West Sussex Joint Strategic Needs Assessment

ESTIMATION OF NEED
AND SOCIAL CARE DEMAND MANAGEMENT

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(April 2015)

There has been a considerable amount of work undertaken in West Sussex, internally and working with external organisations and consultants, looking at the interface of health and social care, and demand management. This includes work on sub-acute activity and the development of Better Care Fund proposals. Information and discussions from that work inform this briefing (i.e. we are not starting with a blank page).

This briefing aims to:

1) Segment the West Sussex over 65 population in terms of social care need and demand (in terms of support for daily living activities, self-care and domestic tasks). Public Health has approached segmentation in terms of:-

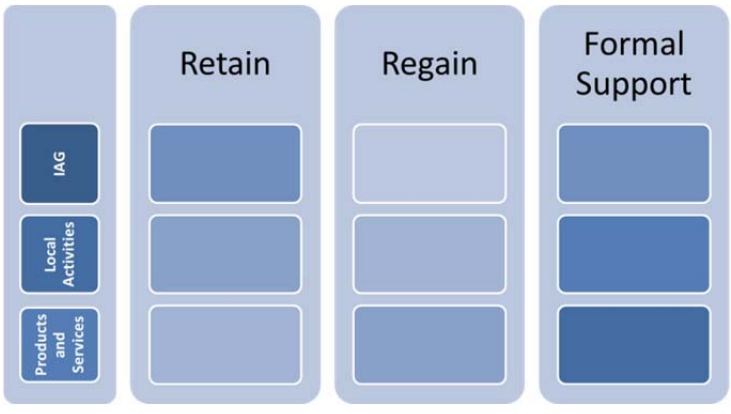
   a) Population characteristics
   b) Assumptions drawn from West Sussex GP patient data, using information on age and long term conditions.
   c) Existing patterns of social care demand, using data from WSCC Frameworki and Finance.

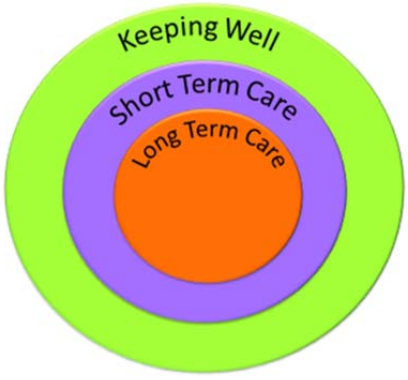
2) Identify how provision supports people within, or moves people between segments/states.

3) Provide a basic review the information required, and that available, to inform how our knowledge of demand.

There are numerous ways of segmenting a population but for this briefing Public Health have been tasked at considering need and demand broadly aligned to a 9 Box Model (shown below). This groups people under three headings “retain” “regain” and “formal support”. It collates activities (Information and Guidance, Local Activities (which may or may not be WSCC funded) and Formal Support (WSCC social care funded) under those groups and obviously people may move from one group/state to another. In the Transformation Programme people were defined as keeping well, needing short term care and those needing long term care.

9 Box and Target Model Approach

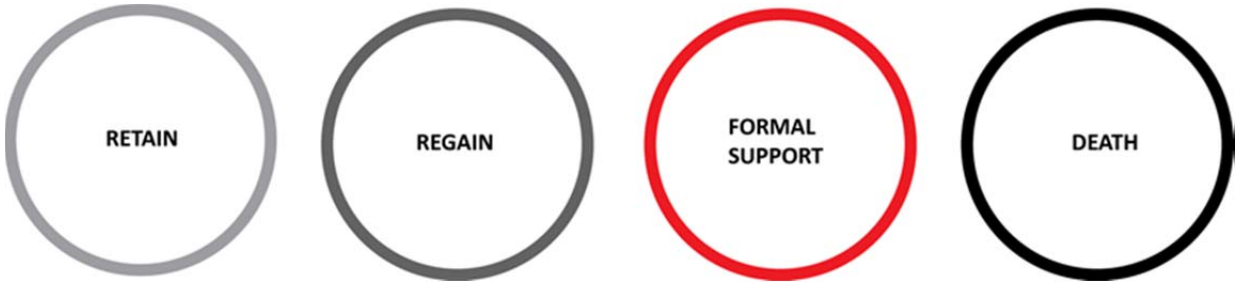




Need

This briefing considers social care need in terms of individuals achieving outcomes including keeping clean and fed, being socially included and being safe. Those in need are people who are unable to achieve, or maintain, these outcomes.

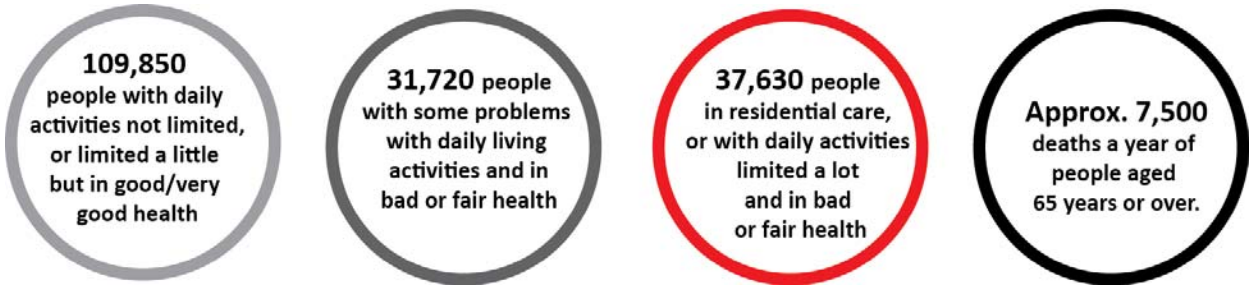
To ensure coherence from considering need in the wider population, to demand within a social care system we have maintained the premise of the 3 basic groups (retain, regain and formal support) but have also added a final end of life/death group (reasons for this will be apparent later).



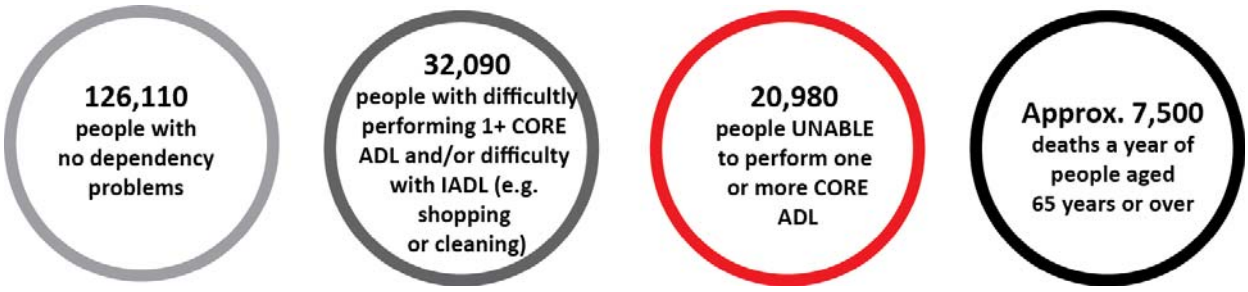
Using the latest population estimates (2013 MYE) there are **179,200 people aged 65 years or over** in West Sussex, this number is segmented by different methods/assumptions shown below. Annually there are approximately 7,500 deaths of people aged 65+, *deaths have not been subtracted from each of three groups*.

