

Care Services Efficiency Delivery

Demand Forecasting and Capacity Planning

Configuring Future Services Toolkit

A Structured Approach to Delivering Better Outcomes for Older People

Version 1.0

October 2007

This Toolkit covers service configuration options to support people's preferred lifestyle, in their own homes, as long as possible. These options exist at the health and social care interface and represent opportunities to build on Joint Strategic Needs Assessment [JSNA] with practical joint projects.

CSED developed the approach with the Institute of Public Care, Oxford Brookes University [IPC]. A copy of IPC's full report on the work is available on the CSED website.

IPC research provides evidence, based on current literature, for service reconfigurations aimed at seven conditions and an implementation planning approach. A later report will discuss lessons learnt from work with two pilot authorities and make recommendations for wider implementation including the building of a knowledge base for local authorities to access.

The Care Services Efficiency Delivery Programme was set up in response to the Gershon recommendations as a collaborative programme to help councils achieve their targets in adult social care. CSED seeks to encourage councils to adopt its initiatives by demonstrating their value.

Demand Forecasting and Capacity Planning is one of six CSED workstreams.

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Part 1 Planning the Approach

Introduction

CSED, working with the Institute of Public Care (IPC), is developing tools to support councils with demand forecasting and planning of care services for older people.

The POPPI system, released in March 2007, brings together published information on current and future populations of older people, the prevalence of conditions affecting the demand for care and existing local authority performance data.

The Anticipating Future Needs project developed a simple structured methodology for consulting pre-retirement age groups and current service users about their care requirements.

Increasing the current service provision in line with the projected population growth shown in POPPI is unaffordable and early evidence from the Anticipating Future Needs studies shows that it would not meet the changing expectations of older people.

This third IPC project explores service configuration options to support people's preferred lifestyle, in their own homes, as long as possible. These options exist at the health and social care interface and represent opportunities to build on Joint Strategic Needs Assessment [JSNA] with specific, practical joint projects.

This paper provides the research evidence for service reconfiguration for 7 conditions based on the current literature and an implementation planning approach. A second paper, in December 2007, will discuss lessons learnt from work with two pilot authorities and make recommendations for wider implementation including the building of a knowledge base for local authorities to access.

Re-thinking the approach to Service Planning

Traditionally, social care and health managers have managed services. They decided who received services and ensured delivery to time, cost and quality. With services increasingly purchased from the private and voluntary sectors, managers need to take a wider perspective; understanding the complex nature of demand and the options to meet it.

- Events that lead to major expenditure for one agency, such as hospital or care home admission, may have their antecedents in the work of another. For example, lower health service physiotherapy provision may impact a person's capacity to recover from a stroke, leading to increased social care provision. The absence of an early social care intervention may impact health services through hospital admission.
- Current information systems have been designed to meet the needs of service managers. Information to answer questions on the choice of service or the consequences of delays is often not available or not collated.

- Joint commissioning requires an evidence base, an understanding of cause and effect across organisational boundaries and both the capacity and desire to allocate funding from one organisation to another.

Rethinking future provision needs to be more focussed and better researched by asking questions in a structured way.

- Is the quantity, intensity and type of service currently delivered achieving outcomes that a service user might want or expect?
- Are there needs where targeted community-based interventions could prevent people entering care homes?
- Is the intensity of the service sufficient to achieve the outcomes desired; e.g. in stroke services for an individual, to maximise potential recovery?
- Are there unintended consequences to current service provision; e.g. do mobility aids actually exacerbate immobility?
- Is the timing of intervention likely to deliver the best outcomes; e.g. are eligibility criteria barring people from provision when it may have the greatest preventative impact?

Answering such questions may involve challenging professional practice. It is time consuming and there may be inadequacies in the data available which make linking cause and effect through key milestones on a care pathway difficult.

Any methodology that improves our understanding is better than leaving professionals to make decisions on future service configuration unaided. The Toolkit offers a structured approach and methodology to these questions about demand and interagency service provision.

Project Methodology

The objectives are:

1. identify key factors that influence demand at the health/social care/housing interface;
2. test those with participant authorities;
3. devise a range of options for service reconfiguration to improve the quality of outcomes.

Reviewing more than one or two topics at a time is not recommended. It would stretch resources and dilute the necessary focus and commitment.

The following address the objectives and two local authorities / PCT teams are currently testing the approach.

1. Identify the difficult issues that conventional commissioning approaches have not resolved.
2. Review the latest research and best practice in relation to the challenging issues.
3. Develop hypotheses for the root cause of the problems.
4. Gather evidence to prove or disprove the hypotheses.
5. Analyse the data and ask further questions to refine the hypotheses.
6. Develop options for commissioners in reconfiguring services or influencing future supply.

7. Carry out a risk and cost benefit analyses and plan a way forward.
8. Consult users, providers and front-line staff
9. Introduce the option(s) into the commissioning strategy/business plans.

The following paragraphs examine each step in more detail.

Step1 Identify issues

Identifying need where service has been provided but outcomes are not being achieved through inappropriate matching of needs and services or insufficient service intensity to deliver the required outcomes. For example, front line care or health staff are often aware that poor continence services impact residents and staff in care homes or poor podiatry services limit older people's mobility. We also expect that the local results from Anticipating Future Needs surveys will point up areas for service improvement as an input to JSNA.

