Joint Strategic Needs Assessment

Moving resources upstream:

Changing patterns of expenditure to improve health in Gateshead

(mental health, cardiovascular disease, musculoskeletal conditions and housing-related falls)

2010

(next planned update: autumn 2011)

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Foreword

NHS North East as a whole and NHS South of Tyne and Wear in particular have a strategic direction that involves transforming health and social care services, by moving investment from acute services to preventive and community services. Individual organisations and health & social care economies have struggled with this agenda for many years now, both in terms of making this shift in practice and in actually measuring the level of shift.

This element of the Gateshead Joint Strategic Needs Assessment contributes towards this strategic direction in two ways: developing a baseline in relation to 3 important conditions and developing a method to measure the transfer of resources. While the work has been difficult, grappling with the technical issues is important if we are to lay a clear trail in terms of this transfer. This is the crucial foundation of the preventive agenda set out by Wanless and Darzi and now reinforced by the need for resource-releasing initiatives to be identified within the NHS. I hope this report acts as a stimulus to further discussion and ownership of this issue across the health economy and the further development of methods of measurement that are fit for purpose.

David Hambleton
Director of Commissioning and Reform

Executive Summary

This report forms part of the Gateshead Joint Strategic Needs Assessment for 2010. It follows through the strategic intention first expressed in the 2008 Joint Strategic Needs Assessment, to find ways to measure the transfer of resources upstream from acute interventions to preventive or community based interventions, as indicated in '*Our Health Our Care Our Say*'. It focuses on measuring progress in terms of financial allocation along the pathway of care for the following conditions: circulatory disease, mental health and musculoskeletal conditions. These examples have been selected to pilot the methodology on subjects which are important problems, require a range of health and social care services and where there is evidence of effective preventive or community based interventions. Additionally, we consider the movement of resources into housing repair, with a specific aim of reducing falls on stairs and the associated expenditures on health and social care.

Challenges faced in doing this work include: definitions (the sectors represent a continuum, many preventive measures affect more than one pathway/condition and conditions are given different names in acute, community and social care settings); obtaining appropriate data (timeliness, headings used by programme budgeting, Local Authorities and Clinicians are all different).

All three conditions showed an increase in PCT programme budgeting expenditure by hospital services and a decrease in community services. Within the acute sector, outpatients increased as a proportion of costs for cardiology, which may indicate increased community based care. The reverse was true for trauma and orthopaedics. This reflects the direction of numbers of attendances.

For mental health, an analysis of expenditure by tiers in relation to adult drug treatment showed the greatest proportion at tier 3 (tiers 3 and 4 make up 38% of the total). For alcohol tier 2 is the highest, with tiers 3 and 4 together using 42% of the total. Tier 1 uses relatively little expenditure in both cases.

For both mental health and musculoskeletal around a third of personal social care expenditure for adults under 65 relates to nursing/residential care.

Prescribing costs are complex in all three examples, because while usage is increasing the cost of generic drugs in several areas, means that high volume costs are reducing.

Next steps include:

- Stakeholder discussion of meaningful categories used for comparison and use of unit-costs;

- Leadership from finance and commissioning in the PCT and LA;
- Local Authority consideration of pathway based work as a framework to drive service improvement and modernisation including tracking spend;
- Recognition that this approach is an essential part of the strategic shift of resource use that will be required to make the savings expected over the next 5 years and maximise effective use of resources;
- Regional/National work to create high level agreement (e.g. DH definition of a pathway starts with NHS client contact; Health Reference Groups and Read codes do not work well together).

Year 3 of working with the framework will determine whether it is a useful tool for assessing progress in relation to Our Health Our Care Our Say.

1 Background

As stated in Gateshead Joint Strategic Needs Assessment's priorities for adults and older people:

'The strategic commissioning intention expressed by the JSNA is to work towards reallocation of resources along the care pathway of 5% from acute care to prevention or community-based care (treatment/rehabilitation/support at home/palliative care), as indicated in 'Our Health, Our Care, our Say'. It is proposed to aim for at least 1% transfer in 2008-09, leading up to at least 3% by 2010-11. Progress will be reviewed in terms of best outcomes for the health of the population, as well as monitoring our direction of travel in terms of resource allocation.'

There are several elements to consider when assessing progress towards this aim, including the following (not intended to be a comprehensive list)[1]:

1. An appropriate baseline measurement of resource allocation needs to be identified;
2. Care pathways need to be mapped, so that:
    a. Resource expenditure can be properly allocated to acute care or prevention/community-based care
    b. suitable areas for change can be targeted or
    c. changes along the pathways can be identified;
3. Continuing assessment of expenditure at specific points of pathways needs to be identified.

There is an increasing urgency to carry out this type of assessment. The quality, innovation, productivity and price (QIPP) initiative is expected to assist the NHS to release major sums of money for new investment over the next few years (around 20%). There will be no investment without disinvestment in future.

The specific health areas considered for this report (mental health, circulatory disease and musculoskeletal conditions) have been chosen because they are amongst the most significant areas in terms of both population health (accounting for extremely high proportions of morbidity) and service expenditure. Additionally, there is an increasing base of information about resource expenditure on these, on which we can draw to inform this exercise. Prevention of falls by housing repair is considered rather differently, looking at the effects of certain housing repairs on hospital admissions due to falls on stairs.

Each of the elements mentioned above has its own issues, which are discussed under appropriate sections below.

[1] See Appendix 1 for list of useful documents.

2 General issues arising

This section outlines general issues arising around definitions, baseline measurement, care pathway mapping and assessment of expenditure. Issues specific to the areas of focus are discussed in the chapters addressing those areas of focus.

2.1 General issues with definitions and baseline measurement

The White Paper 'Our Health, Our Care, Our Say' acknowledges that there are difficulties in defining and measuring spend on prevention and suggests that spend on prevention and spend on public health should be separated more clearly. The expert advisory panel on preventative health spending, reporting to Health England, proposes the definitions shown in Box 1.

Box 1: proposed definitions of prevention

A proposed definition of a preventive intervention:
'*A clinical, social, behavioural, educational, environmental, fiscal or legislative intervention designed to reduce the risk of illness, disability or premature death and to promote physical, social, emotional and psychological wellbeing*.'

A proposed definition of preventive health spending:
'*the total public and private spend on primary and secondary prevention, health promotion, family planning, school health services, national screening programmes, public health programmes for communicable and non-communicable disease, epidemiological surveillance and public health administration, in the health or social care sectors.*'

Financial monitoring (see also Appendix 2) includes splitting expenditure according to where it occurred: within primary care or in secondary care. However, there are various difficulties with this, including: blurring of boundaries between primary and secondary care and resource implications/ systems for finance and commissioning teams.

The blurring of boundaries is best explained by examples:

1. A cardiac team is based in a secondary care setting, with staff employed by a secondary care trust. Expenditure is therefore classed as secondary care. However, the workers spend much time out in the community, carrying out what could/should be described as prevention

or community-based care (and the model has been commended by the NHS Institute as a good model of primary care!).

2. GP surgeries are increasingly carrying out work that used to be hospital-based (in-patient or out-patient). These activities are therefore classed as primary care in some instances but might sometimes still be carried out in hospitals (and therefore be classed as secondary care).

There could therefore be several instances where expenditure is technically (and not incorrectly) allocated to primary or secondary care but should, from a true care pathway perspective, belong in the other category.

Any major reassessment of financial monitoring has implications for finance teams, in terms of both time taken and staff resources. We cannot simply assume they could take on extra staff because of restrictions on management costs.

There will be times when expenditures on preventive measures for one disease will impact on other diseases, e.g. risk factors for heart disease and some cancers overlap; CVD prevention, including physical activities, often has beneficial effects on dementia. The crossover effects might be impossible to measure but could nevertheless be quite strongly present.

Most of this analysis concerns pathways and expenditures on patients. There are also effects on carers to bear in mind, for example stress, and lost opportunity costs.

2.2 General issues with care pathways and pathway mapping

The patient pathway is defined in Department of Health documents as the route that a patient takes from first contact with an NHS member of staff (usually their GP) through referral to the completion of their treatment. An NHS focus tends to be the norm so thought needs to be given as to exactly how to define the pathway to ensure that local authority provision is properly accounted for.

The blurring of boundaries between primary care and prevention/community-based care was mentioned above and is one reason why care pathways need to be accurately described. However, it is likely that there will be frequent changes in the pathways, so that any approach used to monitor pathways will have to be flexible enough to encompass these.

Patient satisfaction with pathways must be assured. Triage-type centres, to which GPs can refer instead of hospitals, might lead to more complex care pathways that might initially seem more awkward for patients. However, the triage is intended to speed up access to services for those who need them urgently. The system is more cost-effective as well as speeding up access. Expenditure on triage centres will be classed as an increase in primary care expenditure.

There could well be instances where a change takes place within a community or preventive setting that is a definite move in the right direction, i.e. towards earlier prevention or capacity-building, but that gets overlooked because it is not a transfer from secondary care, if analysis is by organisation rather than activity type. The importance of such changes needs to be recognised as part of the capacity-building process.

The infrastructure needs to be in place for any changes in the care pathway, e.g. training for GPs or for social services staff in mental health problem recognition.

According to Intermountain Healthcare (an American insurance and primary & secondary care provider[2]), three elements are all needed: money, pathway and infrastructure. The Intermountain health care system has the same size budget as SoTW and obtains consistently high quality ratings, decreasing expenditure and improving clinical outcomes and the patient experience.

2.3 Issues around patient and professional response to change

Patients need to be satisfied with proposed changes. The personalisation agenda offers one opportunity to discuss with patients their priorities and needs in terms of preventive and community based interventions.

There are also sometimes difficulties around professionals adopting new procedures or techniques, and in aligning appropriate capacity and capability in the workforce at the right part of the pathway. For example, in recent work involving GPs looking at registers for heart disease screening, there were much lower numbers of patients identified than would have been expected from NICE guidance[3].

Blood pressure might be measured in GP practices but necessary follow-up action not be taken, in terms of treatment. High blood pressure (hypertension) is a major cause of strokes and coronary heart disease[4]. Early detection and treatment improve outcomes.

GPs might wish to use counselling instead of drugs for mental health patients but find that there are not enough counsellors.

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[2] Intermountainhealthcare.org
[3] http://www.nice.org.uk/usingguidance/commissioningguides/heartfailureservice/determininglocalservicelevelsheartfailureservice/DeterminingLocalServiceLevelsHeartFailureService.jsp
[4] http://www.dh.gov.uk/en/Healthcare/NationalServiceFrameworks/Bloodpressure/DH_4066153

The question of where any savings are seen to go was mentioned earlier. Equitable (and transparent) distribution of savings and costs needs to be considered also when patients from one practice are sent under new arrangements to another specified practice for certain services.

2.4 General expenditure mapping issues

Figures relating to expenditure over the past few years for the areas of focus are given in sections dealing specifically with those areas. This section concentrates only on some of the general issues surrounding the expenditure.

As with care pathway mapping, one difficulty is that of frequent change.

As with baseline measurement, any major reassessment of financial monitoring has implications for finance teams, in terms of both time taken and staff resources. It has been suggested that mechanisms for monitoring changes in expenditure and for performance management are now being built into new services in a much better way than before. It would be sensible to ensure that such mechanisms are routinely employed whenever any new contract or service is established. However, there are government restrictions around the type and quantity of information requested (with the aim of reducing the burden of administrative provision on the NHS)[5].

For comparative purposes, it will be important to ensure comparison is between items measured in the same way each time period. In many ways, historical comparison will be more reliable and more useful than comparisons with other areas, as consistency of approach cannot be guaranteed. Methods of data collection and data collation could lead to apparent significant differences.

It needs to be borne in mind that straightforward moves of expenditure from acute to preventive care will rarely occur. More usually, a move will be from somewhere towards the acute end of the continuum to somewhere nearer the preventive end.

Currently many of the financial breakdowns available do not contain sufficient detail for easy use in a pathway model. Block contracts can be difficult to disaggregate, as can other elements such as pharmacy costs. It might be that various assumptions are necessary in the first instance. This might not be too serious a problem, so long as any assumptions are continued when year-on-year changes are being monitored. Standard programme budgeting returns

[5] The Review of Central Returns (ROCR) team is charged with minimising the burden of all ongoing and one-off central information requirements on the NHS. It does this by regularly and rigorously reviewing all information requirements, and approving new requests for information - including one-off surveys, taking account of the NHS effort involved in supplying the data requested.

for the SHA are also of limited use (giving, for example the PCT programme budgeting expenditures for mental health problems or circulation problems as a whole). However, across Tyne and Wear work has been going on to allow identification of service provider and setting within the programme areas.

An estimated 16% of drugs are initiated in secondary care then prescribed largely in primary care. When in secondary care, they are mostly included in tariffs so are not separately identified (major exceptions to this are expensive cancer drugs).

Activities such as direct access (e.g. GP requesting blood tests, X-rays, etc. - primary care activity) are not covered by national tariff. There is a need to investigate the best ways of looking at these GP costs. Other GP issues include local enhanced services – it should not be thought that these are always the best way forward. For example, some more fruitful approaches might include increasing a training budget to enhance skills in practice-based commissioning or to provide front-line staff with better skills in mental health problem recognition. Other pathways might include leisure centres or gyms (with subsidised memberships) or pharmacies where investment would be beneficial.

There might be one-off expenditures associated with setting up new systems or procedures, for example for training of front-line staff. Changes in pathways towards primary care could also lead to temporary rises in certain secondary care activity, for example when more tests for CVD are carried out in primary care there could be a subsequent short term sudden rise in referrals to cardiology.

There might also be expenditures associated with decommissioning or disinvestment (there will almost certainly be a need for negotiation and full discussion around any disinvestment). It takes time to terminate contracts with secondary care or to arrange the purchase of a new service. However, contracts with secondary care will be revised on an annual basis and so long as 6 months notice is given, changes in service are possible. If major changes are to take place, the Trusts would need to be provided with the right service specification, with information about the impact and what types of patients will be coming out of the service. Where there are no substantial waiting lists (such as in heart disease) there are sometimes no perceived benefits to a Trust to a reduction in the number of patients.

Contracts for secondary care do contain information requirements, including statutory information schedule 5. Contracts also contain a 'PCT wish-list' of desirable information, which the Trusts are frequently happy to provide. Sometimes additional information needs can be stated in a service agreement.

For 'quick wins' it might be appropriate to fund pilots, although this would not be a suitable long-term approach. There is also a question around where any recognised savings go: in what way can any financial benefits be allocates?

PCTs are responsible for some 80% of the total NHS budget and LAs are responsible for the entire social care budget[6].

Practice based commissioning is one route to increase investment in prevention[7]. Investment in practice based commissioning will involve ensuring appropriate information is collected and used in practices (the Department of Health has produced guidelines to minimum information requirements that PCTs should provide to GP commissioners[8]).

Various budgeting approaches use calculations of the effect of marginal changes on spending: for example, programme budgeting and marginal analysis (PBMR[9])). In essence, this can be seen as looking at the effect on a programme (or service element) of providing one additional unit of resource (often financial resource) and comparing the effects of such marginal changes to identify which service element would benefit the most. Similarly we can consider the effect of removing one unit of resource from different service elements to see which would suffer the most. PBMR considers what resources are available, where they are currently spent, what other possibilities are there for spending, whether current services could be effectively provided more cheaply (so releasing funds) and whether some services should be reduced because more benefit would be gained from spending elsewhere.

When major changes take place (such as the mental health ward closure), this will have a large one-off effect on expenditure and care should be taken not to make assumptions about similar percentage reductions in the following time periods.