Descriptions of how numbers are derived are attached in Appendix 1.

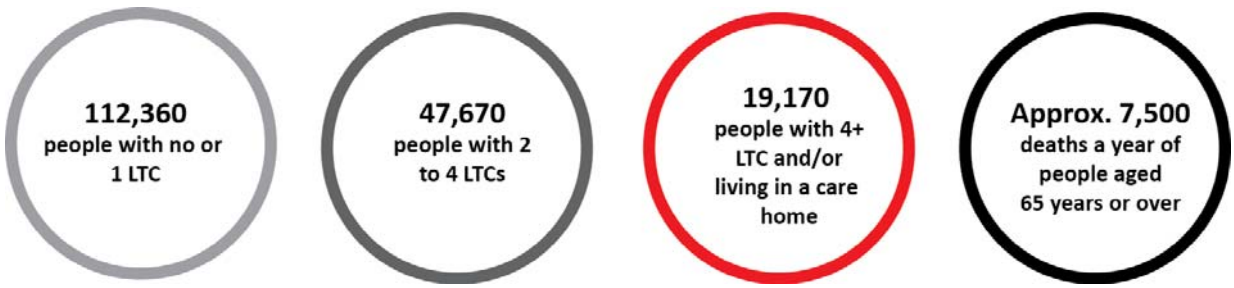
A) POPULATION LEVEL – GENERAL HEALTH AND LONG TERM LIMITING ILLNESS



B) SOCIAL CARE NEED – ACTIVITIES OF DAILY LIVING (CORE ACTIVITIES) / INSTRUMENTAL ACTIVITIES OF DAILY LIVING

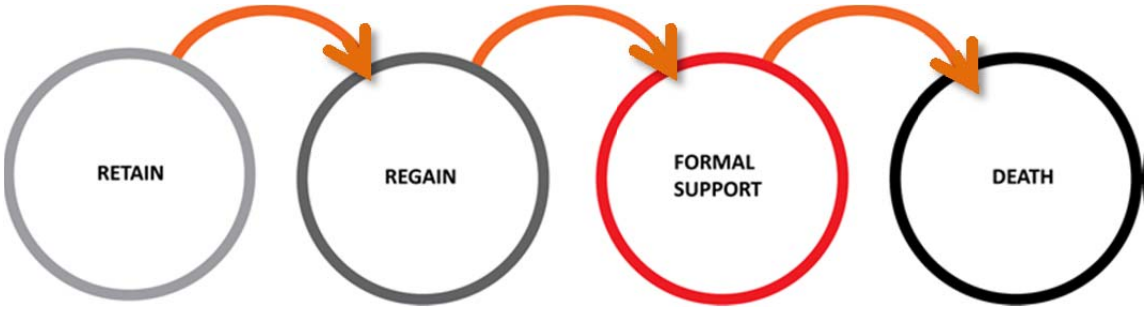


C) AGE AND LONG TERM HEALTH CONDITION / CO-MORBIDITIES



Movement between States

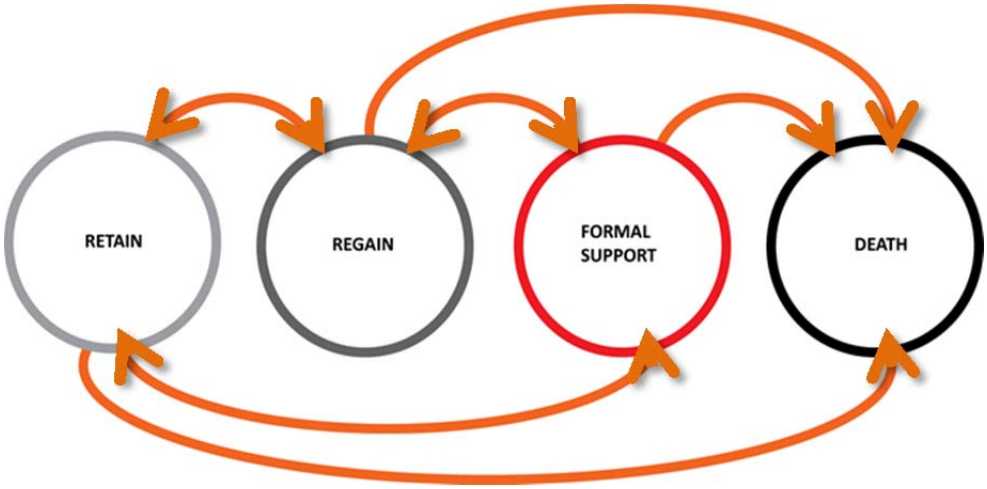
As people age there is a general movement from good health, although there may be periods where people need short term support, to increasing frailty.



In reality each state (except death!) has a number of in/out movements, representing periods of improving health, those maintaining health and those with deteriorating health.

All of the various movements between the states are shown on the diagram below. Applying assumptions to the movements between states (i.e. the probabilities of moving from one group to another within a given time period) is the basis of a Markov model, and is, in essence, what the 9 box model is framing.

Appendix 2 outlines a simple model for examining the effectiveness of preventative interventions in social care.



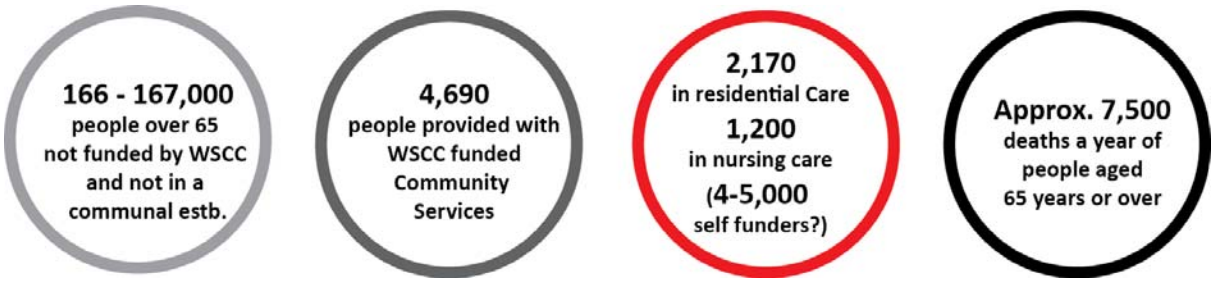
NEED TRANSLATED TO SOCIAL CARE DEMAND

The *demand* for social services is not just driven by underlying health and disability but also the availability and provision of informal care and housing. *Use* of services is also dependent on supply of available provision in an area.

