0%
25-29	149	135	-14	-9.4%
30-34	143	127	-16	-11.2%
35-39	149	133	-16	-10.7%
40-44	141	173	32	22.7%
45-49	143	168	25	17.5%
50-54	189	152	-37	-19.6%
55-59	159	144	-15	-9.4%
60-64	128	169	41	32.0%
65-69	106	168	62	58.5%
70-74	117	105	-12	-10.3%
75-79	77	83	6	7.8%
80-84	56	89	33	58.9%
85-89	30	38	8	26.7%
90+	17	33	16	94.1%
Total	**2153**	**2203**	**50**	**2.3%**

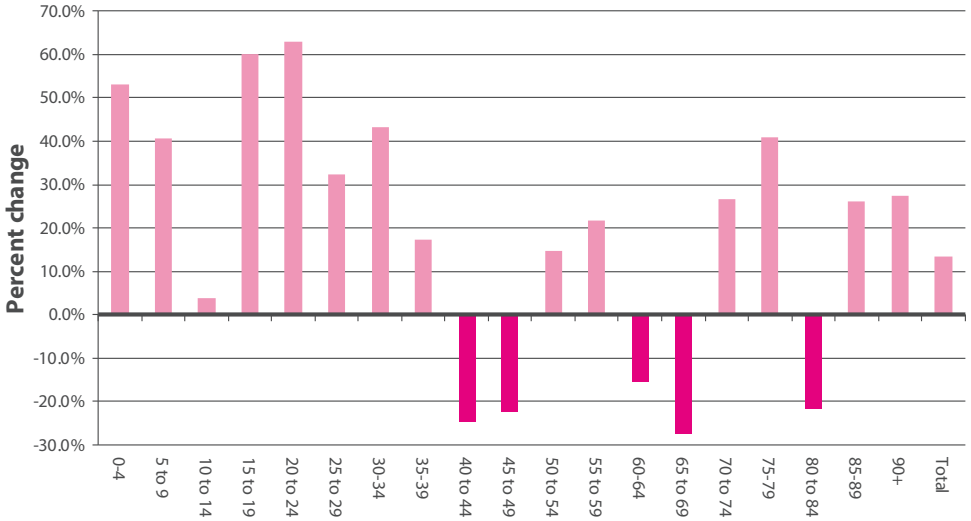
Source: 2001 and 2011 census

Table 1.4: Projected population growth for the Isles of Scilly, 2011-2021

Age band	2011	2021	Number change	% change
0-4	106	162	56	53.20%
5-9	105	148	43	40.70%
10-14	108	112	4	3.80%
15-19	63	101	38	60.20%
20-24	104	169	65	62.90%
25-29	135	208	51	32.30%
30-34	127	182	55	43.30%
35-39	133	156	23	17.20%
40-44	173	130	-43	-24.60%
45-49	168	130	-38	-22.50%
50-54	152	174	22	14.80%
55-59	144	175	31	21.80%
60-64	169	143	-26	-15.30%
65-69	168	122	-46	-27.20%
70-74	105	133	28	26.70%
75-79	83	117	34	40.80%
80-84	89	70	-19	-21.60%
85-89	38	48	10	26.20%
90+	33	41	9	27.40%
Total	**2203**	**2522**	**298**	**13.40%**

Source: 2011 census and Interim 2011-based Subnational Population Projections.
Total figure may not add up due to rounding.

Figure 1.3: Projected population change by age group for the Isles of Scilly, 2011-2021



Source: 2011 census and Interim 2011-based Subnational Population Projections

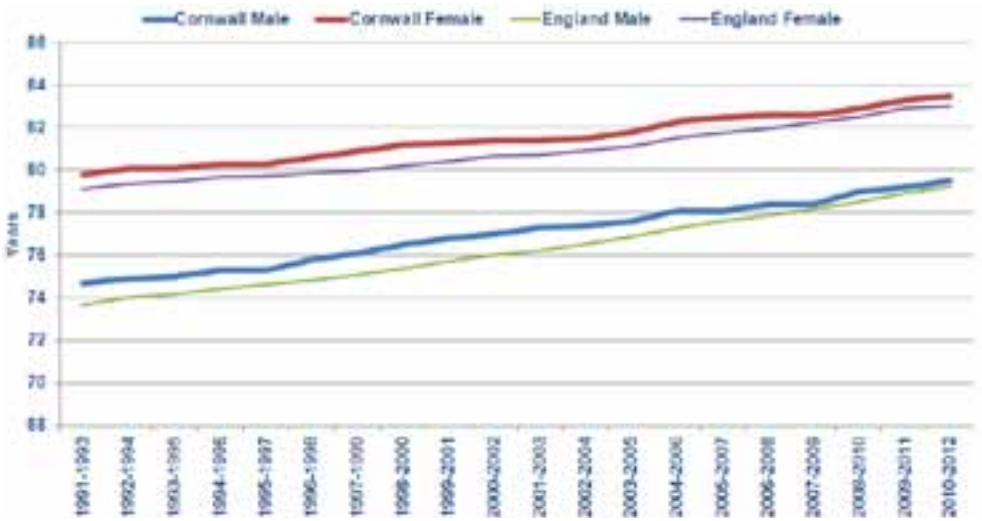
By 2021, the population of the Isles of Scilly is expected to increase by **13.4%** from the 2011 census levels.

Life expectancy

Life expectancy at birth is a measure of general population health and health inequalities. It is an estimate of how long a child born today might expect to live if current age and gender specific death rates are applied throughout their life. In Cornwall life expectancy for males is 79.5 years and 83.5 years for females (2010-2012). Life expectancy in Cornwall is slightly higher, but not significantly, than England which is 79.2 years for males and 83.3 years for females.

The following figure shows that life expectancy has increased nationally and locally in the last 20 years. Between 1991-1993 and 2010-2012, the gap between male and female life expectancy in Cornwall has narrowed. Cornwall is ranked 46th out of 150 local authorities for premature death (where the lowest score is best). Separate life expectancy figures are not calculated for the Isles of Scilly because the numbers of deaths involved are too small for the necessary calculations.

Figure 1.4: Life expectancy at birth trend 1991-1993 to 2010-2012 (Cornwall as a whole)



Source: Office for National Statistics

Life expectancy has **increased** nationally and locally in the last 20 years

Cornwall is ranked **46th** out of **150** local authorities for **premature death** (where the lowest score is best).

The Slope Index of Inequality (SSI) is a measure of health inequalities in life expectancy at birth within a local area from the most to the least deprived. Based on death rates in 2006-2010, there is a difference of 5.9 years in male life expectancy at birth between the most and least deprived areas of Cornwall (shown here in deciles or tenths of the population by deprivation score). The difference for females is 5.2 years.

Figure 1.5: Male life expectancy at birth by deprivation deciles, Cornwall, 2006-2010 (Comparing areas within Cornwall)

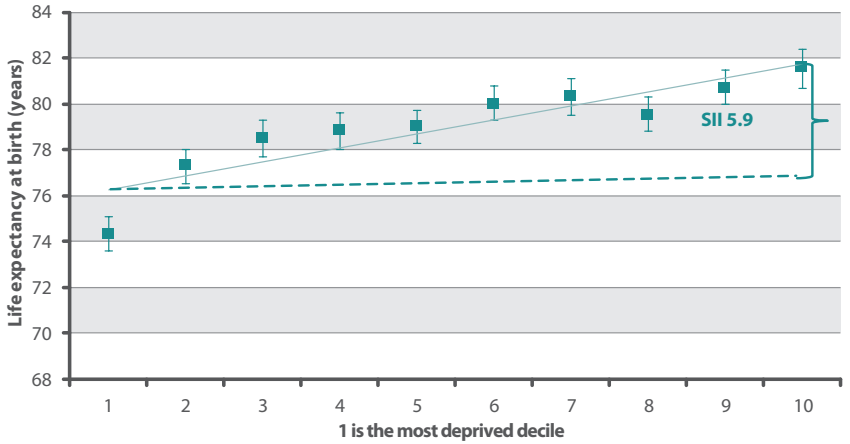
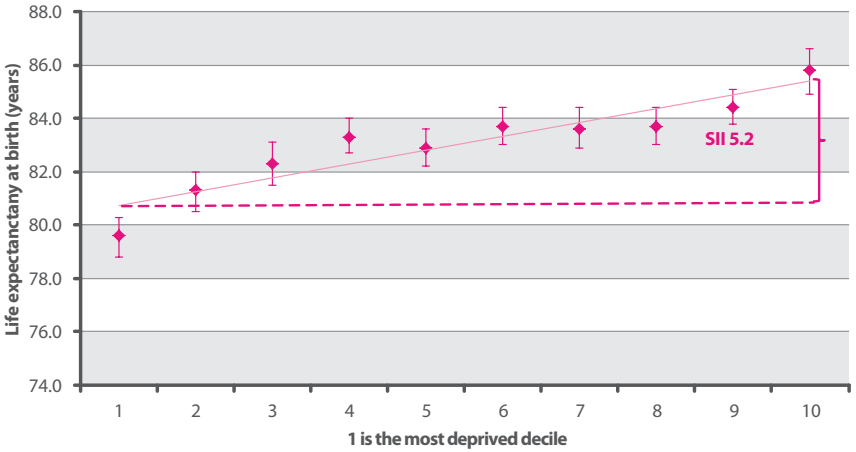


Figure 1.6: Female life expectancy at birth by deprivation deciles, Cornwall, 2006-2010 (Comparing areas within Cornwall)



Based on death rates in 2006-2010, there is a difference of **5.9 years** in **male life expectancy** at birth between the **most and least deprived areas** of Cornwall

Source: Office for National Statistics

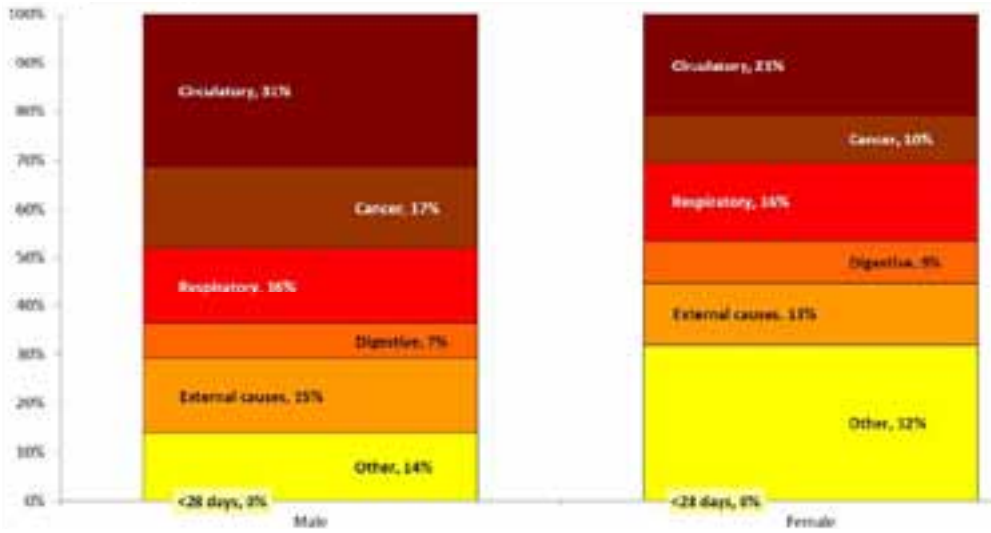
Figure 1.7: Life expectancy at birth by deprivation deciles, Cornwall (2006-10)

Deprivation	Male Life Expectancy	95% CI*		Female Life Expectancy	95% CI*	
Decile	(years)	lower	upper	(years)	lower	upper
1	74.3	73.6	75.1	79.6	78.8	80.3
2	77.3	76.5	78.0	81.3	80.5	82.0
3	78.5	77.7	79.3	82.3	81.5	83.1
4	78.8	78.0	79.6	83.3	82.7	84.0
5	79.0	78.3	79.7	82.9	82.2	83.6
6	80.0	79.3	80.8	83.7	83.0	84.4
7	80.3	79.5	81.1	83.6	82.9	84.4
8	79.5	78.8	80.3	83.7	83.0	84.4
9	80.7	80.0	81.5	84.4	83.8	85.1
10	81.6	80.7	82.4	85.8	84.9	86.6

Source: Office for National Statistics,
* Note: Confidence intervals (CIs) are a statistical technique to provide an acceptable range within which the true value is likely to lie (with 95% accuracy).

New local authority comparative data has been published to show the relative contribution that different causes of death make to the difference in life expectancy between populations in the most and least deprived parts of Cornwall. This shows the key role played by avoidable causes of death such as coronary heart disease and lung cancer on inequalities in life expectancy. (PHE, Segement Tool)

Figure 1.8: Avoidable causes of death contributing to inequalities in life expectancy in Cornwall



Footnote: Circulatory diseases includes coronary heart disease and stroke. Digestive diseases includes alcohol-related conditions such as chronic liver diease and cirrhosis. External causes include deaths from injury, poisoning and suicide.

Source: Public Health England, The Segment Tool (2014)

Healthy life expectancy

Healthy life expectancy (HLE), estimates lifetime spent in 'Very good' or 'Good' health based upon people's own definition of their general health and disability-free life expectancy (being free from a limiting persistent illness or disability).

Healthy life expectancy is a useful high level outcome to contrast the health status of different groups of people in our community at specific points in time and to monitor changes over time.

As life expectancy continues to increase in the UK, it is important to measure what proportion of these additional years of life are being spent in good health or in poor health and dependency. Healthy life expectancy provides a useful dimension of quality of life to review against estimates of life expectancy.

Figure 1.9 Healthy life expectancy in Cornwall

On average males in Cornwall can expect to live **62.6 years** in a state of 'Good Health'

On average females in Cornwall can expect to live **64.6 years** in a state of 'Good Health'

Source: Office for National Statistics

Although healthy life expectancy in Cornwall is similar to the national average for both men and women this masks the significant variation between population groups. The persistent gap in healthy life expectancy between those with the best health for the longest and those with the poorest quality of life underlines the need to tackle the social injustice of inequalities.

Figure 1.10: Male healthy life expectancy at birth in England

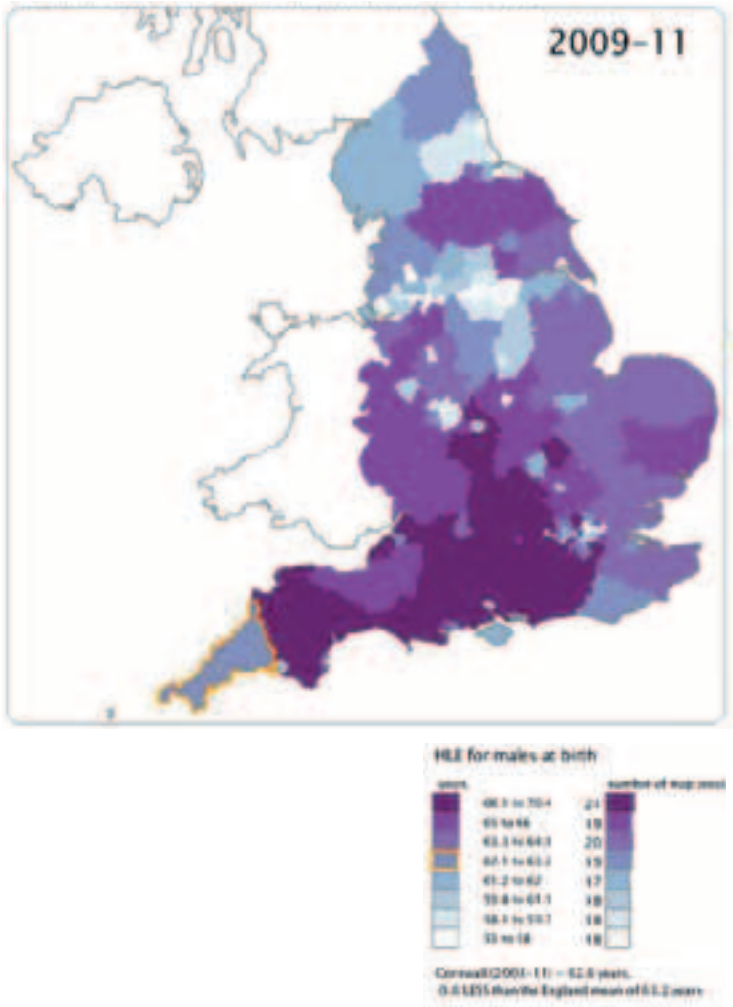
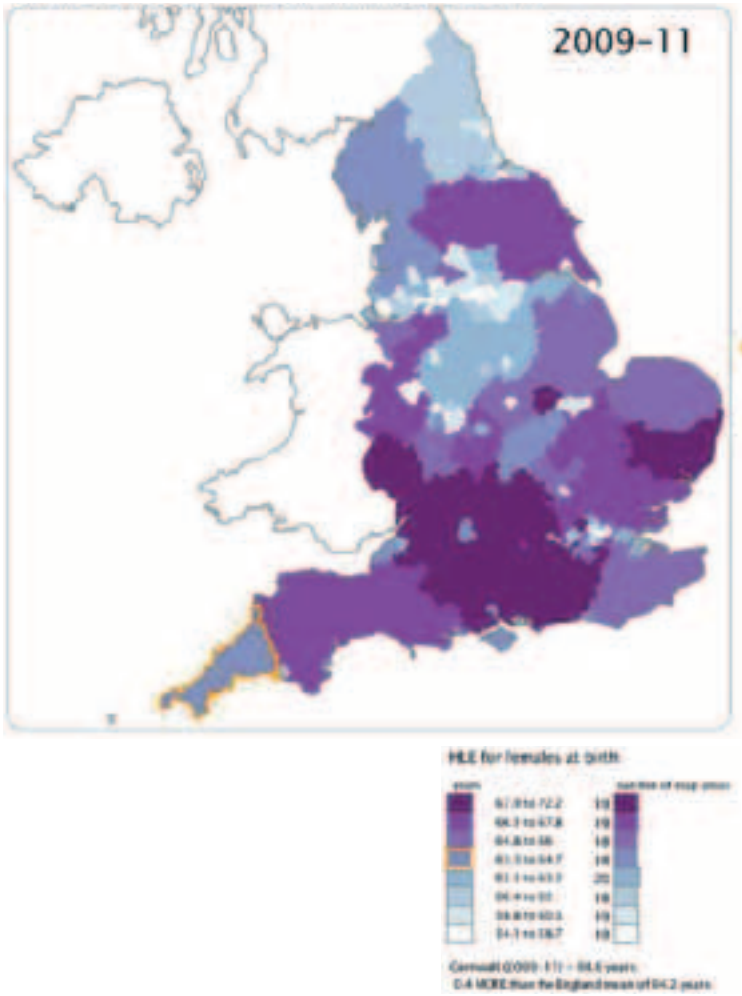


Figure 1.11: Female healthy life expectancy at birth in England



Deprivation

Cornwall ranks 110 out of 326 local authorities (based on rank of average score, Index of Multiple Deprivation (IMD) 2010 figures). However, there are wide geographic variations between areas; Pengegon in Camborne is within the 2% most deprived areas in England and Latchbrook South is at the other end of the spectrum at 94%. The Isles of Scilly deprivation data is excluded from the local authority data set but included in regional and national data scores.

The geography used to calculate the IMD means it is better at highlighting areas where there are more concentrations of deprived people. This means that people living in large rural areas are less likely to be highlighted in the IMD. People in rural areas can experience the same deprivation as those in towns, but they are more challenging to reach because they are remote from service centres.

Likewise there are pockets of deprivation which aren't highlighted because they are included with more affluent areas.

The IMD is a very effective tool for prioritising which areas are invested in, so areas that are within the top 10% or 20% for IMD 2010 may find it easier to access grants and funding.

The Department of Communities and Local Government has announced it will be updating the IMD but given the long lead-in time, publication is anticipated in 2015.

The next two images show where the greatest levels of deprivation are in Cornwall. This includes the rank of those areas against all lower super output areas (LSOAs) in England (total of 32,482) where a low score means a high level of deprivation.

Figure 1.12: IMD 2010 Cartogram for most deprived areas in Cornwall

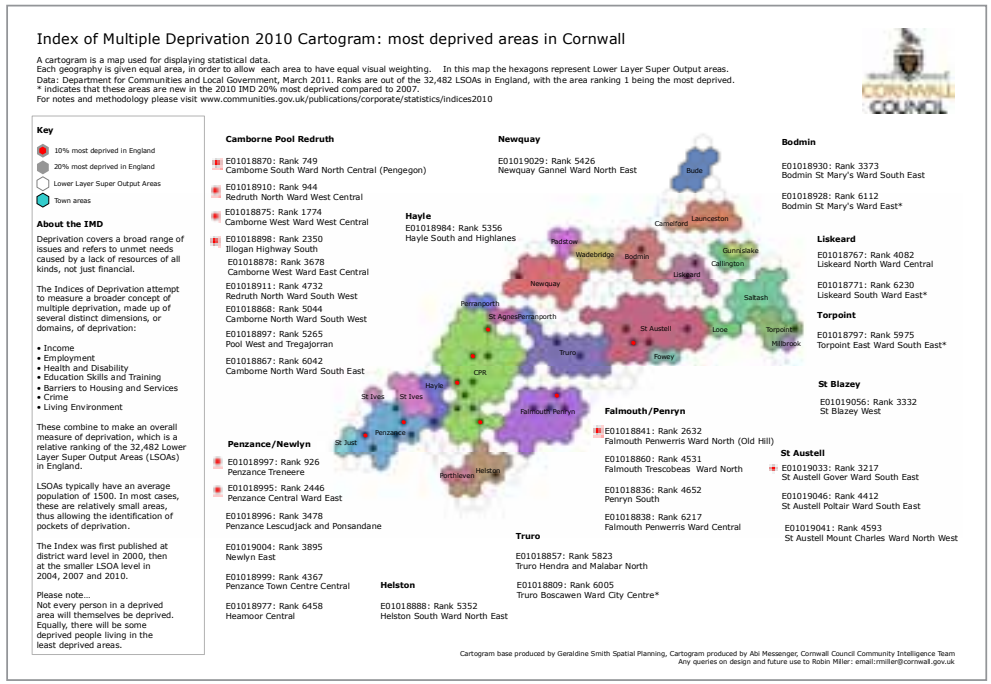
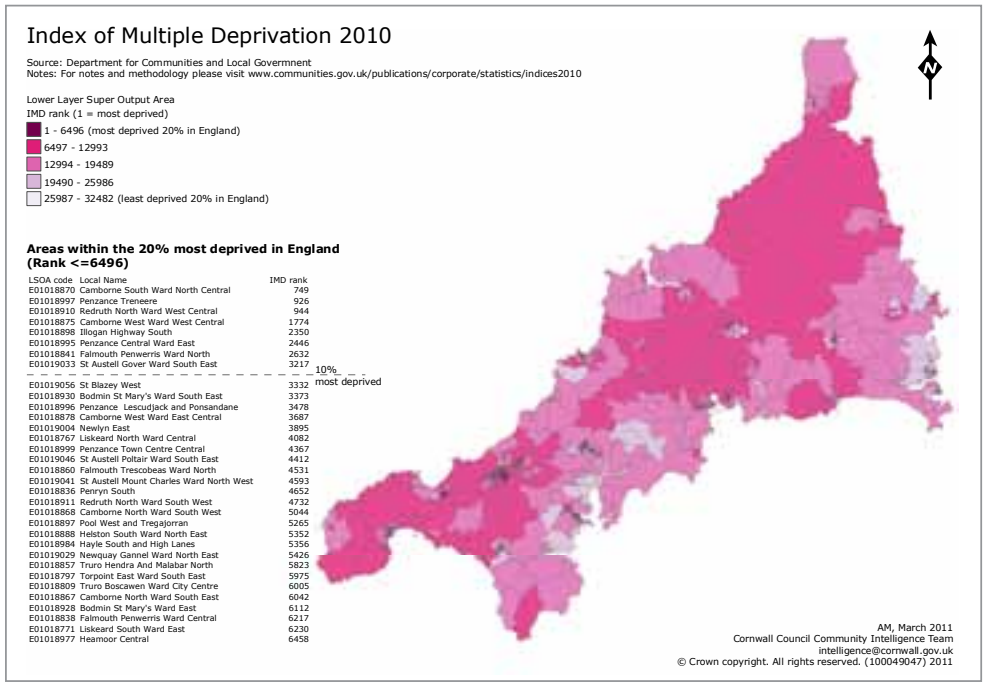
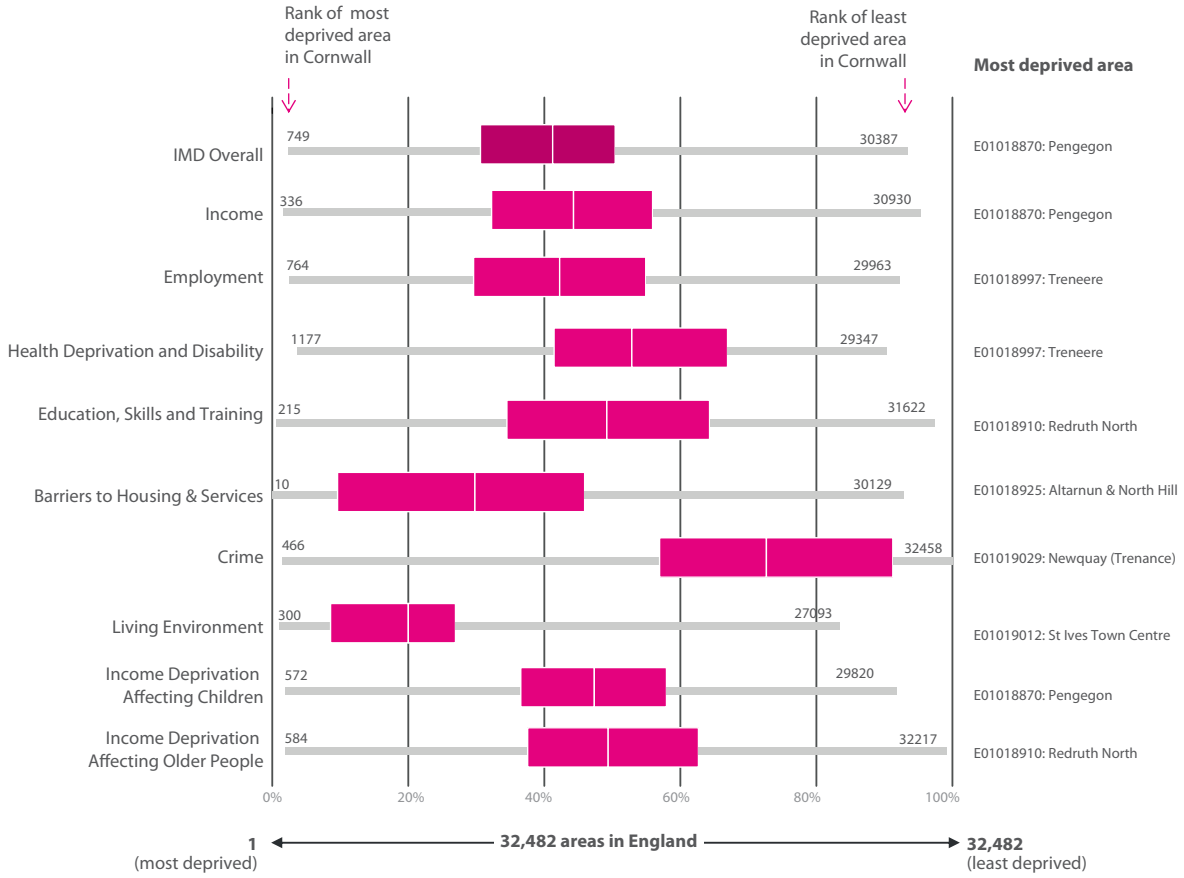


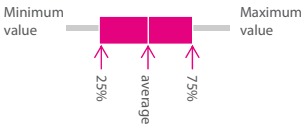
Figure 1.13: Figure 1.13 IMD 2010 Map for most deprived areas in Cornwall



The graphic below shows the relative position of LSOAs in Cornwall against England for different factors of deprivation with Cornwall represented as the pink bar (with the average score at the centre of the bar). It also includes the lowest and highest ranked LSOA within Cornwall against each indicator.