The new personalisation agenda could make comparative assessment of expenditure more complex. If there is a notional amount of money to be spent on a patient and the patient is involved in decisions about how to spend it, record-keeping will be different. However, social care is well ahead of health in its thinking about this agenda and its implications for moving resources upstream and lessons could be learned there. Building in considerations of measuring investment along the pathway at the design

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[6] Department of Health etc. *Practice based commissioning: an introduction for a local authority audience*. 2006

[7] NHS Alliance. Practice-based commissioning: improving health and reducing inequalities. 2005

[8] Department of Health. *Practice-based commissioning: practical implementation.* See also *The Intelligent practice: understanding the information needs of GP commissioners* (Dr Foster, 2007)

[9] Ruta D, Mitton C et al. *Programme budgeting and marginal analysis: bridging the divide between doctors and managers.* **BMJ** 2005;330;1501-1503

stage is critical, and ways to discuss this with patients could form an important new avenue of influence.

Decisions will have to be taken about how to count new expenditure that is brought into a service. Pragmatically, influencing new investment is easier than changing existing service patterns. In this paper if a totally new service is commissioned in primary or preventive care with extra money, which is not a transfer from anywhere, we have considered it as a percentage increase in primary or preventive care (and therefore a comparatively higher increase compared to secondary care). A simplistic example is given in Table 1. In this example, there has been no direct transfer from acute to preventive care but there has been an injection of funds into preventive care, so that the proportion of total expenditure going towards preventive care has increased.

Table 1: percentages of overall spend versus transferred spend

Year 1			**Year 2**		
Acute care	Preventive care	Total	Acute care	Preventive care	Total
100	100	200	100	120	220
(50% of total)	*(50% of total)*		*(46% of total)*	*(54% of total)*	

2.5 Areas where PCT and LA have less direct influence

Costs are paid to secure and high dependency providers elsewhere for services to Gateshead residents. These costs are not under the direct influence of the PCT/LA. However, increasing the range of local services and success at the preventive end of the continuum should eventually reduce the numbers of patients needing this care.

3 Changes in expenditure on circulatory disease

3.1 Circulatory disease pathway mapping: issues

As well as the general issues mentioned in section 2.2, there are specific issues related to mapping circulatory disease pathways.

Work into patient pathway development is already taking place for South of Tyne and Wear with regard to both heart disease and stroke. Appendix 3 shows the stroke group's pathway for TIA. Appendix 4 contains the vision for the NHS SOTW CVD programme and Appendix 5 shows the model for obesity services.

ST-Segment elevation myocardial infarctions (STEMI) have a particular course of action: ambulances are kitted out for diagnosing heart disease and if the case is a STEMI, the ambulance goes with a blue light straight to Freeman, even if it is close to a DGH. This is a new pathway, under which an angioplasty takes place within minutes of arriving. (This has been an unusual change in that it was clinically driven.)

There is a need to consider new primary care enhanced services around heart failure. Gateshead has started developing an urgent care team to reduce secondary care admissions. This peripatetic service came into place last year, with workers employed by the PCT. It is built on a Sunderland model, which is in its 4th year, having started on respiratory conditions but with an evolving role, working with the ambulance service and able when appropriate to send community nurses rather than an ambulance. The staff will be keeping their own records of caseloads, numbers of admissions saved and so on.

Within primary care, there might be moves towards prevention, or earlier recognition, which would constitute moves in the right direction but might be overlooked if the only measurement is of changes to community or prevention from secondary care.

If the necessary follow-up service is not available, patients could be disadvantaged by long waits or worries. For instance when risk assessments for TIAs show a need for further diagnostic examinations but there is no imaging equipment available.

National initiatives might have serious effect on pathways. If stroke physicians are relocated to central units then they might not be available to deal with TIAs locally and if TIA patients start to feel better they often do not bother to continue attending if they have to travel far.

There are examples of shared care protocols available on the Department of Health website that outline certain responsibilities and roles for the sharing of

care. One example is a shared care protocol for carvedilol (eucardic) for the treatment of chronic heart failure. This outlines responsibilities and roles of specialists and of general practitioners and states that the general practitioner will do the prescribing (after communication with the specialist). Although such shared care protocols might be of limited value to this present assessment, they should be borne in mind as potential aids to identifying primary and secondary care expenditure.

3.2 Circulatory disease expenditure mapping: issues

As well as the general issues mentioned in section 2.4, there are specific issues related to mapping circulatory disease expenditure.

There has been little real breakdown available other than, for example, the cost for delivering circulatory disease care in secondary care broken down by Health Resource Group, elective and non-elective admissions.

It is possible to tell if spend on circulatory disease is higher than the norm (but see section on baseline assessment).

There are new enhanced primary care services around heart failure, for which business cases have been developed. This involves additional resource in all three PCTs (CVD primary prevention and CHD enhanced services £200k), with plans developed between public health and commissioning.

Where preventive measures are put in place but the subsequent infrastructure is not in place, there could be extra spending required to ensure equipment etc is available. For instance, risk assessment procedures might include sending patients for further imaging but there is a lack of imaging equipment.

With the push for cost-effective use of generic statins, the drugs budget will be reduced in the short term. This should not be seen as a reduction in spend in primary care but will have to be considered in terms of volumes of statins as well as costs. (The bulk of statin expenditure is incurred in primary care.)

3.3 Circulatory disease pathway/service changes already happening or planned

- The secondary care-based team going out into the community has already been mentioned, when discussing definitions in section 3. Further discussions are to be held to try to estimate costs around this.
- Blaydon has now a primary care centre where monitoring of rehabilitation can take place.
- Increasingly risk assessment is expanding in primary care. There is likely to be increased investment in primary care on, for example, atrial

fibrillation as a risk factor for stroke. It is worth noting that this will not be a direct transfer from secondary care spend.

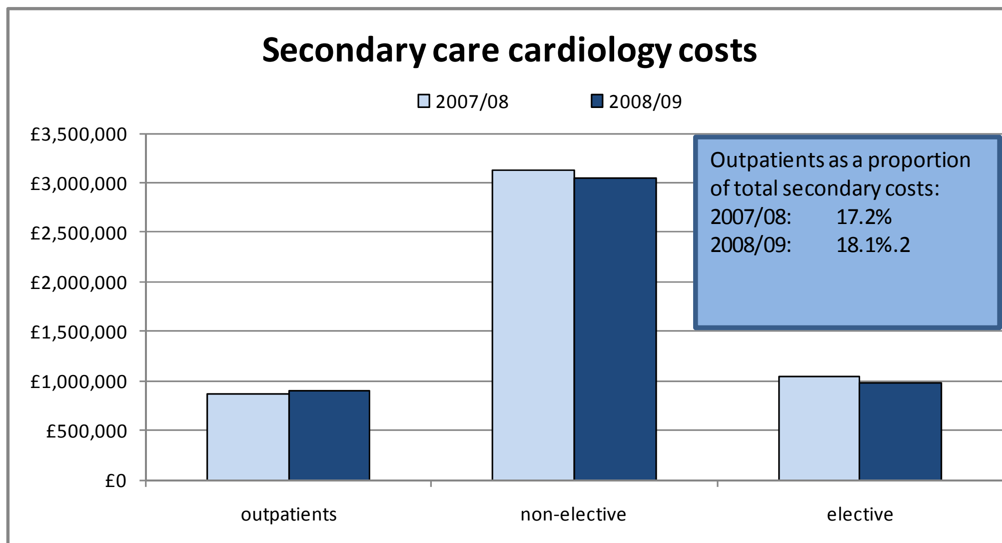
- Vascular risk screening programmes are being rolled out through GPs, alongside pilot work in the workplace.
- The vascular risk programme across Gateshead, South Tyneside and Sunderland has test-bed status with the Department of Health for its innovative work in relation to Social Marketing and Health Inequalities.
- New obesity services have been commissioned and a *South of Tyne and Wear obesity strategy* has been developed.
- Social marketing research has been undertaken to try and improve the attractiveness of services to key groups, including men over 40. Additional social marketing work is being carried out in South of Tyne and Wear within BME communities.
- CVD risk is a strategic priority within the South of Tyne and Wear Strategic Plan. A workforce development plan is being developed and additional members of staff are being employed to support the vascular risk programme.
- A review of Bridging the Gap – CVD Strategy Group, the current function across the three PCT's and Local Authority areas has been carried out to address the issue of unclear decision making and the loss of local implementation teams.
- A social marketing project was completed by the end of March 2009. It had three main strands: to understand levels of awareness and barriers to accessing services for those most at risk of stroke, to understand why stroke survivors may have delayed seeking help, whether they were referred in to specialist services rapidly and how their experience could be improved and finally whether professionals are aware of the importance of rapid referral for those showing symptoms of stroke or TIA and how changes in the stroke pathway can best be communicated to them.
- Links with local implementation teams are being strengthened through broadening the membership of the South of Tyne and Wear Stroke Task Group.

3.4 Identified changes in expenditure on circulatory disease

In terms of NHS secondary care costs for cardiology, there has been an increase in the proportion of overall costs that relate to outpatients (see

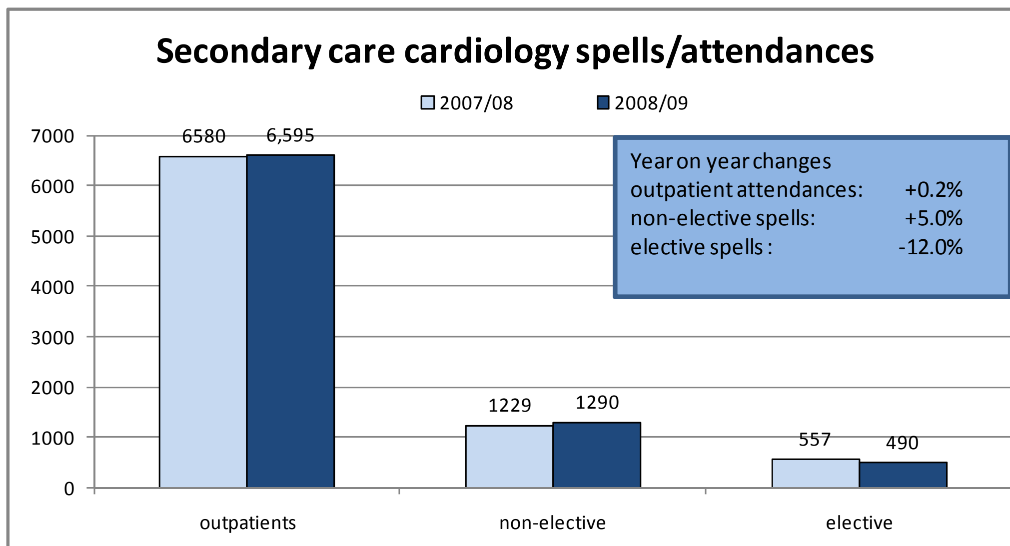
Figure 1). This is a move in the right direction, towards community rather than acute care.

Figure 1: secondary care cardiology costs



The number of outpatient attendances has also risen, as has the number of non-elective spells, whilst there has been a larger reduction in the number of elective spells (see Figure 2.)

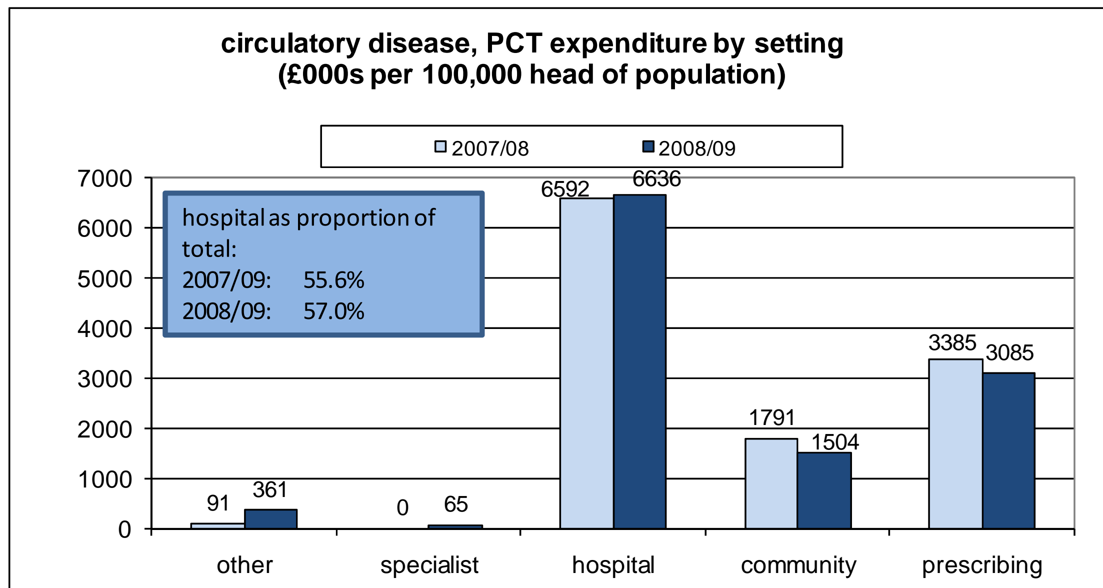
Figure 2: secondary care cardiology spells and attendances



However, if we look at PCT expenditure on circulatory disease by setting (see

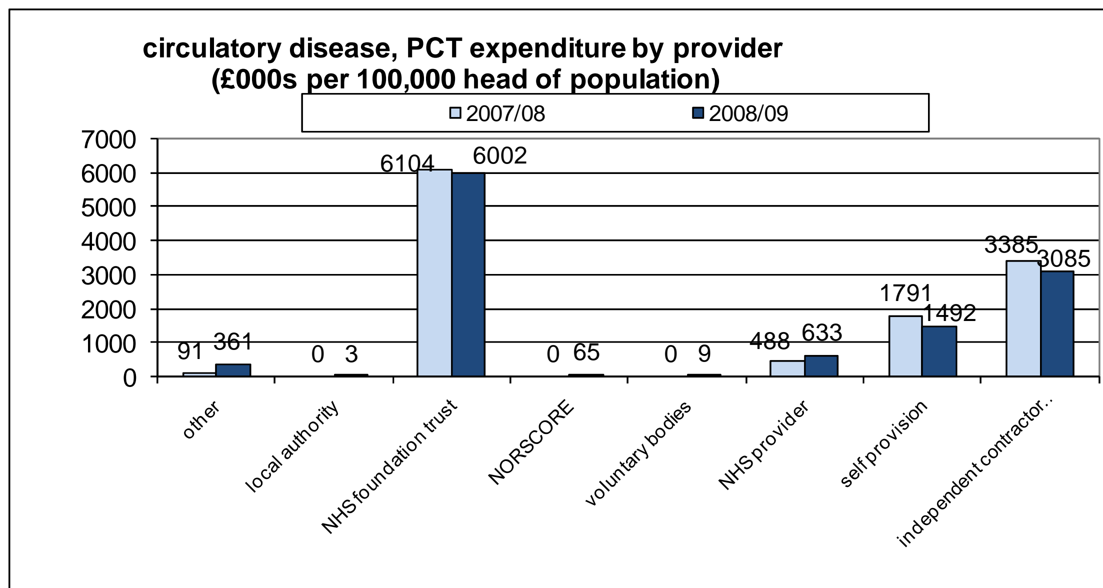
Figure 3), it appears that there has been an increase in the level of expenditure in a hospital setting and a decrease in the level of expenditure in the community.

Figure 3: circulatory disease, PCT expenditure by setting



As can be seen from Figure 4, the biggest proportion by far of PCT expenditure on circulatory disease is for hospital care.

Figure 4: circulatory disease, PCT expenditure by provider



Following sign-off by the SoTW Integrated Board in March 2008, a total of £2.8million per annum was allocated to support the development of comprehensive pathway of care for adult weight management and treatment services. During 2008/09, 45 contracts were successfully awarded to a range of providers to deliver all of the related 27 Service Level Agreements. (See obesity strategy.)