D) RECORDED SOCIAL CARE DEMAND (WSCC FUNDED)

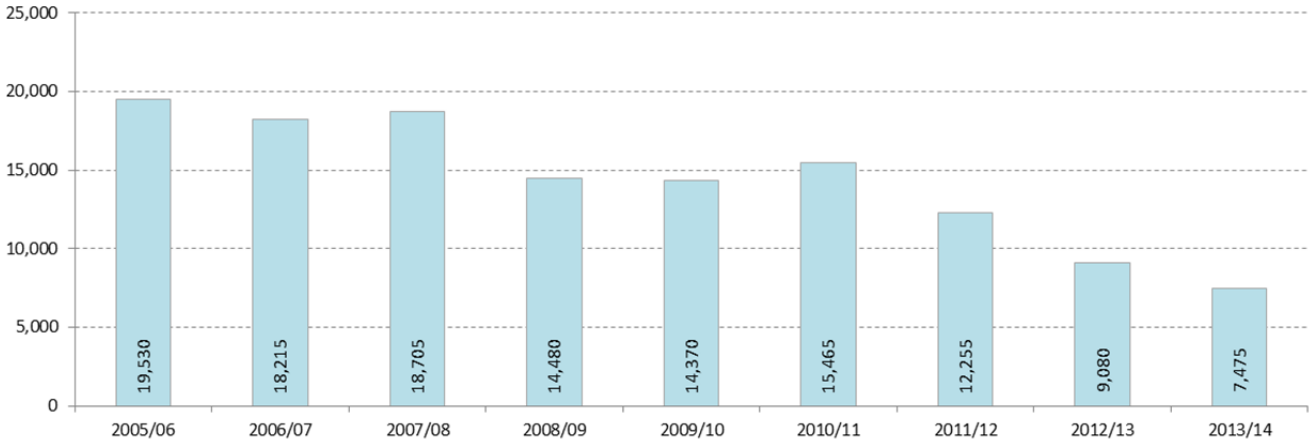
Note this excludes preventative services funded by WSCC which act to promote independence and wellbeing.

This data has been taken from the published information relating to people aged 65 or over in receipt of WSCC funded care. Data below relate to people aged 65 years and over (2013/14), as pers per the RAP return to HSCIC. It would also be possible to segment groups according to costs, irrespective of service.



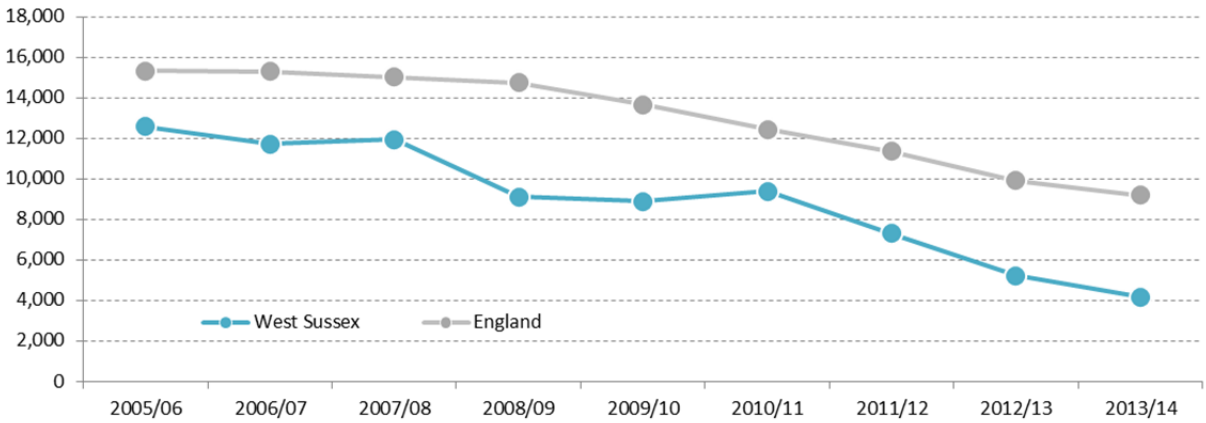
The number of people directly supported by services provided or commissioned by West Sussex has declined, significantly, over the last 5 years.

Total Number of Clients (Aged 65 years or over) Receiving Services (all types including residential and community based) provided or commissioned by West Sussex County Council 2005/6 to 2013/14



Source: HSCIC RAP P1

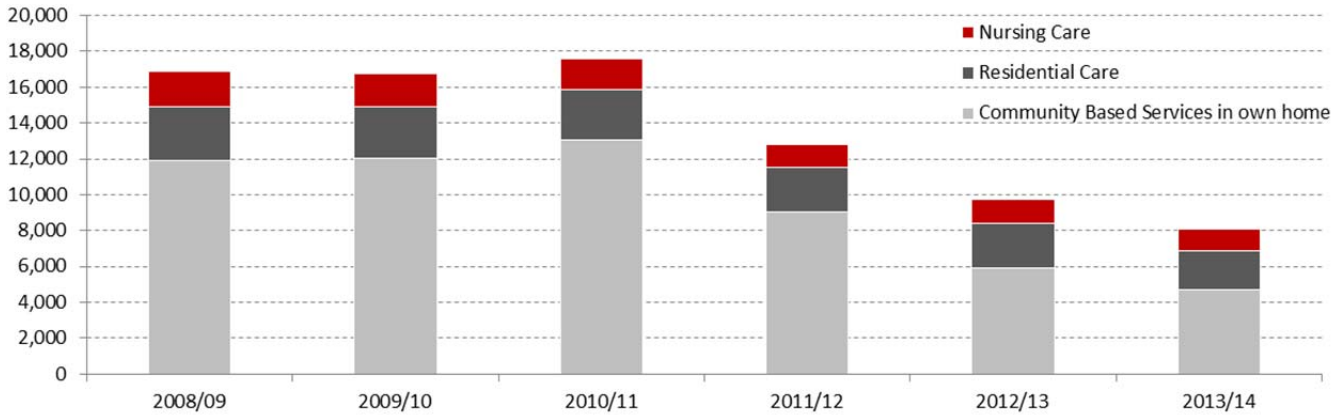
People Receiving Services (all types including residential and community based) provided or commissioned by West Sussex County Council Rate per 100,000 Population Aged 65 years or over 2005/6 to 2013/14 West Sussex Compared with England Rate



Comparing estimates on the need for care and the use of funded services it is evident that there is a large and growing gap, notably in the "regain" group.