Figure 1.14: Ranking of LSOAs in Cornwall against key indicators of deprivation





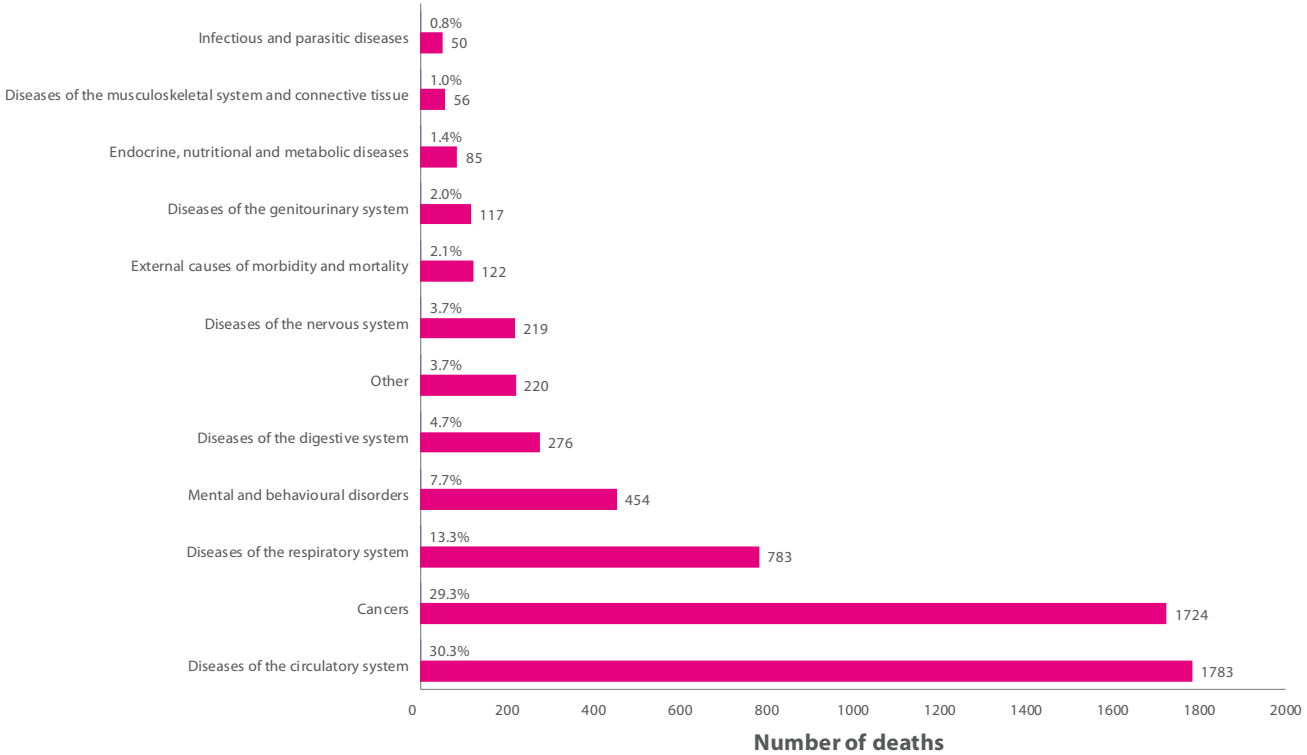
Causes of death

In 2012, there were 5,889 registered deaths for Cornwall and the Isles of Scilly. Most of these deaths (4,290 or 72.8%) were caused by diseases of the circulatory system (1,783 or 30.3%,), cancer (1,724 or 29.3%), and diseases of the respiratory system (783, 13.3%). Diseases of the circulatory system include deaths from cardiovascular diseases such as coronary heart disease, stroke and heart failure. (Office for National Statistics)

In 2012, there were **5,889 registered deaths** for Cornwall and the Isles of Scilly.

Most of these deaths (4,290 or 72.8%) were caused by diseases of the **circulatory system** (1,783 or 30.3%,), cancer (1,724 or 29.3%), and diseases of the respiratory system (783, 13.3%).

Figure 1.15: Leading causes of death (2012 registered) for Cornwall and the Isles of Scilly

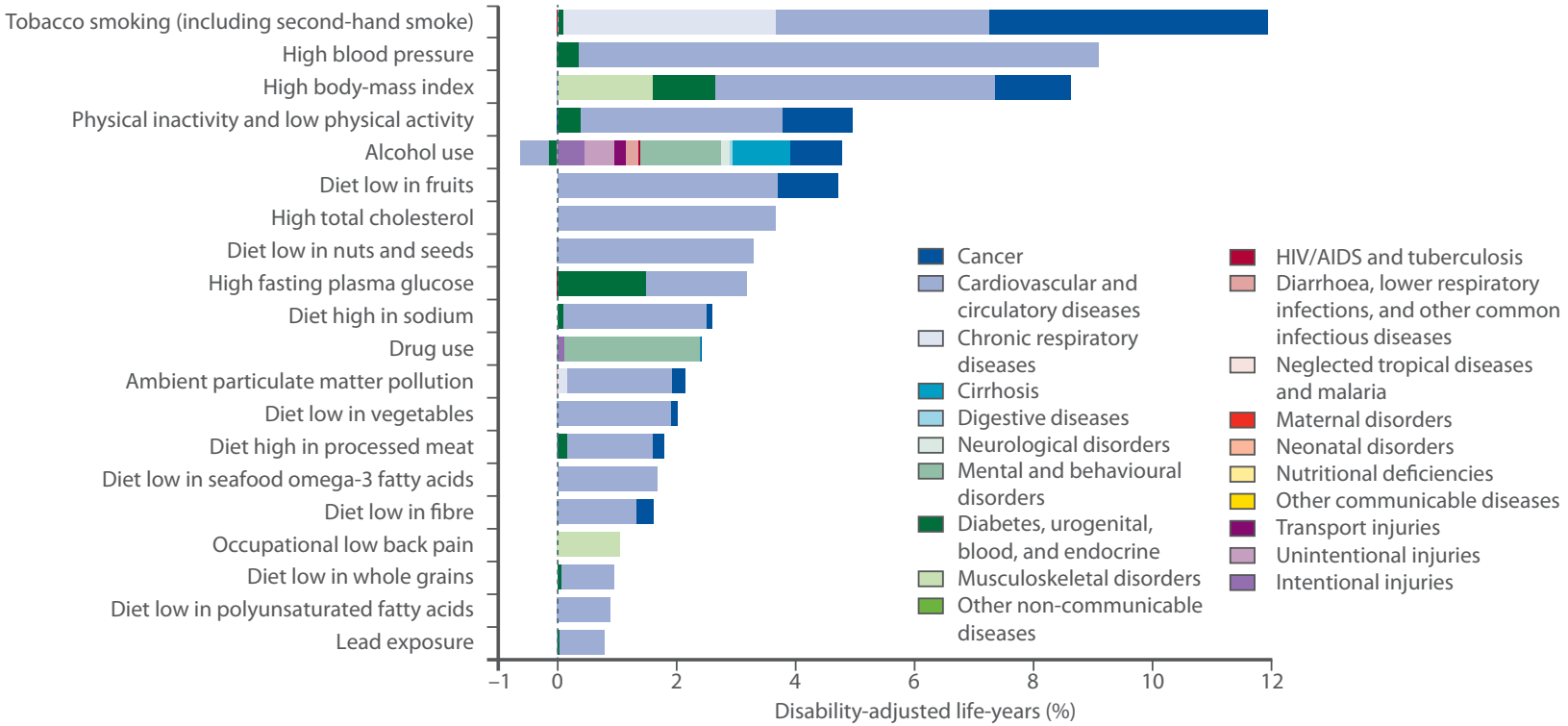


Source: Vital Statistics, Office for National Statistics

There is a significant challenge around how to tackle non-communicable disease by addressing both the causes (such as high blood pressure or drug use) and even the causes of the causes (such as educational achievement, housing or everyday physical activity levels throughout life). The graphic below is a helpful overview of these factors.

Figure 1.16: Understanding the non communicable disease challenge

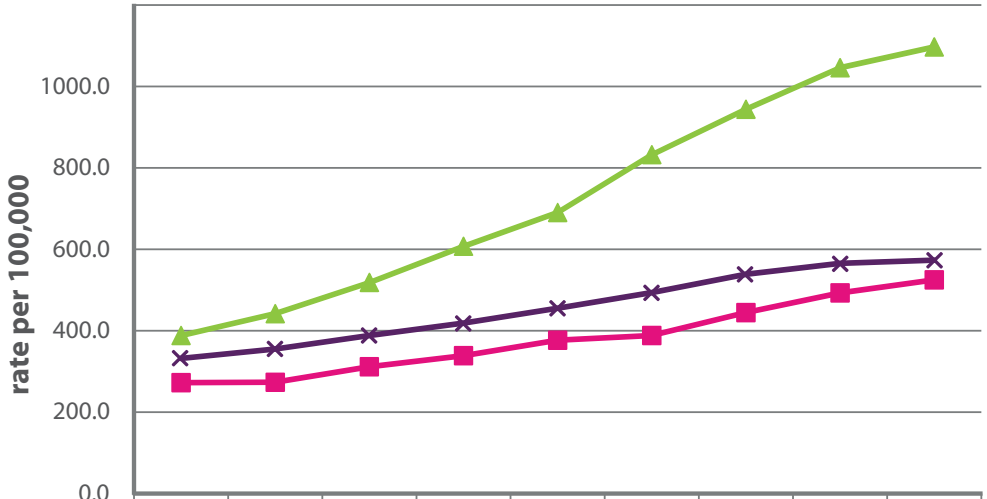
Burden of disease attributable to 20 leading risk factors, expressed as percentage of UK Disability Adjusted Life Years (DALYS).



Example: Obesity related disease incidence

Obesity is the major causal factor for a number of non-communicable diseases. The following figures show predicted rates per 100,000 for the adult male and female populations for the period 2006 to 2046 for new cases of coronary heart disease, diabetes and hypertension.

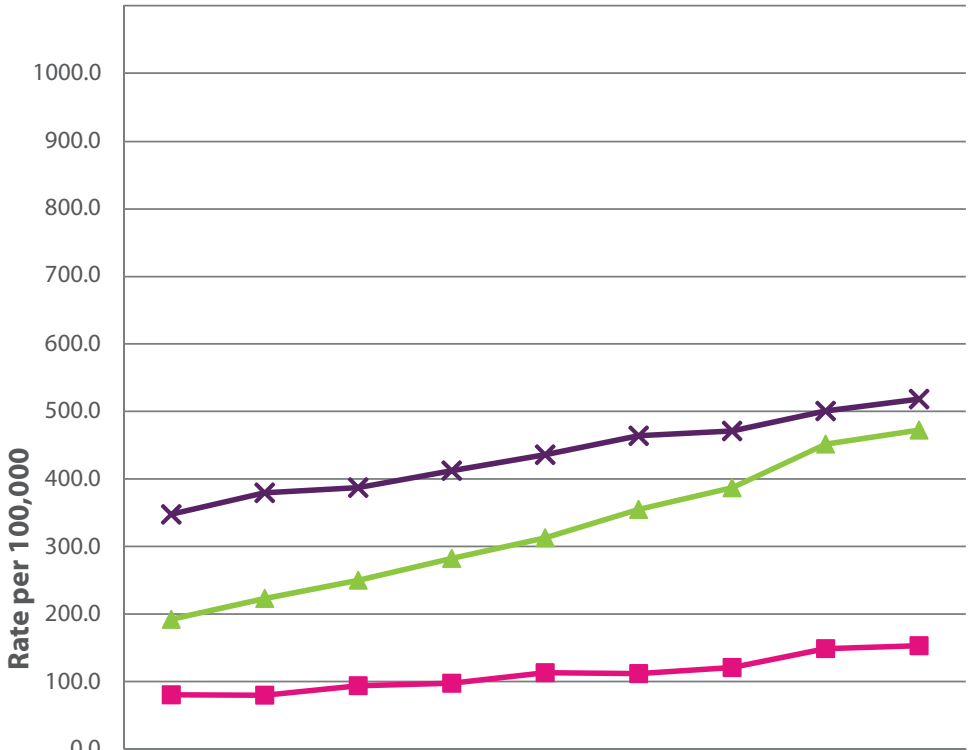
Figure 1.17: UK Disease incidence rate per 100,000 males aged 40-60



	2006	2011	2016	2021	2026	2031	2036	2041	2046
chd	272.4	273.4	311.6	338.7	376.6	388.4	444.6	492.9	524.9
dia	388.1	441.8	518.4	607.3	690.2	832.4	943.9	1046.1	1097.1
hyt	332.0	355.1	388.4	419.0	455.5	493.6	539.0	565.6	573.4

Source: National Heart Forum, Obesity Trends for Adults. CHD, Diabetes and Hypertension incidence rates for males aged 41-60

Figure 1.18: UK Disease incidence rate per 100,000 females aged 41-60

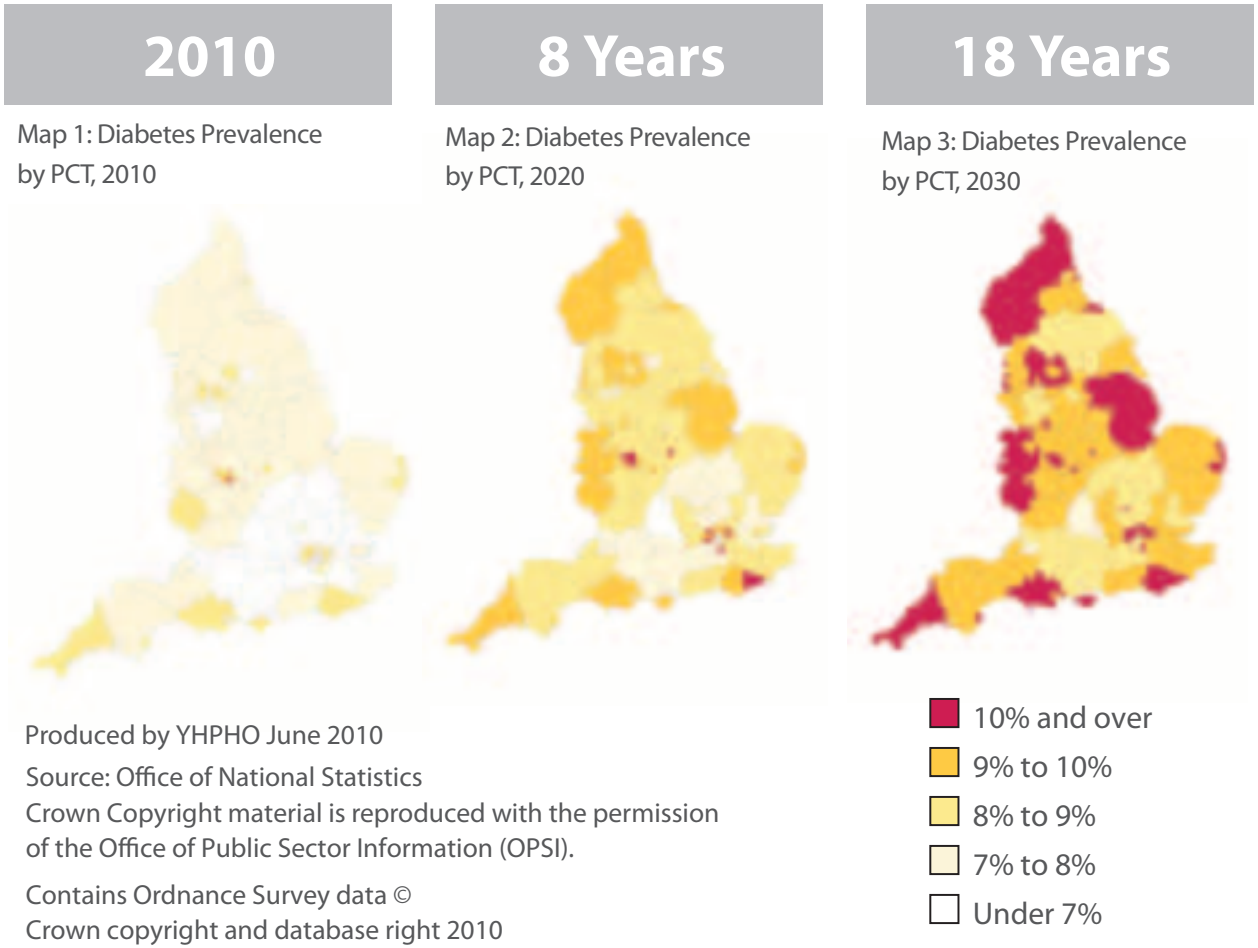


	2006	2011	2016	2021	2026	2031	2036	2041	2046
chd	80.5	79.9	93.9	97.6	113.2	111.9	120.8	148.8	153.2
dia	192.1	223.0	250.0	282.2	312.8	354.8	386.8	451.4	472.2
hyt	347.5	379.4	387.2	412.2	435.9	463.8	471.0	500.5	518.1

Source: National Heart Forum, Obesity Trends for Adults. CHD, Diabetes and Hypertension incidence rates for females aged 41-60

These figures show the marked impact that obesity is predicted to have on the key causes of morbidity and mortality. Without further impact on levels of obesity, the increasing rate of new cases of CHD, diabetes and hypertension will be added to existing cases. Taking diabetes as an example, this will mean that by 2030 more than 1 in 10 of the adult population will be diagnosed with this condition in Cornwall and the Isles of Scilly. This change is illustrated in the following graphic.

Figure 1.19 Projected prevalence of diabetes by former Primary Care Trust in England



Source: Diabetes UK, State of the Nation (2012)
Please note this refers to Primary Care Trusts which have now become Clinical Commissioning Groups (NHS Kernow).

Other useful sources of intelligence

Cornwall Joint Strategic Needs Assessment: The local hub for intelligence about health and wellbeing and the determinants of health and wellbeing outcomes. A series of focus papers are also available on key topics such as alcohol, child poverty or trips and falls.

Isles of Scilly Joint Strategic Needs Assessment: This document sets out data relevant to the island communities around health and wellbeing.

NHS Choices Atlas of Risk: A useful way to review causes of death and risk factors contributing to death across men and women and different age groups. Data is shown using a series of circles which change size and order as you change the parameters for each population group. Data is available at national and regional level only.

Longer Lives: Developed by Public Health England, Longer Lives aims to make England's mortality data accessible to everyone. It quantifies premature deaths from the four most common causes of mortality in England – heart disease and stroke, lung disease, liver disease, and cancer; highlights inequalities in premature mortality, and provides examples of effective local interventions.

Public Health England Local Health: This site gives access to interactive maps and reports at a small area level (middle super output area) and local authority level. It has the facility to combine areas and create geographies and compare with the England average.

Public Health England GP practice profiles: These profiles are designed to support GPs, clinical commissioning groups (CCGs) and local authorities to ensure that they are providing and commissioning effective and appropriate healthcare services for their local population.

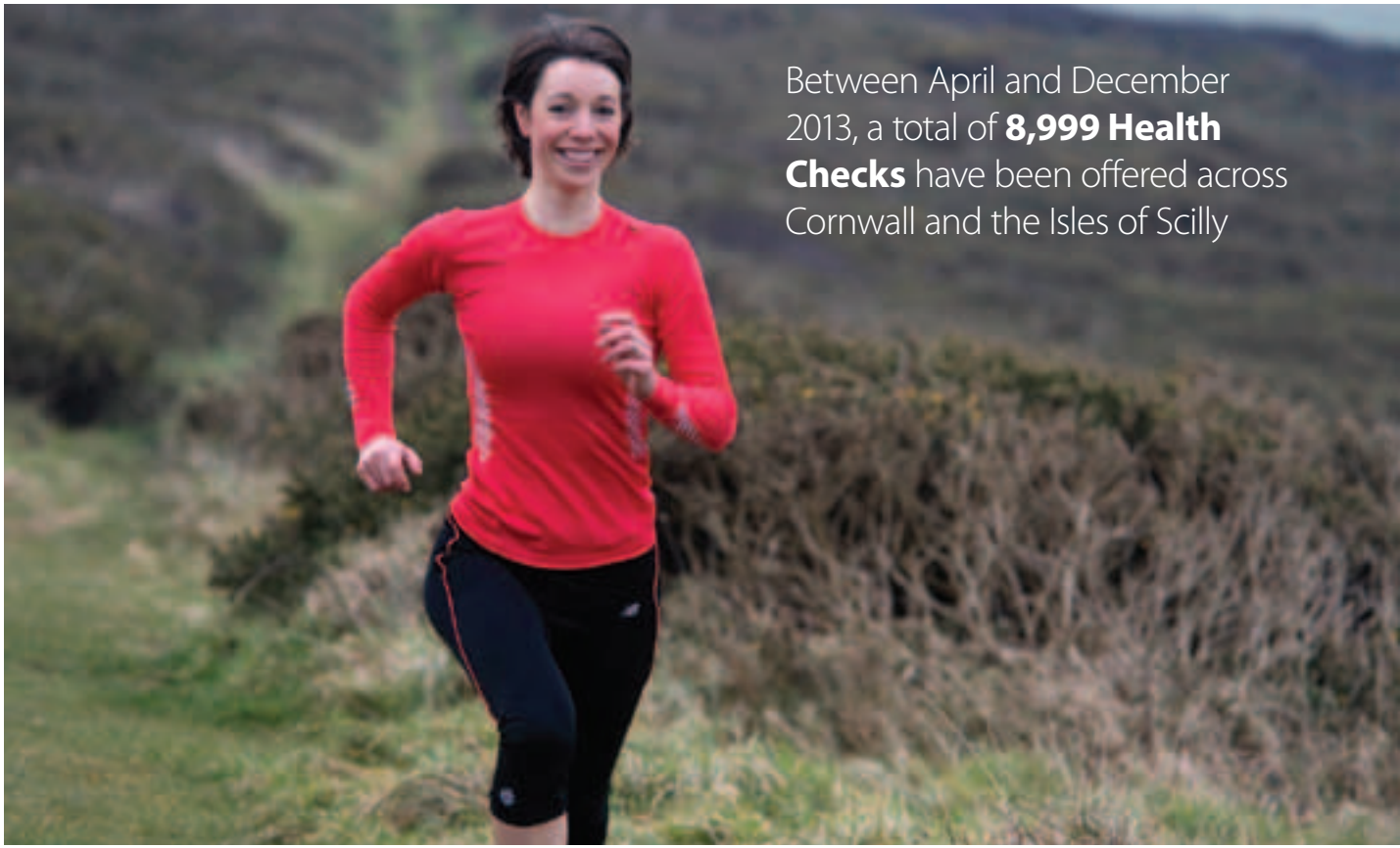
Measuring wellbeing: The Office for National Statistics provides an overview of personal wellbeing including at a local level.

D. Things to celebrate

- In late 2012, Michelle joined a 12 week Weight Matters course in Redruth run by the Health Promotion Service, and a year later had lost 29.1kg (4 stone 8lb). She is enjoying many new activities including surfing, swimming, running and cycling.
- "The Nippers' Nutrition programme has provided us with fantastic support to make changes to our menus and we have learnt so much from the process". (Early Years Provider who took part in Health Promotion's Nippers' Nutrition programme to promote high quality, nutritious and safe food and drink for the benefit of young children)
- The number of under 18 conceptions in Cornwall has continued to decline. The most recent national data showed that Cornwall has reduced teenage conceptions by 30% in the past decade and now has the lowest conception rate since the national strategy began.
- Results from 2013 Weight Matters courses:
  - Average weight loss; 3.4kg (3%).
  - On average physical activity levels doubled to four days a week.
  - On average, one extra portion of both fruit and veg per day.
  - One in four people lost at least 5% of their starting weight.
- In late 2013, the Local Government Association Peer Review of Health and Wellbeing took place. Feedback featured a number of areas of public health work identified as good practice. They include: outreach work with local communities like targeting health inequalities in fishermen; systems leadership around tackling food poverty; good links with local universities; and developing a strong legacy document identifying areas for progress across all parts of the Public Health Outcomes Framework.
- "You cannot imagine what an honour and pleasure it is to be given the wonderful news about our Healthy Schools Award. Nothing is perfect but we strive to do and be the best we can be so to be recognised for this effort is so very refreshing. I am glowing with pride for my team and will share the news with our parents at Harvest this afternoon." (Healthy Schools Award winner).
- "This lady [the stop smoking advisor] is a credit to your establishment, in fact, she has saved my life and put years on it, with her kind support and assistance through the whole process of myself kicking the habit." (Stop smoking service user).
- Between April and December 2013, a total of 8,999 Health Checks (to help prevent or detect heart problems early) have been offered across Cornwall and the Isles of Scilly with 2,659 being completed. This includes outreach work with higher-risk population groups like fishermen

(by providing checks at the quayside) and the recruitment of a new dedicated men's health worker. The Isles of Scilly achieved a remarkable 83% uptake of all appointments offered during the second quarter of 2013/14

- Over 58,000 children in Cornwall and the Isles of Scilly are learning in Healthy Schools (78% of the total population aged 5-16 years old), which provides access to evidence-based interventions around key areas of child development like emotional wellbeing and achieving a healthy weight.
- There are a number of powerful personal stories on the Health Trainer website about the benefits of the Health Trainer service. The 2013 conference included a testimony from one person explaining how she was overcoming her chronic anxiety and agoraphobia, and was getting very close to reaching her goal of being able to pick her son up from school.



Between April and December 2013, a total of **8,999 Health Checks** have been offered across Cornwall and the Isles of Scilly

Cornwall now has **reduced teenage conceptions** by **30%** in the past decade and now has the **lowest conception rate** since the national strategy began.

Chapter Two

Improving outcomes around major health conditions

Long term conditions (LTCs), like heart problems, stroke or poor mobility, are becoming more common in our population, particularly as people live for longer. Across England, more than 15 million people have a long term condition and this figure is set to increase, particularly for those with more than three conditions at once.

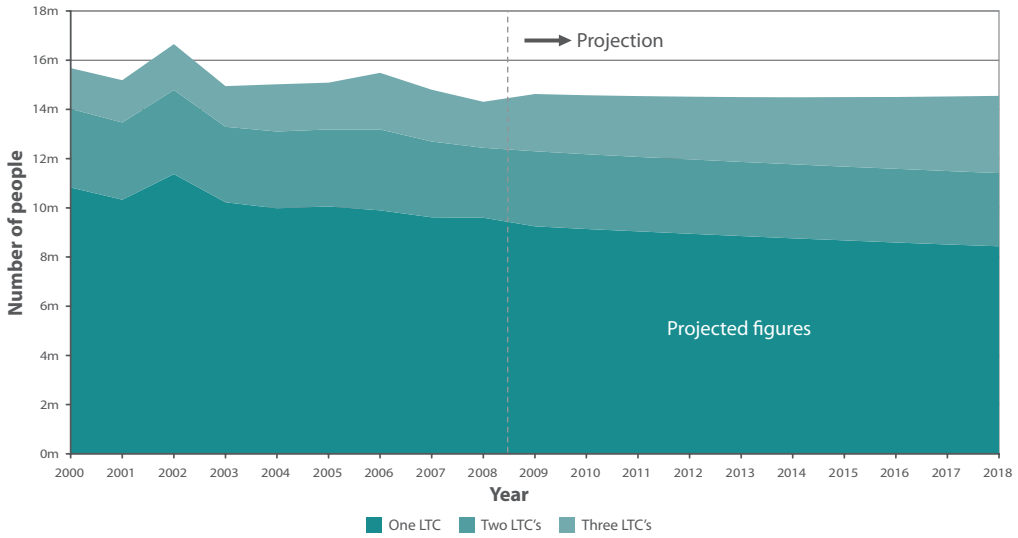
People with long term conditions account for (based on 2009 General Lifestyle Survey):

- 50% of all GP appointments
- 64% of outpatient appointments
- 70% of all inpatient bed days

In total around 70% of the total health and care spend in England (£7 out of every £10) is attributed to caring for people with long term conditions. This means that 30% of the population account for 70% of the spend.