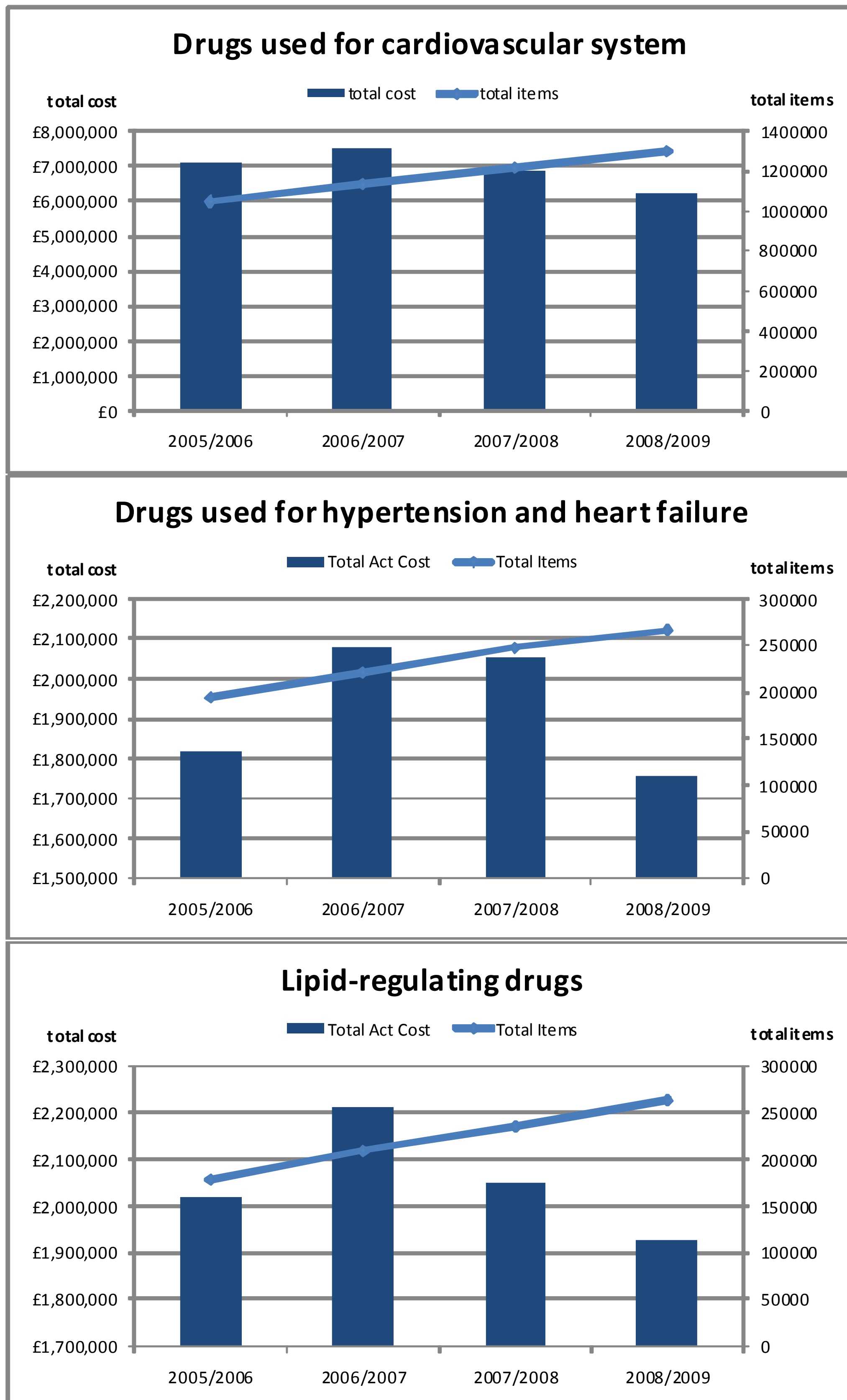
The numbers and costs of prescriptions for drugs used in treating circulatory disease problems are shown in Table 2. There are difficulties in identifying exactly the types of drugs to include but the three main relevant categories are shown in the figure. It is also problematic assigning the drugs to a place on the continuum from acute to preventive care. For example lipid-regulating drugs are usually regarded as a preventive measure (prevention of further heart disease) but others, whilst primarily treatment, might well be helping patients not to be admitted to hospital.

Table 2: drugs used for treating circulatory disease, 2008/09

Category	Number of items	Cost
Cardiovascular system	1,299,896	£6,218,638
Lipid regulation	263,562	£1,926,315
Hypertension and heart failure	266,476	£1,755,450

Error! Reference source not found. shows costs and volumes over the past four years. Whilst there has been a significant rise in the quantities for all three, the costs have actually come down, because of large changes in drug prices. This offers opportunity costs to treat greater numbers of patients for the same expenditure. This example illustrates the complexity of understanding changes in resource allocation along the pathway of care.

Figure 5: drugs used in the treatment or prevention of circulatory disease



4 Changes in expenditure on mental health

4.1 Mental health pathway mapping: issues

As well as the general issues mentioned in section 2.2, there are specific issues related to mapping mental health pathways.

Identification of the current pathway is necessary before any redesign can take place. An emerging patient pathway (for commissioning mental health across the North East) is shown in Appendix 6, with the related levels of care described in Appendix 7. This pathway includes promoting healthy lifestyles and wellbeing, a stage earlier than the Department of Health pathway definition given in section 3.1, which starts with the patient's first contact with the NHS, usually through his/her GP.

Ensuring proper accounting of local authority provision (to compensate for the tendency for standard patient pathways to focus on NHS provision) is relevant at all stages of the pathway and might begin with the early recognition of mental health problems by front-line staff of any discipline and from any sector. In the broader definition of the pathway developed by the Mental Health Commissioners, to include healthy lifestyles and wellbeing, this definition could be even more significant. Another difference with a pathway appropriate to our use in assessing cost transfers is that its focus will be very much on the location of the care, so that possible areas for change from acute to community care or prevention can be identified.

In general, local authority services for mental health would be regarded as community rather than acute services. There are, however, some services which might technically be classed as acute, or at least intensive – such as services for toxic dementia (a temporary condition that can be caused following an infection). Sufferers might be treated in a community setting or a home but it would be one area where an increase in spend would not necessarily reflect a desirable transfer of funds.

Within local authority settings, changes might take place that are certainly a move in the right direction, i.e. towards preventive action, but which might be overlooked as they are already within the community care classification. Such changes include training of care staff in different levels of mental illness risk recognition.

Access to certain mental health activity is currently very limited, with no access for commissioners at present to the mental health Minimum Dataset. This is unlike the case for the Common Dataset. This is under discussion nationally, following a consultation about mental health information in 2008.

4.2 Mental health expenditure mapping: issues

As well as the general issues mentioned in section 2.4, there are specific issues related to mapping mental health expenditure.

A 2006 report on a care packages and pathways project, dealing with payment by results for mental health, concentrated on 13 packages. Should this approach be widely adopted, breakdown of costs might be subject to the same difficulties as with other packaging approaches, in that systems might be set up that produce summaries only by package.

Secondary care spending on mental health is more difficult to identify in detail than heart disease, partly because codes pick up related spending, such as that on senile dementia or alcoholism.

Breaking down costs for mental health drugs is also problematic because many drugs are prescribed not just for mental health problems but for a wide range of conditions (e.g. antidepressants for pain relief, antipsychotic drugs for dementia). With high levels of drug misuse in Gateshead, there are high levels of prescribing of opioids, benzodiazepines etc for drug-related rather than mental illness.

Mental health drugs expenditure is high in the area. Pharmacy advisers discuss alternatives, namely cognitive behaviour therapy and other counselling, with practices but find that there are not enough CBT services available for everyone. Comparative costs of counselling and drugs should be taken into account if more counselling does become available, as it might temporarily skew primary care costs.

4.3 Mental health pathway/service changes already happening or planned

- One of the Tranwell unit's three wards closed as an inpatient ward in April 2009 and is intended to be re-opened as an urgent care day service once internal refurbishment is completed. This decision was based on local inpatient activity and will complement the existing mental health crisis team. This provides an alternative option to 24-hour inpatient care for those people who do not require that inpatient care.
- A dementia specialist team is being piloted in the (local authority) domiciliary care service. This is a definite move towards the early preventive end of the spectrum, although it is not a transfer from secondary care.
- In 2008 there was a move towards more LA community care with an increase in support time recovery workers, funded by a special grant. The Support, Time and Recovery (STR) Workers assist people with mental health needs to access educational, training and work related opportunities.

- Promoting independence centres have been established for people discharged from hospital, for the assessment and improvement of independence skills, mainly targeting older people.
- The emphasis of domiciliary care has changed: previously it was on shopping/cleaning etc, now it is aimed at promoting independence. The workforce has been reformed and retrained to NVQ level 2, leading to a reduction in the number of people returning to hospital.
- Currently there is work on the reprovision of some NTW services based in Trust-owned residential villas. Residents will be moving into supported accommodation or supported environment with care packages this financial year.
- A social work team has been located in QE hospital, carrying out assessment.
- South of Tyne and Wear now has a full time senior public health staff member leading on the public mental health promotion agenda. Each of the three PCTs funds a proportion of the cost, based on their population sizes, so that Gateshead contributes over a third of the cost. Initiatives under this remit include the development of a public mental health promotion strategy and a suicide prevention plan.
- All GP practices have a Primary Mental Health Worker input.
- The service provides access and choice to a range of services/treatment options and includes:
    - access to a variety of self help materials literature;
    - books on prescription in collaboration with Gateshead libraries;
    - supported self help service located in all 3 geographical sectors covering Gateshead;
    - 1-1 assessment and treatment with a PCMH worker or GMH worker;
    - a variety of group work interventions.
- Gateshead Locality Crisis Resolution Service is fully established through a process of new investment and radical service reform. The team are meeting all projected trajectories and receive positive feedback from the service user population on a regular basis incorporating Wellness Recovery Action Planning (WRAP) into everyday practice. The service is now having a substantial impact upon acute inpatient bed occupancy rates demonstrating the effective application of the home treatment, bed management and gate-keeping roles.
- The Voluntary Sector also provides services: Counselling, Tyneside Women's Health, CAB, giving variety, choice and promoting social inclusion and gender appropriate services across Gateshead.
- The crisis home treatment service has also been merged with other frontline urgent assessment services i.e. A&E Liaison, Court Liaison and the developing Acute Day Care Services. Working links between these services and the acute inpatient facility in the Tranwell Unit have enabled the establishment of an Urgent Care Team, which incorporates all elements of service within the Urgent Care Pathway. These services now come under a single line of management and have dedicated consultant psychiatrist and psychology input. Levels of early discharges have

significantly increased over the past 12 months, which is reducing lengths of stay and producing a higher patient turnover.

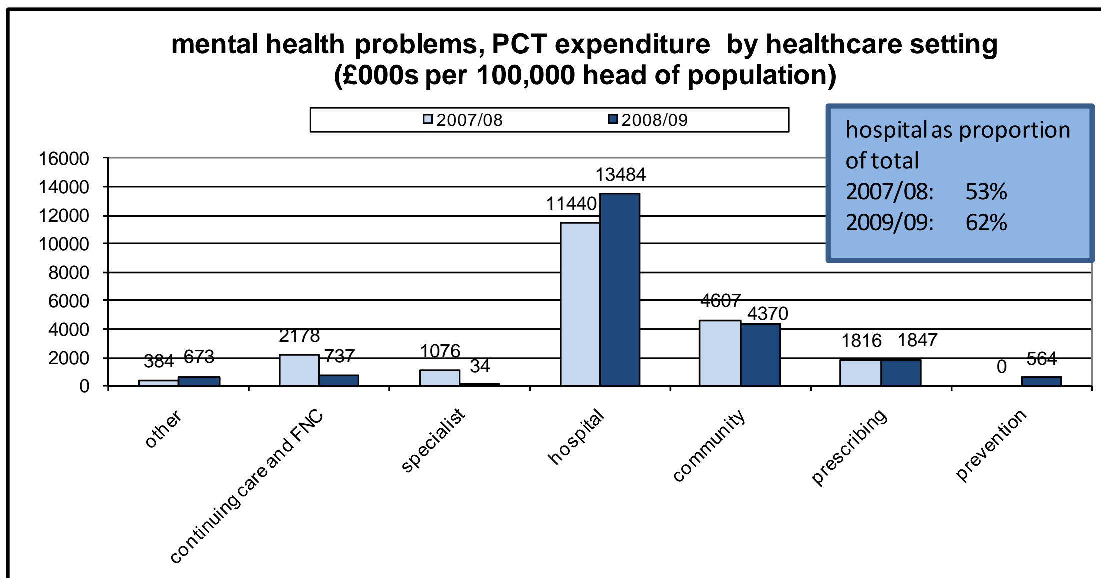
- There is currently a joint Gateshead & South Tyneside *Early Intervention in Psychosis* Team that works to a sector model serving 2 LIT areas. The team has met relevant targets for years one and two. Capacity issues have impacted upon the team's ability to meet year three activity targets.
- The Gateshead Assertive Outreach Team has met all relevant targets.
- The Personalisation agenda promotes access to natural/community support options in order to increase choice for people with mental health needs.
- A social inclusion action plan is in place, which aims to deliver meaningful opportunities and timely access.
- Gateshead Council's Provider service facilitates meaningful day opportunities of adults of working age who have identified mental health needs. Utilising the Community bridge building model, the focus is on assisting people to access socially inclusive, community based opportunities, which promote independence, wellbeing, choice and citizenship.
- Gateshead has commissioned from the Third Sector a mental health low-level brokerage service for those people who do not meet the Fair Access to Care Criteria. This service operates on a preventive model.
- Gateshead Council has commissioned from the Third Sector a support service from women with mental health needs, an Employment service, Advocacy and Mental Health User Forum, telephone helpline and supported living options.

4.4 Identified changes in expenditure on mental health

Programme budgeting information on PCT mental health expenditure suggests that there has been a significant increase in the level of expenditure in a hospital setting and a decrease in the level of expenditure in the community, although there has been a rise in the level of expenditure at the prevention level. (See

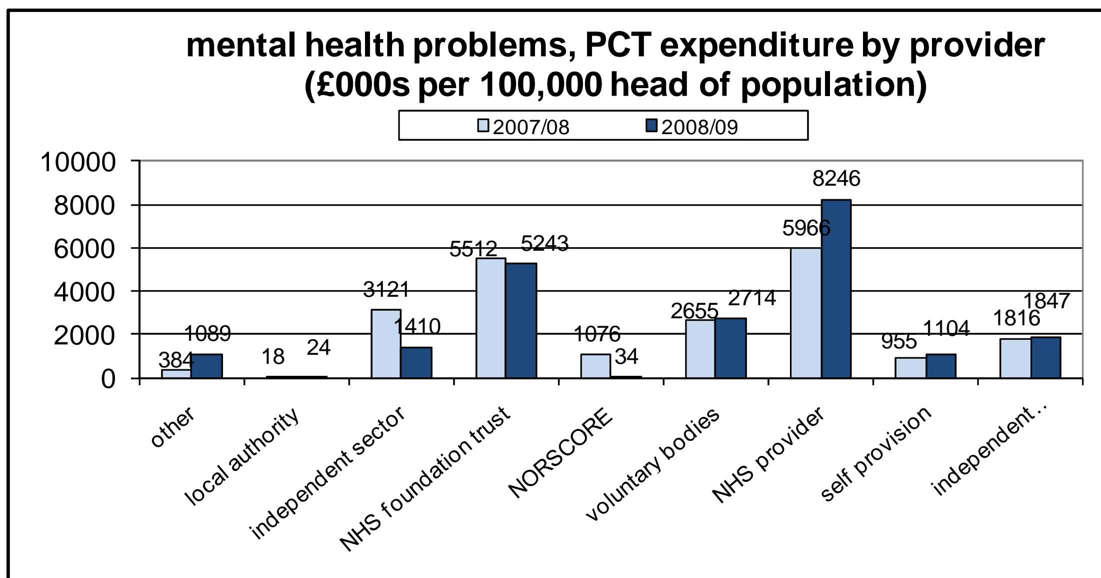
Figure 6.)

Figure 6: PCT expenditure on mental health by healthcare setting



As can be seen from Figure 7, the highest expenditures are on NHS providers, with a substantial rise from 2007/08 to 2008/09, whilst there was a fall in expenditure on the NHS foundation trust itself.