Number of clients supported by service type – West Sussex 2008/9 to 2013/14

	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Community Based Services in own home	11,905	12,030	13,070	9,010	5,930	4,690
Residential Care	2,985	2,890	2,815	2,510	2,485	2,170
Nursing Care	1,985	1,835	1,695	1,300	1,300	1,200
Total	**16,875**	**16,755**	**17,580**	**12,820**	**9,715**	**8,060**



Source: HSCIC

The WSCC exposure to the people in this group is reducing, so while the Care Act now places increased emphasis on prevention, services have less contact with the "regain" group.

UNDERSTANDING TRANSITION PROBABILITIES/"CUSTOMER JOURNEYS"

CAVEAT: Identifying the movement of people through their social care journeys using in-house data is difficult, customer insight is poor. Therefore Public Health analysts have used a combination of health data, social care data and finance data to piece together an understanding of movement between services/states. Existing analysis has been undertaken which examined movement into residential care and an analysis of domiciliary care is (April 2015) underway.

NEW STARTERS IN RESIDENTIAL CARE

Public health analysis (see Appendix 3) undertaken in 2014 into residential care new starters found 865 new starters.

In terms of movement into residential care, of those 865 people identified:-

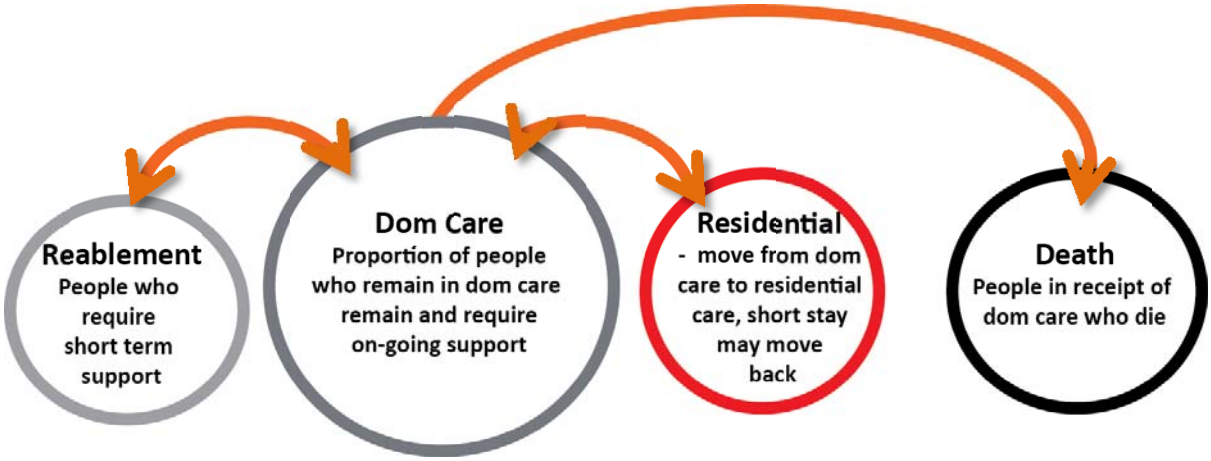
- 355 were known to WSCC before and in receipt of community based services
- 88 were identified as capital depleters (i.e. remained in the residential sector but with a funding change)
- 422 people were neither in residential care as self-funders, or in receipt of WSCC funded community based services. This means that 59% of those entering residential care and WSCC funded were, in terms of social care demand management, unknown to the council.

This analysis suggests that interventions or programmes which aim to reduce movement from community based services into WSCC funded residential care are working with 40% of the new starter cohort.

It was also found that following entry into residential care 209 of the 865 people died within the financial year. The length of time taken between entry to residential care and death is obviously an important part of understanding the system. Services may be very successful in preventing people entering the system, or reducing need but if the final state movement from formal support to death (in residential care terms the attrition rate) then expenditure will rise.

DOMICILARY CARE

The regain group represents a wide range of people and circumstance, the diagram below illustrates the different outcomes being sought from domiciliary care. Commissioning for maintaining a person in domiciliary care may be suited to "contact hours" whereas services orientated at moving people back to the "retain" group would be more suited to specific outcome commissioning (e.g. whether people feel able to perform ADL and feel more confident), indeed commissioning services on the basis of contact hours for this group may act as a disincentive to the provider.



The transition assumptions may be different according to age and health conditions. For older frailer people, or people with life limiting illnesses, maintaining within the dom care group may be more realistic.

Appendix 3 outlines a simple model for examining the effectiveness of preventative interventions in social care.

APPENDIX 1

APPROACHES TO SEGMENTATION THE 65+ POPULATION

(A) POPULATION LEVEL SEGMENTATION

Using Population Data from the 2011 Census - General Health Status, Limiting Long Term Illness and Communal Establishments Residents - to segment for social care needs.

% of the Over 65 Population		Day-to-day activities limited a lot	Day-to-day activities limited a little	Day-to-day activities not limited
LIVES IN A COMMUNAL ESTABLISHMENT	4.5%			
Very good or good health		1.8%	9.3%	44.4%
Fair health		8.2%	14.3%	7.6%
Bad or very bad health		8.3%	1.3%	0.3%

Retain Group = 61.3%
Regain Group = 17.7%
Formal Support Group = 21.0%

The 14.3% of the population who say their activities are limiting a little but their health is “fair” is a key group to maintain or improve health.

For 13% of the population who are living in residential care or with day to day limited activities and Bad health movement back to the regain group would appear challenging.

Data are available at a CCG, local authority and small area level to enable locality planning.

Over 85s.

It is likely that population growth will be highest in the 85 population and this age group have a markedly increased % in the formal support group.

% of the Over 85 Population		Day-to-day activities limited a lot	Day-to-day activities limited a little	Day-to-day activities not limited
LIVES IN A COMMUNAL ESTABLISHMENT	17.6%			
Very good or good health		4.4%	12.0%	13.5%
Fair health		18.9%	14.9%	3.4%
Bad or very bad health		14.0%	1.0%	0.3%

Retain Group = 28.9%
Regain Group = 20.6%
Formal Support Group = 50.5%

(B) SOCIAL CARE NEED BASED ON ACTIVITIES FOR DAILY LIVING AND INSTRUMENTAL ACTIVITIES FOR DAILY LIVING.

This approach is based on the work of the Wanless Review *(Securing Good Health for Older People Review for the King's Fund with the Personal Social Services Research Unit (PSSRU) at The London School of Economics (2006)).*This review grouped data from national surveys into 5 groups, according to whether a person had difficulty or could not perform core activities of daily living:

- transfer: get in and out of bed (or chair)
- use toilet
- get dressed and undressed
- feed self.