The number of people with one long term condition is projected to be relatively stable over the next ten years. However, those with multiple long term conditions in England is set to rise to 2.9 million in 2018 from 1.9 million in 2008.

Figure 2.1: Numbers of people with one or more long-term conditions

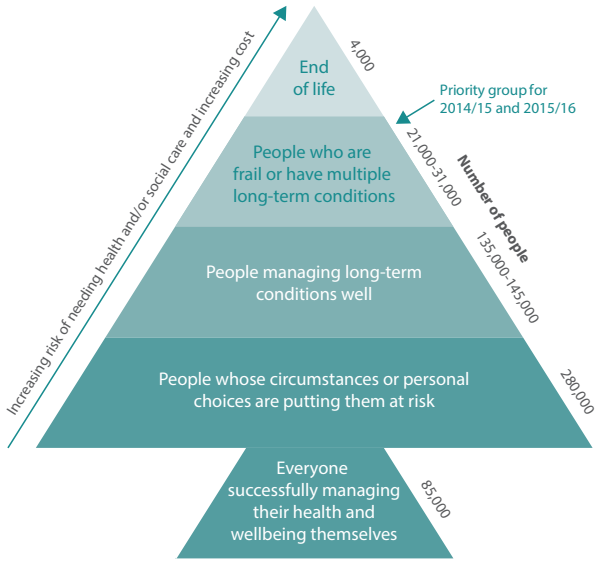


Source: Department of Health projections (2000 based)
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/216528/dh_134486.pdf

The need to change this situation and create better outcomes is driving national plans to integrate health and social care support. In Cornwall and the Isles of Scilly, we have a great opportunity to lead the way in this change following a successful bid to become one of fourteen national 'pioneers' for health and social care integration.

Across public services the aim is to meet the needs of different population groups more effectively by working with individuals, their families and community to better understand and meet both their needs and aspirations. Notably, the majority of the population sit further down the 'Christmas tree' diagram being used for local planning, and should be supported in managing their own health and wellbeing, preventing the need for long-term care.

Figure 2.2: Population health and care needs in Cornwall and the Isles of Scilly



Source: Kernow Clinical Commissioning Group 5-year plan.

If we are to work effectively with local communities it cannot just be about managing increasing demands for care. This is not sustainable as services are already finding it hard to cope with demand and we must create the right opportuntiies for a better quality of life for a large group of vulnerable people.

As well as getting the services right, we must reduce the risk of people needing support in the first place or at least reduce the length of time that they may need it – more years with better health. Public health action to prevent problems occurring is a key part of creating a sustainable future for public services.

Set out in this chapter are some examples of where prevention can play a big part in addressing significant challenges affecting our population in Cornwall and the Isles of Scilly:

- More than 1 in 5 people are aged 65 or over rising to 1 in 4 by 2021.
- About 1 in 12 people are estimated to have cardiovascular disease.
- About 1 in 12 of our population have diabetes (either diagnosed or undiagnosed) which is projected to rise to 1 in 10 in the next 20 years.
- About 1 in 10 people describe themselves as having arthritis or a joint problem by 45 years old rising to 1 in 4 by 65 years old.

For each of these areas, an outline will be given of the three levels of prevention: primary (before someone gets a disease), secondary (after the disease has occurred but before a person notices anything is wrong), and tertiary (when someone already has symptoms of the disease).

A. Healthy ageing – a means of ensuring sustainability in health and social care

There is considerable discussion currently about the challenge of an ageing population, and how health and social services can cope with the increasing demands. Commentaries propose that an increase in the number of people with long term conditions is an inevitable consequence of increasing life expectancy. This is illustrated in an HM government report;

'As people live longer they're more likely to live for more of their life with at least one long-term condition like diabetes, asthma, or Alzheimer's disease.' [1]

In turn this rise in long term conditions is expected to mean an increase in the need for health care and social care [2] i.e.

Increasing life expectancy → Ageing population → Increasing long term conditions → Increasing disability and frailty → Increasing need for services

Treatment and care for people with long term conditions is estimated to take up £7 in every £10 of total health and social care expenditure, and this will increase in both relative and absolute terms. [3] The Department of Health estimates that long term conditions will require an additional £5 billion per year in health and social care spend by 2018 compared to a baseline at 2011. There is concern that due to these pressures, health care and social care will become unsustainable.

> "As people live longer they're more likely to live for more of their life with at least one long-term condition like diabetes, asthma, or Alzheimer's disease."

What is the challenge for Cornwall and the Isles of Scilly?

There are some characteristics of our population that suggest that the challenge to Cornwall and the Isles of Scilly is greater than in other parts of the country;

1. Population projection

As described in Chapter 1 and shown in Figures 1.2 and 1.3 it is clear that Cornwall and the Isles of Scilly has an ageing population with increases in the older population groups that are higher than the average for England.

2. Trends in long term conditions

Data from the 2006 General Household Survey for England suggests that the likelihood of having a longstanding illness increases markedly with age. For example 22% of people aged 16 to 44 reported suffering from a longstanding illness whereas this rose to 68% for people aged over 65.

In Cornwall and the Isles of Scilly, with the exception of diabetes and mental health problems, the age specific prevalences of most long term conditions have been decreasing in recent years. However, the ageing population means the overall prevalences for most long term conditions are rising. An estimate of this rise is given below.

Table 2.1: Modelled prevalence of long term conditions, as per cent of people aged 16+ in Cornwall and the Isles of Scilly over a ten year period

Cornwall and the Isles of Scilly		
	2010	2020
Stroke	3.1%	3.5%
Heart disease	7.5%	8.3%
Chronic lung disease	3.6%	3.9%
Diabetes	8.0%	8.7%

Source: Eastern Region Public Health Observatory 2008

3. Healthy life expectancy

Increased life expectancy has been a huge achievement of the last century with a near doubling since the start of the 20th century. However increasing life expectancy is less of an achievement if it results in people spending long periods in poor health as they get older. Healthy life expectancy or disability free life expectancy is an important measure alongside life expectancy.

Healthy life expectancy is the average number of years a person lives in good or fairly good health. Disability-free life expectancy is the average number of years a person lives disability-free (no limiting long-term illness). So although the definitions are slightly different, these are both measures of time spent in good health.

For men in Cornwall and the Isles of Scilly, life expectancy is 79.5 and healthy life expectancy is 62.6 meaning that men on average spend 16.9 years in poor health (ONS data)

For women in Cornwall and the Isles of Scilly, life expectancy is 83.5 and healthy life expectancy is 64.6 meaning that on average women spend 18.9 years in poor health (ONS data).

In Cornwall and the Isles of Scilly men spend six years longer in poor health and women nearly five years longer than in the best performing local authority in England (ONS data).

There is also a clear relationship between disease free life expectancy and deprivation as shown in the Marmot review team image below. For people in the lowest income groups, disability starts before retirement age. As well as the impact on quality of life, this has implications for wider society in lost productivity and benefit payments. If people can stay healthy for longer, they remain engaged members of society.[4]

The following image from the Marmot review team demonstrates the inequality in both life expectancy and healthy life expectancy by deprivation score, showing the absolute unfairness in both length and quality of life.

4. Conditions causing disability

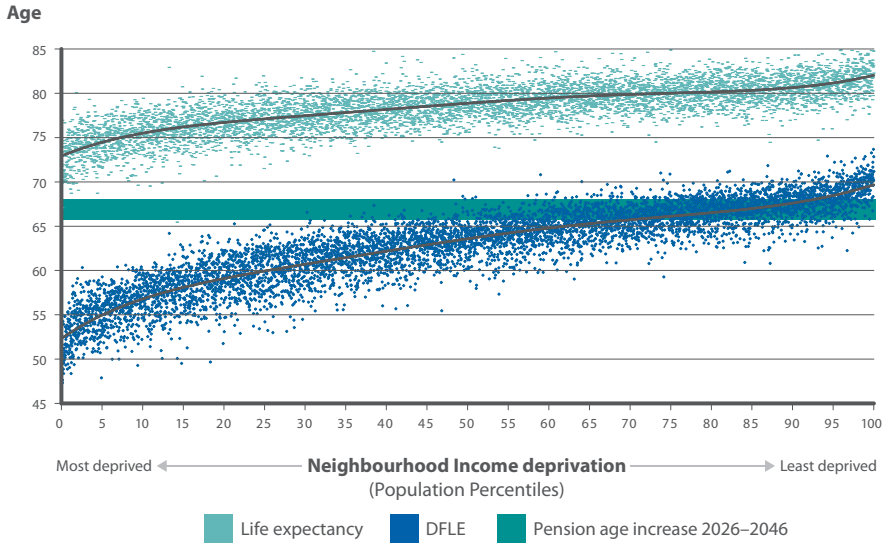
The Global Burden of Disease Study [5] uses a variety of indices to measure disability and quantifies these in terms of the number of years lost to disease (YLD). This takes into account the number of people with the condition, the average duration until remission or death and a weighting to reflect severity. The top five causes of disability are given below.

Years lost to disease in the UK 2010:

1. Low back pain
2. Falls
3. Major depressive disorder
4. Neck pain
5. Other musculoskeletal disorders

An alternative measure of disability is claims for Disability Living Allowance

Figure 2.3: Inequalities in life expectancy and healthy life expectancy



Source: Marmot Review: Fair Society, Healthy Lives

Table 2.2: Top 10 conditions in UK Disability Living Allowance caseload

Main disabling condition of claimant	% of total caseload
Arthritis	18%
Mental health causes	16%
Learning disability	10%
Back ailments	8%
Muscle / Joint / Bone Disease	7%
Heart disease	5%
Stroke related	3%
Chest disease	3%
Malignant disease	2%
Blindness	2%

Source: Department for work and pensions. Disability Living Allowance - cases in payment caseload: UK 2008

Whilst in health services there is considerable focus on the burden of disability caused by cardiovascular disease, diabetes, mental health problems and lung disease, it can be seen that using both measures musculoskeletal conditions are major causes of disability. It could be argued that these are not given the same priority in health services as the other conditions.

What can be done to reduce demand for services?

There is general agreement that in the future just doing more of the same is not an option for the NHS and social care [4]. There is a need for a different approach.

1. Is it possible to have increasing life expectancy without increased disability?

On an individual basis ageing does not necessarily lead to long term conditions and disability. A person aged 80 with no family history has only a 2% chance of developing diabetes in the next 10 years providing they are of healthy weight and a non smoker. Similarly a person of any age is unlikely to develop chronic lung disease unless they have been regularly exposed to tobacco smoke or other air pollutants.

2. Can the onset of disability be delayed?

Studies have shown that lifestyle factors can delay disability. In a study in France nearly 4,000 people aged 65+ who were free of any disability at the start were followed up for an average of seven years. In that time a little over two-thirds remained free of disability, showing that disability is far from inevitable in this age group. The factors that predicted disability were smoking, physical inactivity and consuming less than one portion of fruit or vegetables per day. [6]

A study of 5,100 British civil servants with average age 51 at the start and followed up over 18 years showed that four lifestyle factors (physical activity, not smoking, moderate alcohol and eating fruit and vegetables) were each moderately associated with reduced disability but their combined impact was substantial. [7] A number of smaller studies have also shown similar effects.

A review of all the evidence on lifestyle change programmes for senior populations carried out for the Center for Medicare and Medical Services concluded such programmes were very effective and this led to a Health Risk Reduction Program for Medicare recipients aged 67 to 74. Results so far have shown that those receiving an intervention cost Medicare on average $958 less per year and were 14.2% less likely to be hospitalised. [8]

A House of Lords Select Committee review of the evidence on demographic change acknowledged the potential to delay the onset of disability. [9]

3. Can time spent in poor health be reduced?

Besides delaying disability another aim is to reduce the total number of years spent with disability. This is the concept of disability compression where the majority of life is disability free and the time spent with disability is compressed into a short time period at the end of life. Figure 2.3 demonstrates disability compression in the less deprived populations compared to the most deprived. Studies have shown that disability compression may be achieved by healthy lifestyle. For example non smokers not only have a longer life but also less time living with disability [10].

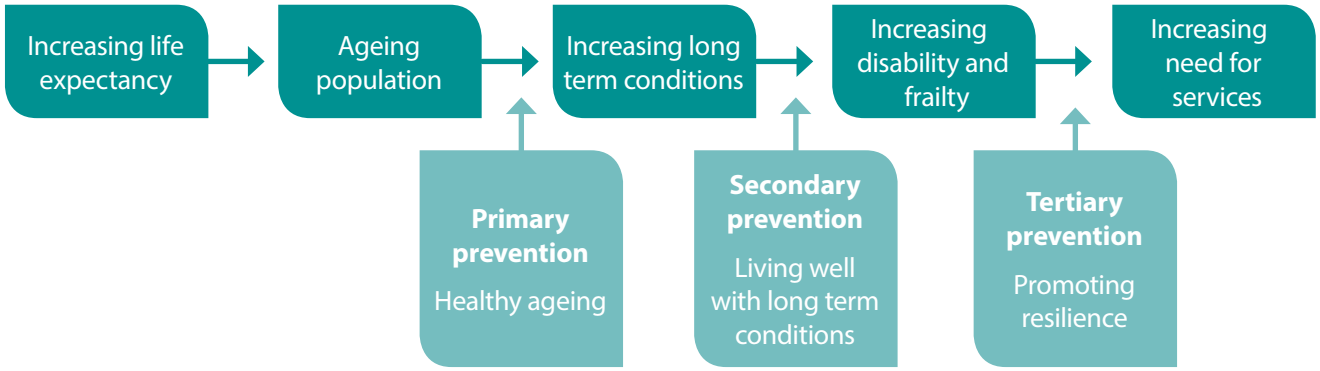
A study of 1,741 university alumni with average age 68 followed up for 8 years concluded that not only did people with better health behaviours survive longer but disability was postponed and compressed into fewer years at the end of life. [11] Smoking, body mass index, and exercise patterns in midlife and late adulthood were predictors of disability.

A study of running club members aged over 50 concluded that consistent moderately active exercise postponed onset of disability for 12 years compared to overall healthy individuals but less active controls (a comparison group). Time to death was also postponed but by a smaller margin, thereby demonstrating disability compression. [12] A longitudinal study of ageing concluded that moderate physical activity (compared to low activity) reduced the number of years lived with disability. [13]

Overall there is strong evidence to support the concept of disability compression.

4. Can public health interventions reduce the need for services?

Included here are interventions other than traditional health care and social care. They have potential to reduce the need for services that result from an increase in life expectancy. They are effective at three points in the pathway and are often referred to as primary, secondary and tertiary prevention.



Primary prevention – healthy ageing

This includes the healthy lifestyle activities that are important for everyone at all ages including:

- Physical activity
- Smoking cessation
- Healthy eating
- Sensible alcohol consumption
- Mental health promotion
- Work place health programmes.

Patients and health professionals in Cornwall and the Isles of Scilly can access services via PHIL (the Promoting Health Information Line on 01209 215666).

In addition there are programmes aimed at preventing specific conditions. The Health Checks programme for people aged 40-74 identifies those at risk of heart disease, stroke and diabetes. It offers tailored advice, support and referral if required to help people make lifestyle changes to prevent or delay the onset of health problems.

People identified, either by a health check or by their GP or pharmacist, as being at high risk of diabetes (i.e. showing signs of impaired blood glucose control) will soon be offered an intensive lifestyle change programme. The programme uses behaviour-change strategies to help people increase their physical activity, eat more healthily, and maintain a healthy body weight. These programmes have been shown

to half the risk of developing diabetes over the next ten years. They are very cost effective, as treating and monitoring a person with diabetes is expensive at around £1,300 per year, with additional costs to social care arising from complications such as blindness, stroke and amputations. Similar adaptations are being rolled out in countries such as Finland, Australia and the US. [14]

Secondary prevention – living well with long term conditions

People with long term conditions can be encouraged to take control of their condition. Lifestyle modifications can be used to control or even reverse early signs of disease such as high blood pressure, high cholesterol and diabetes. There are also programmes to help reduce the impact of specific diseases and promote self care such as cardiac rehabilitation, pulmonary rehabilitation and programmes for newly diagnosed diabetics. After the formal programmes are completed, patients are able to access help to continue to improve or maintain lifestyle factors.

Other public health interventions include flu jabs for people with long term conditions and walking programmes for people with diabetes.

Tertiary prevention – promoting resilience

For those people whose long term conditions lead to disability and frailty, tertiary prevention can help them maintain independence and reduce need for services.

Examples include warm homes schemes, falls prevention programmes, volunteer schemes to improve social contact for the elderly, and projects to support carers such as carers' health checks.

What is the evidence that PH interventions work?

A review of all public health interventions that have been assessed by the National Institute for Health and Care Excellence (NICE) found that 30 were cost saving and a further 69 cost less than £1,000 per quality adjusted life year (QALY) gained. [15] NICE judges anything that costs less than £20,000 per QALY to be cost effective. Therefore public health interventions are generally highly cost effective compared to the vast majority of health care interventions assessed by NICE.

The effectiveness of public health interventions can be demonstrated using physical activity as an example:

Physical activity as primary prevention

There is overwhelming evidence of the importance of physical activity in enabling a healthy and fulfilling life into old age. [16] Evidence shows that people who do regular physical activity have:

- up to a 35% lower risk of coronary heart disease and stroke
- up to a 50% lower risk of type 2 diabetes
- up to a 50% lower risk of colon cancer
- up to a 20% lower risk of breast cancer
- a 30% lower risk of early death
- up to an 83% lower risk of osteoarthritis
- up to a 68% lower risk of hip fracture
- a 30% lower risk of falls (among older adults)
- up to a 30% lower risk of depression
- up to a 30% lower risk of dementia.

Physical activity as secondary prevention

The British Medical Journal recently published a review of studies of the effectiveness of physical activity compared to medication. It concluded that physical activity was as effective as medication in secondary prevention of heart disease and prevention of diabetes. Physical activity interventions were more effective than drug treatments for patients with stroke. [18]

Physical activity as tertiary prevention

A recent evidence review concluded that physical activity to improve strength and balance was the most effective intervention in preventing older people falling. Interventions comprising exercise alone were five times more effective than multidimensional interventions including those with medication reviews and home safety modifications. [19]

Conclusion

The challenge for health and social care of an ageing population is significant in the next 10-15 years. However, the size of the challenge will partly be determined by the prevalence of long terms conditions and disability in the cohort of older people.

Reports from the Department of Health and the Kings Fund acknowledge that a critical determinant of future trends for long term conditons is lifestyle and that a change in lifestyles offers the greatest opportunity to reduce the burden of chronic disease.

For best outcomes public health programmes should start before birth, and continue across the lifespan. However, the evidence shows that interventions specifically targeting midlife and older age can be effective in both delaying and compressing disability and thereby reducing the need for serivces.

Public health interventions offer a very good return on investment for public funds and are vital in ensuring a sustainable future for health and social care.

Recommendation

That the benefits of and opportunities to be physically active are promoted throughout life. Although people need to make a sensible assessment of their current age and level of fitness as a starting point, the emphasis should be on physical activity as a part of everyday life and the many benefits it can bring. We should support and encourage others to make daily activity the normal thing to do and show how by our own example.

> “The potential benefits of physical activity to health are huge. If a medication existed which had a similar effect, it would be regarded as a ‘wonder drug’ or ‘miracle cure’.”
>
> On the State of Public Health, 2009 Chief Medical Officer for England Annual Report

References

1 Working together for a stronger NHS, HM Government 2011

2 Care for older people. Nuffield Trust. December 2012

3 Department of Health (2012). Report. Long-term conditions compendium of Information: 3rd edition

4 The Kings Fund, Time to think differently http://www.kingsfund.org.uk/time-to-think-differently/trends/demography/ageing-population

5 Murray CJL et al. UK health performance: findings of the Global Burden of Disease Study 2010 The Lancet, Volume 381, Issue 9871, Pages 997 - 1020, 23 March 2013

6 Artaud F et al. Unhealthy behaviours and disability in older adults: Three-City Dijon cohort study BMJ 2013;347:f4240. July 2013

7 Sabia S et al. Influence of individual and combined healthy behaviours on successful aging CMAJ, December 11, 2012, 184(18)

8 Evaluation of the Senior Risk Reduction Demonstration (SRRD) Under Medicare First-Year Evaluation Report February 2012 Daver Kahvecioglu, Ph.D. Betty Fout, Ph.D. Daniel Weinberg, Ph.D. Nicholas Bill, M.P.P

9 House of Lords Report: Ready for Ageing? - Select Committee on Public Service and Demographic Change

10 Nusselder WJ et al. Research report Smoking and the compression of morbidity. J Epidemiol Community Health 2000;54:566-574

11 J. Vita, R. B. Terry, H. B. Hubert, and J. F. Fries, Aging, health risks, and cumulative disability, New England Journal of Medicine, vol. 338, no. 15, pp. 1035–1041, 1998

12 E. F. Chakravarty, H. B. Hubert, V. B. Lingala, and J. F. Fries, "Reduced disability and mortality among aging runners: a 21-year longitudinal study," Archives of Internal Medicine, vol. 168, no. 15, pp. 1638–1646, 2008.

13 Nusselder WJ et al. The relation between non-occupational physical activity and years lived with and without disability. J Epidemiology Community Health. 2008 Sep;62(9):823-8.

14 Preventing type 2 diabetes: risk identification and interventions for individuals at high risk NICE public health guidance 38 Issued:July 2012

15 L Owen, A Morgan, A Fischer, S Ellis, A Hoy, M P. Kelly, The cost-effectiveness of public health interventions Journal of Public Health, Vol. 34, No. 1, pp. 37–45

16 Start Active, Stay Active; A report on physical activity for health from the four home countries' Chief Medical Officers

17 NHS Choices – why be active? http://www.nhs.uk/Livewell/fitness/Pages/Whybeactive.aspx

18 Naci H and Ionanidis JPA. Comparative effectiveness of exercise and drug interventions on mortality outcomes: metaepidemiological study BMJ 2013;347:f5577

19 Petridou ET et al. What works better for community-dwelling older people at risk to fall?: a meta-analysis of multifactorial versus physical exercise-alone interventions. J Aging Health. 2009 Aug;21(5):713-29.

B. The rising tide of diabetes

Many more of us are at risk of developing diabetes or even have the condition than we think, while less than a third of us realise the complications that diabetes can cause. There are nearly 2.5 million people in England living with diabetes, and estimates suggest a further 850,000 people in the UK have the condition but are either unaware, or have no confirmed diagnosis

What is diabetes?

Diabetes is a chronic and progressive disease characterised by raised blood glucose level (hyperglycaemia).

There are four main categories of diabetes:

- Type 1 diabetes, also known as insulin-dependent diabetes mellitus or juvenile-onset diabetes. People with type 1 diabetes are unable to produce insulin. Its onset is usually in children and people less than 40 years of age.
- Type 2 diabetes, also referred to as non-insulin-dependent diabetes mellitus or adult-onset diabetes. Type 2 diabetes accounts for about 90% of all diagnosed cases.
- Gestational diabetes is a type of diabetes that only pregnant women get. If not treated, it can cause problems for mothers and babies. Gestational diabetes develops in about 2% to 5% of all pregnancies.
- Other specific types of diabetes resulting from specific genetic syndromes, surgery, drugs, malnutrition, infections, and other illnesses may account for 1% to 5% of all diagnosed cases of diabetes.

> “There are nearly **2.5 million** people in England living with **diabetes**”

Why does diabetes matter?

The numbers of diagnosed cases of type 2 diabetes are rising in the UK population and many people have the condition but are unaware.

By the time they are diagnosed, half of the people with type 2 diabetes show signs of complications. People with type 2 diabetes are 1.6 times more likely to die early than the general population. (NHS Information Centre, National Diabetes Audit)

The condition can cause severe and debilitating health complications including heart disease, blindness, kidney failure, and lower-extremity amputations. There is no cure for diabetes. Without careful, ongoing management including recommended health checks and lifestyle beahviours, a person with the condition might expect a reduced life expectancy of between 6 to 20 years.

Most complications from diabetes recorded for Cornwall and the Isles of Scilly were related to cardiovascular (heart) disease. Compared to the general population, people with diabetes in Cornwall and the Isles of Scilly are 61% more likely to have a heart attack. People with diabetes are also more likely to be admitted to hospital and have long inpatient stays. (Variation in Inpatient Activity: Diabetes Key Findings for England)

Key risk factors for developing type 2 diabetes include lifestyle choices, environmental exposures, age and ethnicity. Regular physical activity, maintaining a healthy weight and eating a balanced diet lower diabetes risk in the population and support good management of the condition for individuals.

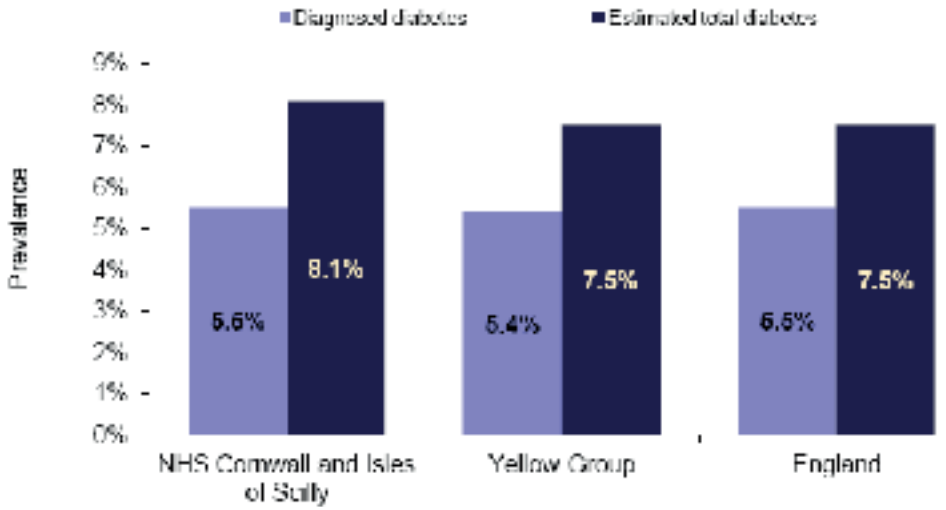
What is the situation in Cornwall and the Isles of Scilly?

About one in twenty adults in Cornwall and the Isles of Scilly (aged 17 or over) have recorded diabetes, but the real prevalence is estimated to be between one in twelve and one in thirteen adults. By 2030 the estimated prevalence of diabetes in Cornwall and the Isles of Scilly is set to increase to 50,637 or almost one in ten people.

There is considerable variation in the prevalence of diagnosed diabetes within Cornwall and the Isles of Scilly's 69 GP practices, from 2.5% to 6.5% in 2012.

Data shows that 30% of people estimated to have the condition in Cornwall and the Isles of Scilly have yet to be diagnosed by their GPs. This represents more than 10,000 people.

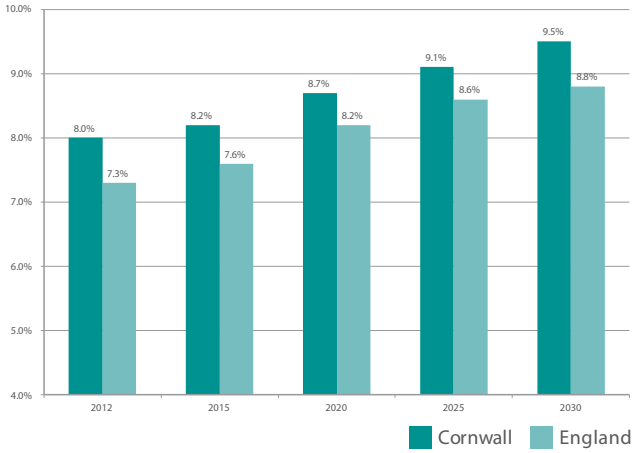
Figure 2.4: Quantifying diabetes in Cornwall and the Isles of Scilly



Source: 2011/12 Quality and Outccomes Framework, APHO model estimates

Note: The Yellow Group is a cluster of Primary Care Trusts in England that have similar main risk factors for diabetes.