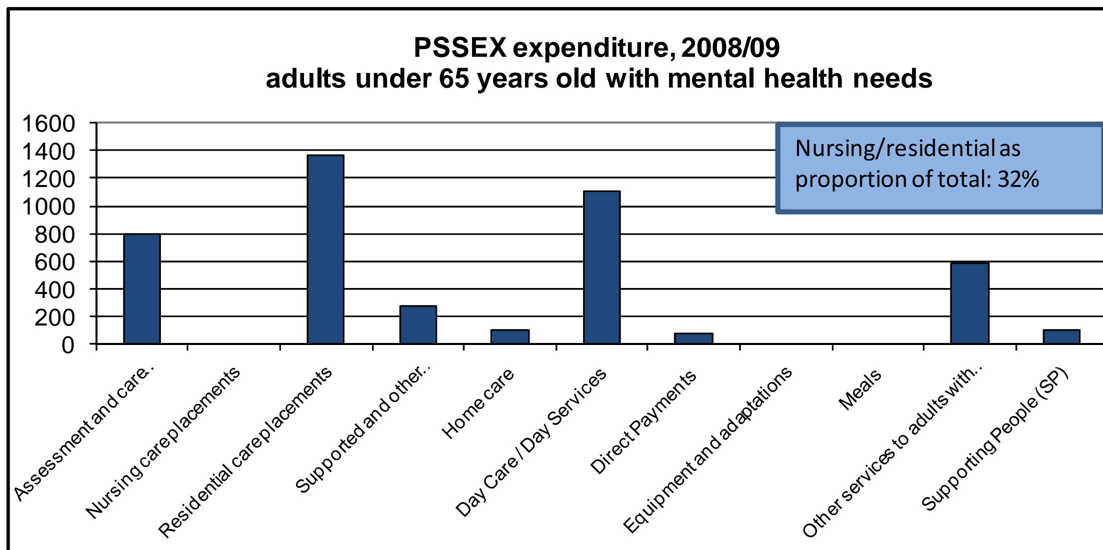
Figure 7: PCT expenditure on mental health by provider



Personal social services expenditure for 2008/09 is shown in

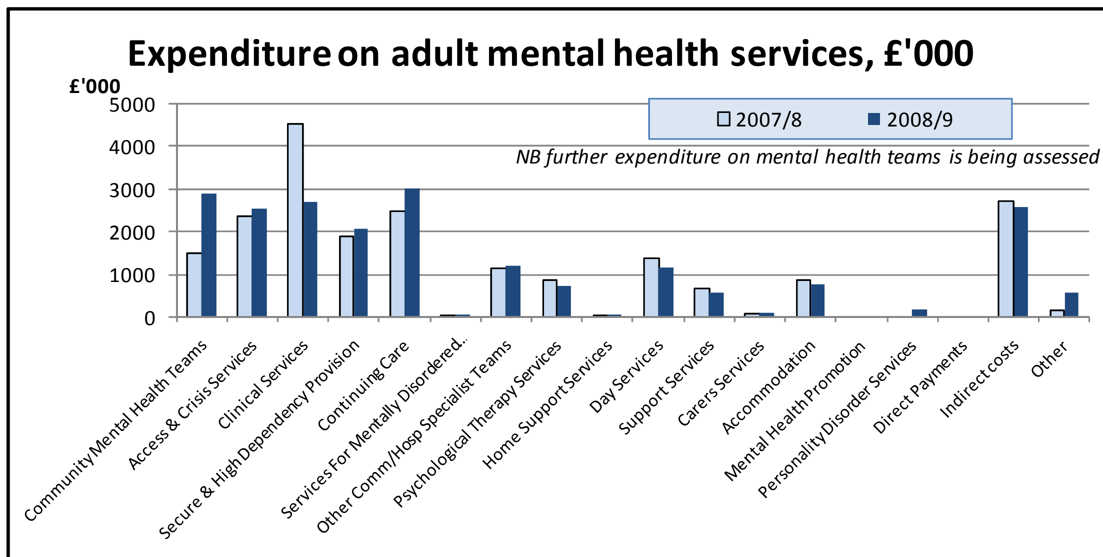
Figure 8. The proportion of the total spent on nursing or residential care is 32%. Changes in this proportion will be monitored as future years' information becomes available.

Figure 8: personal social services expenditure, adults under 65 with mental health needs



Information on child mental health services expenditure has not yet become available. Total adult mental health services expenditure for 2007/08 to 2008/09 is shown in Figure 9.

Figure 9: total expenditure on adult mental health services



To show better some of the changes between acute/residential care and preventive/community care, the major expenditures in those categories are shown in

Figure 10 and Figure 11.

Figure 10: major community/primary care expenditure, adult mental health services

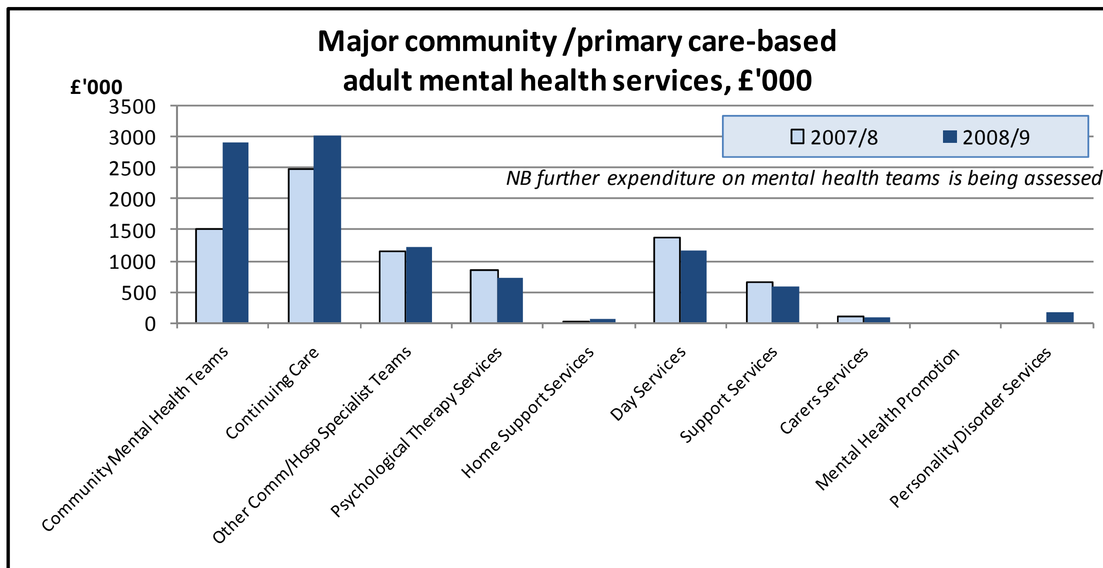
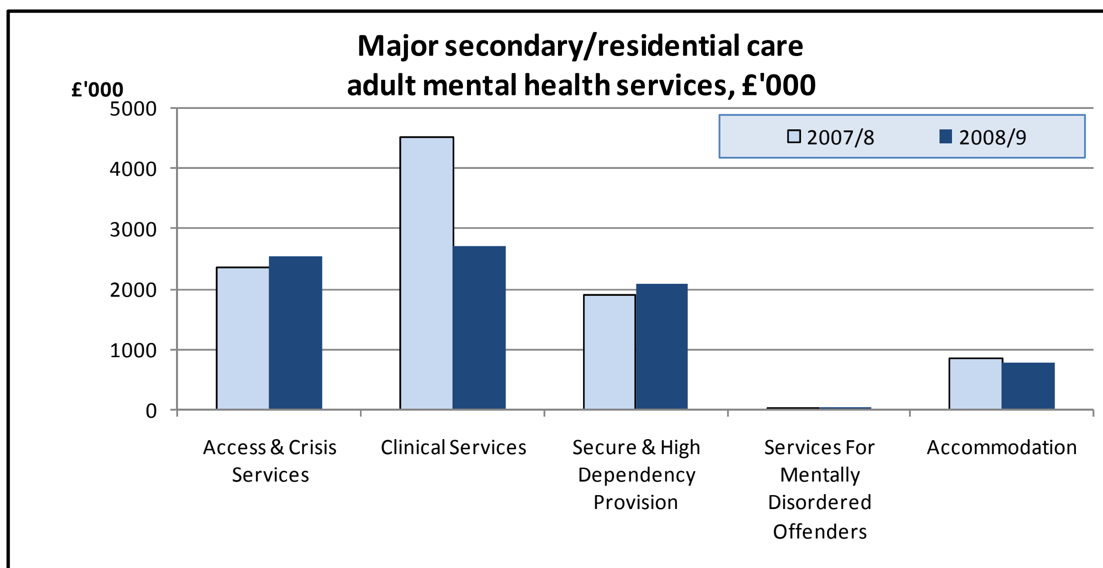


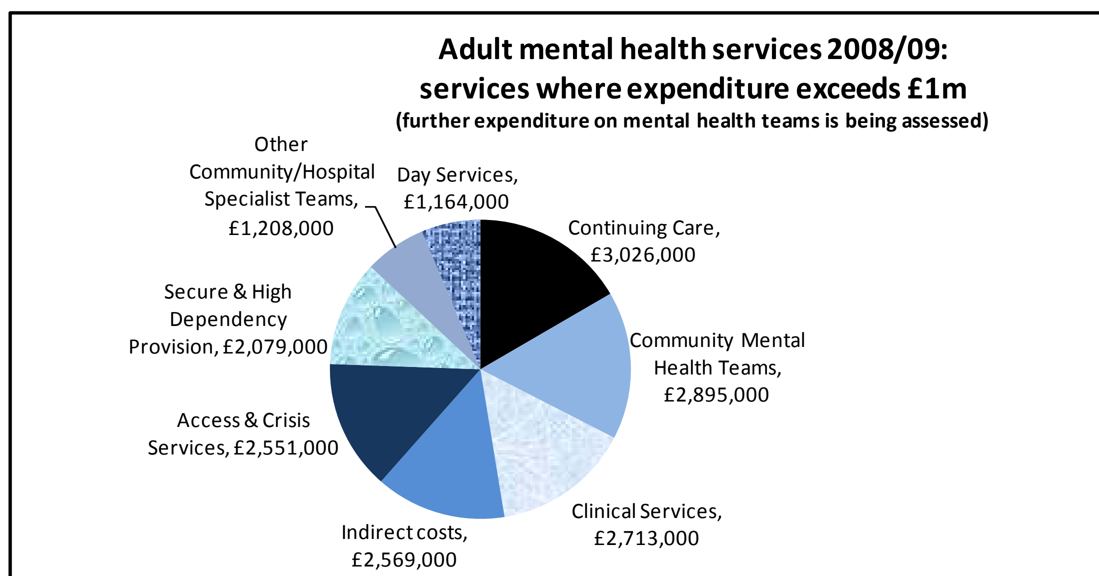
Figure 11: major secondary/residential care expenditure, adult mental health services



These figures do suggest that expenditure on acute or residential care has fallen, whilst expenditure on mental health teams has risen. Further breakdown of other mental health expenditure, particularly around children's mental health services, is expected to become available for subsequent reports. As an indication of where the greatest areas of expenditure occur,

Figure 12 shows the areas for which expenditure exceeded £1m in 2008/09.

Figure 12: service types where expenditure exceeded £1m, 2008/09



The numbers of prescriptions for certain mental health-related drugs, and the associated costs, are given in Table 3. As with drugs for circulatory disease, there are problems around identifying appropriate drugs to consider and separating out preventive from other usage. It is likely that the use of many of the drugs will obviate the need for patients to go into residential care.

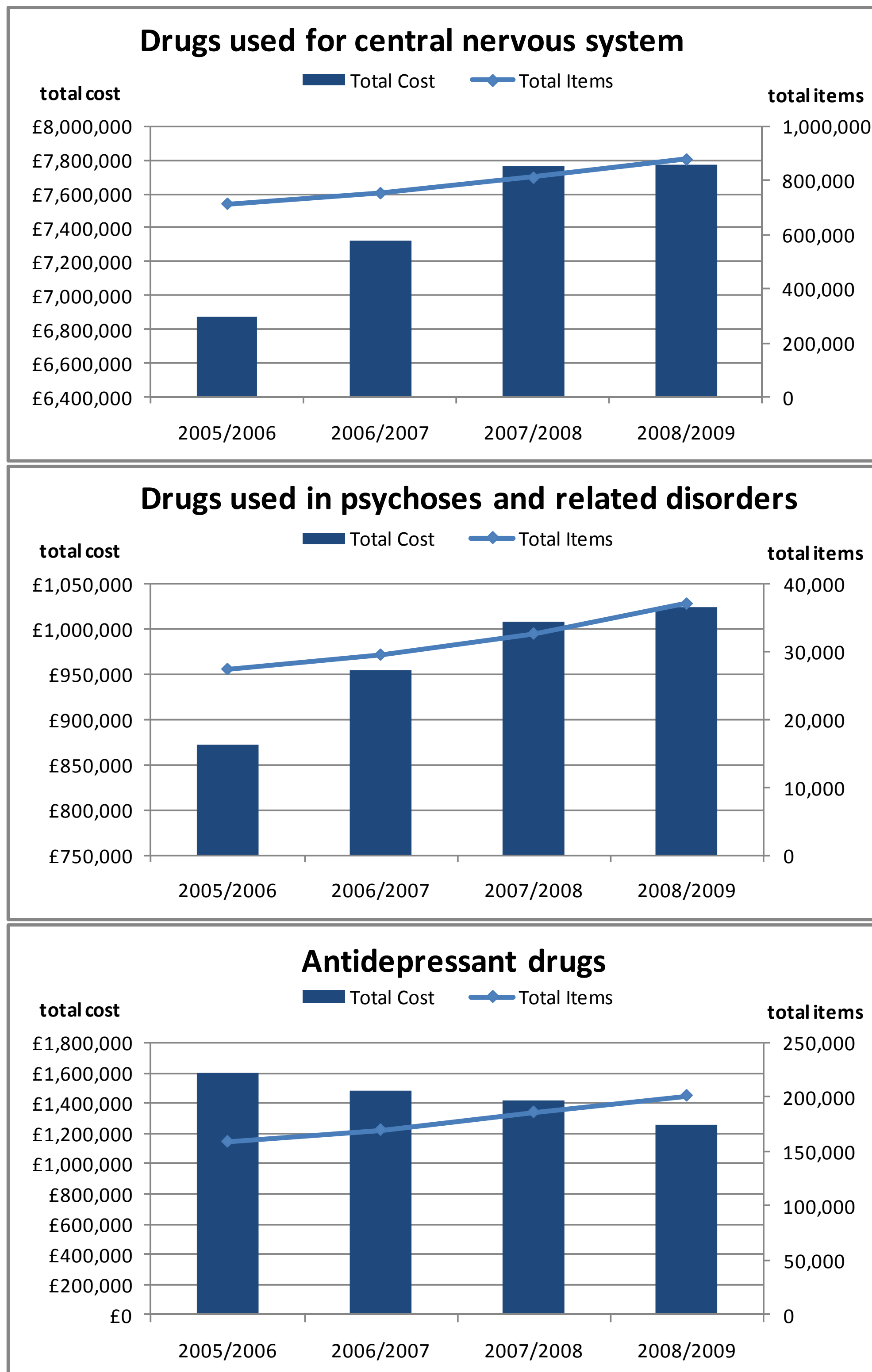
Table 3: drugs used in certain mental health-related conditions, 2008/09

Category	Number of items	Cost
Central nervous system	877,128	£7,776,223
Antidepressants	201,215	£1,255,420
Psychoses and related disorders	37,122	£1,024,064

Quantities of drugs prescribed for these conditions are generally rising but antidepressant drugs total costs are falling. As is the case with cardiovascular drug prices, this can offer opportunities to treat more patients for the same expenditure.

Prescription numbers and costs for the past four years are shown in Figure 13.