The review also used the ability to undertake "instrumental" activities of daily living (IADL) including activities such as shopping, housework, laundry, cooking and preparing meals, managing personal affairs etc.

This has the advantage of being a more detailed consideration as to the nature of daily living activities than provided by the Census, but has a disadvantage in that survey data are not available at county level, so national assumptions from surveys, some undertaken in the mid-2000s, are being applied to local 2013 population figures. Wanless also segmented into 5 groups, we have combined groups 1 and 2 into the "regain" and groups 3 and 4 into "formal support".

5 Wanless Groups	% of 65+ Population
Group 0: no dependency	70.4%
Group 1: no core ADL difficulties (but possibly non-core ADL difficulties), only IADL difficulties such as shopping and cleaning	11.2%
Group 2: as group 1 and also difficulty in performing one or more core ADLs	6.7%
Group 3: people who are unable to perform (without help) one core ADL *– Group 3a: group 3 people with no or mild cognitive impairment* *– Group 3b: group 3 people with severe cognitive impairment*	4.7%
Group 4: people who are unable to perform two or more core ADLs *– Group 4a: group 4 people with no or mild cognitive impairment* *– Group 4b: group 4 people with severe cognitive impairment.*	7.0%

The 2006 Wanless Review also examined the evidence between specific health conditions and disability, i.e. which specific conditions increase the probability of the onset of disability? Which increase the likelihood of dying? In relation to social care the first group are of specific interest so that some conditions, including treated hypertension and managed diabetes were identified as having a lower impact (in relation to requiring support for activities of daily living) than others – notably stroke, arthritis, COPD and dementia.

With increased integration between health and social care understanding the possible social care implications of specific conditions

Condition	Increases chance of disability	Increases chance of death
Stroke	Yes	Yes
Peripheral vascular disease	No	No
Coronary heart disease (angina & heart attack)	Yes	Yes
Treated hypertension	No	No
Arthritis	Yes	No
Treated diabetes	No	Yes
Chronic airways obstruction	Yes	Yes
Parkinson's disease	Yes	Yes
Hearing problems	No	No
Eyesight problems	Yes	No
Cognitive impairment: - mild - substantial	 Yes Yes	 Yes Yes

Yes = a significantly greater than zero chance.
No = a not significant or negative chance.

Source: Jagger et al (2006) Compression or Expansion of Disability? Forecasting future disability levels under changing patterns of diseases. Wanless Social Care Review Research Report.

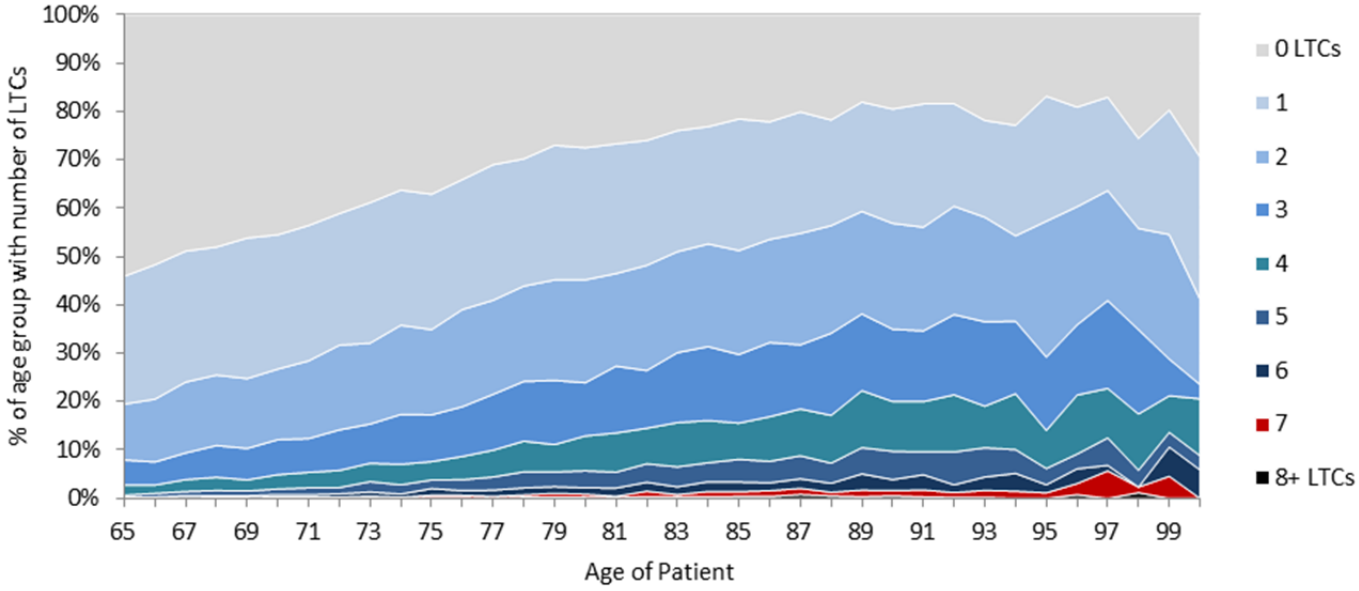
(C) SEGMENTATION USING AGE AND LONG TERM HEALTH CONDITION

Registered patient data provide detail of age, sex, long term conditions (nature of condition and number), and may include some data on health care activity and cost. Public Health has some, but limited, access to data.

We have been able analyse anonymised data to provide a population level view of health and to segment the 65+ population. The intelligence provided by the sample of records (approximately 30% of the West Sussex 65+ population) has then been applied to the total West Sussex population.

Age and the Number of Long Term Conditions (LTCs)