Figure 2.5: Projected total (diagnosed and undiagnosed) diabetes prevalence in Cornwall and the Isles of Scilly



Source: 2011/12 Quality and Outcomes Framework, APHO model estimates

Diabetes in children

There are approximately 29,000 children and young adolescents with diabetes in the UK. Most, (91%) have type 1 diabetes. Although the diagnosis of type 2 diabetes is less common in children, the incidence of children and young adults affected by type 2 diabetes is beginning to rise.

In 2013, the Royal College of Paediatrics and Child Health released the National Paediatric Diabetes Audit Annual Report, covering 2011-12 data from NHS hospital trusts. The report shows the Royal Cornwall Hospital Trust (RCHT) treated a total of 203 children and adolescents (0-24 years). Most, 95.7%, had a record for Type 1 diabetes and were between the ages of 10-14 years (52%) and 15-19 years (26%). Diabetes was more prevalent in males than females, 60% vs. 40%, respectively.

Who is at risk for diabetes?

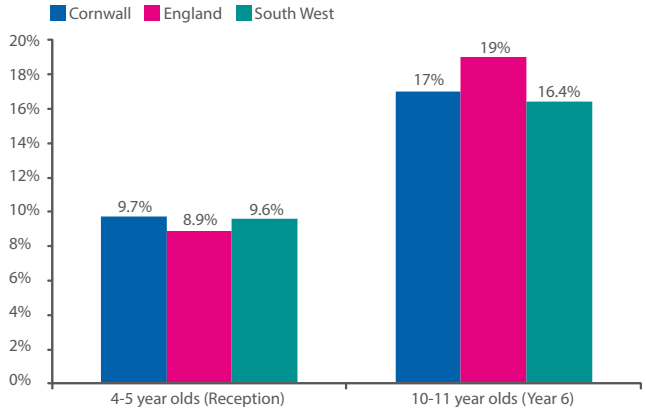
Risk factors for developing type 2 diabetes include lifestyle choices, environmental exposures, age, and ethnicity. Diabetes usually appears in middle-aged or older people. However, it is more frequently being diagnosed in younger and obese people. In addition to individual risk factors, people from certain communities and population groups are disproportionately affected. This includes people of South Asian, African-Caribbean, black African and Chinese descent and those living in the most deprived areas. Increased risk for diabetes has also been linked with obese women with polycystic ovary syndrome or women who may have had gestational diabetes.

Obesity

Obesity is a significant risk factor for developing diabetes and therefore plays a central role in the lifestyle interventions aimed to reduce diabetes incidence. Numerous studies have linked obesity with a sedentary lifestyle combined with a high calorie diet. It has been associated with other long-term conditions such as coronary heart disease.

An estimated 25% or one quarter of the adult population in Cornwall and the Isles of Scilly is obese. This is higher than the England average of 24.1%. Similar to the national trend, obesity for both men and women increases with age and is highest among those 55-74 years. Furthermore, a risk factor for having diabetes as a child is obesity. Diabetes prevention strategies should target overweight and obese adolescents who are more likely to have pre-diabetes.[1] 69.8% of adults in Cornwall and the Isles of Scilly are overweight or obese compared with 63.8% in England (PHE public health outcomes framework data tool 2014).

1 A person may have a blood sugar level higher than normal, but not high enough for a diagnosis of diabetes. A person with pre-diabetes is at a higher risk for developing type 2 diabetes and other serious health problems, including heart disease, and stroke.



Source: National Child Measurement Programme

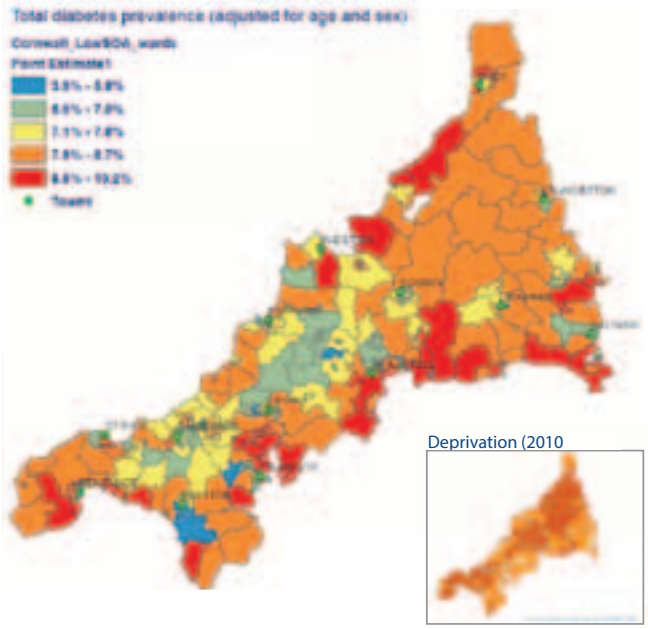
Figure 2.6: Childhood obesity in Cornwall and the Isles of Scilly

Deprivation

Deprivation is strongly linked to higher levels of obesity, physical inactivity, and unhealthy diet, all of which are risk factors for diabetes, whilst other factors linked to deprivation like poor mental health can exacerbate the condition. Findings from the 2010/11 Health Survey for England (HSE) show that people living in the 20% most deprived neighbourhoods as measured by the Index of Multiple Deprivation (IMD) have nearly twice the rate of diabetes.

The map below (Figure 2.7) shows the distribution of the estimated diabetes prevalence in Cornwall and the Isles of Scilly. It shows the highest diabetes prevalence is concentrated in some of the most deprived areas of Cornwall and the Isles of Scilly. Nevertheless, the correlation is not as significant as the national trend. People living in the 20% least deprived neighbourhoods in Cornwall and the Isles of Scilly have lower, but not significantly, rates to those living in the 20% most deprived neighbourhoods (7.2% vs. 7.8%). This means that deprivation alone cannot explain the geographic pattern of diabetes in Cornwall and the Isles of Scilly. The distribution of diabetes is most likely to be related to other risk factors such as sedentary lifestyle, diet and age. Geographic distribution of diabetes is an important factor in developing and targeting services and interventions in Cornwall and the Isles of Scilly.

Figure 2.7: Diabetes prevalence in Cornwall and the Isles of Scilly



> “The map shows the **highest diabetes** prevalence is **concentrated** in some of the most **deprived areas** of Cornwall and the Isles of Scilly”

Control of diabetes is important to avoid complications such as blindness, kidney failure and the risk of developing other chronic conditions such as cardiovascular disease. People with diabetes should receive regular clinical checks by their general practitioners to make sure their diabetes is in control. These checks include:

- Body mass index
- Blood pressure
- HbA1c level (marker for blood glucose)
- Urinary albumin
- Creatinine
- Cholesterol
- Eye screening
- Feet examination.

Quality Outcomes Framework (QOF) data from Cornwall's 69 GP practices shows that people with diabetes in Cornwall and the Isles of Scilly are managed at above average standard compared to individuals in England for retinal screening, foot examination, risk assessment, influenza immunisation and testing for kidney function. The following table shows Cornwall and the Isles of Scilly's achievement rate for these indicators.

Table 2.3: Performing better than England on some clinical indicators

QOF clinical indicator	Cornwall & IoS	England
Retinal screening	93.3%	91.9%
Foot examination and risk assessment	90.6%	89.6%
Influenza immunisation	92.3%	88.6%
Record of micro-albuminuria testing in the previous 15 months (urine test for kidney function)	89.7%	88.9%
Record of estimated glomerular filtration rate (eGFR) or serum creatinine testing in the previous 15 months (blood test for kidney function)	98.2	96.9%

Source: Quality and Outcomes Framework 2011-12

However, there are still people with diabetes in Cornwall and the Isles of Scilly receiving inadequate standards of care and are therefore at risk for developing serious complications. The table below quantifies the number of people missing checks by QOF indicators. Even a small proportion of people with poor control of diabetes can lead to increased disability or hospitalisation, both of which have an impact on the overall health and social care cost.

Table 2.4: Quantifying people in Cornwall and the Isles of Scilly missing an annual check, QOF 2011/12

QOF clinical indicator	Number of people in Cornwall & IoS with diabetes missing a check*
Record of retinal screening	1,606
Record of foot examination and risk assessment	5,015
Influenza immunisation	1,650
Record of micro-albuminuria testing in the previous 15 months (urine test for kidney function)	2,356
Record of estimated glomerular filtration rate (eGFR) or serum creatinine testing in the previous 15 months (blood test for kidney function)	447
Record of neuropathy test	1,847
Treated with ACE inhibitors where indicated	398
Total missed checks	13,319

* Excludes those with exceptions, Source: Quality and Outcomes Framework 2011-12

Moreover, Cornwall and the Isles of Scilly lags behind the nation on two key diabetes clinical indicators. The table below shows we perform significantly worse than England on the per cent of patients with diabetes with controlled glucose and cholesterol levels.

Table 2.5: Performing worse than England on key clinical indicators

Clinical indicator	Cornwall & IoS	England
HbA1c (<= 7.5%/<59m mol/mol)	* 68.4%	69.9%
Cholesterol <5mmol/l,,	* 80.3%	81.7%

* Significantly worse than England, Source: Quality and Outcomes Framework 2011/12

While blood glucose levels vary, HbA1c provides a measure of the average blood glucose levels over the last 2-3 months. The more glucose there is in blood, the greater the amount of HbA1c that is present. For every percentage point reduction in results of HbA1c the risk of developing eye, kidney and nerve damage is reduced by 40% while the risk of heart attack is reduced by 14%.

Patients who have an HbA1c level of 7.5% or less are considered to have a good level of diabetes control. In Cornwall and the Isles of Scilly, the per cent of patients reporting an HbA1c level of 7.5% or less is 68.4% (excluding those with exceptions). This is significantly lower than the England average of 69.9%. The rate varies from 91.1% to 54.2% among our local GPs.

People with diabetes have an increased risk of developing cardiovascular disease and should have a cardiovascular risk assessment every year as part of routine annual checks.[2] The risk of cardiovascular disease increases with higher cholesterol levels. It is recommended that people with a cholesterol reading of 5mmol/l should be started on medication. The per cent of people with diabetes with a record of a cholesterol test results less 5mmol/l was 80.3%. This is significantly lower than England and the South West, 81.7 and 82.1% respectively.

The National Diabetes Audit

The National Diabetes Audit (NDA) is a large clinical audit of data designed to ensure that national standards for diabetes are met. It examines records for all patients with diabetes and reviews a bundle of nine key tests recommended by NICE to monitor and control their diabetes.[3] Participation in the audits by GPs is voluntary. For the most recent audit (2010/11), 36 out of 69 GP practices in Cornwall and the Isles of Scilly participated (a participation rate of 52%). This is statistically lower than the rate for authorities in the same cluster and England, 55.5% and 54.3% respectively.

Table 2.6: Percentage of patients in Cornwall and the Isles of Scilly receiving NICE recommended care process

Care process recorded	Percentage of registered patients in PCT	Median for all PCTs
All Care Process*	37.1%	55.5%
Blood creatinine	92.5%	93.1%
Blood pressure	93.1%	95.2%
BMI	87.5%	90.0%
Cholesterol	90.9%	91.7%
Eye screening	82.7%	82.4%
Foot exam	81.0%	84.5%
HbA1c**	89.7%	82.4%
Urinary albumin	75.3%	76.3%
Smoking	56.0%*	85.7%

* People registered with diabetes receiving all nine key processes of care.

** For patients under 12 years of age, 'all care process' is defined as HbA1c only as other care processes are not recommended in the NICE guidelines for this age group.

* Significantly worse than median for all PCTs,

**Source: National Diabetes Audit 2010/11

2 Haffner SM, Lehto S, Ronnemaa T et al. Mortality from coronary heart disease in subjects with type 2 diabetes and in nondiabetic subjects with and without prior myocardial infarction. New England Journal of Medicine 1998;339(4):229–234.

3 The National Institute for Health and Clinical Excellence (NICE), Quality Standard for diabetes in adults, March 2011

The indicator that has a 'dragging' effect on the rate is the smoking status for patients with diabetes. This is because different processes are used to collect the information.

Data shows that diabetic patients under the age of 55 years are less likely than those who are 55 years and over to complete their annual checks.

Table 2.7: Percentage of patients in Cornwall and the Isles of Scilly receiving all care processes by age group and diabetes type

	All ages	<55 years	>=55 years
Type 1	32.7%	28.4%	42.7%
Type 2	38.8%	32.1%	39.9%

Source: National Diabetes Audit 2010/11

What are the complications caused by diabetes?

Poorly managed diabetes can lead to severe complications including amputation, kidney disease, strokes, heart attacks, depression and blindness. Having diabetes increases the chance of a person needing hospital admission by five times. Complications develop after a long period of exposure to high blood glucose, high blood pressure and high cholesterol. Even a small increase in diabetic complications can have a substantial impact on social care and NHS costs.

Diabetes foot profile

Table 2.8 Hospital foot care activity in Cornwall and the Isles of Scilly, March 2011-April 2012

Hospital foot care activity March 2011-April 2012	Cornwall & IoS	England
Total episodes of inpatient care for diabetic foot disease	1,551	134,731
Annual episodes of care for diabetic foot disease per 1,000 adults with diabetes	20.9	18.3
Total nights in hospital due to diabetic foot disease	12,174	1,219,817
Annual nights in hospital for diabetic foot disease per 1,000 adults with diabetes	163.8	166.1
Episodes of care where an amputation is performed on those with diabetes	269	19,066
Annual amputations per 1,000 adults with diabetes	3.6	2.6

Source: Public Health England, Diabetic Foot Disease Profile.

Of the 570 patients admitted for foot care in Cornwall and the Isles of Scilly, 23.0% had more than four periods of care, which is significantly higher than the national average. During the same time period, there were 90 major amputations performed in Cornwall. This is an annual rate of 1.2 major amputations per 1,000 adults with diabetes, which is significantly above the national average.

Amputations related to diabetes often develop after prolonged exposure to poor diabetes control. Repeat hospital admissions for foot disease in Cornwall and the Isles of Scilly highlights areas for improvement in the clinical management of high risk diabetic patients.

Diabetic ketoacidosis

Diabetic ketoacidosis is a serious complication of diabetes that is fatal if left untreated. It primarily affects people with type 1 diabetes. There were a total of 34 cases of diabetic ketoacidosis in Cornwall and the Isles of Scilly in 2010/11. Emergency admissions rates for diabetic ketoacidosis and coma for Cornwall and the Isles of Scilly for all ages have fluctuated since 2002, but the overall trend remains stable. The rate for Cornwall and the Isles of Scilly is lower compared to the England average in 2010/11 (17.4 per 100,000 vs. 27.44 per 100,000).

Kidney disease

Diabetes is the most common cause of end-stage renal disease. Nearly one in three people with type 2 diabetes develops kidney disease. Kidney disease accounts for 21% of deaths in type 1 diabetes and 11% of deaths in type 2.

Data from Royal Cornwall Hospitals NHS Trust shows that the additional risk of undergoing renal replacement therapy in people with diabetes is 110% compared to the general population of Cornwall and the Isles of Scilly.

Cardiovascular disease

Cardiovascular disease (CVD) includes heart disease, stroke and all other diseases of the heart and circulation. People with diabetes have about twice the risk of developing a range of cardiovascular disease, compared with those without diabetes.[4]

Research shows that improving dietary habits, managing weight, keeping active and using medication where required reduces the overall chance of developing cardiovascular disease. Cardiovascular disease is a major cause of death and disability in people with diabetes, accounting for 44% of deaths in people with type 1 diabetes and 52% in people with type 2. Additionally, people with type 2 diabetes have a two-fold increased risk of stroke within the first five years of diagnosis compared with the general population.

Compared to the general population, people with diabetes in Cornwall and the Isles of Scilly are 61% more likely to have a myocardial infarction (a heart attack) and 36.8% more likely to have a stroke.[5] They are also 98.5% more likely than the general population to have a hospital admission where heart failure was recorded; this is significantly higher than people with diabetes in England.[6]

Depression

Evidence shows that having diabetes more than doubles the risk of developing depression. Most studies show that depression exacerbates the progression of type 2 diabetes which in turn increases the risk of diabetes-related burden, such as suboptimal glycemic control, complications, and even mortality. People with depression may find it harder to deal with everyday tasks.

Over time, managing diabetes (regular blood glucose testing, taking medication, following a healthy eating plan and regular physical activity) can take its toll. This may increase a person's risk of depression, which may in turn lead to their usual diabetes care being neglected.

The NICE quality standard for diabetes in adults recommends people with diabetes to be checked for psychological problems (such as depression, anxiety, fear of low blood sugar, eating disorders and problem scoping with the diagnosis) and any problems are properly managed.

Gestational diabetes

Gestational diabetes is a type of diabetes that arises during pregnancy (usually during the second or third trimester). It affects up to 5% of all pregnancies. Women who are overweight or obese are at a higher risk of gestational diabetes. The lifetime risk of developing type 2 diabetes after gestational diabetes is at least 7%.[7]

4 Emerging Risk Factors Collaboration (2010). Diabetes mellitus, fasting blood glucose concentration, and risk of vascular disease: a collaborative meta-analysis of 102 prospective studies. Lancet 375 (9733); 2215–2222

5 National Diabetes Audit 2010-2011 Report 2 Complications and Mortality

6 National Diabetes Audit 2010-2011 Report 2 Complications and Mortality

7 Lancet (2008). The global challenge of diabetes. The Lancet 371 9626; 1723

Data from Royal Cornwall Hospitals NHS Trust (RCHT) maternity unit indicates there were a total of 110 women with gestational diabetes in 2011. This is nearly double the number of women with recorded gestational diabetes in 2001. This represents a gestational diabetes prevalence rate of 2.5% among all pregnancies managed by the hospital. These findings suggest that there is a rapid rise in the number of cases of pre-gestational diabetes in Cornwall and the Isles of Scilly, and resources will be required to provide care as recommended by NICE.

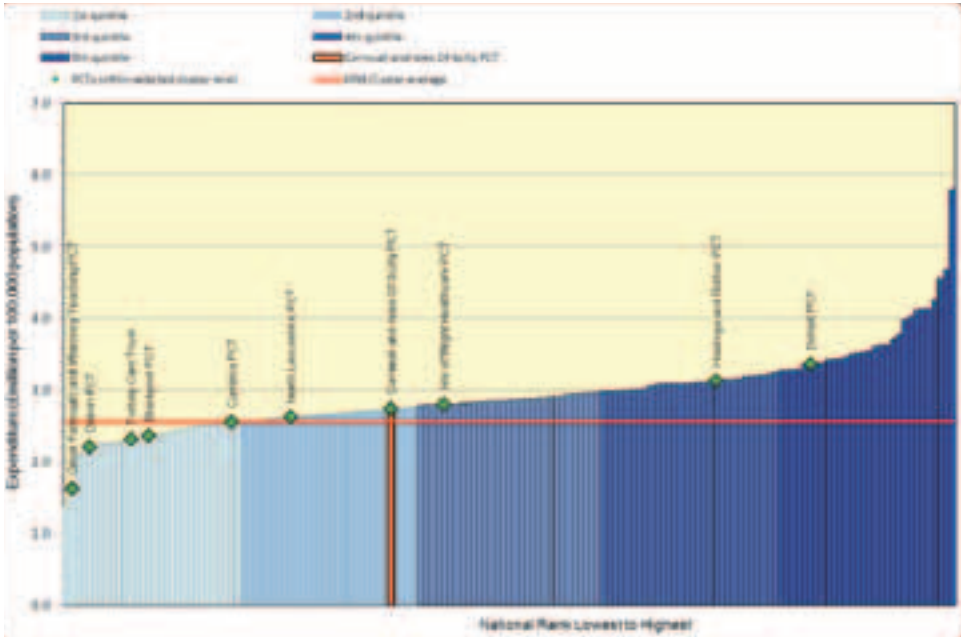
Use of Inpatient services in Cornwall and the Isles of Scilly

Variations in inpatient care activities allows a closer look at the impact of differing use of services experienced by patients with diabetes compared to those without. The variations can be used to help improve the quality and productivity of inpatient care for those with diabetes. National data shows that people with diabetes have longer average hospital lengths of stays and are more likely to be readmitted as an emergency after a period of care.

Across England, patients with diabetes are likely to spend longer in hospital per admission than people without diabetes. In 2011/2012, patients in England with diabetes had 27.7% more total bed days compared to admissions for similar patients without diabetes. In Cornwall the previous year (2010/11), total bed stays among diabetes patients was 1% more than would be expected for patients without diabetes.

Across England patients with diabetes had 8.2% more emergency readmissions among diabetes patients compared to those without. In 2011/2012, Cornwall had lower emergency readmission within 28 days of a previous inpatient stay among patients with diabetes than in England. In 2011/12 emergency readmissions for patients with diabetes in Cornwall was 23.2% less than would be expected for those without diabetes. This is compared to 6.6% the previous year (2010/2011).

Figure 1.8: All PCT expenditure per 100,000 for diabetes



Source: Department of Health, Programme Budgeting Data 2011/12

The 2013 National Diabetes Inpatient Audit report shows that 88.2% of diabetes inpatients were admitted to hospital as an emergency. Most, 72.4% were admitted for other medical reasons and 9.2% were admitted specifically for management of diabetes.

Mortality

There has been great fluctuation in the mortality rate from diabetes in Cornwall and the Isles of Scilly,

although the rate has decreased between 1993 and 2010. In 2010, mortality from diabetes for Cornwall and the Isles of Scilly was 4.61 per 100,000 population. This is lower than the national rate of 5.39 per 100,000.

In Royal Cornwall Hospitals NHS Trust, after adjusting for factors such as age, sex, comorbidities, and method of admission, inpatients with recorded diabetes are 22.7% more likely to die than inpatients without recorded diabetes.

What resources and evidence are used to tackle diabetes?

The largest proportion of funding spent on diabetes was in primary care prescribing, which accounted for £18,239,000 or 62% of the total programme budget in 2011/12. The proportional expenditure across secondary care (inpatient services for both elective and non-elective) in Cornwall and the Isles of Scilly is higher compared to the national average.

The per cent of expenditure allocated to preventative services in Cornwall and the Isles of Scilly is higher than areas in the same cluster, 2.6% vs. 1.6%. Spends on community care, services delivered outside of a hospital and within local communities however is lower, 3.5 % vs. 8.5%.

Cornwall and the Isles of Scilly spent £2.73 million per 100,000 population on diabetes in 2011/12, higher than the ONS cluster average of £2.56 million per 100,000 population, and ranked 71 nationally.

The benchmarking analysis is taken from the Diabetes Outcomes Versus Expenditure Tool (DOVE) provided by Public Health England. Quadrant analysis plots diabetes spends against an outcome. The spend and outcome of the percentage of diabetes patients aged 17 years and older with an HbA1c of 59mmol/l or less shows Cornwall and the Isles of Scilly is in the high spend/ poor outcomes quadrant. This level of spending, however, is not statistically different than England as a whole.

Evidence-based interventions

The Diabetes National Service Framework was published in 2001 and set out twelve standards for diabetes care. This was followed in 2003 with a delivery strategy which set out how the Diabetes NSF could be achieved. In 2010, a six year update on performance on the Diabetes NSF standards was published, which highlighted progress made on each of the 12 standards.

NICE guidance is available for the management of type 1 diabetes (CG15), the management of type 2 diabetes (CG66), antenatal care (CG62), footcare (CG10, CG119), patient education models (TA60) and risk identification and prevention (PH35, 38 & 46).

"The NHS Health Check programme aims to help prevent heart disease, stroke, diabetes, kidney disease and certain types of dementia."

Prevention focused services in Cornwall and the Isles of Scilly

The NHS Health Check programme aims to help prevent heart disease, stroke, diabetes, kidney disease and certain types of dementia. Everyone between the ages of 40 and 74, who has not already been diagnosed with one of these conditions or have certain risk factors, will be invited (once every five years) to have a check to assess their risk of heart disease, stroke, kidney disease and diabetes, and will be given support and advice to help them reduce or manage that risk.

The programme in Cornwall and the Isles of Scilly aims to reach 33,789 people who meet the enrolment criteria in the next five years. Quarterly updates are provided on the number of checks offered and the number taken up. At July 2013, 53 out of 69 GPs had enrolled in the programme. Most of the practices are targeting hard-to-reach groups including those patients who have not attended a surgery for more than 12 months, men, older people, and patients who are smokers. Additionally, there is a local outreach service to offer checks to 6,500 people in community venues. A specialised Men's Health Promotion officer will work alongside the Health Checks service offering on-the-spot advice on stop smoking, weight management and physical activity.

Public Health leads intervention programmes including:

- Healthy Schools Programme - promotes physical and emotional health by providing accessible and relevant information and equipping pupils and staff with the skills and attitudes to make informed decisions about their health.
- Stop Smoking Service – offers free help and support to anyone who wants to stop smoking. It uses the support of a trained advisor plus medication on prescription meaning you are up to four times more likely to successfully quit smoking.
- The Cornwall and the Isles of Scilly Healthy Weight Strategy recognises the impact of economic, environmental and social circumstances on people's weight and includes interventions and approaches across settings to support more people to be a healthy weight. Five key themes are:
  - Children: early prevention of weight problems and healthy growth
  - Promoting healthier food choices
  - Building physical activity into people's lives
  - Creating incentives for better health
  - Personalised support for overweight and obese individuals.
- The associated healthy weight programme delivers community based interventions across the life course to reflect these themes.

Recommendations

Public Health will work with key partners, commissioners and stakeholders to:

- Reduce undiagnosed diabetes in the population
- Reduce risk factors and increase awareness of diabetes and risk prevention in communities at high risk
- Promote quality and reach of diabetes education programmes
- Improve outcomes for diabetic foot care especially to reduce the rate of amputations in Cornwall and the Isles of Scilly
- Ensure that activity data from services is collected (including information about age, sex, ethnicity and geography to facilitate monitoring of equity of access to services and inform future service development)
- Continue to focus on 'hardly reached groups' in Cornwall and the Isles of Scilly who are more susceptible to complications.

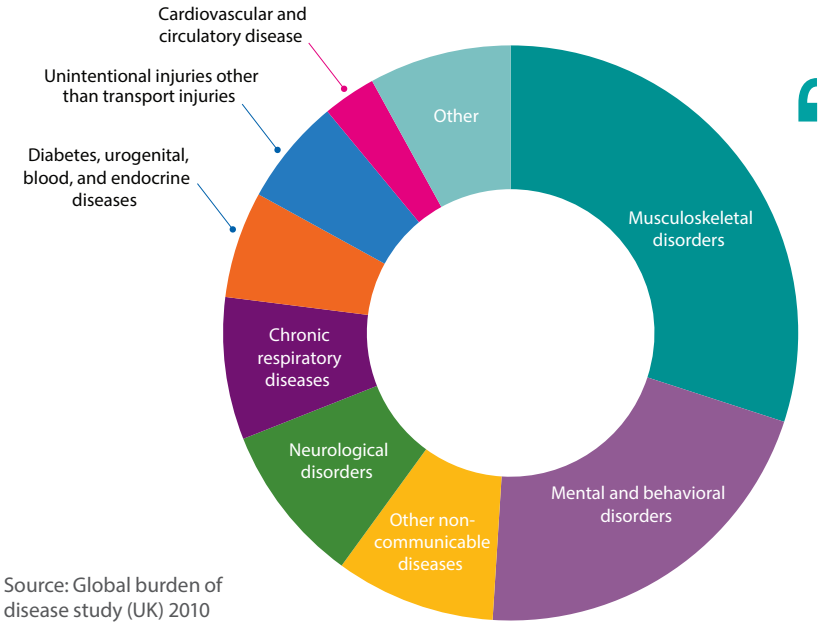
C. Musculoskeletal Health

What are musculoskeletal conditions and why are they important?