Figure 13: drugs used in the treatment or prevention of mental health problems



Very much linked to mental health problems is substance abuse. Estimates have been provided for expenditures on treatment for adult drug use and adult alcohol use. These are shown in Figure 14 and Figure 15. Expenditure on the more acute services (tiers 3 and 4) as a proportion of the total expenditure is 38% for drug treatment and 42% for alcohol treatment. These proportions will be monitored as future years' information becomes available.

Figure 14: expenditure on adult drug treatment

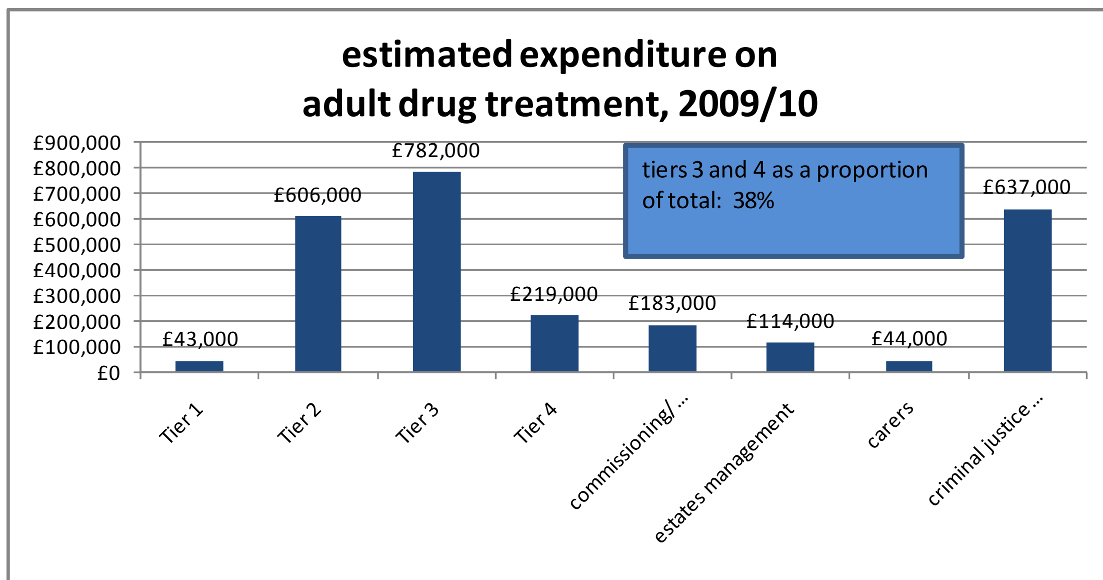
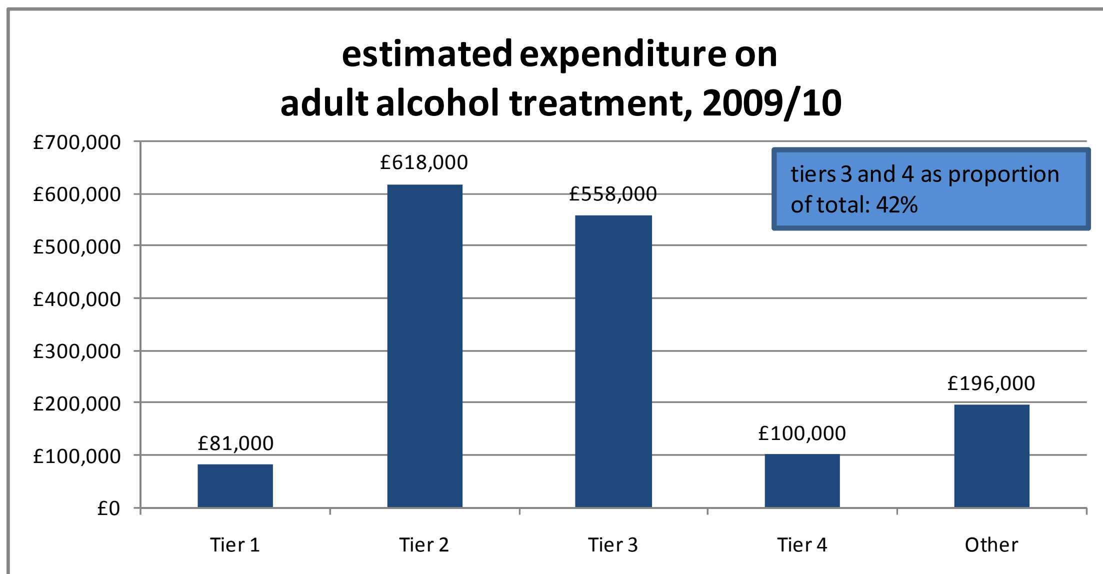


Figure 15: expenditure on adult alcohol treatment



5 Changes in expenditure on musculoskeletal conditions

This section considers changes in expenditure along general musculoskeletal conditions pathways. (Section 6 considers one specific aspect of musculoskeletal conditions – falls, in particular falls on stairs.)

5.1 Musculoskeletal conditions pathway mapping: issues

As well as the general issues mentioned in section 2.2, there are specific issues related to mapping musculoskeletal conditions pathways.

The term 'musculoskeletal conditions' covers a wide range of diseases and conditions. Therefore, whilst there are many evidence-based pathways developed nationally, there remain a significant number of conditions where the pathways require local development. An example of such local development is in the procurement of a new model for Community Physiotherapy in Gateshead, which involved more locally-based access to treatment and provided patients with the ability to self-refer into the service without any requirement to visit their GP first. (Self-referral was included in the pathway prior to the Department of Health announcement that PCTs should improve patient access by including self-referral wherever possible.) The pathway includes a number of 'red flag' conditions which highlight to the Physiotherapist where the patient should be immediately re-directed to A&E or other hospital services.

Another issue which demanded pathway reform centred around the significant number of patients referred into hospital-based Orthopaedic outpatient services, for an appointment with a surgeon. More than half of such appointments did not result in the patient requiring surgery. A pathway for a Clinical Assessment & Treatment Service (CATS) was developed and put out to tender. The service in Gateshead commences in April 2010 and will triage patients referred by their GP. GPs with a special interest in Orthopaedics (GPwSI) will clinically assess patients and determine the most appropriate course of treatment for that patient. Dependent on the condition and medical history, this could include treatment by Extended Scope Practitioners (ESPs), referral to community-based services like Podiatry or Physiotherapy or referral to hospital-based services. It will cover a wide range of conditions relating to hips, knees, shoulders and other parts. It will operate within national waiting time targets and the pathway includes a range of conditions where there is immediate signposting to services like A&E or cancer treatment (for existing or suspected cancers).

Variation in severity and type of condition lead to very different health and social service needs, and each patient, wherever possible, should be assessed individually to determine their own treatment plan.

When accessing information from different services or types of services, the differing definitions they use need to be borne in mind. Within social services, the term 'disability' will tend to reflect what the health service tends to refer to as 'musculoskeletal conditions', but the causes of disability are not always musculoskeletal.

5.2 Musculoskeletal conditions expenditure mapping: issues

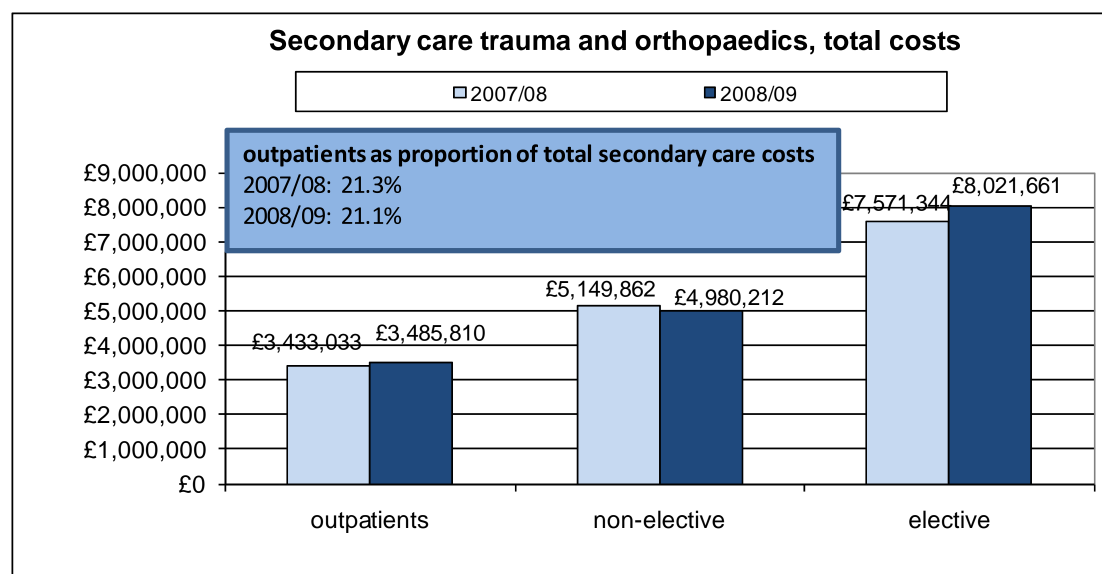
As well as the general issues mentioned in section 2.4, there are specific issues related to mapping musculoskeletal conditions expenditure.

As mentioned in the section on issues around the musculoskeletal pathway, there are differences in terminology (musculoskeletal is used more in health settings, whilst social services tend to refer to (physical) disability. Within the health sector, the nearest appropriate overall expenditure category is 'trauma and orthopaedics' but in the programme budgeting approach trauma is excluded.

5.3 Identified changes in expenditure on musculoskeletal conditions

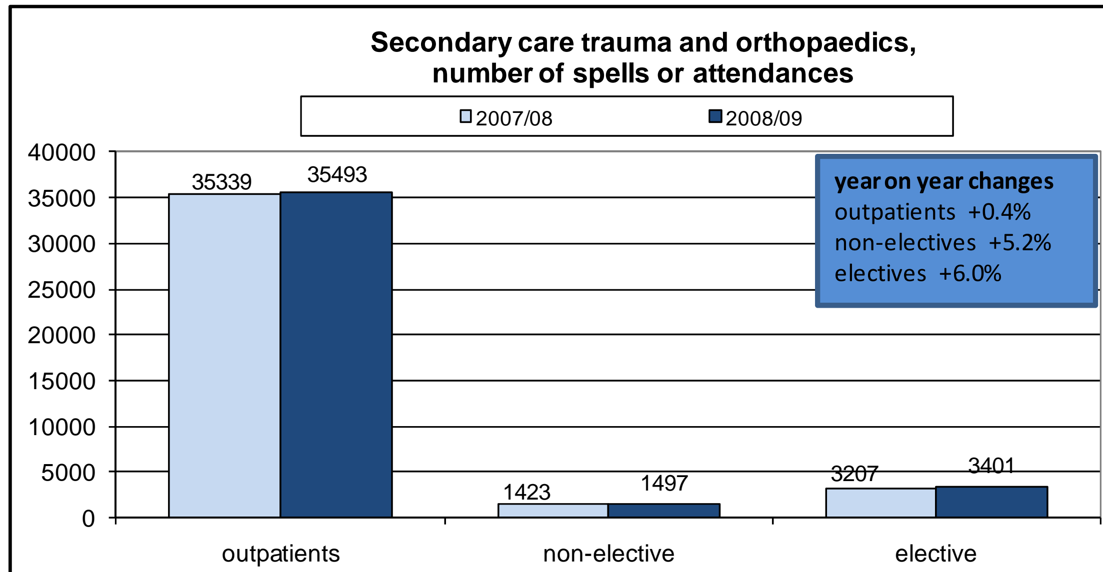
In terms of NHS secondary care costs for trauma and orthopaedics, outpatient costs as a proportion of total costs remain similar to the previous year. Non-elective costs have dropped but elective costs have risen. (See Figure 16.)

Figure 16: secondary care trauma and orthopaedic costs



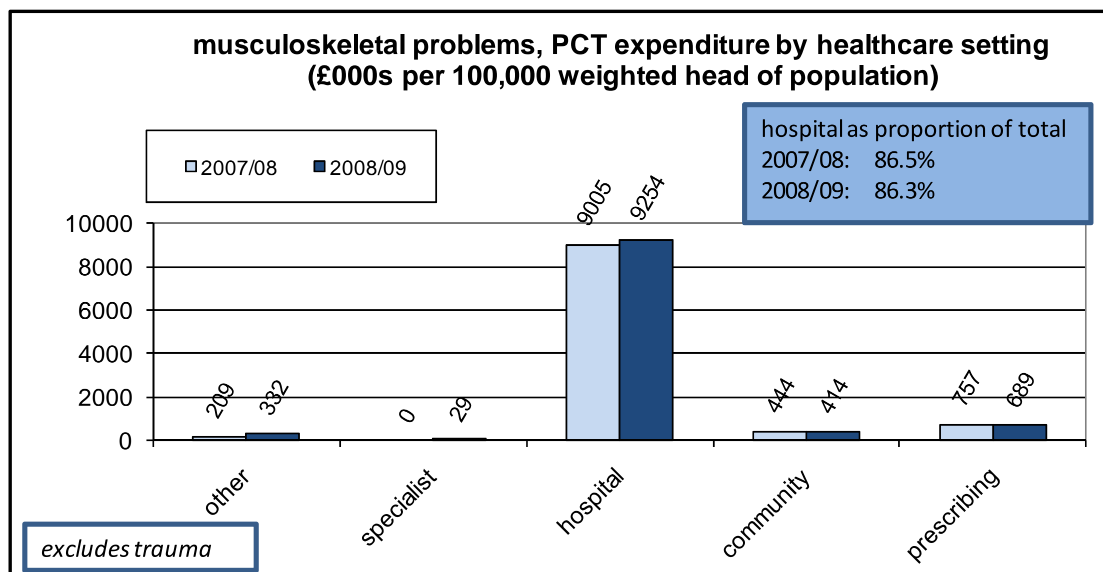
The number of outpatient attendances, a far greater number than that of in-patients, has risen only slightly, whilst, as Figure 17 shows, the number of in-patient spells has risen by over 5%.

Figure 17: secondary care trauma and orthopaedics: spells and attendances



Programme budgeting information on PCT musculoskeletal problems expenditure suggests that there has been an increase in the level of expenditure in a hospital setting (by far the most common setting anyway) and a decrease in the level of expenditure in the community, as shown in Figure 18.