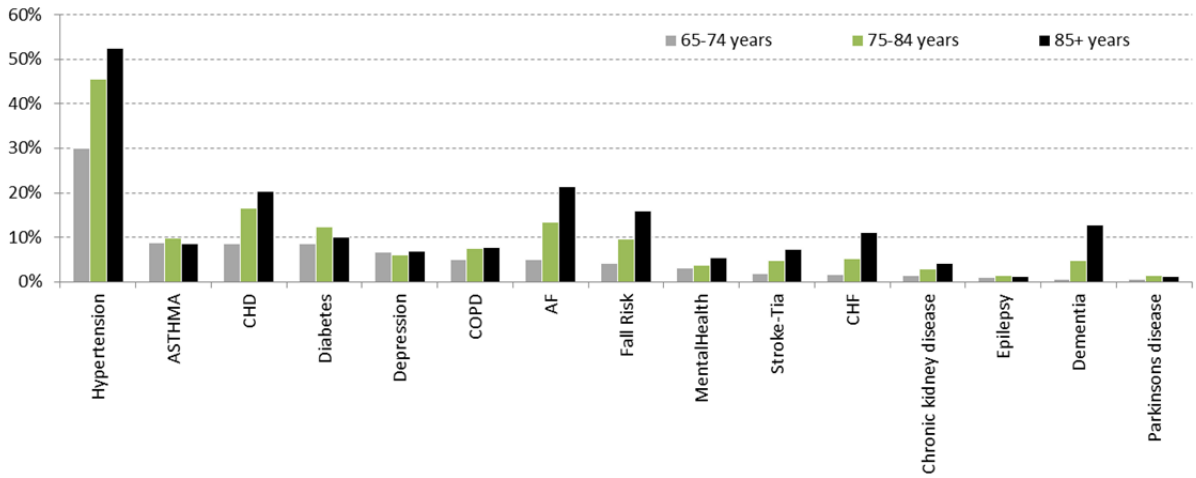
The graph below shows, by individual age (up to the age of 100) the percentage of the each age by the number of LTCs in the age group



Source : WSCC Public Health Research Unit (Data relate to Oct 2014)

The graphs shows that 54% of patients at age 65 had no long term health condition, this fell to 21% by the age of 85 years. This relates to the overall population but similar to the census data we know that poorer health is associated with deprivation, so

Long Term Conditions – by Age Group



Using the sample data, we have crudely grouped by numbers of long term conditions but first we have excluded people identified as living in care homes, in the sample this was 2.2% of the population overall.

- 62.7% of the 65+ population had no or 1 long term condition (of which hypertension was the most common single long term condition).
- 26.6% had 2 or 3 LTCs
- 8.5% had 4 or more LTCs.
- 2.2% identified as living in care home

Age Group	0 or 1 LTC Condition	2/3 LTCs	4+ LTCs	Identified to be living in a care home
65-74 years	73.8%	21.4%	4.4%	0.4%
75-84 years	55.0%	31.6%	11.4%	2.0%
85+ years	41.6%	33.6%	16.0%	8.8%
Total	62.7%	26.6%	8.5%	2.2%

This is a crude grouping according to number of conditions, 6.4% of people with a single LTC have either COPD, assessed as having a fall risk, dementia or stroke.
Note: The percentage of over 65s living in a care home is lower than might be expected from the Census data and may indicate lower identification / recording on the dataset.

Whole Population Segmentation and Joining Up with Health

Clearly this is high level segmentation, detailed segmentation requires better data and/or greater sharing of data between health, social care and other agencies. A whole population approach has been adopted by the London Healthcare Commission, the population has been segmented into 15 groups defined by age and health conditions broadly grouping people with similar needs, including for example groups relating to children with continuing and enduring health needs, and people socially excluded (e.g. homeless, or people with substance misuse dependency).

In addition to overall information on characteristics and size, service usage (including social care) and cost data are to be analysed to inform how services are more tailored to the specific needs of different groups.

Although grouping is undertaken, in the main, using data on age and health condition, this approach highlights the importance of considering behaviour and attitudes to health when designing services; for example for the older person with multiple long term conditions having the same GP may be very important while for a healthy person, who makes infrequent visits to primary care, speed and convenience may be key.

APPENDIX 2

A SIMPLE MODEL FOR PREVENTATIVE INTERVENTIONS IN SOCIAL CARE

Purpose

This simple model describes transitions individuals make between different forms of care. This simple framework characterises interventions to be evaluated at a basic level. However, more sophisticated and specific interventions will require more detailed models. This model provides a basic framework for future models, establishes the minimum data requirements for future models, and provides an understanding of care dynamics at a basic level.

Basic outline

As a baseline we consider a single population cohort with no "births", only deaths. We assume that age does not affect the transitions in the model, so that transitions do not change with the amount of time elapsed. This assumption should be challenged in the longer term. We will discuss two possible ways to model the ageing of the cohort.

We split the population P into four exhaustive and mutually exclusive categories: N=not requiring care, D=requiring domiciliary care, R=in residential care, X=exited (i.e. deceased)), with $\mathrm{P} = \mathrm{N} + \mathrm{D} + \mathrm{R} + \mathrm{X}$. We represent the population at time t in a state vector $\mathrm{Q_t} = (\mathrm{N}, \mathrm{D}, \mathrm{R}, \mathrm{X})^{\mathrm{T}}$ with initial condition $Q_0 = (N_0, D_0, R_0, 0)^T$. A matrix T contains the probabilities of moving between the four states. X is a sink state because every individual eventually dies and exits the population. The final state vector will eventually be $Q_* = (0,0,0, P)^T$. An intervention affects the content of the transition matrix T; this in turn alters how many time steps it takes to reach Q_* from Q_0, and what the intermediate states are. We calculate the cost of interventions by applying a cost function to the state vector at each time step and calculate the total over all time steps.

Note that we could consider the proportion of our cohort in each phase of care, in which case P=1.

We compare the cost of interventions by comparing each to a baseline scenario that we outline in advance.

What does the transition matrix look like?

We call the transition matrix T (for transition):

$$T = \begin{bmatrix} \tau_{NN} & \tau_{ND} & \tau_{NR} & \tau_{NX} \\ \tau_{DN} & \tau_{DD} & \tau_{DR} & \tau_{DX} \\ \tau_{RN} & \tau_{RD} & \tau_{RR} & \tau_{RX} \\ 0 & 0 & 0 & 1 \end{bmatrix}$$

Each element τ_{AB} gives the probability of moving from state A to state B. Because the states describe the population exhaustively, the probabilities across each row must add up to 1. Note the special case of the exit state: once individuals are in the exit state they do not return to other states, hence an individual in state X stays in state X with probability 1 and each of the other probabilities are zero.

It should be possible to make crude estimates for each of these probabilities both for a base case and for interventions. If no data is available, the fact that the model evaluates interventions relative to a standard base case will allow us to make educated guesses and/or make use of expert opinion.

The following is a brief summary of each of the probabilities.

τ_{NN} is the probability that an individual not requiring care will continue in this state. For most interventions we model, the value of τ_{NN} should be lower than in the base case.

τ_{ND} is the probability that individual not requiring care will require domiciliary care in the next time step – interventions like home adaptation will seek to decrease this value compared to the base case.

τ_{NR} is the probability that an individual previously not requiring any care now requires residential care. While it is often the case that individuals will enter residential care after a period of domiciliary care, often new entrants do "appear out of nowhere". While interventions aimed at preventing the need for domiciliary care will seek to decrease τ_{NR} as well as τ_{ND}, interventions that decrease τ_{NR} may increase τ_{NR} in the long term. (The fact that parameters do not change according to state or with time is a potential drawback of this model.)