Although these issues indicate a need for more preventative services, there is little evidence tracking the relationship between poor outcomes and service deficiencies. The starting point is to capture some of the issues that propel older people along particular health and care pathways.

- Bring together a range of stakeholders; managers, providers, service users and carers into a development group to agree the process of reviewing the national literature and testing the research against the locally held data and the local survey results.
- Task one or two individuals to deliver the results on a range of options so that the group can select one or two issues for priority attention.

Step 2 Conduct literature reviews

Part 2 of this document gives seven examples of outputs and hypotheses from literature reviews. It is worth examining the latest research and best practice to give a firm evidence base to the local investigations. It may be necessary to reconsider the initial selections from Step 1 and see who else might need to be involved in the development group.

The key outputs from this process are descriptions of problems, a set of hypotheses as to how these impact local care pathways and how to test this through reviewing local data.

Step 3 Develop hypotheses

A hypothesis is an assumption made as a starting point for further investigation. Within the literature review on continence, for example, three hypotheses are suggested - each as a starting point for further investigation. They are:

- Admission to care homes may be caused or exacerbated by incontinence.
- Incontinence may be a contributory factor to accident and emergency admissions.
- Continence issues are only initiated by service users when their self-management of the condition becomes difficult to hide.

The intention of this stage is to develop one or more hypotheses, based on the literature review, which capture the essence of perceived local problems for testing in the next stage of the process.

Step 4 Gather the evidence

Experience suggests that this process may reveal that necessary information is not collected, or not collated and analysed in any useful way. Data may be available but key stakeholders are not aware of its existence. It may help future joint commissioning by prompting a review of local information systems and promote a refocusing on outcomes.

Step 5 Analyse the data

It may be useful to do an initial analysis and draw tentative conclusions for testing with one or more 'experts' before reporting the information to the development group. This is an important stage of the project and misinterpretation of the data can lead to inappropriate decisions.

Another key factor here is the standard of proof. The danger is that improvements are not made on the basis that the evidence is insufficient. Services will continue to be provided and decisions to be made on a lesser standard of evidential proof than this exercise provides. What is required is a level of information that is good enough to make suggestions for future service configuration.

Other elements to take into account are risks and equity. Strategies that empower or liberate may expose people to greater risks but commissioners need to be equally cautious about being 'risk averse'. Distributing services equitably may conflict with ensuring that the service is targeted on those with greatest needs or where the greatest impact may be made. With the growth in the population of older people, targeting may become both more prevalent and more contentious.

Step 6 Decide on potential commissioning and contracting options

Once it has been decided that the hypothesis is supported, the development group needs to determine the implications. It is sometimes necessary to trace back along the care pathway to find the point or points at which the problem started to occur. For example, if admissions to care homes may be caused by incontinence and, incontinence may be a contributory factor to A & E admissions, it may be necessary to track back and determine the best points at which to intervene to address the problem and assess how amenable individuals may be to this intervention.

To decide what service changes are required commissioners need to think about the outcomes to be achieved. Developing services that deliver positive outcomes as compared with outputs is increasingly a focus of central and local government thinking.

For clarity:

- Outcomes are desired goals for service users with the rationale that underpins those needs.
- Outputs are services required to deliver outcomes and the evidence that these will achieve the desired results.
- Processes are what is required to ensure appropriate services are delivered at the right time.

If the desired goal is to reduce the number of older people going into residential homes because of continence problems, then it is necessary to decide:

- What services need to be put in place to achieve this?
- What is the evidence that these services are the most appropriate?
- What is the action plan/timetable for implementing changes to achieve this?

There are close links between the desired outcome, the services provided, the rationale as to why these have been chosen, the plan of action and the monitoring of results.

Step 7 Carry out an impact and cost / benefit assessment

Step 6 leads to a judgement about what might be the best range of service provision to tackle the problems identified.

Before any of these can be implemented it is also important to make judgements about what the impact of change might be, what resources are required and what risks are involved to stakeholders in making such changes.

Carrying out an impact assessment is often best accomplished with all members of the development group present. Assessments might include:

- Political opposition – will any service reconfigurations align with existing local commitments or impact national targets and performance indicators?
- Service users / carers – how might changes be viewed by the wider community of service users and carers? Are people likely to be exposed to greater or lesser risks of the basis of the changes being proposed?
- Staff – will changes affect work patterns, skill requirements etc? Is there a need to consult at this early stage with trade unions?
- Providers – will changes affect the relationship between commissioner and providers and will new service specifications be economically viable for providers?

In terms of cost/benefits this means asking the question:

If this service is put in place at this cost what is the benefit it delivers compared to either no service or a lesser or greater volume of provision?

It is important to consider the sensitivity to outcomes of different volumes of service provision. For example, we know that rehabilitation after a stroke is vital to recovery, but what impact do differing volumes and types of rehabilitative input have on long-term recovery?

Calculating cost is not always consistent between or within health and social care but the evaluation should be based on the *incremental cost* to all the organisations involved. Activity Based Costing is the ideal analytical framework. There may be incremental costs in 'indirect' areas such as increased management attention and dedicated analytical support. It is also useful to distinguish 'cashable' and 'non-cashable' cost savings. Finally the sources of funding and the impact on budgets for rest of year and following year plans need to be identified and approved by finance.

Step 8 Consult

Following the impact assessment there needs to be a process of consultation with all interested parties to the re-configuration. This should include users, providers and front-line staff. Early supplier involvement is critical to driving continuous, cost-effective improvement in outcomes.