The musculoskeletal system is made up of the body's bones, muscles, joints, cartilage and other connective tissues. This system provides form, support, stability and movement to the body.

Musculoskeletal conditions (MSC) are a diverse group of over 200 conditions that affect this system. They include osteoarthritis, back pain, osteoporosis and rheumatoid arthritis. MSC are common and have a variety of causes, including injury, illness and ageing. They are a leading cause of pain and disability. It is estimated that one quarter of adults in England are affected by long term MSCs and they are responsible for over 30% of all disability in the UK [1].

Figure 1.9: Percentage of total years lived with disability by cause UK 2010



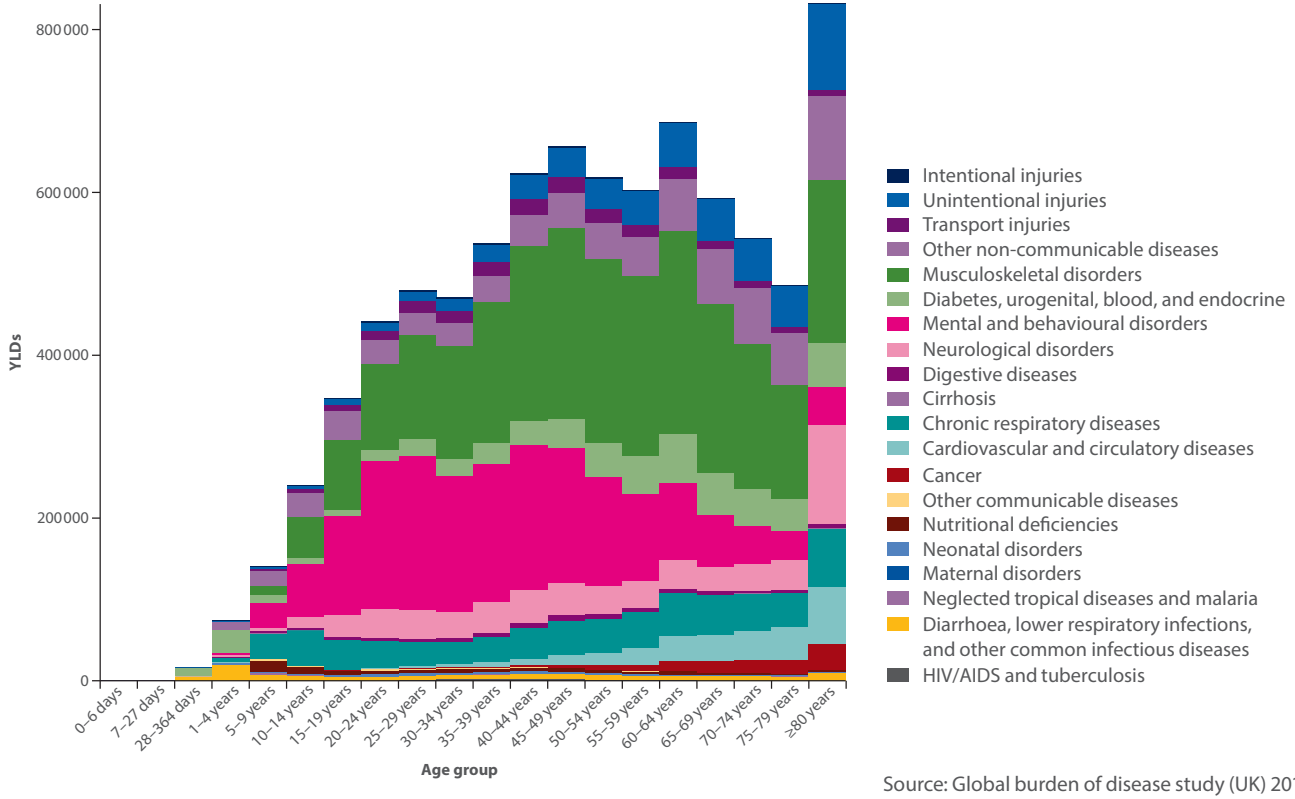
Source: Global burden of disease study (UK) 2010

> "Musculoskeletal conditions are responsible for **over 30%** of all disability in the UK"

The graph below shows the total years lived with disability by cause and age for the UK. It shows that musculoskeletal disorders (shown in green) are a major cause of disability which affects adults of all ages [1].

Musculoskeletal conditions not only impact the lives of those affected and their families they also have a significant economic impact. In 2011/12 Cornwall and the Isles of Scilly PCT spent over £57.6 million on problems of the musculoskeletal system which equates to £104 per head of the population.

Figure 1.10: Total years lived with disability by cause and age for the UK (2010)



Source: Global burden of disease study (UK) 2010

In Cornwall and the Isles of Scilly, large employers report that 18-20% of all sickness absence is due to MSC. In 2012, 35% of Disability Living Allowance claims in Cornwall were for musculoskeletal disorders and they were in the top five conditions for incapacity benefit [2].

As in the rest of the UK, our population is ageing and it is projected that by 2021 one quarter of people in Cornwall and the Isles of Scilly will be aged 65 or over [3]. Population ageing, the rise in obesity and a decline in physical activity means that the number of people affected by musculoskeletal conditions in our community is set to grow. This comes at a time when people are being expected to extend their working lives to older ages. Helping the people of Cornwall and the Isles of Scilly to maintain their musculoskeletal health is key if we wish them to maintain their mobility and independence into old age. Improvements in musculoskeletal function have a great potential for delaying or eliminating the onset of disability and dependence [4, 5].

How many people are affected?

It is estimated that low back pain probably affects around one-third of the UK adult population each year [6]. Estimates of the prevalence of low back pain vary considerably between studies – up to 33% for point prevalence (a single episode), 65% for one year prevalence, and 84% for lifetime prevalence [7]. There is little data available on trends in back pain.

Data from the Health and Safety Executive [8] suggest that there has been a reduction in the incidence and prevalence of work related back disorders in Great Britain over the past decade, which may reflect the efforts made by the health and safety community and other stakeholders to ameliorate this problem but it still remains significant.

Osteoarthritis is the most common musculoskeletal condition in older people. Approximately one third of people aged 45 years and over in the UK, have sought treatment for osteoarthritis [9]. Between 1990 and 2010 disability due to osteoarthritis in the UK is estimated to have increased by 16% [1]. It is estimated that in Cornwall and the Isles of Scilly over 93,000 visits are made to a GP for those over 45 years old due to osteoarthritis. Over 54% of these consultations are for osteoarthritis of the hip and 24% are for osteoarthritis of the knee. The burden of osteoarthritis is set to grow as the population becomes older and as obesity rates increase.

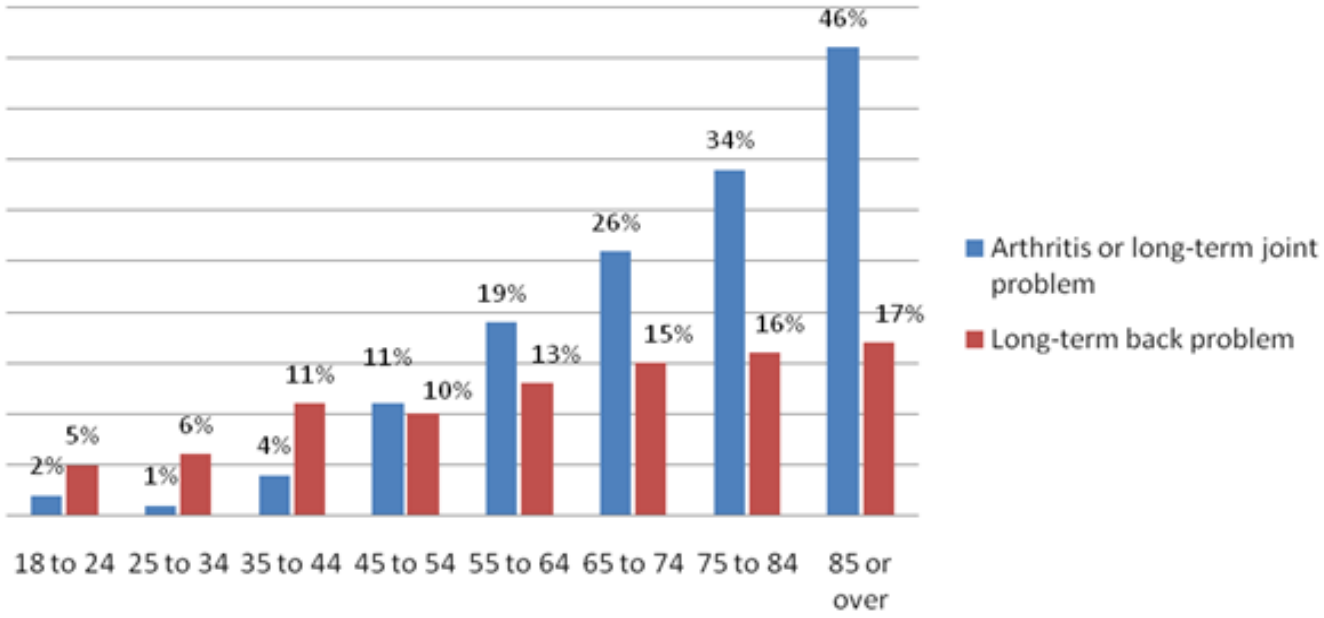
Rheumatoid arthritis is much less common than osteoarthritis with a prevalence of around 1% [10]. However it can affect people of all ages including children and causes progressive joint damage and disability unless treated effectively.

Other important specific causes of musculoskeletal pain and disability are injuries often associated with work and sports and fractures in older people with osteoporosis.

Hip fracture is one of the most common and serious health problems affecting older people, and leads to more than 50,000 hospital admissions a year in England. Last year the Royal Cornwall Hospital operated on 620 hip fractures that were admitted as emergencies. Across Cornwall and the Isles of Scilly there were 1,383 admissions for hip replacement.

The number of hip fracture admissions in England increased by 15.5%, from 46,495 admissions in 2001/02 to 53,694 admissions in 2010/11. The increase in admissions appears mainly due to the general ageing of the population, as age- and sex-standardised rates have been more or less stable since 2002/03 [11].

Figure 1.11: Percentage of patients reporting arthritis / joint problem or a back problem by age group Cornwall 2012-13

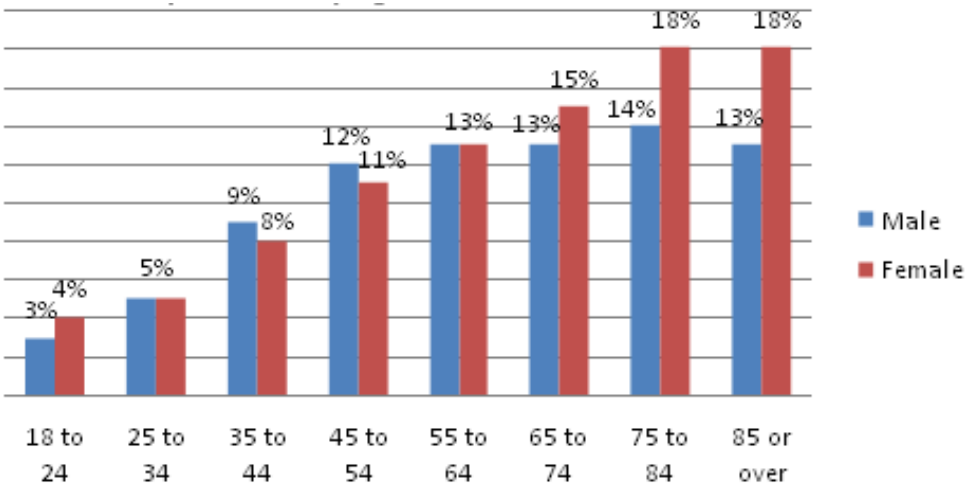


Source: NHS GP patient survey

There is a lack of data at Cornwall and the Isles of Scilly level on the numbers of people affected by any musculoskeletal condition. However data from the national NHS GP patient survey is available. This survey goes out to people who are registered with GP surgeries. 58% of those surveyed in Cornwall and the Isles of Scilly reported having a long term condition: 15% reported having arthritis or a long term joint problem and 11% reported a long term back problem. The graph below shows the percentage of patients reporting arthritis or long term joint problems and the percentage reporting a long term back problem by age group. The percentage reporting these conditions rises with age: nearly 50% of people aged 85 or over report arthritis or long term joint problems.

The graph below shows the percentage of patients surveyed in Cornwall and the Isles of Scilly reporting a long term back problem by age group and gender. Other than ages 35-54 a lower percentage of men report having a long term back problem than women. Nearly one in five women over 75 report having a long term back problem. In the working age group 45-64 over one in ten men and women report long term back problems.

Figure 1.12: Percentage of patients reporting long-term back problems by age and sex in Cornwall 2012-13



Source: NHS GP patient survey

How can we prevent musculoskeletal ill health and disability?

The following measures have been recommended by European Action Towards Better Musculoskeletal Health [12] as ways in which to prevent musculoskeletal ill health. They will also have many other health benefits for other chronic conditions such as cardiovascular disease. For some of these measures there is a strong evidence base; other interventions have less evidence of effectiveness. However, the research base is growing daily.

1) Bone health – the importance of a good start

Bone is living tissue that changes constantly, with old bone being removed and replaced by new bone. The amount of bone tissue in the skeleton is known as bone mass. Up to 90% of peak bone mass is acquired by age 18 in girls and age 20 in boys, which makes youth the best time to "invest" in bone health and optimise peak bone mass. The bone mass attained in childhood and adolescence is an important determinant of lifelong skeletal health and the health habits formed as children have an important impact on their risk of osteoporosis as an adult.

Peak bone mass is influenced by a variety of factors including gender, nutrition and physical activity. Before puberty, boys and girls develop bone mass at similar rates. After puberty, however, boys tend to

acquire greater bone mass than girls. Women are at greater risk of osteoporosis, therefore it is particularly important that girls build as much bone as possible to protect against this disease in later life.

The two most important lifelong bone health habits to encourage in children are proper nutrition and plenty of physical activity. Eating for healthy bones means getting plenty of foods that are rich in calcium which is an essential nutrient for bone health. A well-balanced diet including adequate amounts of vitamins and minerals such as magnesium, zinc, and vitamin D is important. Most children do not get enough calcium in their diets to help ensure optimal peak bone mass (for more information on bone health and the recommended calcium intake see http://www.nos.org.uk/netcommunity/document.doc?id=395). The best kind of physical exercises for children's bones are weight-bearing activities like walking, running, dancing, tennis and football (children who tend to play outside will also have higher vitamin D levels). Normal sex hormone levels are also important for developing and maintaining bone health.

2) Physical activity to maintain musculoskeletal fitness

Physical activity is essential for good musculoskeletal health. It can increase bone density in adolescents, maintain it in adults and slow its decline in old age. Physical activity reduces the risk of fracture – the risk

of hip fracture is lower in active people, reduced by up to 68% at the highest level of physical activity [13, 14]. Various levels of walking are linked to a risk reduction of osteoarthritis ranging from 22% to 83% [13]. A broad range of physical activities can reduce pain, stiffness and disability, and increase general mobility, gait, function, aerobic fitness and muscle strength in older adults with osteoarthritis [15].

There is growing evidence that improved musculoskeletal fitness is associated with an improvement in overall health status and a reduction in the risk of chronic disease and disability [4, 5]. Musculoskeletal fitness appears to be particularly important for elderly people and their ability to maintain functional independence, because reduced musculoskeletal fitness leads to inactivity and further dependence.

> "**Physical activity** is **essential** for **good musculoskeletal health**. It can increase bone density in adolescents, maintain it in adults and slow its decline in old age."

3) Maintain an ideal weight

There is a strong association between obesity and musculoskeletal conditions and there is evidence that childhood obesity can have a significant effect on the musculoskeletal system in adulthood [16]. Obesity and overweight have long been recognised as potential risk factors for osteoarthritis, especially osteoarthritis of the knee [17]. A US study demonstrated that women who had lost about 5kg had a 50% reduction in the risk of development of symptomatic knee osteoarthritis [17]. The same study also found that weight loss was strongly associated with a reduced risk of development of radiographic knee osteoarthritis.

4) A balanced diet including daily allowance for calcium and vitamin D

Good nutrition and in particular an adequate intake of calcium and vitamin D is essential for bone formation and the maintenance of musculoskeletal health.

5) Don't smoke

Smoking is a well-established risk factor for the development of rheumatoid arthritis [18, 19]. The relationship between smoking and osteoarthritis is less clear [20] but not starting or giving up has significant benefits for overall health which can in turn affect muscoskeletal health, for example the ability to be physically active or income saved to help eat a balanced diet.

6) The balanced use of alcohol and avoidance of alcohol abuse

Alcohol leads to an increased risk of some skeletal conditions, such as fractures and muscle diseases [21].

7) Promoting accident prevention programmes to avoid muscoskeletal injury

Musculoskeletal injuries have not only short term but also long term effects, for example they may increase the risk of osteoarthritis in later life. Prevention work around slips, trips and falls is already a local priority and can deliver many benefits for those who take part, including increased confidence, independence and better quality of life.

7) Wider health promotion

Health promotion in the workplace and related to sports activities is benefiical in avoiding abnormal and overuse of the musculoskeletal system.

Greater public awareness of the problems that relate to the musculoskeletal system, and good quality information on what can be done to prevent or effectively manage the conditions is also benefitical.

What can interventions to prevent musculoskeletal ill-health achieve?

A comprehensive public health approach to the prevention of musculoskeletal conditions needs to involve people in many sectors including health care, health promotion, employers and policy makers. There is little research on the cost effectiveness of implementing the prevention measures discussed above. Appropriate data collection strategies are needed using epidemiological and economic expertise to understand where best to target prevention efforts.

For some measures the evidence of effect is clear. For example, research shows that the risk of knee osteoarthritis increases progressively with increased obesity. Very obese people with a BMI of 36 or more are 14 times more likely to develop osteoarthritis than those within the healthy BMI range [22]. Weight loss of as little as 5 kg reduces the risk of developing knee osteoarthritis among women by 50% [17]. It is estimated that if everyone in the community were physically active (leaving everything else unchanged), the number of osteoporosis cases would decrease by 27% [23].

Everyone is at risk of developing musculoskeletal conditions but their impact on people of all ages can be minimised by reducing obesity, increasing physical activity and by introducing interventions to avoid work place and sports injuries. Maintaining physical capability and musculoskeletal function as we grow older are important aspects of healthy ageing, enabling people to be active and independent for longer. Improving the musculoskeletal health of the people of Cornwall would result not only in improved individual health and wellbeing but would also result in substantial savings for the NHS, social care and employers.

A full report on the burden of musculoskeletal conditions in Cornwall and the Isles of Scilly will be available in 2014.

Table 2.9: Recommendations - prevention strategies for specific conditions

	Well population	At risk population
Level of prevention	To prevent incident disease	To prevent progression to established disease
Osteoporosis	Prevent corticosteroid-induced osteoporosis Weight-bearing and resistance exercises	Prevent first fracture in people at high risk for example: Osteoporosis prophylaxis Calcium & vitamin D Physical activity Prevent falls and injuries Support attendance at an educational programme
Rheumatoid arthritis	Promote awareness of the risks of smoking	Ensure early recognition of symptoms and prompt referral to specialist Initiate disease-modifying therapy early Support attendance at an educational programme
Osteoarthritis	Promote awareness of the need for weight control and joint injury prevention (sport, recreational and occupational)	Promote weight control and joint injury prevention
Back pain	Regular exercise, maintaining good posture and lifting correctly will all help.	Encourage the person to be physically active and continue with normal activities as far as possible. Reduce stress, anxiety and tension
Occupational musculoskeletal injuries	Identify occupational risk factors Participation in accident awareness and prevention campaigns	Adaptation of work place and organisation

> “Everyone is at risk of developing musculoskeletal conditions but their **impact** on people of all ages can be **minimised** by **reducing obesity**, increasing physical activity and by introducing interventions to avoid work place and sports injuries.”

References

1. Murray C J et al. UK health performance: findings of the Global Burden of Disease Study 2010. Lancet 2013; 381(9871):997-1020.
2. Byfield K et al. Welfare Reform Research. Cornwall Intelligence Team. 2012. www.cornwall.gov.uk/welfareresearch
3. Cornwall Council, Joint Strategic Needs Assessment.
4. Warburton DE, Gledhill N, Quinney A. Musculoskeletal fitness and health. Can J Appl Physiol 2001;26:217-37.
5. Warburton DE, Gledhill N, Quinney A. The effects of changes in musculoskeletal fitness on health. Can J Appl Physiol 2001;26:161-216.
6. National Collaborating Centre for Primary Care. Low back pain: early management of persistent non-specific low back pain. Full guideline May 2009 http://www.nice.org.uk/nicemedia/live/11887/44334/44334.pdf
7. Walker BF. The prevalence of low back pain: a systematic review of the literature from 1966 to 1998. J Spinal Disord. 2000; 13 (3):205-217.
8. Health and Safety Executive. At a glance guide to health and safety statistics 2011/12. http://www.hse.gov.uk/statistics/at-a-glance.pdf
9. Arthritis Research UK. Osteoarthritis in General Practice. July 2013
10. Symmons D, Turner G, Webb R, Asten P, Barrett E, Lunt M, et al. The prevalence of rheumatoid arthritis in the United Kingdom: New estimates for a new century. Rheumatology 2002; 41(7):793-800.
11. Smith et al. 2013. Focus on hip fracture. Health Foundation. London.
12. Bone & Joint Decade. European Action Towards Better musculoskeletal Health. 2005.
13. Department of Health . Start Active, Stay Active: A report on physical activity for health from the four home countries' Chief Medical Officers. London 2011.
14. Warburton D, Nicol CW, Bredin S. Health benefits of physical activity: the evidence. CMAJ. 2006 March 14; 174(6): 801–809.
15. British Heart Foundation. Active for later life. London 2006.
16. Tsiros MD, Coates AM, Howe PR et al. Obesity: the new childhood disability? Obes Rev 2011; 12(1):26-36.
17. Felson DT, Zhang Y. An update on the epidemiology of knee and hip osteoarthritis with a view to prevention. Arthritis Rheum 1998;41(8):1343–1355.
18. Di Giuseppe D, Orsini N, Alfredsson L. et al. Cigarette smoking and smoking cessation in relation to risk of rheumatoid arthritis in women. Arthritis Research & Therapy online open access 22 April 2013.
19. Källberg H et al. Concise report: Smoking is a major preventable risk factor for rheumatoid arthritis: estimations of risks after various exposures to cigarette smoke. Annals of the Rheumatic Diseases 2011;70 (3): 508-511.
20. Hui M, Doherty M, Zhang W. Does smoking protect against osteoarthritis? Meta-analysis of observational studies. Ann Rheum Dis doi:10.1136/ard.2010.142323. Published Online First 7 April 2011.
21. Anderson P. Baumberg B.. Alcohol in Europe: a public health perspective. London: Institute of Alcohol Studies. London 2006.
22. Arthritis Research Campaign. Osteoarthritis and Obesity. 2009.
23. Katzmarzyk PT, Gledhill N, Shephard RJ. The economic burden of physical inactivity in Canada. CMAJ. 2000 Nov 28;163(11):1435-40.

Useful links

Health and Safety Executive Musculoskeletal Disorders http://www.hse.gov.uk/MSD/

Musculoskeletal Services Framework
http://www.susanoliver.com/pdf/MSF_Final.pdf

Global Burden of Disease
http://www.healthmetricsandevaluation.org/gbd

Arthritis Research UK
http://www.arthritisresearchuk.org/

Endnotes

1 HSE 2011: Vol 1 | Chapter 4: Diabetes and Hyperglycaemia – Prevalence of doctor-diagnosed diabetes

2 Analysis of Cornwall's 328 Lower Super Output Areas

3 Haffner SM, Lehto S, Ronnemaa T et al. Mortality from coronary heart disease in subjects with type 2 diabetes and in nondiabetic subjects with and without prior myocardial infarction. New England Journal of Medicine 1998;339(4):229–234.

4 The National Institute for Health and Clinical Excellence (NICE), Quality Standard for diabetes in adults, March 2011

5 Emerging Risk Factors Collaboration (2010). Diabetes mellitus, fasting blood glucose concentration, and risk of vascular disease: a collaborative meta-analysis of 102 prospective studies. Lancet 375 (9733); 2215–2222

6 National Diabetes Audit 2010-2011 Report 2 Complications and Mortality

7 National Diabetes Audit 2010-2011 Report 2 Complications and Mortality

8 Lancet (2008). The global challenge of diabetes. The Lancet 371 9626; 1723

D. Cardiovascular disease

Background

Cardiovascular disease encompasses diseases of the heart and blood vessels and includes conditions such as coronary heart disease, stroke and heart failure. Cardiovascular disease is the second largest cause of death in England causing around 29% of all deaths.

Risk factors

Some risk factors that contribute to cardiovascular disease are fixed such as age, ethnicity, and gender, but others relate to lifestyle behaviours. Risk increases with age and the prevalence increases greatly after the age of 40. Men generally have higher risk of cardiovascular disease than women and certain ethnicities such as South Asians have notably higher risk of cardiovascular disease. Behavioural risk factors include smoking, poor diet, high salt intake, physical inactivity and being overweight.

Male cardiovascular disease (CVD) mortality rates in Cornwall and the Isles of Scilly are significantly higher than female CVD mortality rates (193.3 and 124.6 respectively). It is estimated that 21.9% of the population in Cornwall and the Isles of Scilly smoke. This is higher than the estimated proportion in England (20.7%) and South West Coast (20.3%). People with increasing or high risk drinking behaviour is estimated to be 22.8% of the population in Cornwall, which is higher than England (22.3%). It is estimated that 25.0% of the adult population in Cornwall and the Isles of Scilly are classified as obese. This is higher than both England and South West Coast authorities (24.8% and 24.2% respectively).

Prevalence

Statistical modelling suggests that the number of people with cardiovascular diseases in Cornwall and the Isles of Scilly is less than would be expected. For cardiovascular disease, a little over half (51.5%) of the people with the disease in the community are being recorded by GPs. Hypertension, known as the 'silent killer', is estimated to affect 36% of the population in Cornwall and the Isles of Scilly. However, less than half of these, (14.8%) are being recorded by their GPs.