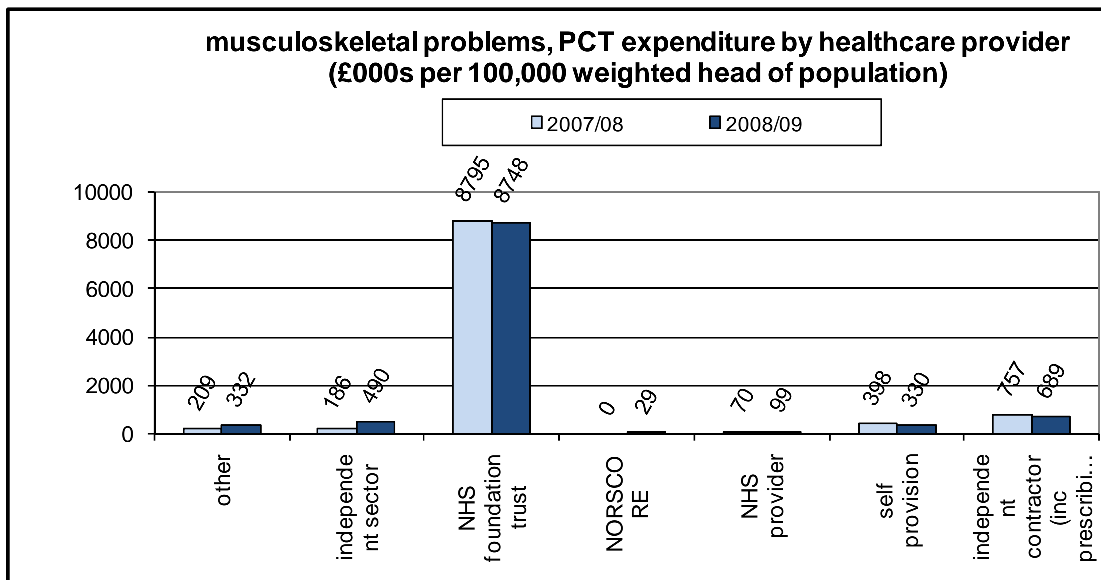
Figure 18: PCT expenditure on musculoskeletal problems, by health care setting



As can be seen from

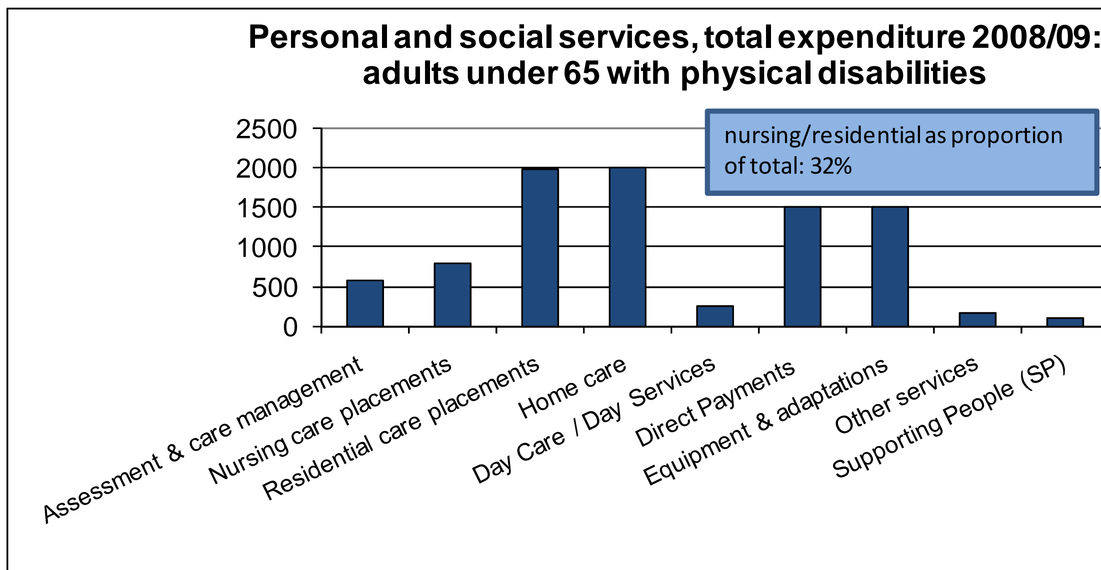
Figure 19, the NHS Foundation Trust provides almost all of the services.

Figure 19: PCT expenditure on musculoskeletal problems, by provider



The Local Authority provides personal and social services for people with physical disabilities. Figure 20 shows the expenditure for adults under 65. It can be seen that 32% of the expenditure is on nursing or residential care placements. This proportion will be monitored as future years' information becomes available.

Figure 20: PSSEX expenditure on adults under 65 with physical disabilities



The numbers of prescriptions for drugs for certain musculoskeletal conditions, and the associated costs, are shown in Table 4. As with drugs for circulatory disease and mental health conditions, there are problems around identifying appropriate drugs to consider and separating out preventive from other

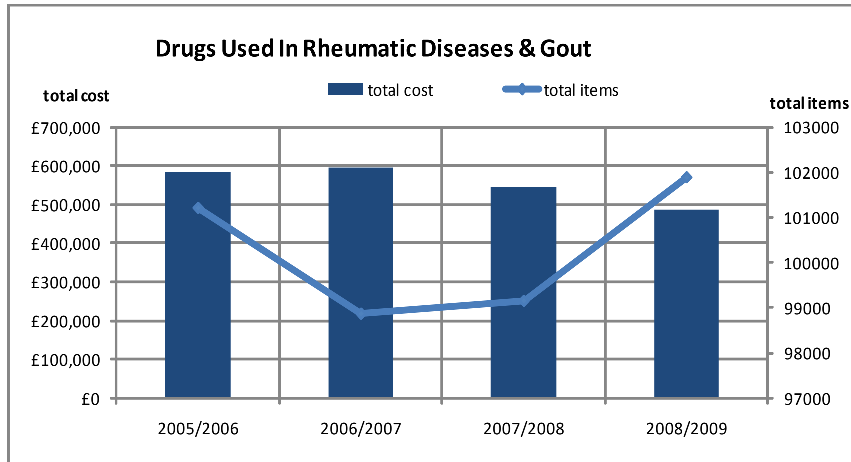
usage. It is likely that many of the drugs will obviate the need for patients to go into residential care.

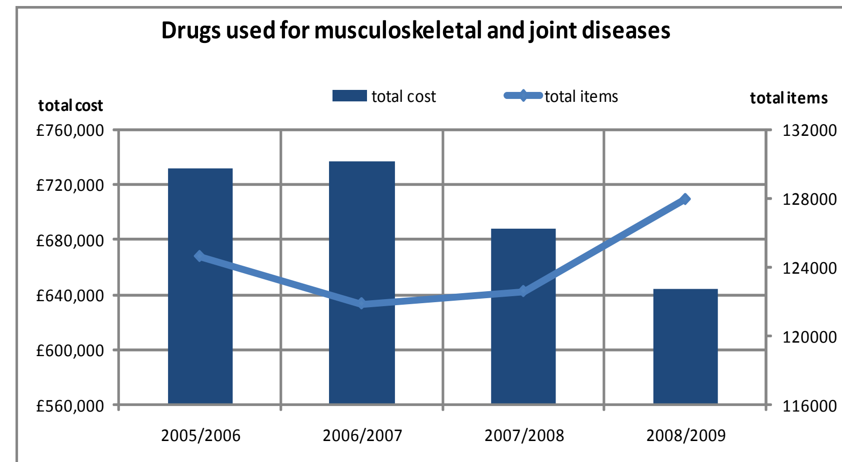
Table 4: drugs used in certain musculoskeletal conditions, 2008/09

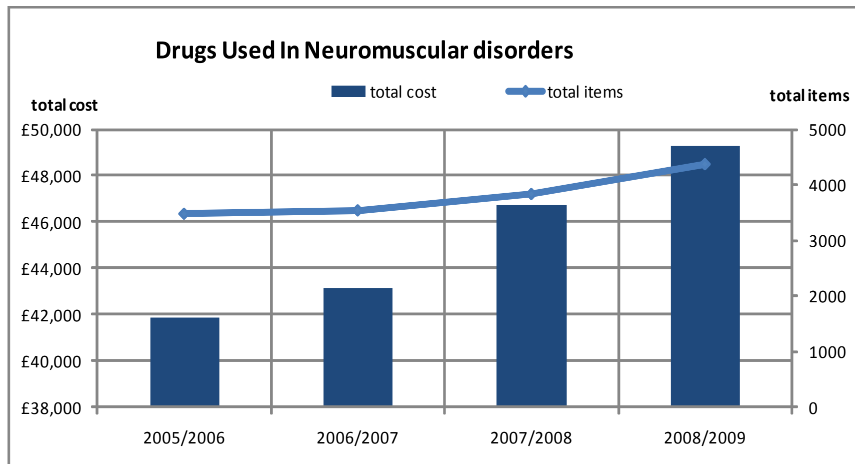
Category	Number of items	Cost
Musculoskeletal and joint diseases	127,942	£644,549
Rheumatic diseases and gout	101,874	£487,183
Relief of soft tissue inflammation	21,695	£108,118
Neuromuscular disorders	4,373	£49,258

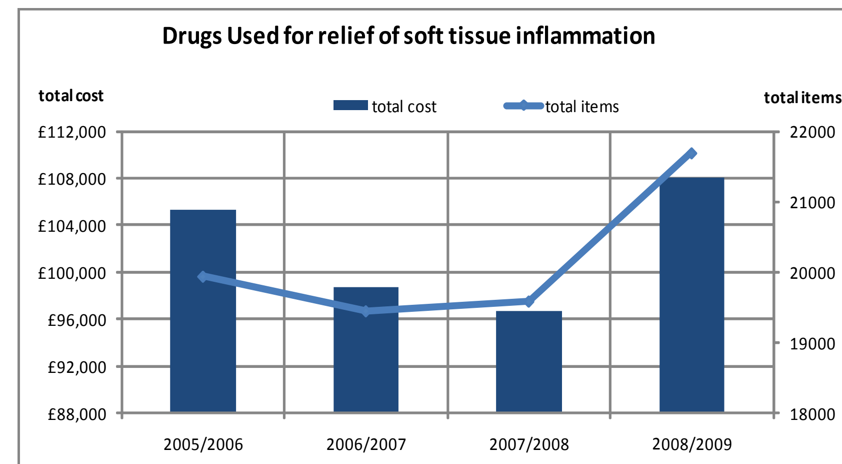
Figures for the past four years are shown in Figure 21. For the two largest volume and largest cost categories (drugs for rheumatic diseases and gout and drugs for musculoskeletal and joint diseases) are experiencing increases in volume and decreases in expenditure.

Figure 21: Drugs used for certain musculoskeletal conditions









6 Expenditure on housing, related to falls on stairs

6.1 Hospital admissions due to falls and fractures

Table 5 shows the numbers of hospital admissions due to falls and fractures in each of the five areas of Gateshead from 2007/08 to 2009/10. Risks of falling are highest in those aged 60 and over.

Table 5: hospital admissions due to falls and fractures

		Admissions by Area (2007/08 - 2009/10)					
Area	Population	Number	Directly Standardised Rate per 100,000	95% C.I.	Lower Limit	Upper Limit	Significance
Gateshead Central	35,603	1242	1032	57	975	1090	H
Gateshead East	34,594	1228	958	54	905	1012	-
Gateshead Inner West	33,522	1042	860	52	807	912	-
Gateshead South	43,345	1632	962	47	915	1009	-
Gateshead West	43,326	1310	788	43	745	831	L

L Significantly lower than PCT average
H Significantly Higher than PCT average

6.2 Falls at home associated with stairs or steps: assessing hazards

A particular problem is that of falls associated with stairs or steps in a house. Dwellings can be assessed and categorised using the Housing Health and Safety Rating System. This is a means of identifying faults in dwellings and of evaluating the potential effects of any faults on the health and safety of occupants, visitors, neighbours and passers-by. Hazard categories are allocated for several types of danger, including falls on stairs.

Assessment of hazards by surveyors was part of Gateshead Council's 2007 Private Sector Stock Condition Survey. The survey found that there were **5,521** dwellings with Category 1 (most dangerous) hazards for falls on stairs. Surveyors described the problem factors in these dwellings.

- 46.9% of dwellings were reported to have problems with the internal staircase/balcony e.g. no handrails, narrow treads, no or open balustrade, loose carpet, steep steps.
- 54.4% of dwellings were reported to have problems with external steps e.g. steep or uneven steps, no handrail, no retaining wall, uneven risers, no balustrade.
- 11.7% of dwellings were reported to have problems with both internal and external stairs.
- 41.9% of dwellings with a Category 1 falls on stairs hazard were flats, of which

- 43.5% had problems reported with internal stairs
- 61.2% had problems reported with external steps and
- 11.9% had problems reported with both internal and external stairs.

6.3 Risks of falling and likely outcomes of fall

A key piece of work by Roys *et al*[10]. investigated potential savings to NHS costs arising from falls associated with stairs, creating a model to show the effects of remedying poor conditions in dwellings. The model took into account the likelihood of falls (according to house condition) and the likely severity of outcome of those falls. **Error! Reference source not found.** shows the likelihood of a fall and likely outcomes of the fall, for category 1 risk dwellings (highest risk) and dwellings with average risk.

Table 6: Spread of class of harms *(from Roys et al. tables 26 and 27)*

Class of harm (*Typical outcome)*		**class 1** *(quadriplegic)*	**class 2** *(Femur fracture)*	**class 3** *(Wrist fracture)*	**class 4** *(Cut/bruise (A&E visit))*
dwellings with category 1 risk	*likelihood of event: 1 in 32*	0.046	0.215	0.316	0.423
dwellings with average risk	*likelihood of event: 1 in 245*	0.019	0.067	0.217	0.697

Likely numbers and severities of falls in Gateshead (over one year) have been calculated, based on the table above and on the figure of 5,521 dwellings with Category 1 risk (as mentioned in section 6.2). These are shown in Table 7, along with expected numbers if those dwellings were average risk.

Table 7: expected number of falls in Gateshead, category 1 risk dwellings vs average risk dwellings

Class of harm (*Typical outcome)*	*Total expected falls*	**class 1** *(quadriplegic)*	**class 2** *(Femur fracture)*	**class 3** *(Wrist fracture)*	**class 4** *(Cut/bruise (A&E visit))*
dwellings with category 1 risk	*173*	7.94	37.09	54.52	72.98
dwellings with average risk	*23*	0.43	1.51	4.89	15.71

[10] Roys M, Davidson M, Nicol S, Ormandy D, Ambrose P (2010). The Real Cost of Poor Housing. IHS BRE Press

6.4 Remedying problems with stairs or steps: actions and costs

Surveyors suggested the following remedies for the problems described in section 6.2:

- For the majority of problems with internal staircases, suggestions included fitting/repairing or replacing handrails or balustrade, adding a grabrail or gate.
- For the majority of problems with external staircases, suggestions included repairing steps, adding a handrail, grabrail or banister, fixing tripstep at threshold.
- In a small minority of cases, suggestions included replacing or redesigning the staircase (around 2%) and fitting lights to staircase (around 2%).

The average cost of remediation has been estimated at £750 per dwelling (directly attributable cost, in 2011).

6.5 Costs of falls

The Roys *et al*[11] analysis included an assessment of NHS costs (by class of harm) arising from falls associated with stairs, as summarised in Table 8.

Table 8: NHS costs by class of harm *(from Roys et al. table 20)*

Class of harm (*Typical outcome)*	**class 1** *(quadriplegic)*	**class 2** *(Femur fracture)*	**class 3** *(Wrist fracture)*	**class 4** *(Cut/bruise (A&E visit))*
NHS costs	£59,246	£25,424	£745	£67

It is worth noting that these costs are underestimates of the total costs, as they are only direct NHS costs. Other costs to society could include (not an exhaustive list):

- social services costs;
- employer costs (covering sickness absence);
- benefits (e.g. sickness benefits);
- childcare costs (grandparents are frequently involved in childcare);
- health and social service costs related to subsequent long term physical injury;

[11] Roys M, Davidson M, Nicol S, Ormandy D, Ambrose P (2010). The Real Cost of Poor Housing. IHS BRE Press

- health and social service costs related to subsequent mental health problems (lack of confidence following a fall can lead to fear of going out, which can lead to depression or social isolation).

Applying these costs to the expected numbers of falls given in Table 7 allows us to see the difference in costs between taking no action and taking action to remedy all of the 5,521 Category 1 hazard dwellings so that they become average risk dwellings. (See Table 9).

Table 9: NHS costs expected for Gateshead falls, dwellings with and without remediation

NHS Costs	class 1	class 2	class 3	class 4	TOTAL
without remediation	£470,202	£943,083	£40,617	£4,890	£1,458,793
with remediation	£25,367	£38,386	£3,643	£1,052	£68,448

6.6 Potential savings

Comparing NHS costs with and without remediation (Table 9) shows that a total saving of £1,390,345 (i.e. £1,458,793 - £68,448) on NHS costs could be expected if all Category 1 hazard dwellings were improved to average hazard dwellings. This is an average of £252 per Category 1 hazard dwelling.

With the direct repair costs at £750 per house (section 6.4, this means that the direct repair cost is recovered in three years. Every year thereafter, there is a saving of £252 per dwelling, i.e. an annual saving of £1,390.345.

Savings estimates are conservative. They are based on national averages for expected frequencies of falls and expected severity. Gateshead has a higher than average number of dwellings with outside steps leading to a yard – with an associated higher risk of falling and higher risk of more serious injury. (This does not mean that related remediation costs are higher than national – cost estimates are based on known costs for the district.)