Step 9 Implement change and integrate into long term commissioning plans

Implementation of the agreed service re-configuration should be seen as part of a change programme and should be resourced and project managed appropriately.

The expected results in terms of events, costs outputs and outcomes should be monitored against the assumptions made in the assessment and cost/benefit analysis.

It is important to look the impact of both the change and the process on the long-term approach to commissioning. For example:

- Has implementing this process suggested a way forward for other issues/services?
- Has the data capture and analysis process pointed up issues for information systems and their ability to inform strategic commissioning?
- How will the impact of the change be monitored in the longer term?
- What impact has the process had on joint strategic decision making and operations?

Part 2 - Reviewing the Evidence

Introduction

In recent years there have been a number of research reports and projects looking at the impact of services at the health, housing and social care interfaces.

This work has been wide ranging covering, strokes, podiatry, falls and mobility, continence, dehydration, dentistry and housing conditions but seems to have had little influence on future service planning and long term strategic commissioning.

These research topics are not necessarily focusing on mainstream concerns of the three agencies and it is possible that opportunities for configuring services with better, more cost-effective outcomes are being missed.

IPC have compiled the following brief literature reviews for seven of these topics.

1. Incontinence
2. Dehydration
3. Dentures
4. Falls
5. Housing
6. Podiatry
7. Stroke Recovery

Each review has a three part structure:

1. A general background to the condition or subject area
2. Evidence relating to the problem
3. Some suggested hypotheses.

These topics and hypotheses are not the only ones for commissioners to consider but they:

- Form a basis for local investigations - the 'Is this true for you?' approach to questioning and investigation.
- Prompt questions and discussions that may not have been raised before.
- Provide useful examples for local commissioners to develop their own local hypotheses.

Topic 1 – Incontinence

Background

Incontinence is caused by physiological changes that compromise the ability to remain continent in up to a quarter of the older population. Urinary incontinence affects 24% and faecal incontinence affects 1-4% of older people living in the community. The percentage of older people who are incontinent is higher in care homes, where 30-60% of older people suffer with urinary incontinence and up to 25% with faecal incontinence.

There is some evidence to suggest that incontinence in older people is under reported in those living in the community because many do not seek services, in part, because they see it as part of normal aging and, in part, because of shame and embarrassment¹. Incontinence is more common in women than men and has been described as a disabling disease of the elderly².

The mortality and morbidity rate for those who are incontinent is higher than continent contemporaries³. The need to remain or regain continence is important in the maintenance of self esteem and independence, quality of life, personal hygiene, reducing the risk of falls and minimisation of personal and economic cost.

The National Service Framework for Older People (2001) stipulated that an integrated continence service should be established by April 2004. The National Audit of Continence Care (2005)⁴ reported a good basic infrastructure for continence services but inadequate access to integrated services and no guarantee of assessment. It further reported that containment rather than treatment is the dominant approach.

The total cost of incontinence across the UK is unknown because the information is not collected or collated but is undoubtedly very significant. The cost implications play an important part in influencing the shape and intensity of health and care interventions.

Nature and Evidence of the problem

A study showed that the overall prevalence of urinary incontinence in people aged over 65 in any one month was 31% for women and 23% for men. Women generally had more severe frequency of incontinence and a greater degree of wetness than men. Protection use was greater in women than in men. Furthermore, only 40% of men and 45% of women aged over 65 with incontinence had accessed health services⁵.

Another study of 3000 older people (aged over 65), living at home in the UK, were interviewed concerning faecal incontinence. 78 respondents (3%) reported faecal incontinence. There was a small but not significant association with increasing age: 38 (2%) of those reporting incontinence were aged 65–74 years; 40 (3%) were over 75. Faecal incontinence was significantly associated with gender, with reports from 15 men (1%) versus 63 women (4%). It was also significantly associated with anxiety and with depression⁶.

¹ Horrocks S Somerset M Stoddart H Peters TJ (2004) What prevents older people from seeking treatment for urinary incontinence? A qualitative exploration of barriers to use of community continence services *Family Practitioner* Dec;21(6):689-96

² HAS (1997)

³ Rockwood K Stadnyk K Macknight C McDowell I Herbert R Hogan DB (1999) A brief clinical instrument to classify frailty in elderly people *The Lancet* 353:205-206

⁴ National Audit of Continence care (2005)

⁵ *British Journal of General Practice* Volume 51, Number 468, 1 July 2001, pp. 548-552(5)

⁶ *Age and Ageing*, Volume 30, Number 6, November 2001, pp. 503-507(5)

It is clearly important for health and care professionals to enquire about continence and to use acceptable terminology, such as asking about a 'troublesome bladder'. If a problem is acknowledged, a comprehensive assessment, carried out with sensitivity, may identify the causes, many of which are eminently treatable.

Physiotherapists with expertise in continence issues have the knowledge and skills to prevent and alleviate many of the symptoms. Physiotherapy techniques may provide effective treatment in many cases with pelvic floor retraining being effective in alleviating stress incontinence⁷, urge incontinence⁸ and faecal incontinence⁹. For some of the more problematic causes of incontinence there is evidence to suggest that behavioural modification may be effective in improving continence in older women and that it remains efficacious for up to one year after treatment. If the potential cause is due to medication, referral to the general practitioner for a medication appraisal may be helpful.