τ_{NX} is the probability of an individual not currently requiring care exiting the population (i.e. dying or leaving the area). This value may have to be inferred but is likely to be smaller than for individuals in other classes.

τ_{DN} is the probability of an individual currently receiving domiciliary care no longer requiring any care. Most of the interventions we consider will seek to increase this probability compared to base case. An example of an intervention of this nature would be a reablement service.

τ_{DD} is the probability that an individual currently requiring domiciliary care continues to do so. It is preferable that interventions increase this probability (compared to base case) at the expense of transitions to residential care, or decrease it (compared to base case) in favour of a return to the state of not requiring care.

τ_{DR} is the probability that an individual currently requiring domiciliary care will now require residential care. It is likely that modelled interventions will seek to decrease this probability relative to the base case.

τ_{DX} is the probability that an individual currently requiring domiciliary care exits the population (death, or e.g. removal to residential care outside the area)

τ_{RN} is the probability that an individual currently requiring residential care no longer requires care of any kind. It is likely that events like this are rare and could not be controlled by an intervention. Nevertheless it may be necessary to alter this value when characterising an intervention due to the need for rows to sum to one.

τ_{RD} is the probability that an individual currently requiring residential care now requires domiciliary care.

τ_{RX} is the probability that an individual currently requiring residential care exits the population.

τ_{XN}, τ_{XD}, and τ_{XR} are always zero, and τ_{XX} is always one (see notes above).

What do interventions look like?

Interventions will alter one or more values in the transition matrix T compared to the base case. An intervention that seeks to mitigate entry into the various care states will reduce values above the diagonal of T and/or increase values on or below the diagonal. The former represents improvements in life expectancy or mitigation of movement to domiciliary or residential care, while the latter represents increased probabilities of returning to earlier care stages (though this is not possible with the exit state).

One way to characterise an intervention is as an alternative matrix $T_\Delta$consisting of different values to the original matrix T. We then compare the outcome of running the model forward in time for both matrices. However, interventions may be parameterised with different levels of action, creating a family of matrices representing the effect on the population for a range of that parameter (eg. Level of investment, number of nurses trained for the intervention etc). Building a matrix dependent on parameters is also one way of accounting for the ageing of the population (see below).

The main focus of our intervention models will be those that increase the values of one or more of τ_{NN} and τ_{RN}, and/or decrease the values of one or more of τ_{NR} and τ_{NX}, though it a given intervention may also alter other values in the matrix T.

On the necessity of the "exit" state

We include the exit state "X" so that the total population always sums to P. Its inclusion also means that rows of the transition matrix sum to one. If we were to omit the exit state, the rows for each state will sum to one minus the mortality rate for individuals in that state.

How to model ageing of population over time

The population under consideration will eventually require domiciliary or residential care, or may die before doing so. So transitions between states (for all interventions) change as the intervention continues – and so elements of the transition matrix will be time dependent.

1. How does this "time dependence" enter the parameters? One way is to track the age composition of the population with separate equations and calculate the content of the transition matrix using the results of these equations. For most variations of this model, survival analysis will be used to calculate the changing values of T.
2. We could split the states into age groups too. This will lead to a large number of states in the model, a larger transition matrix, and require an increased number of parameters to populate the larger transition matrix. It is necessary to clarify when ageing events occur and whether it is possible for state changes to happen at the same time.

List of data required

This will change as the model increases in sophistication and we get a better handle on the data we need. Note that for this model we require proportions – a stochastic model that requires rates will be discussed along with the other adaptations of this model below.

Ways to expand the model

- More age groups
- Different rates for genders
- Incorporate household structure
- More model states
- Long term conditions
- More elaborate costing mechanisms

Data required	Model transition(s) involved	Likely source	Likely further refinement required	Additional related data
Proportion dying each year in population cohort (Over 65s?)	N to X, D to X, R to X	ONS, also need to establish how different levels of care affect mortality rates (i.e. can we get estimates of survival rates in long term residential care from Ross's piece?)	By sex, further age groups, long term conditions, time step (month vs year, seasonality etc)	
Proportion of people receiving residential care who no longer need care	R to N	Existing piece on residential care? Frameworki search for short term residential care use? Literature search? This is likely to be a small number.	By sex, additional age groups, long term conditions, types of care package, time step etc	May need to distinguish between short-term and long-term residential care
Proportion of people month to month who continue not to require care	N to N	We can probably get a handle on this from Frameworki and ONS data		
Proportion of people in domiciliary care maintaining that care package	D to D	Frameworki search? Literature search?	By sex, additional age groups, long term conditions, types of care package, time step etc	Ongoing costs of dom care.
Proportion of people in residential care maintaining that care package	R to R	PH residential care cohort? An extension of this to see how these figures change with time/demand?		Costs of continuing care
Proportion of population receiving domiciliary care that moves to residential care	D to R			Costs of changing care
Proportion of population receiving no care that moves to residential care	N to R			Costs of entering care
Proportion of people receiving domiciliary care who no longer need care	D to N			
Proportion of population receiving no care that moves to domiciliary care	N to D			Costs of entering care
Proportion of individuals receiving residential care that moves to receiving domiciliary care	R to D			Costs of changing care

APPENDIX 3

WEST SUSSEX PUBLIC HEALTH RESEARCH TEAM ANALYSIS OF NEW STARTER IN RESIDENTIAL AND NURSING CARE

(undertaken by Ross Maconachie, Public Health Research Unit 2014)

KEY POINTS

- 865 individuals identified as beginning their first package of long stay residential care in 2013/2014 – this figure is higher than current estimates from finance data
- 2/3 were women, 1/3 were over 90
- Placement rates were higher than expected in Mid Sussex
- 24% mortality within the financial year, higher among frail customers, lower among dementia customers
- Average gross and net costs of care were similar among client groups
- 41% of new starters were known to us beforehand, 30% received a dom care or direct payment type service
- 88 customers were identified as capital depleters
- Placements predicted to increase by 3-4% per year

The Cohort

Finance typically calculate the new starters in a given year by subtracting the customers who die from the change in 'customers in pay', and this number is thought to be roughly 800. Due to data recording and reporting issues, identifying the user IDs of these ~800 people in order to undertake an analysis has proved problematic. This report summarises the results of a 'deep dive' into the raw data exported from Frameworki.

A total of 952 new starters were identified, 86 of whom began a period of long stay care then exited without dying. It is thought that these people either represent recording error or were on a short form of a Deferred Payment Agreement while their property was being sold. These 86 have been excluded from the analysis going forward. A further 49 people died within their first month in care and may not be picked up in the finance statistics (but will be included in this analysis). The resulting figure is close to the ~800 estimate.

99 capital depleters began council funded care in 13/14 but only 88 of them were detected by this analysis. The discrepancy of 11 could be investigated further.