Table 2.9 Observed (GP registered) prevalence in 2011/12 versus estimated prevalence in 2011

Observed (GP registered) prevalence in 2011/12 versus estimated prevalence in 2011			
	Observed	Expected	Undiagnosed
Coronary heart disease (CHD)	4.0%	7.8%	3.8%
Stroke	2.3%	3.3%	1%
Hypertension	14.8%	36%	21.2%

Source: Quality and Outcomes Framework 2011/12 and modelled estimates of prevalence, Eastern regions Public Health Observatory, December 2011

Cornwall and the Isles of Scilly performed significantly worse than England on four CVD indicators which measure quality and standard of care at GPs:

Table 2.10 Quality and Outcomes Framework performance for coronary heart disease

Quality and Outcomes Framework – performance	Cornwall & IoS	England
% CHD patients currently treated with beta blocker	72.5	74.2
% patients with history of myocardial infarction currently treated with ACE inhibitor or angiotensin II antagonist	87.2	91.1
% patients with a current diagnosis of heart failure due to Left Ventricular Dsyfunction (LVD) currently treated with an ACE inhibitor or angiotensin receptor blocker	87.5	89.3
% stroke patients whose cholesterol was 5mmol/l or less	75.2	77.2

Source: Quality and Outcomes Framework 2011/12

Hospitalisation

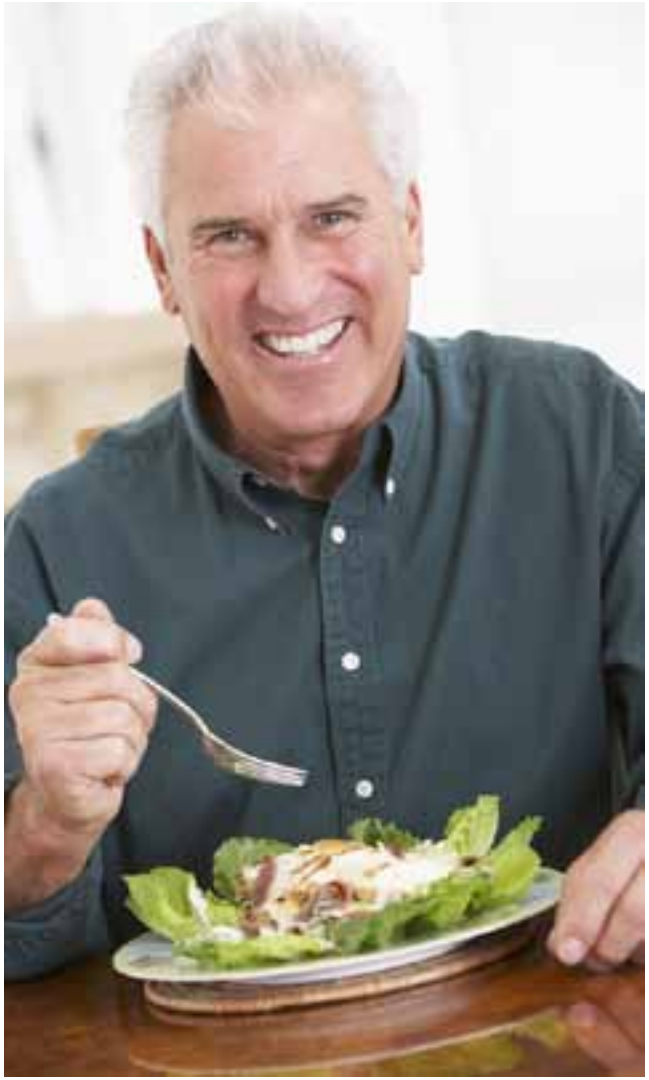
In 2011/12, there were a total of 3,305 hospital emergency admissions in Cornwall and the Isles of Scilly for cardiovascular disease, heart failure and strokes. Emergency admissions rates for coronary heart disease and heart failure were significantly lower than England. However, for stroke, rates were higher than England and significantly higher than South West Coast. Three per cent of people discharged from hospital for stroke are readmitted within 30 days. Readmissions may indicate a range of issues such as unresolved problems at initial discharge, the quality of immediate post-hospital care or a more chronically ill patient.

Table 2.11 Emergency hospital admission rates by event

Emergency hospital admission rates per 100,000			
	Cornwall & IoS	South West	England
Coronary heart disease	184.3	169.1	198.3
Heart failure	49.6	47.7	60.7
Stroke	92.6	82.0	89.5

Source: HES, Health and Social Care Information Centre, ONS

People living in the most deprived areas of Cornwall and the Isles of Scilly had emergency hospitalisation rates 1.6 times higher for CHD and heart failure than those living in the least deprived areas which means action to prevent cardiovascular disease must have a focus on tackling inequalities.



In 2011/12, people with a heart attack (myocardial infarction) had to wait a median time of 121 minutes from time of a call for help to primary angioplasty treatment. This is 8 minutes more than South West and 10 minutes more than England.

Coronary angiography is used to diagnose a number of heart conditions and to help guide treatment. In 2011/12, a total of 2,301 angiography procedures were performed in Cornwall. Most of the procedures were performed on males and on people who live in the most deprived areas of Cornwall and the Isles of Scilly underlining the need to tackle inequalites in outcomes for these higher risk groups.

An angioplasty is a minimally invasive procedure performed under local anaesthetic to open up the narrowed section in the artery. There were 906 angioplasty procedures performed in Cornwall in 2011/12. The procedure rate was 111.8 per 100,000.

This is higher than England (111 per 100,000) and South Coast (103.4 per 100,000). Most of the angioplasty procedures performed in 2011/12 in Cornwall were unplanned (as an emergency) incidating early identification of people at risk or with heart disease and management in primary care is an important focus to reduce the impact of emergency episodes.

A more in depth study on cardiovascular disease is due to be published as part of the JSNA in 2014.

> “In 2011/12, people with a **heart attack** (myocardial infarction) had to wait a median time of **121 minutes** from time of a call for help to primary angioplasty treatment.”


A more in depth study on
cardiovascular disease is due to be
published as part of the **JSNA in 2014**.

Chapter Three

The power of prevention

Preventing problems before they occur is something that it is hard to argue against. How you go about it is a more challenging topic.

In this chapter, two examples of multi-agency working are given, as models for change. One highlights the importance of a cross-cutting issue that is fundamental to our health, wellbeing and happiness – food – and one looks at a targeted population approach to tackle inequalities – families with complex needs.

Importantly, both of these programmes are very focused on the outcomes that they want to achieve. By concentrating on the opportunities and needs in our population and community they deliberately put organisations around the needs of the individual or group rather than viewing issues through specific projects or single objectives.

This is a common theme in recent public sector publications. In late 2013, the Local Government Information Unit published a guide to tracking preventative spend in which it states:

Short-termism, and dealing with problems at the acute end of the spectrum, often leads to poor outcomes for individuals, not to mention huge expense and escalating costs in providing services.

The LGIU identified five common barriers to changing the emphasis on prevention which we need to consider and address in Cornwall and the Isles of Scilly, namely:

1. Culture – a tradition of intervening when an issue has been identified, acting as a safety net
2. Increased demand on acute services – means shifting budgets towards early action is problematic when immediate demand attracts attention
3. Cost pressures – the need for huge savings is cutting into discretionary services
4. Cycle of elective office – a desire to see a return on investment during a term of office versus the longer-term payback of sustainable prevention
5. Lack of clarity about what worthwhile prevention is – the need to link activity across all services and outcomes with a clear understanding of all spending and its impacts.

Similarly, NHS England and Public Health England published A call to action: Commissioning for Prevention in November 2013 to support the NHS and local partners in rising to the challenge of effective prevention. It states that of more than 250 studies on prevention published in 2008*, almost half showed a cost of under £6,400 per quality-adjusted life year and almost 80% cost less than the £30,000 threshold used by the National Institute for Health and Care Excellence (NICE).

It also makes the important point that although some interventions take many years to pay-off, others do not - for example, suicide prevention has an immediate impact, and effective management of atrial fibrillation or hypertension can show results within a couple of years. Smoking cessation programmes can have an impact over the short term when targeted on chronic obstructive pulmonary disease patients at risk of acute admission.

* Van Gills, P.F., Tariq, L., Verschuuren, M. and Van den Berg, M. Cost-effectiveness research on preventive interventions: a survey of the publications in 2008'. European Journal of Public Health, 21, (2), pp. 260–4.

NHS England and Public Health England recognise that prevention is also an important way of tackling the persistent inequalities in life expectancy and healthy life expectancy across England. For example, premature mortality rates are two-and-a-half times greater in the areas with the highest rates compared to the areas with the lowest. There are also legal duties for the NHS to address inequalities in both access to services and in health outcomes. Yet analysis of Primary Care Trust (forerunner to Clinical Commissioning Groups) budgets in 2011/12 suggested only 3 to 4% of expenditure in England was on prevention, including secondary prevention activity**.

Whether on grounds of health need, cost or public expectations the case for developing a wellness rather than solely an illness service is compelling.

Public Health England & NHS England - A call to action: Commissioning for Prevention (Nov 2013)

The two examples given in this chapter – Food and Cornwall and Together for Families – are both means of delivering on the commitments for change given in the Health and Wellbeing Strategy. The learning captured from their implementation will be used to further embed prevention in other programmes under the guidance of our Health and Wellbeing Strategies. Crucially, it will also be used to make better links between programmes so that the needs and aspirations of individuals and communities are at the centre of the way our work is designed, commissioned and evaluated.

“Food and Cornwall and Together for Families – are both means of delivering on the commitments for change given in the Health and Wellbeing Strategy.”

** Butterfield R., Henderson, J. and Scott R. (2009) Public Health and Prevention Expenditure in England - Health England Report No.4. Health England.

A. Systems Leadership for Food

Introduction

In July 2013, Cornwall was chosen as a flagship area to develop its innovative food and Cornwall programme as a national example of good practice.

The 'Systems Leadership Programme' is backed by the Local Government Association, Public Health England and the Department of Health. Together with other partners, they have chosen 30 schemes across the country to take forward projects that can improve different aspects of society.

The aim locally is to create system-wide change through leadership collaboration and development on a 'breakthrough issue' for the benefit of local residents.

In Cornwall, the successful bid is to look together at the economic, environmental and health and wellbeing aspects of food and spread the good work that is already in place.

The importance of food

Key facts about food:

Health

- In Cornwall, 23% of 4-5 year olds and 31% of 10-11 year olds are overweight or obese. More than six out of 10 adults in Cornwall are overweight or obese.
- It is predicted that up to 48% of men and 43% of women will be obese by 2030. Obesity in children and women is linked to socioeconomic status and has a greater impact on poorer communities.
- By 2015, the total annual cost to the NHS in Cornwall and the Isles of Scilly of diseases relating to being overweight and or obese will be an estimated £161million. Wider society costs are much higher.
- Poor diet is estimated to account for a third of all cases of cancer, a third of cases of cardiovascular disease and is a contributing cause of type 2 diabetes.
- In the UK, 18,900 people required hospital treatment for food-borne illness, and 440 died (2007).

Economy

- 63,200 people are employed in the food related sector in Cornwall (more than one in ten).
- The Cornwall Gross Value Added (measure of economic benefit) of the core agri-food industry in 2008 was £574 million and the value of the secondary food industry in 2008 was £441 million.
- The agri-food sector is 2-2.5 times more important for employment in Cornwall as for Great Britain as a whole.
- The UK imports 40% of its annual food requirements (90% of its fruit and 60% of its vegetables)
- For every £1 spent on a local food box scheme, £2.40 was contributed to the local economy whilst only £1.20 was generated from £1 spent at a supermarket.

Social

- UK households spend an average of £36.32 per person per week on food and non-alcoholic drinks. This accounts for 11% of all expenditure for an average household, but nearly 17% for a low-income household.
- Cornish food banks fed 814 people/families in 2011/12 and 1,299 people/families in 2012/13. 1,000 people/families have already received food boxes in the first five months of 2013/2014.

- Low income families have poorer health than the general population. The reasons for this are complex, but diet plays a role.
- An estimated 33% of people (one in three) already grow or intend to grow their own vegetables.

Environment / resources

- In Cornwall it is estimated that about 22% of carbon emissions relate to food production.
- Our current UK food system results in around 40% of food being wasted.
- The average household bins almost 10% of their weekly shop and could save around £50 per month by working to reduce food waste.
- Globally around 870 million people are chronically undernourished whilst an estimated 1.5 billion people are overweight

What do we need to do?

Since the Systems Leadership Award was made effort has been focused on making the most of this opportunity. The initial conversation was between senior leaders from the economic, environment and health and wellbeing sectors to consider how we might take a whole systems approach to 'Food in Cornwall'.

This conversation looked at:

- Shared values
- Celebrating achievements on a map of Cornwall
- Major challenges – economic, environmental, health and wellbeing, ways of working and developing food skills
- Opportunities
- Shared aspirations
- Priority actions including ownership across the group.

The outputs of the workshop included:

- A commitment to work together and as a whole system around 'Food and Cornwall'
- Key priorities identified to focus on over the next six months
- Agreement to wider involvement to take the work forward
- Recognition that in Cornwall there is already much to be proud of and a very strong foundation on which to build. It will be important to celebrate these achievements and ensure they are spread across Cornwall.

The group agreed the major challenges are:

- People not having enough food and too many people being an unhealthy weight
- The benefits of local food and the opportunities for growing our own food individually and in communities
- Identifying and developing skills we need at all levels including preparing food, managing a budget and skills for work
- Responsible use of the land we have for a sustainable future
- Understanding the current food system in Cornwall, its benefits and challenges and how we can create a new system that can better meet people's needs and contribute to a thriving economy and environment and the best of health for the people of Cornwall
- Tackling food waste.

Actions we want to take:

It has been acknowledged that developing a vision for 'Food and Cornwall' will take some time and involve a wider conversation in Cornish communities and beyond. This means starting with questions rather than solutions. However, there are some significant questions that if we work on together in the short term, will move us closer to our longer term aspirations. These are the three priority actions we agreed:

1. A senior leaders conversation between the Local Economic Partnership, the Local Nature Partnership and the Health and Wellbeing Board chairs and Cornwall Council's Cabinet and senior leaders from the voluntary and charitable sectors – a conversation that brings together our different perspectives as a system and works towards a shared system vision and way forward as leaders.
2. Develop a bid for European funding on food and skills.
3. Tackle food poverty and create food wealth so that no one in Cornwall is hungry.

A development group of key people from many sectors of the community has been set up to deliver these actions.

Encouragingly, a Local Government Association peer review of Health and Wellbeing in Cornwall and the Isles of Scilly in 2013 identified the Food in Cornwall project as an example of good practice in public health leadership and partnership working.

> "Food is a fundamental part of the fabric of our society and securing national support to help lead us through this project is a significant opportunity for positive change."

Conclusions and recommendations

Food is a fundamental part of the fabric of our society and securing national support to help lead us through this project is a significant opportunity for positive change.

It is important that effort moves out of the relatively small circle of the Project Steering Group and Development Group and becomes something alive in communities across Cornwall. The aim must be for a united social movement embracing the many ways in which food can be a force for better outcomes for our environment, economy and health and wellbeing.

Encouraging participation among a wide range of individuals and groups is the responsibility of community leaders and agencies and has the potential to deliver great and lasting improvements to the public's health.

The learning from the Food and Cornwall Systems Leadership Programme will be started with the Isles of Scilly as well as nationally.

B. Together for families

Introduction

The Troubled Families Programme (renamed Together for Families in Cornwall) began following a commitment from the Prime Minister to 'turn round the lives of Britain's 120,000 troubled families'. The Government uses the term 'troubled families' to describe "those that have problems and cause problems to the community around them, putting high costs on the public sector." This is a cross-government agenda which is led by the Department of Communities and Local Government (DCLG).

The programme

The primary aim of the Together for Families programme is to go out and work with families, empowering and challenging them to reduce their vulnerability and positively change patterns of behaviour in order to improve their lives and those of their children, and have a positive impact on the wider community. The key difference of this to any other approach is that it is a **whole family approach** that seeks to work with families as entities rather than a range of different uncoordinated interventions for each family member as an individual with little regard for the impact upon others or the inter-relationships between them.

Families must meet two or more of the **national criteria**:

- Child(ren) persistently absent from school/ permanently excluded from school, educated in a Pupil Referral Unit or by alternative provision or where an 'equivalent level of concern' exists. Involved in youth crime or any type of anti-social behaviour.
- Recent, current or pending Acceptable Behaviour Contract (ABC) or Anti- Social Behaviour Order (ASBO) for a family member; young person in the criminal justice system.
- Adult receiving an out of work benefit during the preceding 12 months.

Where only two national criteria are met, at least one of the following local criteria must also apply;

- Alcohol and/or drug problems
- Mental health problems
- Domestic Abuse
- Housing problems including risk of eviction
- Non take up of two or three year old childcare funding.

Importantly, from a public health perspective, the families meeting the criteria for this programme also match the profile for the extreme end of health inequalities. The patterns of behaviour may often be symptoms of years or even inter-generational cycles of unmet needs, poorer life-chances and environments that do not support good health and wellbeing. A comprehensive programme that seeks to rebalance these factors creates a much better chance of sustainable change as it addresses the fundamental determinants of health and wellbeing, including income, education and aspiration.

Together for Families in Cornwall sets out to identify and engage with the estimated 1,270 families who should benefit and support them in achieving the following core objectives;

> "The primary aim of the Together for Families programme is to go out and work with families, empowering and challenging them to reduce their vulnerability and positively change patterns of behaviour..."

- Get adults into work or progress onto a work programme
- Increase school attendance and reduce exclusion rates
- Reduce crime and anti-social behaviour
- Reduce costs to the public purse over time.

725 families have subsequently been identified that meet some or all of the criteria for a Troubled Family. The programme has now been extended to 2015/16.

What support is available?

A single family plan is drawn up with Troubled Families Advocates to bring together all of the plans for family members into one that describes the outcomes sought for the family.

With Paragon Concord managing the programme, alongside Cornwall Council other key organisations involved include Real Ideas Organisation (RIO), Lizard Pathways (a service of Cornwall Development Company), Penwith Community Development Trust (PCDT), ReZolve, Volunteer Cornwall, Pentreath and Cornwall Foundation of Promise and the network is expected to grow.

Together for Families is complemented by Cornwall Works with Families, which seeks to support 5,000 workless families with complex issues in Cornwall and the Isles of Scilly over the next three years.

Cornwall Works with Families targets the whole family with 12 months of support delivered by a variety of specialist organisations. It tackles barriers to work which can include alcohol and drug problems; reading and writing difficulties; health; housing and financial issues; or simply a lack of training or confidence.

The European Social Fund Convergence investment in Cornwall Works with Families includes specific local eligibility for workless veterans and their families, and workless people affected by family breakdown.

How is the programme run?

The programme reports to the Children's Trust Board on a quarterly basis and is overseen by a multi agency management group that meets monthly. The management group is chaired by a Police Superintendant and has representatives from Public Health, Communtiy Safety, JobCentrePlus, Housing, Police, Anti-social Behaviour Teams, voluntary and community sector and schools.

A range of commissioned services have been established to engage with eligible families. These include Action for Children's Family Intervention Project (FIP) and the 'Breaking the Cycle' programme for families affected by alcohol and drug problems, delivered by Addaction.

The Together for Families Advocate role is a new position developed to support the delivery of the programme in Cornwall. Thirteen people have been seconded from a range of multi-agency partners to create a wide ranging and skilled team. Their role is to act as localised coordinators, facilitating programme delivery and providing key information to relevant partners. This will include disseminating general programme information, raising awareness of the available services and sharing detailed and sensitive information with identified key workers on eligible families in accordance with information security procedures.

What difference does it make?

One person benefiting from this initiative already is Mr Wilson (not his real name), who was referred to the Real Ideas Organisation (RIO) via a family support worker and health visitor. Mr Wilson has two daughters, aged one and three, and both he and his partner are 22, unemployed and live in a small two bed flat.

Mr Wilson said he has ambitions to become an engineer and get off benefits, "so the family can become self sufficient in the long term."

RIO aimed to help Mr Wilson tackle the massive challenges involved with having two children at such a young age and low income. He chose courses on self employment, work experience and money management. The self employment course has already given him some insight into business practices and to make him think about future possibilities. Falmouth Marine Engineers are looking at the possibility of a work placement in the port area and Mr Wilson has also started an Access Course in Science at Truro and Penwith College.

Latest performance

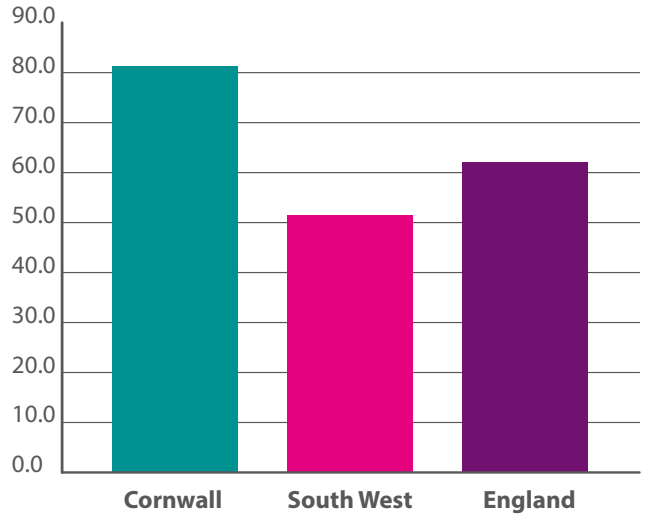
The latest published national comparisons from Payment By Results returns (July 2013) identifies a high proportion both of families engaged and those reaching a turnaround position.

Table 3.1: Total number of Families

	Total number of Families	Number of families identified as at the end of June 2013	Number of families worked with as at the end of June 2013	Total number of families turned around as at the end of July 2013
Cornwall	1,270	725	586	165
South West	9,770	7,377	3,783	1,243
England	118,080	80,010	49,978	13,997

Source: Centre for Economic & Social Inclusion, Social Inclusion Toolkit

Figure 3.1: Proportion of families worked with (based on those identified)

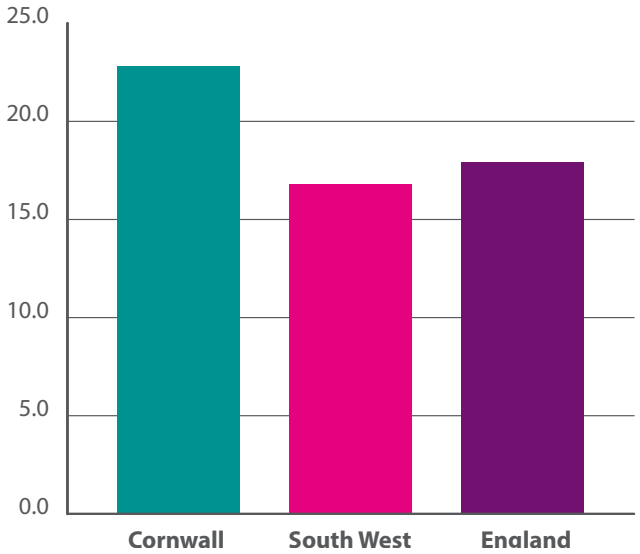


Source: Centre for Economic & Social Inclusion, Social Inclusion Toolkit

Together for Families has seen a **60% reduction** in **anti-social behaviour** across the family in the last six months

The graph below shows the proportion of 'turn around' families achieved as a percentage of all families that have been identified so far.

Figure 3.2: Proportion of families turned around (based on those worked with)



Source: Centre for Economic & Social Inclusion, Social Inclusion Toolkit

Examples of the Together for Families positive outcomes in Cornwall include;

- An improvement in overall school attendance i.e. fewer than three fixed exclusions or less than 15% unauthorised absence in the last three school terms (12 months)
- A 60% reduction in anti-social behaviour across the family in the last six months
- Offending rates by all minors in the family reduced by at least 30% in the last six months
- One adult in the family achieving a 'progress to work' by volunteering for the Work Programme or attaching to ESF provision in the last six months

Or

- Moving off out-of-work benefits into continuous employment in the last six months.

Together for Families has seen **offending rates** by all minors in the family **reduced** by at least **30%** in the last six months.

An example intervention: Breaking the cycle for families where parents have alcohol and/ or drug problems

Dependent children are especially affected by parental use

- Differently at different ages.
- A parent's ability to rear, protect and care for their children, may be greatly diminished by problem use of drugs and / or alcohol.
- Being preoccupied about drug supplies can compromise parents' abilities to be consistent and emotionally responsive to their children's needs.

What level of need is there in Cornwall?

Two datasets were compared – adults in treatment that are living with a child or children (National Drug Treatment Monitoring System - NDTMS) and parental disclosures of substance use problems to the 2011 Health Visitor Audit (HVA)[1].

- 28% of adults in drug treatment were living with a child.
- A further 18% of drug users are parents but not living with their children.
- Health Visitor Audit (HVA) in 2011 found in 3% of families one or both parents disclosed a problem with drugs.
- 4% of families with children under 3 years of age, one or both parents disclosed a problem with alcohol.
- Estimate of around 700 families with young children where there may be a recognised problem with parental drug use.
- 800 families where there may be a recognised problem with parental alcohol use (some families may have problems with both).
- Pockets where the proportion of parents who disclose drug use is over 15%.

Complex needs

The Cornwall Complex Families Index methodology has been used with treatment data (parents accessing specialist treatment services) to identify areas that may need more focus in terms of accessible treatment options for parents.

Developed in 2011 to inform drug treatment needs assessment processes, the index is a combined small area measure that identifies areas that are most likely to experience co-morbidity of domestic abuse with parental drug use and mental health issues.

Information on parental substance use was compared with:

- Police recorded domestic abuse
- Mental ill health prevalence data

This identified geographical areas in Cornwall where there may be concentrations of families with multiple, inter-related issues of drugs, alcohol, mental ill health and domestic violence that require a multi-agency approach. It also found:

- A strong positive correlation between mental health disorders and domestic abuse incidents where the child is resident.
- There is also a significant relationship between substance misusing parents and mental health disorders.
- The relationship between drug misusing parents and domestic abuse incidents is also significant.

Further, in the 2008 Young Carers Assessment 30% reported that they were carers for people with alcohol/drug problems and mental health problems. The Breaking the Cycle programme started in 2009 to meet the needs of families with a young carer affected by parental alcohol and drug problems.

1 It should be noted that the HVA surveyed only families with children aged 3 years and under so is likely to be a significant underestimate

It has since expanded to work with any family affected by alcohol and drug problems, such as those where there are childcare and safeguarding concerns, those affected jointly with mental ill health or domestic violence and those identified within the Together for Families programme.

The programme

A 'whole family' approach with a single family care plan, Breaking the Cycle family workers:

- Develop packages of care tailored to individual families and their specific needs
- Deliver accredited parenting and family programmes
- Advocate on the family's behalf to ensure they receive the services they need outside of alcohol and drug treatment
- Work with different agencies to deliver a co-ordinated approach for families, providing flexible support and increased care during specific periods, such as when one family member is entering treatment for detoxification, to maximise the positive outcomes possible.
- Provide family focused drug and alcohol training packages and specialist drugs and alcohol support to other professionals working with families affected by alcohol and drug problems, such as the Multi Agency Referral Unit.

Outcomes

A much higher number stopped using drugs and completed treatment successfully than those in treatment individually but not on the Breaking the Cycle family programme (87% by comparison with 54%).

- 88% improved their parenting skills.
- 95% improved their housing.
- 95% improved their education or employment status.
- 100% improved family functioning and learned to prioritise their children.

The programme is being evaluated by the University of Warwickshire as part of a Social Return on Investment project over the next two years.

Case study: Family A

Within this family, two children were in foster care, while a third child had recently returned from a secure unit (with a history of alcohol and drug problems as well as mental ill health and offending behaviour). A fourth child (adult) was living in the community with their partner.

The mother was placed in residential rehabilitation for 12 weeks as part of her drug treatment recovery programme. Reach Out, Breaking the Cycle, YZUP and the Children In Care Team worked together to jointly address the complex needs of this family.

Breaking the Cycle brought together all members of the family for daytime family work at weekends whilst the mother was in residential treatment. This helped them all to learn new skills in keeping the family together on her discharge, and to facilitate caring and effective parenting.

The young person who has been discharged from the secure unit also engaged with the YZUP young peoples service. They continue to work with the family since the mother left treatment in order to sustain the gains made and introduce a structure to family life, including getting children to school and the mother into employment.

Breaking the Cycle also tackled practical issues including the lack of beds in the house or a table to eat off and were able to help find suitable replacements. Six months after a staged withdrawal from the programme, the outcomes continue to be sustained including school attendance, employment, drug free, engaged caring and effective parenting, and no antisocial behaviour or reoffending. The family has attended a follow up weekend together with other families from the programme to share their stories and progress and give each other support.

Chapter Four

Everyday public health

Public health is at the heart of the community through many different aspects of everyday life. This is reflected in the ambitions of the Cornwall and the Isles of Scilly Health and Wellbeing strategies that identify the following priorities:

Cornwall Health and Wellbeing Strategy priorities:

Preventative measures: helping people to live longer, happier, healthier lives:

1. Healthy weights and diet – capitalising on the local food economy
2. Active people and environments
3. Alcohol and substance misuse and domestic abuse
4. Smoke free communities.

Improving the quality of life:

1. Improved support for people with long term conditions
2. Improved support for carers
3. Support for independent living
4. Improve support for community social networks.

Reducing inequalities – fairer life chances for all:

1. Improve access to secure, safe and warm homes
2. Improve skills, education and employment
3. Improve the availability of information, advice and support
4. Healthier children and families.