Evidence shows that many causes of incontinence are amenable to treatment and that continence in older people can be restored in most cases¹⁰. Given the extensive nature of the problem, it follows that health and care staff should be trained in continence care so they can initiate diagnosis and treatment. Potter et al (2007)¹¹ called for the urgent need to re-establish the fundamentals of continence care into the daily practice of nursing and medical staff and to fully integrate quality services into this 'neglected area of practice'.

Though treatment is frequently possible, management of the problem seems to be the dominant approach to helping people cope with incontinence^{12 13}. This is despite the cost implications, in terms of the provision of incontinence pads, which are generally rationed¹⁴, and the toll this may make on both service users and carers. Containment rather than cure is expensive from a health, financial and personal perspective. Furthermore, this may contribute to premature referral for care home admission, as either the older person or their carers reach the point of no longer being able to manage the situation.

Evidence that incontinence is a contributing factor to care home admission

Urinary incontinence has been associated with multiple hospital admissions and is believed to be a contributing factor to care home admission^{15 16}. Should a care home admission take place there is evidence to suggest that quality of life of residents is adversely affected if they develop incontinence or their incontinence gets worse.

⁷ Hay-Smith EJ Bo Berghmans LC Hendricks HJ de Bie RA Vab Waalwijk van Doorn ES (2003) Pelvic floor muscle training for urinary incontinence in women Cochrane Database of Systematic reviews issue 1

⁸ Berghmans L Hendricks H Bie RD Doorn EVWV Bo K Kerrebroeck PV (2000) Conservative treatment of urge incontinence in women: A systematic review. British Journal of Urology International

⁹ Solomon MJ Pagar CK Roberts P (2003) Randomised, controlled trial of biofeedback with anal manometry, transanal ultrasound, or pelvic floor retraining with digital guidance alone in the treatment of mild to moderate faecal incontinence Diseases of the Colon and Rectum 46:703-710

¹⁰ Tan TL (2003) Urinary incontinence in older persons: a simple approach to a complex problem

¹¹ Potter J Peel P Main S Lowe D Irwin P Pearson M Wagg A (2007) National audit of continence care for older people: management of faecal incontinence Age Ageing May ;36(3):268-73

¹² Royal College of Physician's Clinical Effectiveness and Evaluation Unit (2005) National Audit of Continence Care

¹³ Cheater FM Baker R Gillies C Wailoo A Spiers N Reddish S Robertson N Cawood C (2006) The nature and impact of urinary incontinence experiences by patients receiving community nursing services: A cross sectional cohort study. Int J Nurs Stud Dec 16

¹⁴ Royal College of Physician's Clinical Effectiveness and Evaluation Unit (2005) National Audit of Continence Care

¹⁵ Yarnell JWG, St Leger AS. The prevalence, severity and factors associated with urinary incontinence in a random sample of the elderly Age Ageing 1979; 8: 81-5.

¹⁶ Ouslander J. Urinary incontinence in the elderly West J Med 1981; 135: 482-91.

Thom¹⁷ demonstrated that urinary incontinence was a significant factor in increasing the likelihood of care home admissions in the United States. His work concluded that “Urinary incontinence increases the risk of hospitalisation and substantially increases the risk of admission to a nursing home independent of age, gender and the presence of other disease conditions”. His finding that urinary incontinence has little effect on total mortality is in contrast to Rockwood’s finding reported earlier.

The PSSRU study on admission to care homes, found that “continence shows good gains immediately following admission, and low rates of decline throughout. However, if the gains are not made immediately after admission, they are much less likely to occur later. This finding probably reflects improved management of incontinence following admission, rather than any great improvement in the underlying condition”¹⁸. By suggesting that continence can be improved or better managed on admission to a care home, the study implies that continence may well be a factor in stimulating the admission in the first place, although it is noticeable that the continence gets ‘managed’ rather than treated. As admissions are frequently precipitated by a physical crisis, e.g. a fall or carer illness, incontinence may not always be identified as a major contributory cause. For example:

- Carers may find it difficult to manage someone with a continence problem but may not wish to admit that this is the case.
- Older people with continence problems using pads may become socially isolated because other people limit their contact with them.
- Older people with continence problems may limit the distance they travel from home because of fears of poor bladder control, thereby losing mobility and becoming more socially isolated.

It appears that the percentages of those with urinary and faecal incontinence increase once older people are admitted to a care home or to an acute setting. There may be several reasons for this:

- People living in the community may under report the problem and language may be a key factor, with older people more willing to admit to a ‘loss of bladder control’ than to incontinence¹⁹. This may reflect that a ‘loss of bladder control’ carries less of a stigma.
- It may be that something in the setting influences the likelihood of incontinence, e.g. unfamiliar surroundings, obstacles obscuring the route to the toilet.
- A person may be admitted with ‘hidden’ incontinence and the effect of institutionalisation exacerbates the problem as they adjust to being cared for.

In conclusion, incontinence can lead to a breakdown in health, psychological and physical difficulties. It can be a financial burden for the family, especially those providing care, and it may hasten care home admission.

Hypotheses

1. Admissions to care homes may be caused by, or exacerbated by, incontinence.

Possible Indicators

- Draw up a list of the last 50 admissions to care homes

¹⁷ Thom D (1997) Medically recognised urinary incontinence and risks of hospitalisation, nursing home admission and mortality. *Age and Ageing* 26;367-374

¹⁸ Bebbington Darton Netten (2001) *Survey Care Homes for Older People: Volume 2. Admissions, Needs and Outcomes. The 1995/96 National Longitudinal Survey of Publicly-Funded Admissions*. Personal Social Services Research Unit, University of Kent

¹⁹ Cochran A (1998) response to urinary incontinence by older persons living in the community *Journal of Wound Ostomy Continence Nurse* 25;6: 296-303

- Telephone interview; ask the care home manager if a person had a continence problem and what they know about the problem:
 - Is it a long-standing issue?
 - How is the home dealing with the incontinence?