Table 1 Mean Age at Entry/Number

	Age (Years)		*Numbers*		
	Female	Male	Female	Male	Total
Adur	86.8	84.7	56	31	87
Bognor	85.9	84.4	67	39	106
Chichester	87.9	84.3	85	61	146
Crawley	87.5	84.0	67	39	106
Horsham	87.9	87.4	47	19	66
Littlehampton	86.4	85.3	59	24	83
Mid Sussex	88.5	83.5	95	42	137
Worthing	85.6	82.4	99	35	134
			575	290	865

About one third of the cohort were aged over 90 at entry. In most age groups, males represented about 40% of the entrants but they represented just 19% of the 90+ group.

Table 2 Age and Sex Breakdown of New Entrants

Age Group	Female	Male	**Of Total**
65-69	64%	36%	**3%**
70-74	55%	45%	**5%**
75-79	54%	46%	**11%**
80-84	61%	39%	**21%**
85-89	61%	39%	**27%**
90+	81%	19%	**33%**

Placement rates were high in Adur and Crawley, being 28% and 40% higher than the (age-standardised) West Sussex rate respectively. Placement rates also appeared higher than expected in Mid Sussex – Horsham has similarly low levels of deprivation and a placement rate 48% lower than the West Sussex rate.

Table 3 Placement Rate

	Placement Rate vs. WSx
Adur	1.28
Arun	0.90
Chichester	1.05
Crawley	1.40
Horsham	0.52
Mid Sussex	1.10
Worthing	1.13

Mortality

A total of 209 of the 866 (24.1%) died within this financial year. Figure 1 below plots the survival time of those who died within the year. Note that a large proportion of deaths occur within the first 100 days.

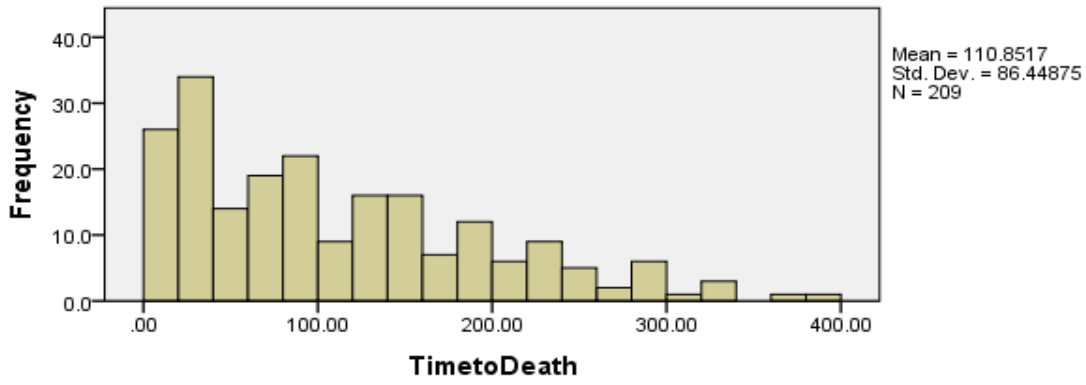


Figure 1

Table 4 shows the number of service users coming from each client group and the percentage dying within the year. It should be noted that although only some 30% are listed as Diagnosis of Dementia, analysis undertaken elsewhere suggests that the actual number of clients living with dementia is much higher – perhaps 50%. This same issue is likely true for those listed as Chronic Condition. The

range in death rates is not very large among the major service user groups but notable differences include the relatively high death rate in people with Frailty and relatively low in Diagnosis of Dementia.

Table 4 New Entrants by Client Group

Group	Number	% Dying
Acquired Brain Injury	14	7%
Chronic Condition	49	27%
Diagnosis of Dementia	259	20%
Dual Sensory Loss	1	100%
Frailty	114	30%
Hearing Impairment	8	38%
Mental Health excl. Dementia	23	17%
N/K - OP OV Migrated	2	50%
N/K - OP PSI Migrated	28	50%
Other	3	33%
Physical Impairment	133	26%
Under Assessment for Dementia	15	20%
Unknown	195	22%
Visual Impairment	22	18%

Cost

Total and net weekly costs of packages of residential care among new starters did not vary a great deal among new starters.

Table 5 New Entrants by Client Group

	Nos	Gross Cost Per Week		Net Cost Per Week	
		Mean	Sum	Mean	Sum
Acquired Brain Injury	14	£581	£8,127	£291	£4,072
Chronic Condition	49	£540	£26,437	£277	£13,559
Diagnosis of Dementia	259	£537	£139,194	£299	£77,408
Dual Sensory Loss	1	£449	£449	£136	£136
Frailty	114	£554	£63,110	£308	£35,136
Hearing Impairment	8	£614	£4,912	£334	£2,674
Mental Health excl. Dementia	23	£504	£11,601	£358	£8,227
N/K - OP OV Migrated	2	£559	£1,118	£195	£391
N/K - OP PSI Migrated	28	£570	£15,971	£277	£7,759
Other	3	£595	£1,786	£315	£945
Physical Impairment	133	£541	£71,992	£284	£37,809
Under Assessment for Dementia	15	£498	£7,474	£285	£4,280
Unknown	195	£554	£107,995	£282	£55,064
Visual Impairment	22	£541	£11,897	£289	£6,369
Total			£472,063		£253,829

Case History

Of the 866 new starters, 355 (41%) had received at least one other service paid for by WSCC prior to admission. Table 4 below shows the elements of care that were received.

Table 6 Previous Service Usage in WSCC

Dom Care	Direct Payments	Short Stay	Outcomes Based Commissioning
18	44	197	193

Table 7 shows the gross and net total cost for the financial year 13/14. More work would be needed to calculate the average per week cost of these types of care as some people have received care for short periods of a week or two that are not immediately prior to admission. The negative net cost on Direct Payments could likely be subtracted from the Dom Care or Outcomes Based Commissioning Costs.

Table 7 Gross and Net Cost (2013/14)

Type	N	Gross Cost 13/14	Net Cost 13/14
Dom Care	18	729	729
Direct Payments	44	4313	-670
Short Stay	197	2370	2344
Outcomes Based Commissioning	193	1993	1993

The Future

Taking the age/sex placement rates from 13/14 and applying them to ONS population projections gives a crude idea of scale of growth over the next few years.

Table 8 Projected New Entrants

Year	Placements	Increase	Cumulative
2013/14	865	-	-
2014/15	896	3.5%	3.5%
2015/16	927	3.5%	7.1%
2016/17	959	3.5%	10.9%
2017/18	995	3.7%	15.0%
2018/19	1033	3.9%	19.5%
2019/20	1073	3.9%	24.1%
2020/21	1116	4.0%	29.0%