Isles of Scilly Health and Wellbeing Strategy priorities:

Residents of the Isles of Scilly:

1. Have equitable access to health and wellbeing services
2. Have access to appropriate services to promote responsible levels of alcohol consumption and smoking cessation
3. Are supported to live independent and fulfilled lives to self-manage their conditions and to participate in preventative health measures
4. Have access to mental health services.

The national Public Health Outcomes Framework provides a range of key indicators to support the delivery of these ambitions. Progress against each of these indicators for each local authority is published quarterly (although the amount of data published for the Isles of Scilly is limited due to the small numbers of people involved in some indicators).

To provide more localised information, a series of one-page summaries of local progress against each indicator has been published on the Cornwall Council website. The indicator on the next page is an example one-page summary.

In 2014, a graphic of a representative community will be developed which can be explored to show each of the 66 public health outcome indicators to help demonstrate their relevance in our daily lives.

Public Health Outcomes Framework: Domain 1 – Determinants of Health Children in Poverty

Indicator	1.01 – Children in Poverty
Data source	National level: Households Below Average Income data, DWP, based on the Family Resources Survey Local Authority level: Data derived from a combination of population data from ONS, tax credit data from HMRC and benefit data from DWP
Linked indicators	1.02 – School readiness 1.17 – Fuel poverty 2.05 – Child development at 2-2.5 years 2.06 – Excess weight in children 2.07 – Hospital admissions from unintentional and deliberate injury 3.03 – Population vaccination coverage 4.01 – Infant mortality 4.02 – Tooth decay in children aged 5

Why is it important?	Child poverty is an important issue for public health. Inclusion of this indicator emphasises its importance. There is evidence that childhood poverty leads to premature mortality and poor health outcomes for adults (see the Marmot Review, 2010). Reducing the numbers of children who experience poverty should improve these adult health outcomes and increase healthy life expectancy
Latest Cornwall and England data	Cornwall : 18.1% children living in poverty England: 20.6% children living in poverty (Both figures for 2011)
Evidence about what works	NICE guidance (PH 19): Managing long-term sickness and incapacity for work NICE guidance (PH 40): Social and emotional wellbeing: early years
Policy	"A New Approach to Child Poverty: Tackling the Causes of Disadvantage and Transforming Families" http://www.dwp.gov.uk/policy/child-poverty/ "Fair Society Healthy Lives" (The Marmot Review) http://www.instituteofhealthequity.org

> "Public health is at the heart of the community through many different aspects of everyday life."

Brief overview of local activity	Local Authority responsibilities include: Child poverty Housing Children and young people's services Inequalities continue to exist for children and young people living in areas of highest poverty. Understanding geographical variations is important for service delivery. We know that responses to child poverty need to be undertaken in the collective context of child, family, home and community. A Child Poverty Strategy is being developed to respond to these issues. Alongside this the Together for Families programme has been introduced. The main outcomes are based around getting children back to school, reduced criminal and anti-social behaviour, getting parents on the road back to work and reduced costs to the taxpayer and local authorities. Another programme, Cornwall Works with Families (CWF) helps families with adults not working.
Useful links	Healthy Schools Cornwall: http://www.cornwallhealthyschools.org/ Health Promotion Service: http://www.healthpromcornwall.org/ Bernardo's: Briefing and campaigns Joseph Rowntree Foundation: Child Poverty in the UK Save the Children: Child Poverty Cornwall Works with Families www.inspiringwork.org

More information on this indicator: www.phoutcomes.info

Public Health Contact: boneill@cornwall.gov.uk

Taking a life course approach: a focus on children

As well as looking at individual indicators, it is also important to link indicators as they impact on people's everyday lives. Reviewing different life stages can provide a more rounded view of what determines health and wellbeing and where the opportunities are to support people to make positive changes.

The image below is a simple representation of how different influences can change during the course of our life and the need to respond in different ways to these opportunities and challenges.

We can see that typically at each stage of our life (running along the bottom of the graph) the strength of different influences changes and we should work within that context to help people achieve the best possible quality of life across their whole life.

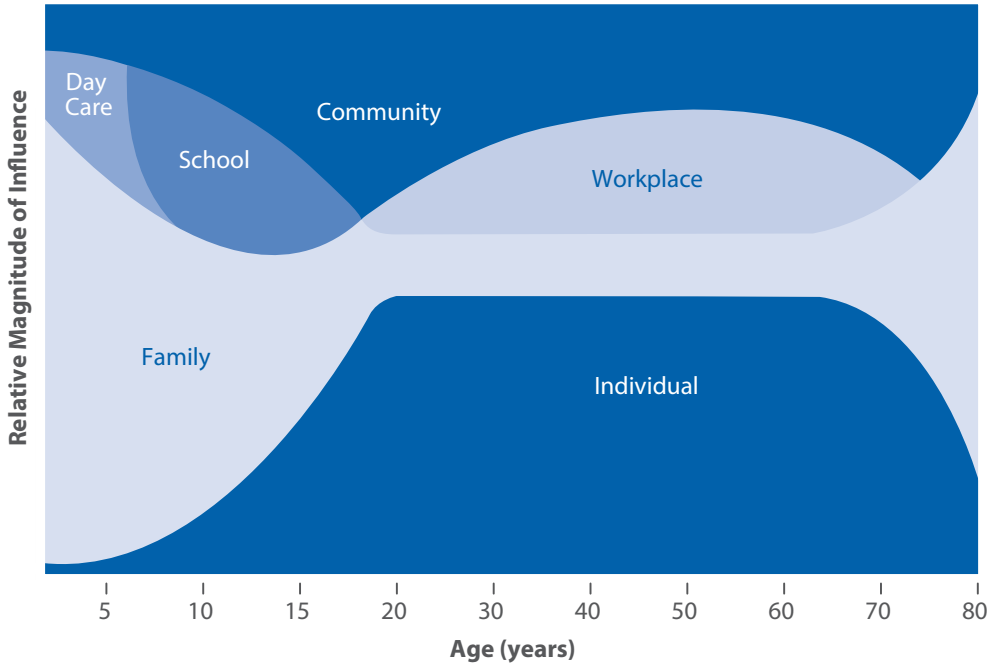
Childhood is particularly important for public health action because of the potential to influence the rest of our lives. This was shown in the Marmot Review of health inequalities which identified seven strategic actions to reduce the gap between those with the best and those with the poorest health, but was clear that the highest priority recommendation was to give every child the best start in life.

The importance of investing in the health and wellbeing of our children was also brought into focus by the Chief Medical Officer's Annual Report (2012) called Our Children Deserve Better: Prevention Pays. It provides an assessment of the state of children's health and provides advice to the government on where action is required.

The report sets out the Chief Medical Officer's response to the challenges to the health and wellbeing of our children and young people. The report particularly focuses on whether we are giving children and young people a good start and building their resilience for a number of reasons:

- The evidence for the life-course approach is strong. What happens early in life affects health and wellbeing later in life. There is increasing evidence that we are not doing as well as we should to achieve good health and wellbeing outcomes.
- The variation we see within our country shows us what good looks like and what is possible: we know we can do better.

Figure 4.1: Key influences across the life course



Source – Healthier Herts: A Public Health Strategy for Hertfordshire (2013-17)

The Chief Medical Officer has chosen to look at the evidence using a life-course approach and makes recommendations under themes, ensuring that early action happens. Recommendations fall broadly into three types: the voice of children and young people; building services and joining services; and the economic case for a shift to prevention.

For example, by looking at two disease areas, mental ill health and neurological disabilities, key themes emerge around the importance of data, service provision and prevention. A focus on looked-after children and youth justice reveals themes around the importance of early life determinants such as parenting and the inequalities that exist in child health.

The review of the evidence identifies that children and young people in England experience high morbidity (poor health), mortality and inequality. In the UK the equivalent of 132,874 excess person years of life are lost per year in the UK when our mortality is compared to the best performer – Sweden.

As an example of morbidity, fewer of those under 25 years with type 1 diabetes in England and Wales have good diabetes control compared to their peers in other countries. One example of inequality is that there would be a 59% potential reduction in psychological and behavioural problems in children and young people with conduct disorders if all children had the same risk as the most socially advantaged.

The most challenging question is why we fare worse than other similar countries.

Many of the Chief Medical Officer's recommendations, detailed on the following pages, are organisational; developing a revitalised evidence base, and supporting programmes for actions that reinforce health enhancing behaviour and early intervention to reduce inequalities experienced by children, whilst safeguarding and promoting their potential.

"The review of the evidence identifies that children and young people in England experience high morbidity (poor health), mortality and inequality."

Recommendations

We should map ourselves against this picture of children's health, across all local services in Cornwall and the Isles of Scilly. This will help us to understand our contribution to the 24 recommendations and embrace through collaborative working the opportunity to improve outcomes for our children and young people.

Recommendations	Rationale
1. Cabinet Office supported by Public Health England, and the Children's Commissioner, should consider initiating an annual National Children's Week.	
2. Public Health England in collaboration with the Early Intervention Foundation should assess the progress on early intervention and prevention, continue to develop and disseminate the evidence base for why this matters and build advice on how health agencies can be part of local efforts to move from a reactive to a proactive approach.	• Early Intervention – more investment of research into psychology, sociology and biology. • Events that occur in early life affect health and wellbeing in later life. • Acting early is underpinned by sound science and sound finance. Children and young people are most at risk for poverty and social exclusion. • Drive to recruit health visitors and increase their numbers and to transform their profession.
3. Public Health England, working with Directors of Public Health and Health and Wellbeing Boards, should support the work of the Big Lottery Fund programmes and ensure that the lessons learnt are disseminated.	• Big Lottery Fund's "A Better Start" programme – improves the life chances of children in their first years by investing £165 million for up to 10 years. • A new investment from the Big Lottery – to increase the resilience of young adolescents and prevent the onset of mental disorders.
4. Public Health England should undertake a Healthy Child Programme evidence refresh, starting with the early years.	• Links between the Healthy Child Programme and public health outcomes indicators and Maternal Health Intelligence Network.

> "The most challenging question is why we fare worse than other similar countries."

Recommendations	Rationale
5. Public Health England should work with local authorities, schools and relevant agencies to build on current efforts to increase participation in physical activity and promote evidence based innovative solutions that lead to improved access to existing sports facilities.	• Local authorities and schools develop innovative approaches to widening access to their sports facilities in order to allow children and young people to exercise more easily.
6. Nutrition	• CMO recommends that NICE examines the cost-effectiveness of moving the Healthy Start vitamin programme from a targeted to a universal offering. • Department of Health to set out next steps in the light of evidence from the Scientific Advisory Committee on Nutrition (SACN) about folic acid. • Action is taken if required on iodine following recommendations by SACN.
7. The Social Mobility and Child Poverty Commission and Public Health England should work together to ensure that efforts to narrow attainment gaps in education complement efforts being made to narrow health inequalities.	
8. Public Health England should work with NHS England, the Department for Communities and Local Government, and the Department of Health to identify how the health needs of families are met through the Troubled Families Programme.	
9. The Department of Health, NHS England and Public Health England, alongside representatives of children and young people, should build on the You're Welcome programme and the vision outlined in the recent pledge for better health outcomes for children and young people: this is to create a 'health deal', which outlines the compact between children and young people and health providers, and creates a mechanism for assessing the implementation of this.	• To clearly identify what is expected of health organisations and how best they engage with healthcare. • Engagement of children and young people in the processes at local levels.

Recommendations	Rationale
10. Children with long-term conditions, as vulnerable people, should have a named GP who co-ordinates their disease management.	• Re-engineer professional relationships that can address the challenge of the current burden of disease such as long-term conditions.
11. As plans are made to extend GP training, paediatrics and child health should be part of the core component of extended training.	• Certain groups of children would benefit from this training such as those with long-term conditions like diabetes and mental health disorders.
12. Health Education England should commission education to ensure that the workforce is training to deliver care that is appropriate for children and young people, in the same manner as is being currently carried out for age-appropriate care for older people.	• To help children and young people navigate the complex health and care system.
13. Health Education England, the Department of Health and Public Health England should work to ensure that commissioning education of health professionals stresses the important role of school nurses.	• Health promotion and co-ordinating health and wellbeing services in schools.

Recommendations	Rationale
14. PHE should develop and enact a youth social marketing programme, "Rise Above" to engage young people around exploratory behaviours through multiple platforms.	• Cornwall and the Isles of Scilly has been chosen as a pilot site by PHE to develop this programme 'Rise Above Cornwall' to be launched in September 2014.
15. PHE and other leading organisations working in the field should work together to strengthen the evidence base for programmes that develop resilience in young people.	• Young people to mount successful responses against life's challenges. Exposing young people to low doses of challenges, in safe and supported environments strengthens their ability to act effectively later in life. • Evidence supports that schools and local authorities can successfully stand in.
16. PHE should develop an adolescent health and wellbeing framework which includes the inter-relationships of exploratory behaviours. As part of their public-facing work, PHE should model engagement with young people on multiple health and wellbeing issues through a variety of platforms.	

Recommendations	Rationale
17. PHE, the PSHE Association and other leading organisations in the field should review the evidence linking health and wellbeing with educational attainment, and from that promote models of good practice for educational establishments to use.	• School Food Plan and the offer of extended free school meals are examples of practice changing for potential benefits to educational attainments and wellbeing.
18. The Children and Young People's Health Outcomes Forum annual summit should provide an opportunity for the review of health outcomes that are relevant to children, and to examine regional variation.	• Identifies key indicators for child health and wellbeing. • Annual summit is an important mechanism to ensure progress.
19. Regulators, including the CQC and Ofsted, should annually review the effectiveness of inspection frameworks and the extent to which they evaluate the contribution of all partners to services for children and young people. This includes the contribution of statutory partners, local safeguarding boards and health and wellbeing boards to the health and protection needs of children and young people.	• To ensure that children and young people, particularly those with additional needs, do not fall between the gaps. • Case-tracking methodology to highlight issues faced by families.
20. The review of 'Safeguarding children and young people: roles and competences for health care staff – intercollegiate document' should embed the professional responsibility to the whole family, and professional bodies should develop the necessary innovative tools to support this.	
21. The DoH should work with Office for National Statistics, PHE and relevant third sector organisations to investigate opportunities to commission a regular survey to identify the current prevalence of mental health problems among children and young people, with particular reference to those with underlying neurodevelopmental issues, those aged under 5, ethnic minorities and those in the youth justice system.	• This data collection should include international comparisons and be linking to the Child and Adolescent Mental Health Services data set, providing key data for developing local services to meet clinical need. • An annual audit of services and expenditure in the area should be undertaken • Trial health and wellbeing local level survey for children and young people • CAMHS services face pressure and cuts as part of their budget is from local authorities who have budgetary restraints.

Recommendations	Rationale
22. The National Institute for Health Research should develop a research call to provide the evidence base to improve health outcomes for long-term conditions in childhood, to match the best worldwide.	
23. The NIHR Clinical Research Network, including the NIHR Medicines for Children Network, should work with children and young people to input to the design of clinical studies in order to facilitate increased participation of children and young people in drug and other trials.	
24. The four UK Chief Medical Offices have agreed that the Chief Medical Officer in Northern Ireland, Dr Michael McBride, will lead a group with the four public health agencies and the Royal Society for the Prevention of Accidents (RoSPA) to develop strategies to combat blind cord deaths.	

Immunisation of children against infectious disease

Protecting children against the risks associated with infectious disease is one of our primary duties. This review of current activity and performance sets out how we will take action in this area.

It is important to recognise that immunisation is one of the greatest breakthroughs in modern medicine. Due to vaccinations (the process of achieving immunisation), we no longer see smallpox, and poliomyelitis is heading towards eradication.

The primary aim of immunisation is to protect the individual who receives the vaccine. Vaccinated individuals are also less likely to be a source of infection to others. This reduces the risk of individuals not immunised being exposed to infection which means that individuals who cannot be vaccinated will still benefit from the routine immunisation programme.

No other medical intervention has done more to save lives and improve quality of life. Vaccines are thoroughly tested for safety before they're made routinely available and each vaccine's safety is continually monitored even after it's been made available.

The immunisation programme in the UK continues to evolve, meeting the demand to improve the control of infectious diseases through vaccination.

Figure 4.2: Immunisation reported at age 1, 2 and 5 years

Percentage of children immunised by their 1st birthday,	Q12-3 Oct-Dec 2012	Q12-4 - Jan - Mar 2013	Q13-1 - April-Jun 2013	Q13-2 - Jul- Sept 2013	Q2 Southwest	Q2 England
DTaP/IPV/Hib%	95.0	95.4	94.2	94.2	95.9	94.3
MenC2%	94.6	95.1	94.2	93.2	94.7	93.1
PCV2%	95.2	95.3	94.2	94.0	95.8	94.3
Percentage of children immunised by their 2nd birthday						
DTaP/IPV/Hib%	95.9	96.6	96.8	96.9	97.5	96.3
MenC%	94.7	95.5				
Hib/MenC%	93.0	95.5	91.8	93.5	93.1	92.7
PCV Booster%	92.1	96.9	92.4	93.6	94.4	92.7
MMR%	92.5	92.7	91.8	94.0	94.1	92.7
Percentage of children immunised by their 5th birthday						
DT/Pol Primary	97.2	97.1	97.1	96.7	97.0	95.9
Hib	96.8	97.0				
Men C Primary	94.6	94.2				
MMR 1st dose	95.7	95.5	95.2	95.7	95.3	94.3
MMR 2nd dose	90.9	89.9	91.4	90.8	90.0	88.5
DTAP/IPV booster	93.3	91.9	93.3	92.5	91.5	89.0
Hib/Men C booster	93.0	92.3	92.8	94.1	93.3	92.3
PCV	89.7	90.1				

Source: Health and Social Care Information Centre

Immunisation uptake rates are reported at **12, 24 and 60 months of age**.

Immunisation uptake rates are reported at 12, 24 and 60 months of age. The data displayed in figure 4.2 relates to the last four quarterly reports for Cornwall and the Isles of Scilly and compares the latest quarter with the Southwest and England average for comparison. The uptake rates have been coded to identify where rates have reached the 95% uptake rate that we strive for (green) and levels where it is important to take further action to improve uptake, i.e. below 90% (red).

Across Cornwall and the Isles of Scilly for all these immunisations we achieve generally higher rates than England and compare well with the Southwest average. We also compare well with our statistical neighbours of Devon and Somerset but have more work to do to achieve levels enjoyed in Cumbria who have achieved above 95% across this picture and indeed have achieved above 98% uptake at 12 months for the latest quarter reported.

One notable result which should be celebrated is that we are now achieving above 95% for the 1st dose of MMR by the age of 5 years. This figure is important given the emergence of measles outbreaks in the last year across the country and represents hard work on the part of everyone in supporting parents with evidence and advice since MMR's adverse publicity in the early part of this century.

There was some controversy about whether the MMR vaccine might cause autism, following a study published in 1998 by Dr Andrew Wakefield. In his paper published in the Lancet, Dr Wakefield claimed a link between the MMR vaccine and autism or bowel disease. However, this work has since been completely discredited. Subsequent studies during the last eight years have found no link between the MMR vaccine and autism or bowel disease. This has resulted in renewed and well placed confidence in the vaccine.

Immunisation rates for looked after children are high; Cornwall and the Isles of Scilly's team report that 91.3% of children and young people are up to date with their immunisation programmes compared to 83.2% for England (year 2012/13).

Further work is required in dissecting the picture for Cornwall and the Isles of Scilly, understanding the variation in uptake and identifying areas where we do less well. From this we should develop a plan on how to work with colleagues across the range of organisations e.g. health and local authority, to improve rates and give a level of protection against infectious disease that children should enjoy.

Three doses of vaccine are required to gain immunisation for some strains of HPV (human papilloma virus) which is offered to girls in year 8 to protect against some causes of cervical cancer. Here we do less well with an uptake of 75.5% for the first dose, 72.4% for dose 2 and only 63.6% for the third dose. This compares with 81.5% for the Southwest and 86.1% for England (2012-13) for the third dose. The programme in Cornwall and the Isles of Scilly initially outperformed the national programme but has not continued to do so. When the programme commenced there was no schools-based service available or one that could be procured and a service through primary care was commissioned. The HPV vaccination programme in Cornwall and the Isles of Scilly is under review, and plans are in place to move to a school-based system to increase the level of uptake. This will be re-procured with changes due to start in autumn 2014 .

The national immunisation programme

A number of changes to the national immunisation programme have been made during 2013-14 to reflect the planned and phased implementation of a series of recommendations by the Joint Committee on Vaccination and Immunisation (JCVI) to improve the overall level of protection against preventable diseases.

Meningitis C

From June 2013, changes were introduced to the current schedule for administering the Men C conjugate vaccine. The second priming dose previously given at four months was replaced by a booster dose given in adolescence. The initial change was to cease giving the four month dose from 1 June 2013 and included now in a programme for young people from January 2014. Further development will involve moving forward the final immunisation for tetanus, diphtheria and polio, usually offered in year 10, to year 9 and take opportunity to give the new Men C booster at the same time.

Rotavirus

From July 2013 a vaccine was introduced to protect babies against rotavirus. Rotavirus is a very common and potentially serious large bowel infection of

young babies. The vaccine is now offered routinely to all babies at the age of two months and again at three months (that is, two doses, four weeks apart) when they attend for their first and second routine childhood immunisations.

Childhood Flu

The existing flu immunisation programme will be extended over a number of years to include all children aged two to 16 inclusive. In autumn 2013, immunisation was offered in Cornwall and the Isles of Scilly to a limited age range of pre-school-aged children, those aged 2 and 3 years. The next phase of this plan is to look at extending this to include those aged 12, 13 and 14 years; work is ongoing with Public Health England and NHS England to determine the way forward in delivering this promise.

Following the recommended changes agreed with the JCVI, the current childhood programme has been identified in figure 4.3.

The full immunisation programme checklist across all ages can be found on NHS Choices

Figure 4.3: Routine Childhood Immunisation Programme from June 2013

When to Immunise	Diseases protected against	Vaccine given	Immunisation site**
Two months old	Diphtheria, tetanus, pertussis, polio and *Haemophilus influenzae* type b (Hib)	DTaP/IPV/Hib (Pediacel)	Thigh
	Pneumococcal disease	PCV (Prevenar 13)	Thigh
	Rotavirus (from July)	Rotavirus (Rotarix)	By mouth
Three months old	Diphtheria, tetanus, pertussis, polio and Hib	DTaP/IPV/Hib (Pediacel)	Thigh
	Meningococcal group C disease (MenC)	Men C (NeisVac-C or Menjugate)	Thigh
	Rotavirus (from July)	Rotavirus (Rotarix)	By mouth
Four months old	Diphtheria, tetanus, pertussis, polio and Hib	DTaP/IPV/Hib (Pediacel)	Thigh
	Pneumococcal disease	PCV (Prevenar 13)	Thigh
Between 12 and 13 months old – within a month of the first birthday	Hib/MenC	Hib/MenC (Menitorix)	Upper arm/thigh
	Pneumococcal disease	PCV (Prevenar 13)	Upper arm/thigh
	Measles, mumps and rubella (German measles)	MMR (Priorix or MMR VaxPRO)	Upper arm/thigh
Three years four months old or soon after	Diphtheria, tetanus, pertussis and polio	dTaP/IPV (Repevax) or DTaP/IPV (Infanrix-IPV)	Upper arm
	Measles, mumps and rubella	MMR (Priorix or MMR VaxPRO) (check first dose has been given)	Upper arm
Girls aged 12 to 13 years old	Cervical cancer caused by human papillomavirus types 16 and 18 (and genital warts caused by types 6 and 11)	HPV (Gardasil)	Upper arm
Around 14 years old	Tetanus, diphtheria and polio	Td/IPV (Revaxis), and check MMR status	Upper arm
	MenC†	MenC (Meningitec, Menjugate or NeisVac-C)††	Upper arm

** Where two or more injections are required at once, these should ideally be given in different limbs. Where this is not possible, injections in the same limb should be given 2.5cm apart. For more details see Chapters 4 and 11 in the Green Book.
† This vaccination will be introduced during the 2013/14 academic year.
†† The vaccine supplied will depend on the brands available at the time of ordering.

Source: NHS Immunisation Information

Chapter Five

Back to the future

It has been recognised in this report that we face a number of pressing challenges to the public's health, not least the health and wellbeing trends in our population such as the projected rise of diabetes plus ongoing reductions in public sector funding. Yet the changes that will need to follow also create the opportunity to consider what type of Cornwall and what type of Isles of Scilly we want to see in 10, 20 or even 50 years time. We need to learn to do more with less by making best use of all resources within our community and that requires a shared vision and values about the society we want to live and prosper in.

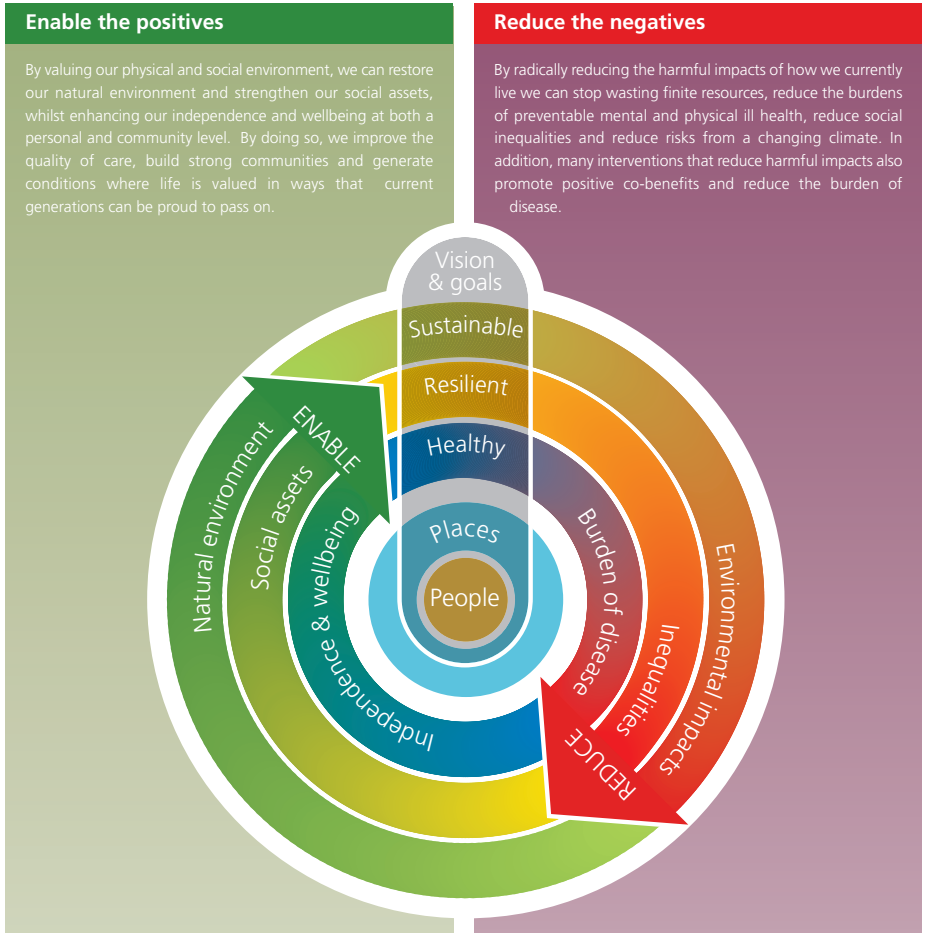
The public sector, in partnership with the community, voluntary and business sectors will continue to debate the future direction for Cornwall and the Isles of Scilly. Moves to integrate commissioing, service delivery and work around shared outcomes are already underway and are likely to gather pace. There are a few key themes to consider as we develop that approach.

1) Sustainability

Public Health England and NHS England have published a useful model for thinking about how we manage our future in a sustainable way.

Helpfully, this vision across public health, the NHS and social care looks to build on the assets that we have to support change as well as tackle the issues that threaten our individual and community health, wellbeing and happiness. The diagram emphasises the links between people and places with the success of one being dependent on the other.