2. Incontinence may be a contributing factor to accident and emergency admissions

Possible indicators

- Identify a sample of people who have been admitted to accident and emergency departments following a fall between midnight and 8am.
- Find out from their notes if they had fallen when trying to reach the toilet or commode
- Identify if these people were incontinent either on admission or immediately prior to admission

3. Continence is generally not identified through existing health and social care assessment processes

Possible indicators

- Is there a question about continence in the Single Assessment Process?
- Do GPs routinely ask older people about continence?
- Differential patterns in referral to continence services that are disproportionate to older people populations.

Topic 2 – Dehydration

Background

Adequate hydration is a basic requirement for body functioning. Remaining hydrated is generally not a problem for healthy adults who are prompted by thirst coupled with a day structured around nutritional breaks. There is evidence to suggest that some older people may be at risk of dehydration, either because they don't have such structured eating habits or because they are cognitively impaired and lack the thirst sensation. Dehydration can also be associated with significant morbidity and mortality rates. The consequences of dehydration, such as dizziness or forgetfulness may also be confused with other conditions and hence be wrongly attributed.

A targeted strategy to prevent dehydration in people living in the community and people in care homes could help to reduce avoidable emergency hospital admissions and help to meet the public services agreement target to reduce hospital inpatient emergency bed days by 5% by March 2008²⁰. The challenge is to identify those people at greatest risk and draw on any evidence of good practice. A necessary pre-requisite is to raise awareness in the general population and, in particular, in the older population about the importance of maintaining adequate hydration.

There is no generally accepted definition of dehydration; however, Jones et al²¹ proposed that rapid weight loss of greater than 3% of the body weight could be used. This rapid weight loss could be due to a lack of fluid intake or to sodium depletion where there is an accompanying loss of water.

Nature and Evidence of the problem

There is evidence that adequate hydration is necessary to prevent or aid the treatment of a number of body malfunctions. These are listed and supported by a range of evidence in *Wise up on water*, a publication from Water UK,²² and include:

- Constipation
- Urinary infections and continence
- Kidney and gallstones
- Heart disease
- Low blood pressure
- Diabetes
- Cognitive impairment
- Pressure ulcers
- Falls
- Poor oral health
- Skin conditions
- Hospitalisation

²⁰ Morrison J (2005) Identifying people at high risk of emergency hospital admission BMJ ;330:266 (5 February).

²¹ Jones B, Devey J, McLean M, Spacey H, Goodes S, Turner V, Kneebone R (2001) Best Practice. Evidence Based Practice Information Sheets for Health Professionals. Vol 5, Issue 1 ISSN 1329-1874

²² Water UK (2005) Wise up on water. Hydration and healthy ageing Water UK

There is evidence to suggest that more than 30 per cent of older people coming into Accident and Emergency have a dehydration-related illness²³. This finding is supported by two American studies^{24 25}.

In Australia in 2001, a systematic review of the literature to date was published²⁶ with the aim of looking at the best available research on maintaining oral hydration in older people. Most of the studies were carried out in nursing or care homes. There was some indication that the more dependent a person was; the more likely they were to have low fluid intake. There was also a weak indication that older people with decreased cognitive status are more likely to be dehydrated. The evidence about risk factors was inconclusive, for age, gender and incontinence but being in a care home was identified as a risk factor in itself.

It has been suggested that older people are at greater risk of becoming dehydrated²⁷ because of a variety of age related changes including:

- A diminished thirst response - older people may have an impaired thirst sensation²⁸ including people with Alzheimer's disease
- May be insensitive to thirst²⁹
- Physical changes e.g. reduction in mobility
- Mental changes e.g. dementia
- Hormonal changes e.g. sensitivity to anti-diuretic hormone
- Medication e.g. diuretics
- Internal organ degeneration leading to e.g. a decrease in renal perfusion.
- Other underlying conditions such as heart failure which make people sensitive to hydration changes.

Evidence that dehydration leads to care home admission

It has been seen that dehydration may be responsible for up to one third of hospital accident and emergency admissions. No evidence was found to suggest that care home admissions may result from dehydration. However, there is evidence, to suggest that a number of people resident in nursing homes may become dehydrated and hence have poorer outcomes which could have been avoided.

An audit of admissions over a period of time may help to provide evidence. It has also been seen that adequate hydration can either prevent or help in the treatment of various conditions, many of which will present in primary care and some of which will need referral to secondary care.