The nature of most of the likely repairs means that they are likely to be able to be carried out by skilled joiners, rather than needing a complex mix of skilled workers from different firms – this makes organizing repairs straightforward, particularly as there is a pool of approved workers already known to the council.

6.7 What is being done?

Funding has been obtained for a programme of repairs to category 1 hazard dwellings, initially for 2011/12. The intention is to remedy the problems in some 290 dwellings, closely monitoring numbers of subsequent falls. The

project involves staff from several organizations, including: the Council's housing departments; the Primary Care Trust; South of Tyne and Wear Falls Group; and the NHS Hospital Trust. Results will be outlined in future editions of this report.

7 Where else and how else to focus

7.1 General points about the focus

It makes sense to focus on the larger components of spend at various points on the pathways, as these are likely to be more stable and less prone to variation in data collection and collation.

Once more detail has become available about chosen pathway elements, a small simulation could be carried out to investigate marginal changes (for example through programme budgeting and marginal analysis, although there are some doubts about the quality assurance of a programme budgeting approach). This would rely on not only financial information but on an awareness of whether some changes were in fact feasible. For example, community staff shortages might make it impossible to assume that certain changes can take place. (This ties in with the need for a good infrastructure, as mentioned earlier.)

The Department of Health has developed a set of ten high impact change principles for service redesign, which would be appropriate to observe (see Box 2).

Box 2: ten high impact change principles for service redesign[12]

	The 10 High Impact Changes
Change N°1	Treat day surgery (rather than inpatient surgery) as the norm for elective surgery
Change N°2	Improve patient flow across the NHS system by improving access to key diagnostic tests
Change N°3	Manage variation in patient discharge, thereby reducing length of stay
Change N°4	Manage variation in the patient admission process
Change N°5	Avoid unnecessary follow-ups for patients and provide necessary follow-ups in the right care setting
Change N°6	Increase the reliability of performing therapeutic interventions through a Care Bundle approach
Change N°7	Apply a systematic approach to care for people with long-term conditions
Change N°8	Improve patient access by reducing the number of queues
Change N°9	Optimise patient flow through service bottlenecks using process templates

Change N°10	Redesign and extend roles in line with efficient patient pathways to attract and retain an effective workforce

There is a growing body of evidence now around cost-effective interventions for both cardiovascular heart disease and mental health problems. Increased use of recommended cost-effective interventions in preventive care will increase the value of transferred funds.

One way of monitoring expenditure might be to concentrate on acute contracts as well as using programme budgeting, tracking at Health Resource Group (HRG) level (see Appendix 2 re mandatory tariffs). There is some concern that HRGs do not map easily onto the disease classification system using Read Codes. This is an example of high level system design that should be addressed if we are to make this sort of monitoring a realistic mainstream part of the work of finance and commissioning. Currently Acute Trusts give some breakdown by the 20 programme budget headings, e.g. PCT gives £x. Inpatient data will be much easier than outpatient, as the outpatient information is by specialty and some activities relating to circulatory disease might come under general surgery rather than cardiology, whilst some activities relating to mental health might come under geriatric medicine.

Drugs expenditure in primary care is a specialist area of analysis in its own right. The links between practices and pharmacists are well-established, with advisers in every practice for one session per week. Advisers will discuss not only cost-effectiveness but appropriate drugs and also appropriate other options. Costs are expected to vary widely from one time period to the next, as generic prescribing requirements take effect. While costs might well be expected to reduce, volumes are likely to increase.

7.2 Focus for circulatory disease

Of the eight Health Inequalities National Support Team top priorities, six focus on circulatory disease. These are priorities that will be addressed in South of Tyne and Wear's plans for tackling inequalities and increasing life expectancy.

One particular large component of circulatory disease costs is admissions for myocardial infarction. Cost effective medical interventions for patients with high risk of CVD include angiotensin-converting enzyme inhibitors, beta-blockers, off-patient statins and aspirin"[13]; there is also NICE guidance around statins.

Examples of changes to pathways[14] include innovative approaches to diagnosing congestive heart failure:

- use of B-type natriuretic peptide testing to remove the need for onward referral (expected to lead to reduction in waiting times for the secondary care provided echocardiography service);
- in-house testing echocardiography service (able to remove the need for secondary care involvement completely).

Consultations with key professionals are taking place to construct appropriate pathways for circulatory disease and to identify also any barriers to change. This work will aim to be consistent with any plans or pathways currently under development.

7.3 Focus for mental health

The largest area of expenditure - clinical services – is almost twice that of any other component, accounting for almost a quarter of spending.

Cost-effective interventions include outpatient treatment with first-generation antipsychotic or mood-stabilising drugs as well as psychosocial counselling for schizophrenia and bipolar disorder and treatment with selective serotonin reuptake inhibitors for depression and panic disorder.[13]

Examples of good practice in practice-based commissioning are available and include community-based teams to cope with cases that require a mix of health and social care expertise, with consultants in mental health and social workers included in a primary care-based setting[6]. Another approach includes a multi-disciplinary team and training practice nurses and receptionists in using the Hospital Anxiety and Depression scale so they can direct patients properly when they first contact the surgery(expected results include reduction of up to 70-80% in referrals to community mental health teams or secondary care and a reduction of around 20% in GP consultations)[14].

Consultations with key professionals are taking place to construct an appropriate pathway and to identify also any barriers to change. This work will aim to be consistent with the mental health strategic plan currently under development. A mental health promotion strategy is being developed by the South of Tyne PCTs.

There are areas where discussion is already taking place, which would warrant strong focus:

- Debates around rehabilitation and recovery services – currently in-patient type provision but there are suggestions that many of these people do not need to be in hospital beds but could be cared for in their own home or in supported care;
- Collaborative and shared care for those with relatively stable illness.

7.4 Focus for musculoskeletal conditions

To address the problem of definitional differences between health services and social services and between different parts of the health service, it might be worth investigating expenditures at a more detailed level and finding other ways of aggregating for comparison.

7.5 Focus for housing-related falls

The funded project to repair 290 Category 1 hazard dwellings should provide useful information about actual costs and savings available from this type of preventive work. Results will be reported in future versions of this report and will inform future plans.

7.6 Expanding to new diseases/conditions

Discussions are under way as to which other areas would be worth a similar detailed investigation. Chronic obstructive pulmonary disease will be included in the next version of this report. Work with the current areas will continue alongside work on new areas.

7.7 Taking account of investment and disinvestment

As mentioned in the background section, the quality, innovation, productivity and price initiative is expected to assist the NHS to release major sums of money for new investment over the next few years (around 20%). There will be no investment without disinvestment in future. Any modelling around the financial implications of changes in expenditure patterns will need to take account of this aspect.

8 What to count and how to compare

With the issues raised in the previous sections, it is clear that it is not going to be a straightforward matter of taking preventive care costs and acute care costs and comparing them year on year.

Work around mental health, cardiovascular disease and musculoskeletal conditions has shown up some of the many difficulties involved in drawing comparisons to assess progress towards the target of moving resources upstream.

8.1 What to count

As a minimum, the figures already discussed and presented should be collected for each year. Ideally, information on the condition-based areas will include:

- PCT programming budgeting expenditures for mental health problems, circulation problems and musculoskeletal conditions, broken down by provider and by setting.
- National tariff summaries.
- Reformed Primary Care Commissioning, including the use of Local Enhanced Service costs, especially new enhanced primary care services around heart failure.
- One-off expenditures incurred for training or for pilot initiatives.
- Decommissioning or disinvestment expenditures.
- Cardiology costs broken down by Health Resource Group, elective and non-elective admissions.
- Mental health costs broken down by Health Resource Group, elective and non-elective admissions.
- Musculoskeletal costs broken down by Health Resource Group, elective and non-elective admissions.
- Prescription costs for mental health. for circulatory disease and for musculoskeletal conditions (with patient numbers).
- Mental health expenditure commissioned by LA, broken down by care type.
- PCT commissioned mental health services, by care type.
- Costs of LA-commissioned services for clients with disabilities
- New costs incurred or existing costs stopped through the changes described under section 7 (areas where change is already known to have happened or to be planned).

In general, the more detail available the better – there will be occasions where a breakdown shows very obviously a move towards preventive spend that might not be apparent in the headline figures.

It is highly likely that, as further investigation goes on, additional expenditures will be identified. As was stated earlier, the intention generally is to make use of routine data as far as possible (one exception to this is where a new service comes into being and no previous comparable data are available).

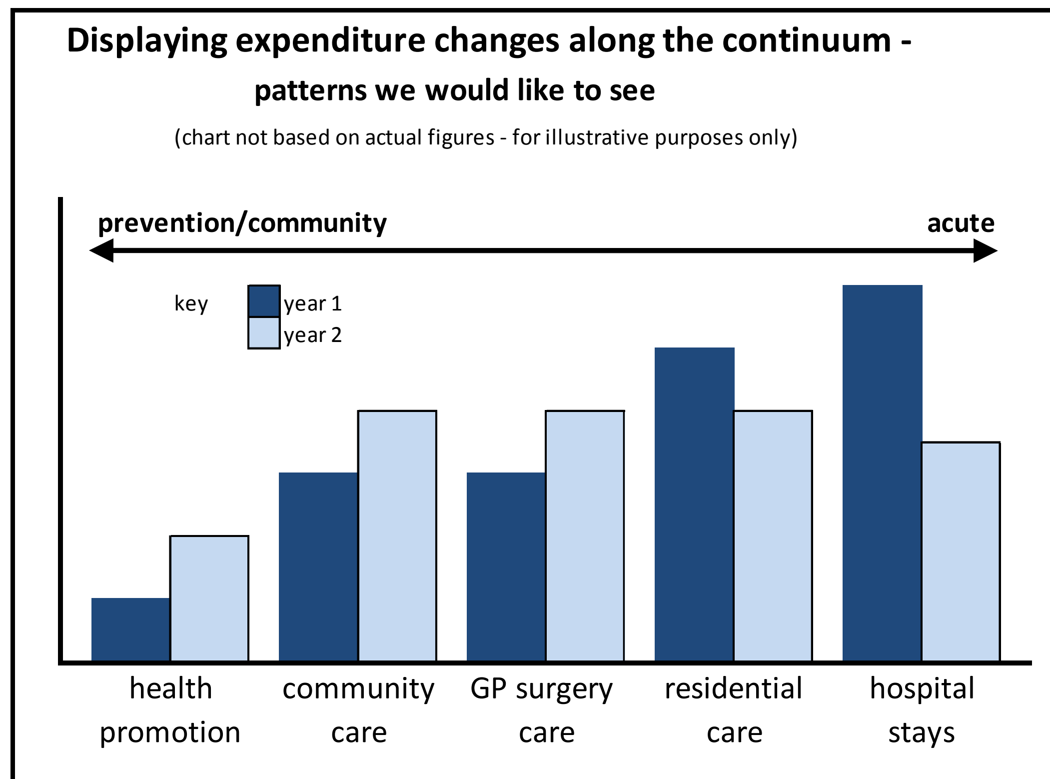
The changes are not likely to be dramatically from the top end of acute spending to the very bottom end of preventive spending. Moves will tend to be along the continuum, although there will be exceptions such as the closure of a hospital ward and transfer of funding to a community service.

8.2 How to compare and show comparisons

Several methods are being considered for displaying comparisons in the most appropriate way. One (possibly unrealistically ideal) option is shown in Figure 22.

It is likely that, in the first run through, several approaches will be tried and views sought on the advantages and disadvantages of each. The purpose will be to show the information in such a way that it is easy to understand as well as helpful in identifying the size or scale of changes in expenditure along the preventive-acute continuum.

Figure 22: possible graphical approach to displaying comparisons



9 Conclusion

The assessment of a move in resources from acute to preventive spending is not straightforward. Issues have been described concerning the patient pathways as well as the expenditure assessment. This exercise around mental health, circulatory disease and musculoskeletal conditions should provide much helpful material on which future work can build. The figures involved are not the only data needed. Alongside these, there must be appropriate descriptions of activity and commentary on changes that have occurred. This should enable a consistent approach to be followed, with a year-on-year analysis of progress towards the target of a move in resources from acute to preventive spend.

Key issues for the development of this work include:

1. Stakeholder discussion of the proposed graphical approach to displaying comparisons, to help ensure that categories used for comparison are meaningful and robust.
2. Within the PCT, full engagement involving public health, finance and commissioning to ensure that the data are used in a timely and consistent way as part of the commissioning cycle
3. Within the Local Authority, active uptake of the pathway approach in commissioning using opportunities to embed this work, for example through the personalisation agenda.
4. Within both the Local Authority and the PCT, recognition that this approach will contribute to a pooled budget type approach, as a tool for maximising effective use of resources. There has been recent guidance on pooled budgeting produced by The Department for Communities and Local Government (March 2010) and also a useful report from the Institute for Public Policy Research[15].
5. Ensuring that investment and disinvestment are both assessed.
6. National support for this work so that high level agreement is reached. Two examples are: the definition of pathway (currently the Department of Health have this as starting with patient contact with an NHS professional); and the way HRGs and Read Codes work together.
7. Consideration of unit-cost measurement (to aid in determining value for money separately from rising demand).

Jean Brown
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Gateshead PCT/Gateshead Council

Appendix 1: Useful documents

Cheshire and Merseyside Partnerships for Health. Improving the health of patients through practice-based commissioning. A good guidance pack 2006
Department of Health etc. PBC team. *Practice based commissioning: an introduction for a local authority audience*. Gateway ref: 7020. 2006
Department of Health etc. *Practice based commissioning: early wins and top tips*
Department of Health. *Practice-based commissioning: practical implementation*
Department of Health. *Our Health, Our Care, Our Say*
Department of Health. *The NHS and Social Care long term conditions model,* modified Jan 2007
Department of Health. *Disease Management Information Toolkit*, modified May 2008.
http://www.dh.gov.uk/en/Healthcare/Longtermconditions/DH_4130652
Department of Health. *Whole system demonstrators*
http://www.dh.gov.uk/en/Longtermconditions/wholesystemdemonstrators
Department of Health National Service Frameworks. Coronary heart disease
Department of Health. Treatment centres - Patient pathways
Dr Foster. *The intelligent practice: understanding the needs of GP commissioners.*2007
Gateshead Joint Strategic Needs Assessment
Gateshead Mental Health Finance Map 07/08
Gray J, Lambert M. Commissioning new health services: the 'rough guide'. Gateshead NHS PCT November 2006
Health England. *Definitions and measures of preventative health spending: a \preliminary report to Health England: a national reference group for health and wellbeing from an expert advisory panel on preventative health spending*. 2007
Marks L, Hunter DJ. Practice based commissioning: policy into practice (report based on workshops 2005)
NHS Alliance. *Practice-based commissioning: improving health and reducing inequalities.* 2005
NHS South of Tyne and Wear Stroke Sub Group. Stroke Service mapping 2008
North East Commissioning Team for Mental Health and Learning Disabilities. *proposed strategic plan for mental health* 2008
Pan-American Health Organisation (regional office WHO).*Best buys for public health*. **Perspectives in Health.** Website accessed 9/6/08
Royal College of Physicians. National Sentinel Audit of Stroke 2008.
Ruta D, Mitton C et al. *Programme budgeting and marginal analysis: bridging the divide between doctors and managers.* **BMJ** 2005;330;1501-1503
Peacock P, Ruta D et al. *Using economics to set pragmatic and ethical priorities.* **BMJ** 2006:332;482-485

Appendix 2: Comments on financial information

Programme budgeting uses the Atlas system.

National mandatory tariffs
Approx ¾ of hospital activity has a national tariff associated with it – non-negotiable costs.

Examples:
1. for admitted patients, the following headers are used against HRG codes.