Figure 5.1: A model of sustainable development



Source: Sustainable, Resilient, Healthy People & Places.
A Sustainable Development Strategy for the NHS, Public Health and Social Care system

2) Maximise the potential for prevention

Research has shown that the health outcomes (life expectancy, burden of ill-health and disease, avoidable death) which people experience are the result of a complex set of interplaying factors including:

- Our parents' health before and during conception and pregnancy
- Our own start in life during childhood (healthy or unhealthy)
- The lives we lead (physical, social, psychological and spiritually healthy lives)
- The place we live in
- The opportunities we have (good education, good employment)
- The services we access (high quality, easily accessible, with a focus on prevention).

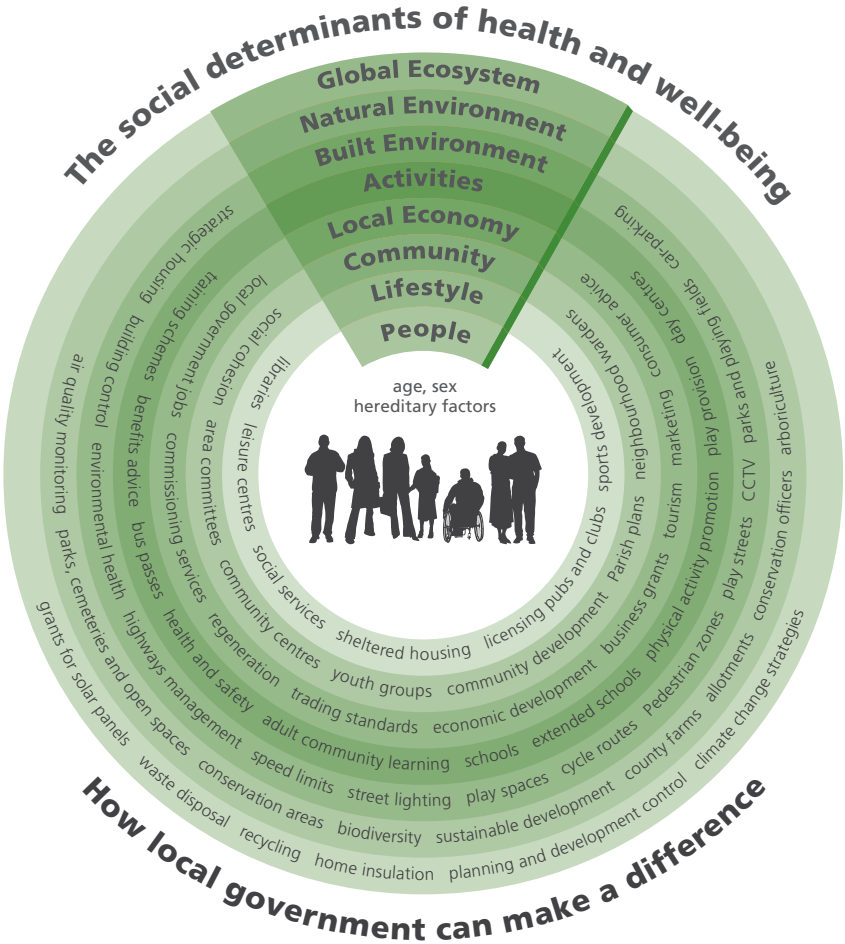
Improving health is complex. The NHS has a large part to play in leading health improvement and in securing high quality health care, but local authorities have significant power and influence over many of the medium and longer term inequalities and determinants of health such as the environment. There is a clear imperative to embed prevention across the whole of the public sector in order to have the greatest positive effect.

The integration of public services in Cornwall and the Isles of Scilly over the next 3-4 years provides enormous potential for the prevention agenda to be delivered simultaneoulsy across multiple agencies. This will provide a much more holistic, consistent approach to prevention.

However, the determinants of health; environmental, economic and social, can only be tackled through effective partnership working with other agencies and communities, and this requires clarity about what we are trying to achieve. This includes a greater focus on prevention and both building and applying the evidence about what works and the economic benefits.

There are many factors that contribute to how healthy and happy you are. The next graphic is a helpful illustration of the many contributions of Council teams and services to better health and wellbeing.

Figure 5.2: How local government can make a difference to health and wellbeing



Source: Local Government Information Unit

3) Working with and for communities

We can only make the public sector budget and resources work with greater community ownership and involvement in service design, with communities helped to do things for themselves where they can, or with public sector support where they really need help.

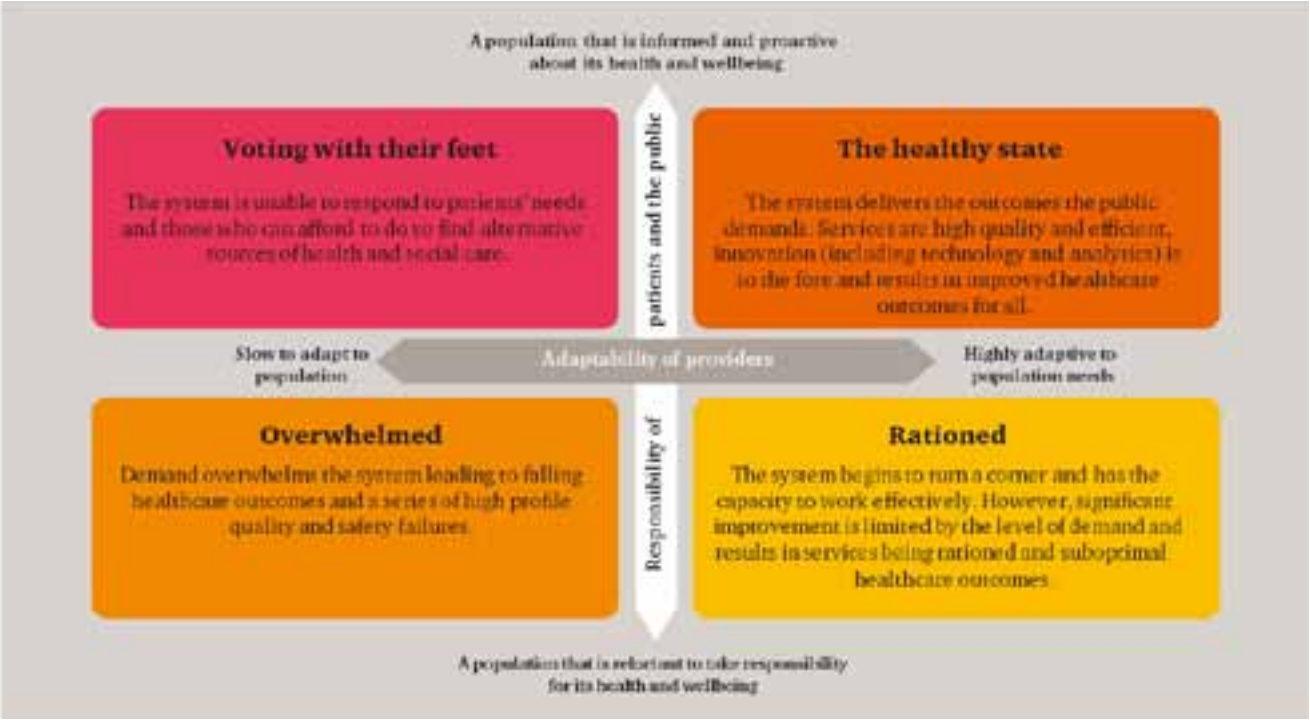
We need to use insight about the aspirations and needs of our local community to design our future ways of working. Local communities need to be true partners in the design and delivery of all our preventative approaches. This includes championing open approaches like social movements and the use of social media in defining and supporting social change.

The public health team works across Cornwall Council, the Council of the Isles of Scilly and with partners to strengthen a preventative approach building community resilience and promoting wellbeing which will reduce spending further downstream.

Our health trainers and health champions are good examples of public health initiatives based in the most deprived areas of Cornwall, working to change lives and empower communities faced with the greatest challenges. The challenge is how to take this ethos and consistently apply it at much greater scale across our commmunity particularly where help is needed most.

During its review of the NHS at 65 years old the Nuffield Trust considered what type of society we need to move towards if we are going to be able to sustain a health and social care system of value to the public. It is notable that the desired healthy state is based on a customer relationship with the public in the way services are provided whilst individuals and communities drive the outcomes that this system provide. This echoes the 'fully engaged' scenario set out by Sir Derek Wanless in his 2002 report for the Treasury, Securing our future health: taking a long term view.

Figure 5.3: A model for developing a healthy state



Source - Nuffield Trust, The NHS @ 65

1 We define the health system to include all providers, from the NHS itself to private and third sector providers as well as commissioners and regulators.

Why involve the public?

As well as the practical benefits of ensuring public health programmes are of high quality and relevant, the underlying reasons for involving members of the public are also informed by broader democratic principles of citizenship, accountability and transparency.

It is also important to involve members of the public as they can provide a different perspective. Members of the public might have personal knowledge and experience or be able to provide a more general perspective.

The Joint Strategic Needs Assessment (JSNA) approach to public involvement is based on the principal that lay people, and organisations representing their interests e.g. Healthwatch, partners, including statutory organisations and voluntary and community services, have opportunities to contribute to developing the JSNA and support its implementation.

The JSNA needs to capture the issues relevant to patients, service users, carers and the public, reflecting their views, experiences and aspirations in order to understand how to best meet current and future healthcare needs. Involving patients, service users, carers and the public adds value to the development of the JSNA evidence base and ensures that services are aware and mindful of people's views when making commissioning decisions.

There are plans to improve the quality of public health programmes through involving the public in the JSNA.

Proposed ways of doing this are by:

- making the language and content of information provided more appropriate and accessible (for example in questionnaires, and information leaflets)
- helping to ensure that the JSNA uses outcomes that are important to the public by increasing participation in the JSNA through:
  - improving the information provided so people can make informed choices
  - helping to include seldom heard groups.

Making the JSNA more relevant, for example through:

- identifying a wider set of topics than if health or social care professionals had worked alone
- suggesting ideas for new JSNA areas
- ensuring the JSNA is focused on the public's interests and concerns and that money and resources are used efficiently
- helping to reshape and clarify the JSNA.

Importantly, a 2013 systematic review on community engagement to reduce inequalities in health found that overall, community engagement interventions are effective in improving health behaviours, health consequences, participant self-efficacy and perceived social support for disadvantaged groups.

What approaches can be used?

Approaches to involving the public at different levels include consultation, collaboration and user-controlled. Within these approaches there are many different ways of involving members of the public during the various stages of programmes that can improve the public's health. Some useful national frameworks include:

(1) The Department of Communities and Local Government and The Local Government Association produced 'Our Place!' in July 2013. The Our Place! programme (formerly Neighbourhood Community Budgets) gives communities and neighbourhoods the opportunity to take control and tackle local issues. The Our Place! approach promises to create more powerful communities, generates better, more efficient services and stretches neighbourhood spend. Using the Our Place! approach means putting the community at the heart of decision making and bringing together the right people - councillors, public servants, businesses, voluntary and community organisations, and the community.

(2) NHS England produced recent guidance on 'Transforming participation in health and care' (September 2013)
The aim is to ensure that public, patient and carer voices are at the centre of its healthcare services, from planning to delivery. Every level of the NHS England commissioning system will be informed by insightful methods of listening to those who use and care about its services.

(3) Commissioners and providers can use asset-based models that allow them to work with patients, rather than "do to", and this helps support patients to harness their own internal resources and build on their lived experience. Potential staff benefits from this include better morale, work life balance, and personal relationships.

Moving from a deficit approach to an asset approach

Where are we now – the deficit approach	Where an asset way of thinking takes us
Start with the deficiencies and needs in the community	Start with the assets in the community
Respond to problems	Identify opportunities and strengths
Provide services to users	Invest in people as citizens
Emphasise the role of agencies	Emphasise the role of civil society
Focus on individuals	Focus on communities/ neighbourhoods and the common good
See people as clients and consumers receiving services	See people as citizens and co-producers with something to offer
Treat people as passive and done-to	Help people to take control of their lives
'Fix people'	Support people to develop their potential
Implement programmes as the answer	See people as the answer

Local examples of community engagement

Teenage pregnancy and sexual health

In 2013 public health carried out, in partnership with youth organisations, a consultation regarding young people's experiences of relationships and sexual health advice guidance and education. Young people told us they want to talk to parents, carers and professionals about growing up, relationships and sexual health but don't always feel they can. This has informed the development of our multi agency Relationships and Sexual Health Best Practice Guidelines which encourage practitioners to take on a proactive role whilst also supporting parents and carers to be a positive source of information.

Systems Leadership around food in Cornwall

As discussed in Chapter 3, Cornwall has been selected for the national Systems Leadership programme run by the Local Government Association. The local focus will be on food as a driver of change for better health and wellbeing, tackling poverty and promoting community cohesion. The project is looking to develop a social movement to connect and empower communities to define and make their own change.

NHS Health Check programme

The NHS Health Check programme outreach service has recently become operational. Regular sessions are taking place across Cornwall offering fisherman and farmers health checks in either their place of work, on the harbour side or in locations they frequent like wholesalers such as Mole Valley farmers country store.

To complement this service a dedicated men's health promotion officer offers lifestyle support in the community for such things as stop smoking, weight management and physical activity. The men's health promotion officer is currently working with a number of fishermen and farmers who are unable to attend traditional surgery-based lifestyle support in either their workplace or their farm.

Chlamydia screening and seuxal health

Members of the sexual health team have attended Truro college Stay Healthy fair and handed out clinic timetable information and sexual health information to approximately 500 students. This has been repeated at Falmouth University Campus.

Working with students from Cornwall College media department a collection of posters advertising sexual health clinics have been designed and also a logo for Royal Cornwall Hospitals Trust Hub has been created. Support has been given to all seven Cornwall College campuses providing posters and condoms for their Student Union sexual health awareness campaign for the month of November. The support has increased C-card registrations.

Learning from our experience: Public Health Legacy Document

The transition of public health from the NHS back to its original home of local government has been a significant moment and opportunity for planning change.

The process involved gathering and analysing a great deal of information. This included a reflection on how services have developed in recent years, the collection of evidence around different interventions and understanding what outcomes have been achieved.

The Public Health Legacy Document is an essential recording of this collective knowledge and learning so it can be used as a platform for continued progress in improving health and wellbeing and tackling inequalities in our local communities. It helps us to keep continuity in essential services, reduces the risk of losing knowledge during staff and organisational changes and promotes a shared understanding of public health issues across a range of partner organisations.

This legacy document, published in December 2013, sets out what progress we have made over the last eight years and what key lessons we can take forward in the new public health system. Progress has been made but we must retain our determination to change the injustice of inequalities and ensure good health, wellbeing and happiness for all.

Progress has been made but we must retain our **determination** to **change the injustice of inequalities** and ensure **good health, wellbeing and happiness for all**.

Vital Statistics

Table 1: Cornwall resident population by five-year age band, 2011 census

All Persons	Population (000s)	%	Cumulative %
0 - 4	27,400	5.1%	5.1%
5 - 9	26,100	4.9%	10.1%
10 - 14	30,000	5.6%	15.7%
15 - 19	31,800	5.9%	21.7%
20 - 24	28,400	5.3%	27.0%
25 - 29	26,400	4.9%	32.0%
30 - 34	26,700	5.0%	37.0%
35 - 39	30,300	5.7%	42.7%
40 - 44	36,600	6.8%	49.5%
45 - 49	38,500	7.2%	56.8%
50 - 54	36,900	6.9%	63.7%
55 - 59	35,500	6.6%	70.4%
60 - 64	42,600	8.0%	78.4%
65 - 69	35,200	6.6%	85.0%
70 - 74	26,500	5.0%	90.0%
75 - 79	21,400	4.0%	94.0%
80 - 84	16,400	3.1%	97.1%
85 - 89	10,200	1.9%	99.0%
90 +	5,500	1.0%	100.0%
All ages 3	532,300		

Table 2: England population by five-year age band, 2011 census

All Persons	Population (000s)	%	Cumulative %
0 - 4	3,318,500	6.3%	6.3%
5 - 9	2,972,600	5.6%	11.9%
10 - 14	3,080,900	5.8%	17.7%
15 - 19	3,340,300	6.3%	24.0%
20 - 24	3,595,300	6.8%	30.8%
25 - 29	3,650,900	6.9%	37.6%
30 - 34	3,509,200	6.6%	44.3%
35 - 39	3,549,100	6.7%	51.0%
40 - 44	3,885,900	7.3%	58.3%
45 - 49	3,879,800	7.3%	65.6%
50 - 54	3,400,100	6.4%	72.0%
55 - 59	2,997,000	5.7%	77.7%
60 - 64	3,172,300	6.0%	83.7%
65 - 69	2,508,200	4.7%	88.4%
70 - 74	2,044,100	3.9%	92.3%
75 - 79	1,669,300	3.1%	95.4%
80 - 84	1,258,700	2.4%	97.8%
85 - 89	776,500	1.5%	99.2%
90 +	403,700	0.8%	100.0%
All ages 3	53,012,500		

Table 3: Male population by age group, Cornwall 2011 census

Age group	Population (000s)	%	Cumulative %
0 - 4	14,100	5.5%	5.5%
5 - 9	13,300	5.2%	10.6%
10 - 14	15,400	6.0%	16.6%
15 - 19	16,200	6.3%	22.9%
20 - 24	14,500	5.6%	28.5%
25 - 29	13,100	5.1%	33.6%
30 - 34	13,300	5.2%	38.8%
35 - 39	14,500	5.6%	44.4%
40 - 44	17,400	6.7%	51.1%
45 - 49	18,700	7.3%	58.4%
50 - 54	17,800	6.9%	65.3%
55 - 59	17,000	6.6%	71.9%
60 - 64	20,700	8.0%	79.9%
65 - 69	17,100	6.6%	86.5%
70 - 74	12,800	5.0%	91.5%
75 - 79	10,000	3.9%	95.4%
80 - 84	6,900	2.7%	98.1%
85 - 89	3,600	1.4%	99.5%
90 +	1,400	0.5%	100.0%
All ages	257,800	100.0%	

Table 4: Female population by age group, Cornwall 2011 census

Age group	Population (000's)	%	Cumulative %
0 - 4	13,300	4.8%	4.8%
5 - 9	12,800	4.7%	9.5%
10 - 14	14,500	5.3%	14.8%
15 - 19	15,600	5.7%	20.5%
20 - 24	13,900	5.1%	25.5%
25 - 29	13,200	4.8%	30.3%
30 - 34	13,400	4.9%	35.2%
35 - 39	15,800	5.8%	41.0%
40 - 44	19,200	7.0%	48.0%
45 - 49	19,800	7.2%	55.2%
50 - 54	19,100	7.0%	62.1%
55 - 59	18,500	6.7%	68.9%
60 - 64	21,900	8.0%	76.9%
65 - 69	18,100	6.6%	83.5%
70 - 74	13,800	5.0%	88.5%
75 - 79	11,400	4.2%	92.6%
80 - 84	9,400	3.4%	96.1%
85 - 89	6,600	2.4%	98.5%
90 +	4,100	1.5%	100.0%
All ages	274,500	100.0%	

Table 5: Cornwall population by ethnic group, 2011 census

Ethnicity	Count/Per cent	Cornwall	South West	England
All Usual Residents	Count	532273	5288935	53012456
White; English/Welsh/Scottish/Northern Irish/ British	Count	509628	4855676	42279236
White; English/Welsh/Scottish/Northern Irish/ British	Percentage	95.7	91.8	79.8
White; Irish	Count	2046	28616	517001
White; Irish	Percentage	0.4	0.5	1
White; Gypsy or Irish Traveller	Count	635	5631	54895
White; Gypsy or Irish Traveller	Percentage	0.1	0.1	0.1
White; Other White	Count	10539	156506	2430010
White; Other White	Percentage	2	3	4.6
Mixed/Multiple Ethnic Groups; White and Black Caribbean	Count	1248	25669	415616
Mixed/Multiple Ethnic Groups; White and Black Caribbean	Percentage	0.2	0.5	0.8
Mixed/Multiple Ethnic Groups; White and Black African	Count	490	8550	161550
Mixed/Multiple Ethnic Groups; White and Black African	Percentage	0.1	0.2	0.3
Mixed/Multiple Ethnic Groups; White and Asian	Count	1553	21410	332708
Mixed/Multiple Ethnic Groups; White and Asian	Percentage	0.3	0.4	0.6
Mixed/Multiple Ethnic Groups; Other Mixed	Count	1109	16255	283005
Mixed/Multiple Ethnic Groups; Other Mixed	Percentage	0.2	0.3	0.5

Ethnicity	Count/Per cent	Cornwall	South West	England
Asian/Asian British; Indian	Count	837	34188	1395702
Asian/Asian British; Indian	Percentage	0.2	0.6	2.6
Asian/Asian British; Pakistani	Count	107	11622	1112282
Asian/Asian British; Pakistani	Percentage	0	0.2	2.1
Asian/Asian British; Bangladeshi	Count	280	8416	436514
Asian/Asian British; Bangladeshi	Percentage	0.1	0.2	0.8
Asian/Asian British; Chinese	Count	1004	22243	379503
Asian/Asian British; Chinese	Percentage	0.2	0.4	0.7
Asian/Asian British; Other Asian	Count	1206	29068	819402
Asian/Asian British; Other Asian	Percentage	0.2	0.5	1.5
Black/African/Caribbean/Black British; African	Count	292	24226	977741
Black/African/Caribbean/Black British; African	Percentage	0.1	0.5	1.8
Black/African/Caribbean/Black British; Caribbean	Count	368	15129	591016
Black/African/Caribbean/Black British; Caribbean	Percentage	0.1	0.3	1.1
Black/African/Caribbean/Black British; Other Black	Count	102	10121	277857
Black/African/Caribbean/Black British; Other Black	Percentage	0	0.2	0.5
Other Ethnic Group; Arab	Count	189	5692	220985
Other Ethnic Group; Arab	Percentage	0	0.1	0.4
Other Ethnic Group; Any Other Ethnic Group	Count	640	9917	327433
Other Ethnic Group; Any Other Ethnic Group	Percentage	0.1	0.2	0.6

Table 6: Under 18 conceptions (numbers and rates) [1] 2009-2011 [2]

Year	2011		2010		2009	
Area of usual residence [3]	Number of Conceptions	Rate per 1,000	Number of Conceptions	Rate per 1,000	Number of Conceptions	Rate per 1,000
Cornwall and the Isles of Scilly	279	30.3	309	32.9	292	30.5
England	29,166	30.7	32,552	34.2	35,966	37.1
South West	2,552	27.3	2,813	29.9	3,077	32.4

Notes:

To preserve confidentiality, counts for Isles of Scilly UA have been combined with those for Cornwall UA respectively.

1 Rates are per 1000 female population aged 15–17.

2 The conception rates for 2011 have been calculated using mid-year population estimates based on the 2011 Census.

Conception rates for 2002 to 2010 at national level have been recalculated using mid-year population estimates based on the 2011 Census and therefore may differ from previously published figures.

3 Following the publication of 2011 Census figures, local authority conception statistics for 2011 are now only available on the current local authority boundaries (those in force from 1 April 2009 when new Unitary Authorities were formed). These 2011 statistics are no longer available for the former local authority districts abolished in 2009. Mid-year population estimates (MYEs) for 2011 are also not available for the former local authority districts abolished in 2009. The publication of 2011 conception statistics and MYEs for current local authorities only is consistent with the way in which 2011 Census statistics for local authorities are being published.

Table 7: Trend under 18 conception rates, Cornwall 1998-2011

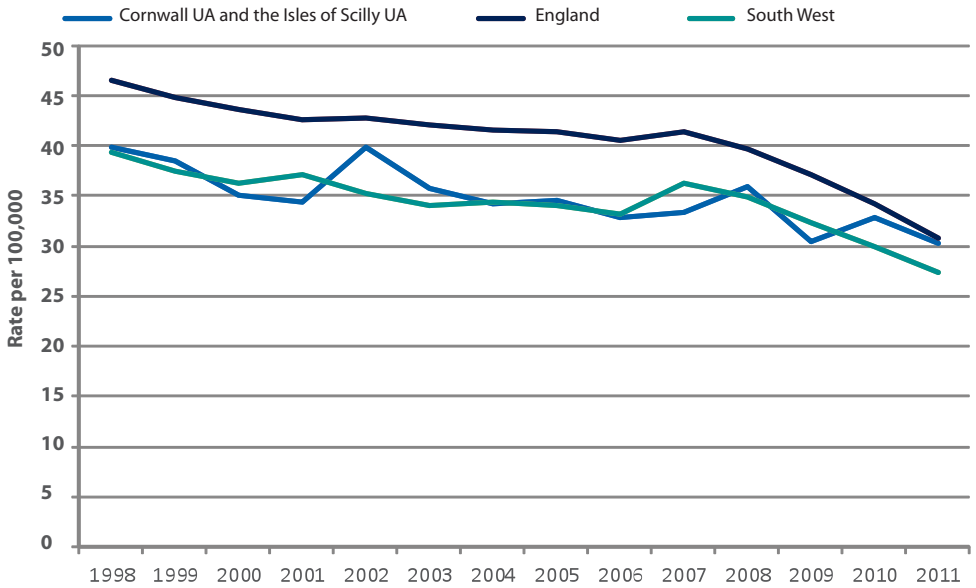


Table 8: Under 18 conception outcome, 2009-2011

Year	2011		2010		2009
Area of usual residence	Maternity rate per 1,000 women in age group	Abortion rate per 1,000 women in age group	Maternity rate per 1,000 women in age group	Abortion rate per 1,000 women in age group	Maternity rate per 1,000 women in age group
Cornwall and the Isles of Scilly	16.7	13.6	18.4	14.5	17.7
England	15.6	15.1	17.0	17.2	18.9
South West	14.2	13.1	15.0	14.9	16.6

Table 9: Deaths (numbers): area of usual residence, by age and sex, 2011 registrations

Cornwall and the Isles of Scilly

	Males	Females
All Ages	2,764	2,899
Under 1	20	13
1-4	<5	<5
5-14	<5	<5
15-24	9	6
25-34	25	10
35-44	44	26
45-54	104	83
55-64	269	174
65-74	551	374
75-84	922	735
85 +	813	1,475

England

	Males	Females
All Ages	219,068	233,794
Under 1	1,744	1,242
1-4	257	215
5-14	297	202
15-24	1,384	639
25-34	2,431	1,304
35-44	5,302	3,180
45-54	11,083	7,520
55-64	23,740	16,026
65-74	42,878	30,222
75-84	69,288	64,808
85 +	60,664	108,436

Table 10: Deaths rates by area of usual residence (administrative areas) , 2011 registrations

				Infant mortality	Neonatal mortality	Perinatal mortality
Area of usual residence	Age standardised mortality rate[1]			rate (per 1,000 live births)	rate (per 1,000 live births)	rate (per 1,000 live and stillbirths)
	Persons	Males	Females			
Cornwall and the Isles of Scilly	502.9	606.2	416.9	5.7	3.8	6.7
England	522.9	618.5	442.9	4.3	3.0	7.6
South West	486.5	575.7	411.2	3.7	2.8	6.8

Notes:

Infant, neonatal and perinatal mortality rates for local areas can fluctuate quite substantially between years due to the small number of deaths recorded at these ages.

1 Age-standardised mortality rates are used as they allow comparisons between populations with different age structures, including between males and females and over time. Age-standardised mortality rates (ASMRs) for Scotland and Northern Ireland will differ from those published by National Records of Scotland and Northern Ireland Statistics and Research Agency as their published ASMRs are based on only population data. ASMRs published here use live births instead of the population aged under 1.

If you would like this information in another format please contact:

Cornwall Council
County Hall
Treyew Road
Truro TR1 3AY

Telephone: 0300 1234 100
Email: enquiries@cornwall.gov.uk
www.cornwall.gov.uk

www.cornwall.gov.uk

JN35659 May 2014

one and all onen hag oll
CORNWALL COUNCIL

Council of the ISLES OF SCILLY