Hypotheses

²³ Hopkins G (2005) Just Add Water Community Care 18th October

²⁴ [Warren JL](#), [Bacon WE](#), [Harris T](#), [McBean AM](#), [Foley DJ](#), [Phillips C](#) (1994) The burden and outcomes associated with dehydration among US elderly. Am J Public Health Aug;84(8):1265-9

²⁵ Greene-Burger S Kayser-Jones J Prince-Bell J (2000) National Citizens Coalition for Nursing Home Reform

²⁶ Hodgkinson B Evans D Wood J (2001) Maintaining Oral Hydration in Older People: A Systematic Review. Joanna Briggs Institute Australia

²⁷ Water UK (2005) Water for Healthy Ageing

²⁸ Kenny WL Chiu P (2—1) Influence of age on thirst and fluid intake Medicine and Science in Sports and Exercise 33:1524-32

²⁹ Albert SG Nakra BR Grossberg GT Carminal Er (1994) Drinking behaviour and vasopressin responses to hyperosmolarity in Alzheimer's disease. International Psychogeriatrics 79-86

1. **Falls associated with dehydration in care homes are higher in older people with dementia or memory loss.**
2. **Dehydration in general may contribute to falls amongst the whole population of a care home.**

Possible indicators

- Review the 'accident' book in a sample of care homes and identify the number of residents who have dementia or memory loss and who have fallen as against those who have fallen who do not have a memory loss.
 - Review individuals care notes to identify if residents need prompts from carers in order to drink a sufficient amount.
 - Explore the impact on falls of all residents having their fluid intake discreetly but more effectively monitored
3. **Ensuring adequate hydration of care home residents may incur a cost saving as a result of fewer urinary tract infections and continence problems, less constipation and fewer falls.**

Possible indicators

- Review a sample of past admissions and identify those at risk of dehydration and ascertain if they have a history of urinary tract infections, incontinence or constipation.

Topic 3 – Dentures

Background

Inadequate dentistry can affect the individual and society directly or indirectly in terms of cost and general health and well-being. Hence it is important to try and improve dental health in older people through appropriate dental interventions.

In terms of a direct impact then a person with missing teeth may experience physical difficulties. For instance, the act of chewing food adequately may be impossible; fewer teeth may result in a lack of food choices which could lead to nutritional disorders or deficits. Almost half of older people have some or all of their teeth missing and many either cope without dentures or have inadequate dentures.

Much the same is true for people whose mouth has changed shape and where previously dentures fitted well they may now be loose or uncomfortable which may also lead to a changing eating habits and hence weight loss or nutritional deficits. In addition, whilst dentures have been successful in the past as a way of treating missing teeth, attitudes are changing and there is evidence that older people are distressed as a result of having to wear a complete set of dentures³⁰.

In a less direct sense the appearance of the mouth and teeth is an important part of self image and contributes to the quality of life of the individual. Unfortunately, a lack of good quality dentistry can affect not only teeth but also a person's facial appearance thus impacting on self image and quality of life. A person's confidence may be affected by having poor teeth or bad breath caused by decay resulting in avoidance of speaking or smiling and their social life may be curtailed if they avoid eating with friends and family.

Poor dental health may come about because it is difficult for the individual to access dental care because of reduced mobility or some other age related reason.

Nature and Evidence of the problem

It is known that more females than males tend to have missing teeth and that black Caribbean men and women are more likely than other groups to have lost their teeth³¹. The same source also recognises that the utilisation of dental services is poor, with most people only using the service if they have a problem. In addition, as people lose their teeth, they no longer attend the dentist.

Access to dental care may be difficult if the older person has mobility problems or is receiving long term care in hospital or is in a care home. Older people are not all registered with a dentist³² and access to preventative services is only available to those who are registered. Furthermore, some older people may feel that they no longer require dental services if they have lost teeth or have dentures.

Domiciliary dental care is available for those who require it but may not be readily accessed unless people are informed of its existence. Some treatments may not be possible through a visiting dental service. The effectiveness of the domiciliary denture service for older people was evaluated and oral health-related quality of life measure (the Oral Impact Profile) was used to identify the change in quality of life caused by the provision of complete dentures³³.

Findings included:

- improvement in the oral related quality of life of housebound older people who had no teeth;

³⁰ Robinson PG Gibson B Davis D Pearson N Gelbier S (2004) The effect of a domiciliary service for complete dentures on the quality of life of older people. King's College London

³¹ Robinson PG Gibson B (2004) The effect of a domiciliary service for complete dentures on the quality of life of older people, Kings college, London

³² McNally L Gosney MA Dohert U Field EA (1999) The orodental status of a group of elderly in-patients : A preliminary assessment Gerodontology 16 p 81

³³ Robinson PG Gibson B Davis D Pearson N Gelbier S (2004) The effect of a domiciliary service for complete dentures on the quality of life of older people. King's College London

- increased likelihood that people would rate their oral health as very good;
- increased ability to chew foods that they were previously unable to chew;
- a twelve times greater chance of enjoying their food.

The study concluded that the oral related quality of life of housebound or semi- housebound people was significantly improved when they were provided with a complete new set of dentures. Improvements in chewing ability and participating in social events was particularly noted.

Maintaining good oral hygiene of patients in hospital is an important part of the nurses' role and following assessment of the patient this may be self care or assisted care. However, in a Strategic Review of Oral Health³⁴ Dr Davis was quoted as saying that 'people who work in the National Health Service don't generally have the training to look after someone else's mouth – and the prospect of doing so can be quite daunting'. This could be a contributory factor to the finding (McNally et al³⁵) that the dental hygiene of inpatients in an acute hospital was inadequate. It is highly likely that similar conclusions would be found in care homes and amongst people receiving home care but who had difficulties in cleaning their teeth.