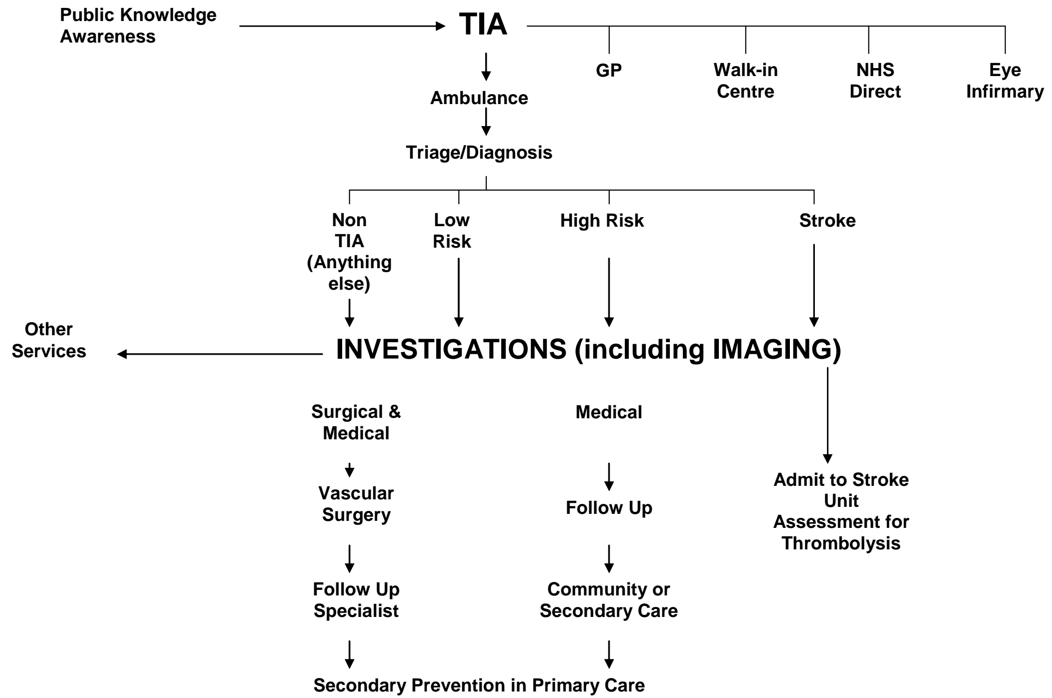
Elective spell tariff (£)	Elective long stay trimpoint (days)	Non-elective spell tariff (£)	Non-elective long stay trimpoint (days)	Per day long stay payment (for days exceeding trimpoint) (£)	Reduced short stay emergency tariff applicable?	% applied in calculation of Reduced short stay emergency tariff	Reduced short stay emergency tariff (£)	Eligible for specialised tariff top-up (including children's specialised)	Eligible for children's non-specialised tariff top up

2. For outpatients, the following headers are used against outpatient treatment function name (specialty)

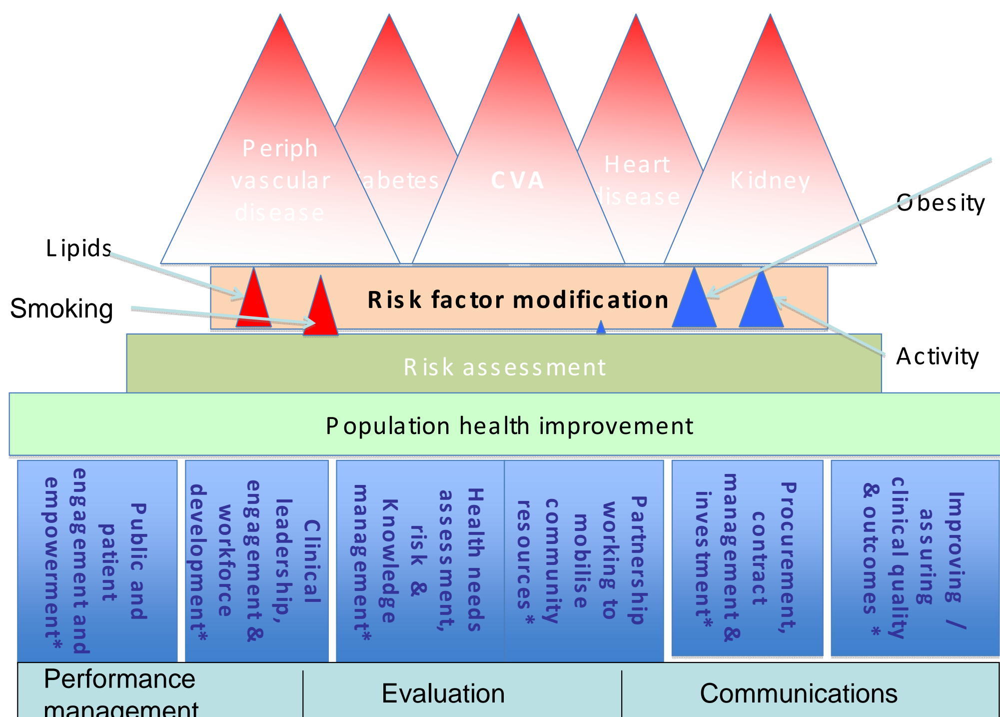
Adult First Attendance tariff (£)	Adult Follow-up Attendance tariff (£)	Child (U17) First Attendance tariff (£)	Child (U17) Follow-up Attendance tariff (£)

Concerns: HRG codes and Read codes do not always map well onto each other

Appendix 3: Pathway for Transient Ischaemic Attack



Appendix 4: Vision for NHS SOTW CVD Programme



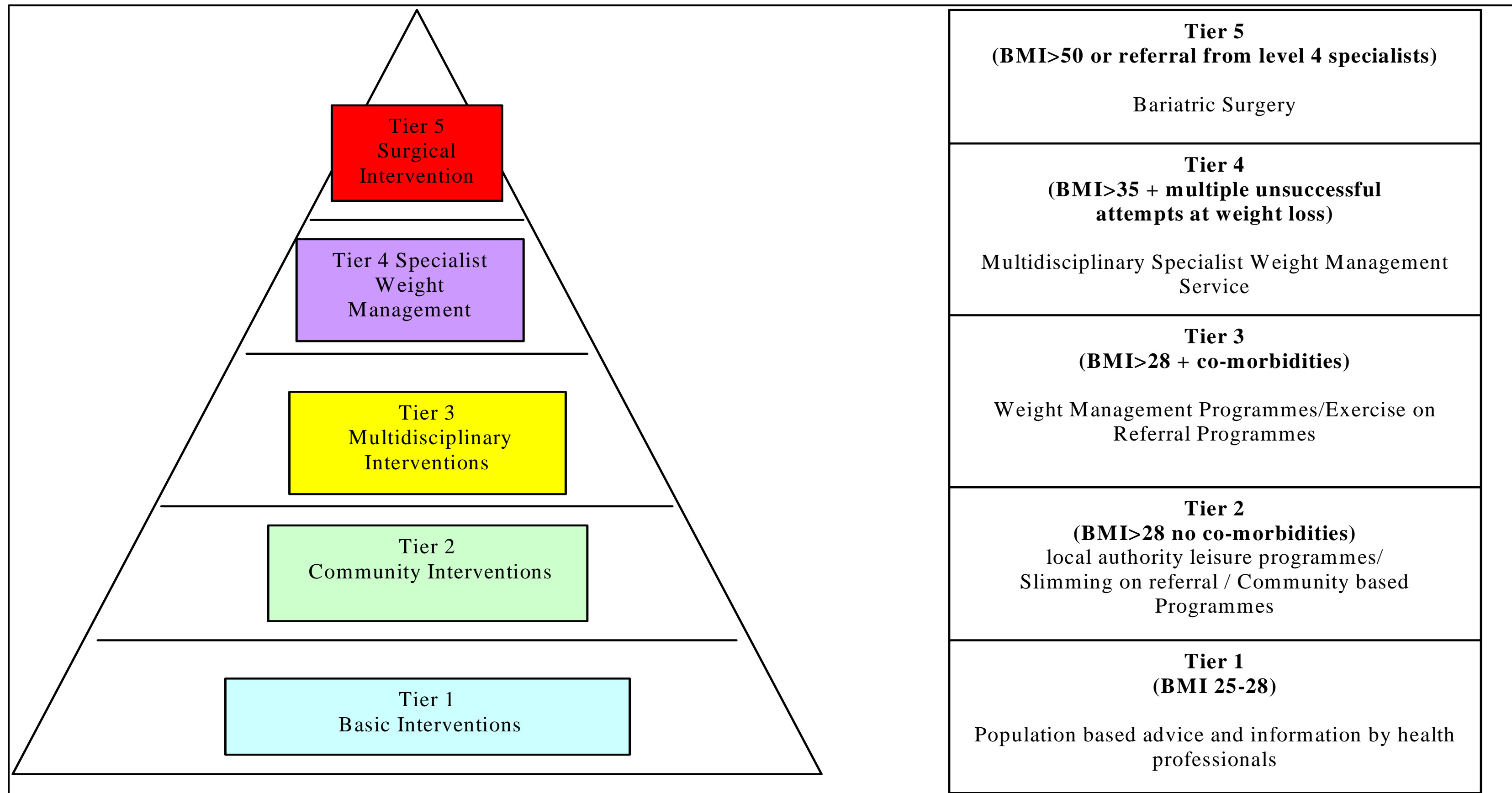
* - World class commissioning, chronic disease management & health improvement competencies

Key:

- Red Triangles at top indicate chronic disease management programmes along the lines of Kaiser Permanente
- Small red & blue triangles correspond to Treatment programmes for lifestyle & biological risk factors delivered according to agreed patient pathways, protocols and guidelines
- The dark green and beige rectangles correspond to a population screening and treatment programme for vascular disease
- The pale green rectangle represent comprehensive population health improvement
- The whole programme is delivered through 6 core strands of activity which reflect world class commissioning, chronic disease management and health improvement competencies
- The programme has a common performance management, evaluation and communications framework

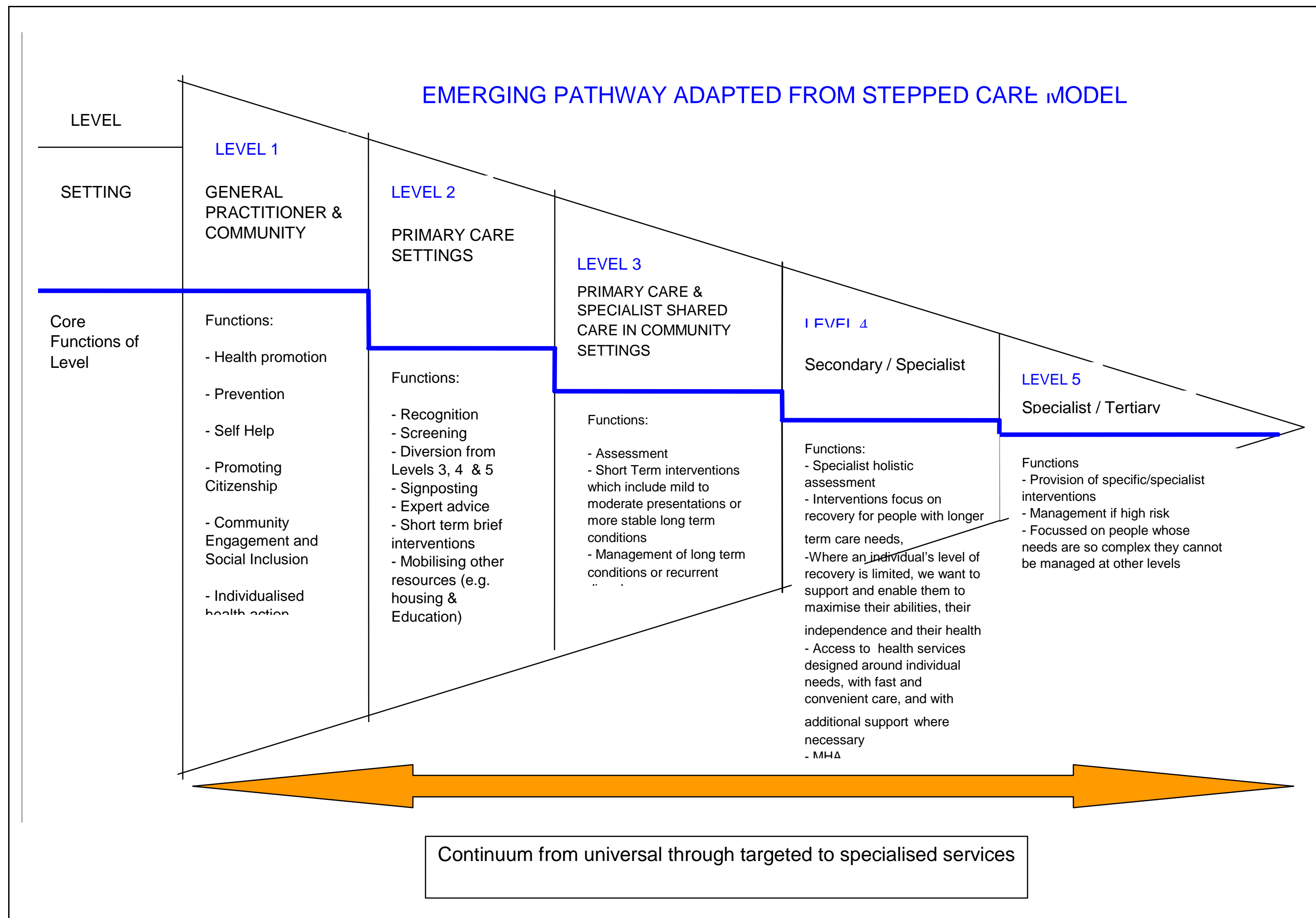
Source: briefing material for National Support Team for Health Inequalities visit 2008

Appendix 5: Model for obesity services



Source: briefing material for National Support Team for Health Inequalities visit 2008

Appendix 6: Emerging mental health patient pathway



Appendix 7: Emerging mental health care pathway levels of care

Broadly the levels of care can be described as follows:

Level 1 – Community and General Practitioner. The functions or types of activity typically seen within this level of service would be health promotion, prevention and self help. This may include working in partnership with other community services to facilitate the promotion of healthy lifestyles and well being, the development of individualised health action plans, alongside facilitating the key objectives linked to reducing social exclusion and engaging with wider community activities. This provision is likely to be provided through a range of organisations and will not be the main focus of NHS or Adult Social Services resources.

Level 2 – Primary Care The functions or types of activity typically seen within this level of service would be recognition and assessment of ill health. This would include signposting, offering of expert advice, short term brief interventions and the mobilisation of other resources such as housing and education. This provision is likely to be commissioned through numerous providers working within different community settings and across organisations.

Level 3 – Primary and Specialist Shared Care The functions or types of activity typically seen within this level of service/pathway would be shared work between specialist and primary care services in a variety of community settings which would focus on working with those people who present with mild to moderate mental health problems or learning disability (where the response required is from health services) who have needs beyond those catered for within Levels 1 and 2 provision, people who present with more stable long term conditions or people with recurrent disorders. Short term interventions would be available following brief assessment with explicit treatments set out within a clear timeframe. This provision is likely to be commissioned through numerous providers and across organisations.

Level 4 – Specialist This is the level that would include the provision of assessment under the Mental Health Act 1983. There would be a function of specialist holistic assessment; interventions focused on recovery of people with longer term care needs and/or enable people to maximise their abilities, independence and health. Specialist residential support may be required. Interventions at this level will be focused on daily living skills, promoting independence and self management and will include access to employment support and community activities. This provision is likely to be provided by a range of specialist mental health and learning disability service providers (statutory, independent and voluntary - not for profit- sector).

Level 5 – Specialist/Tertiary. This level provides for need that is often complex and needs highly specialised interventions that none of the other levels within the overall pathway are able to accommodate. It is likely the needs are so complex or specialist that residential support may be required for a longer period of time or specific interventions are needed which require highly specialist knowledge or skill. Risk and/or complexity will be significant.

(Source: North East Commissioning Team for Mental Health and Learning Disabilities, proposed strategic plan for mental health 2008)