Evidence that poorly fitting dentures may lead to care home admission

The National Minimum Standards (NMS)³⁶ for care homes expect that no service user should move into a care home without having a needs assessment including oral health. The care staff should maintain the personal and oral hygiene of each service user and wherever possible support their ability to self care. The name of the dentist, details of dental treatment, presence of dentures, broken teeth or missing teeth should all be recorded. The assessor should also observe and record reluctance to talk or smile, skin abnormalities around the mouth, the state of gums and if the persons breath is unpleasant. However, in practice the assessment of dental health is sometimes limited to the recording of the presence or otherwise of dentures and possibly their ability to clean their own teeth.

Hypotheses

1. A comprehensive assessment of an older persons' oral health may highlight the need for domiciliary dentistry

Possible Indicators

- Is a dental assessment part of the Single Assessment Process? Is there a role for a domiciliary dental assessor?
- Are dental reviews conducted as part of a care home admission or soon afterwards.
- How many care home residents or those receiving intensive home care have been offered a dental review and the means to attend for treatment if required within the last six months.
- In care homes or via the home care service is assistance available and offered for teeth cleaning?

2. Some older people have a poor diet as a direct consequence of poor dental care.

Possible Indicator

- Check how many care home residents or those receiving intensive home care, receive, request or eat food which is mushy, overcooked or has no crisp vegetables because of poor dental care.

³⁴ www.dh.gov.uk/en/publications&statistics/Bulletins/Chiefdental

³⁵ McNally L Gosney MA Dohert U Field EA (1999) The orodental status of a group of elderly in-patients : A preliminary assessment Gerontology 16 p 81

³⁶ Department of Health (2000) Care Homes for Older People National Minimum Standards

Topic 4 – Falls

Background

Falls and their consequences are often a sensitive signal of unidentified health risk and unmet health care need in older people³⁷ as the National Service Framework³⁸ recognised. Standard six identified a need for a partnership approach to reduce the numbers of falls resulting in serious injury and to ensure effective treatment and rehabilitation for those who have fallen. The NSF called for an integrated service model to ensure the delivery of services to older people who are at risk of falling or have fallen. This was to include:

- Health promotion initiatives to reduce osteoporosis and falls in the general population.
- A single assessment process and community equipment services to promote older people's safety and independence.
- A falls service to be fully functional by April 2005.
- Support for older people who have fallen.

In 2004 the National Institute for Health and Clinical Excellence (NICE) published clinical guidelines³⁹ for the assessment and prevention of falls in older people considering all the evidence up to 2003. The guidelines were to be used in conjunction with the NSF.

Falls account for 400,000 accident and emergency consultations annually. there is little published evidence on the cost effectiveness of falls prevention but there is evidence that the number of falls and their negative consequences can be reduced by 30% if local health and social care communities work together⁴⁰.

Nature and Evidence of the problem

Falls are the main cause of serious injury in older people, a major cause of disability and a leading cause of mortality, with up to 14,000 older people dying each year as a result of osteoporotic hip fractures sustained by falling⁴¹. They are also the costliest type of injury among older people with health care costs increasing with the frequency of falls and the severity of injuries. The incident rates for falls are two to three times greater in nursing homes and hospitals than in the community⁴².

One in three people aged sixty five and over fall each year and of these one in three fall again the following year. In older old age approximately equal proportions of men and women fall but in younger old age, the incidence is greater in women⁴³.

The risk of injury increases with age and the outcomes may be compounded by individual circumstances. A person who has chronic health issues, which are being managed effectively, may find that a fall is the final straw and that they can no longer cope. As people age, a fall may have a significant effect, not only the person's health and wellbeing, but also on their quality of life and confidence and may be a primary factor in triggering care home admission.

³⁷ Swift CG (2001) Falls in late life and their consequences – implementing effective services BMJ 322:855-857

³⁸ Department of the Health (2001) National Service Framework Older People The Stationery Office London

³⁹ National Institute for Clinical Excellence (2004) The assessment and prevention of falls in older people. National Collaborating Centre for Nursing and Supportive Care

⁴⁰ Department of Health (2003) How can we help older people not to fall again? Implementing the Older People's NSF Falls Standard: Support for commissioning good services Department of Health

⁴¹ Department of Health (2001) National Standards Framework The Stationery Office London

⁴² National Institute for Clinical Excellence (2004) Clinical practice guideline for the assessment and prevention of falls in older people. National Collaborating Centre for Nursing and Supportive Care

⁴³ Kingson P Jones M Lally F Crome P (2001) Older People and falls: a randomised control trial of health visitor (HV) intervention. Reviews in Clinical Gerontology 11:209-214 Cambridge University press

As we have seen, falls account for most of the accidents sustained by older people. Those aged over 75 admitted to hospital following a fall, will occupy a hospital bed for an average of 18 days⁴⁴. The period of rehabilitation following a fall also has an additional cost dependent on the intensity of practitioner input and other services which may be required. In 1999 the total cost to the NHS and PSS of admissions to hospital following a fall was £908.9 million and 63% of these costs were incurred from falls in people aged 75 and over⁴⁵. Torgerson⁴⁶ (2001) identified that 86,000 hip fractures occur annually in the UK and Youm⁴⁷ (1999) found that 95% of these are as a result of a fall.

The number of falls experienced by older people increases with age. The injuries sustained from a fall may vary from minor bruises to major fractures, long term hospitalisation and mortality. However, it is not only the physical effects of falling that impact on the individual; the emotional effects lead to a loss of confidence and possibly to the reassessment of the way in which the person lives. Vellas et al (1997)⁴⁸ identified that approximately one third of people who had fallen developed a fear of falling.

NICE identified the following risk factors as most predictive of falling in people in the community with the first four also being identified for those in care homes:

- Previous history of falling
- Impairments of gait and balance
- Visual impairment
- Cognitive impairment
- Mobility impairment
- Fear
- Urinary incontinence
- Home hazards

Extrinsic factors also contribute to the risks of falling and attention is increasingly being turned to the built environment and to the importance of satisfactory walkways and signage. Yardley et al ⁴⁹ interviewed 66 older people age 61 -94 and found that they may reject advice on the prevention of falls, not because of their ignorance of their risk of falling but because they may see it as a threat to their identity and autonomy. Developing a prevention strategy to deal with such a wide range of risk factors is challenging but has been an area that those developing a falls service have had to address.

Evidence of care home admission

Nearly half of all nursing home admissions are due to falls or postural instability⁵⁰. In 2006, Rubenstein stressed that attention to risk factors can prevent premature care home admission, which is most associated with an older person who has one or more identifiable risk factors⁵¹. Cotter et al (2006) demonstrated that fall related readmissions are responsible for significant costs and that any intervention to keep costs to a minimum is valid. However, it is important

⁴⁴ Department of Trade and Industry (1997) Home accident Surveillance system. Accident data and safety research garden and leisure (21st annual reports) DTI London

⁴⁵ Scuffman P Chaplin " (2002) The incidence and costs of unintentional falls in older people in the United Kingdom Journal of Epidemiology and Community Health

⁴⁶ Torgerson DJ Iglesias CP Reid DM (2001) The economics of fracture prevention in The effective management of osteoporosis Aesculapius Medical press p111-121

⁴⁷ Youm KJ Koval and JD Zuckerman, The economic impact of geriatric Am J Orthop 28 (1999) (7), pp. 423–428 fractures, Am J Orthop 28 (1999) (7), pp. 423–428

⁴⁸ Vellas BJ Wayne SJ Romero L Baumgartner RN and Garry PJ (1997) Fear of falling and restriction of mobility in elderly fallers Age Ageing 26(3):189-93

⁴⁹ Yardley L Donovan-Hall M Francis K Todd C (2006) Older people's view of advice about falls; a qualitative study Health Education Research Aug 21(4):508-17

⁵⁰ Salkeld G Cameron ID Cumming RG et al (2000) Quality of life related to fear of falling and hip fracture in older women: a time trade off study. Commentary: Older people's perspectives on life after hip fractures. British Medical Journal 320:341-346

⁵¹ Rubenstein LZ (2006) Falls in older people: epidemiology, risk factors and strategies for prevention. Age and Ageing Sept;35 suppl2ii37-ii41

to recognise that whilst falling may precipitate a care home admission, the incidence of falls in a care home or hospital is higher than for people living in the community. The consequences of falling can also result in institutionalisation ⁵²

Hypotheses

1. The design of street layout and architecture can increase the propensity for people to fall.

Possible Indicators

- Using data collected by ambulance services identify the number of older people who fall and where they fall in the street
- Identify how many falls have been over objects such as bollards, street signs etc.
- Obtain the councils list of reported broken pavements in the last six months and when they were repaired. Identify any relationship between broken pavements and falls in older people
- Identify common sites for falls and ask local shopkeepers if they have observed falls in that area.

2. There is a lack of interventions to prevent falls for people in care homes

Possible Indicators

- Use the 'accident book' identify:
- How many people have fallen in the care home in the last six months,
- The time of day they fell,
- Where they fell, and
- Was the fall related to another activity, eg, were they on their way to the toilet?
- Present information to staff and ask them to identify how those falls could have been prevented

3. There is a lack of interventions to prevent falls for people in care homes who have fallen in the past

Possible Indicators

- Identify a sample of people in care homes who have fallen during the last year and have had a second and subsequent fall.
- Identify any interventions related to the fall and the outcomes of the interventions in relation to further falls.

⁵² Feder G Cryer C Donovan S Carter Y (2000) Guidelines for the prevention of falls in people over 65. The Guidelines Development Group. BMJ 321:1007-1011

Topic 5 – Housing

Background

The widely reported growth in the population of older people will not just affect the future funding of pensions and the costs of providing health care to the ageing population, but also the volume and type of accommodation needed. The challenge for planners and providers will be to ensure that there is a range of good quality housing options that meet a range of expectations and needs at local level. Equally, it is recognised that the whole population of older people will be richer (but often cash poor) than previous generations, enjoy a longer retirement and be more resistant to being described as elderly and this may affect their perception of suitable accommodation.

Housing is in many ways the cornerstone of older people remaining within the community. Poor housing can contribute to poor health⁵³ and housing that is inaccessible or hard to maintain contributes to a decision to move into residential care. Equally, good quality, accessible and secure housing can contribute to older people's feeling of wellbeing and allow them to access a wider range of health and social care services in their own home.

Nature and evidence of the problem

The literature reveals that it is widely accepted that, for most older people, staying in their own home and being cared for by members of their family is their preferred housing option⁵⁵. Boaz⁵⁶ showed that up to four fifths of older people would prefer to stay in their own home for as long as possible and, in the event of disability, three quarters of older people would rather have their home adapted than move⁵⁷. The vast majority of older people are able to remain living independently in their own homes despite a degree of ill health. Many of these people are supported by informal carers until such time as they can no longer cope.

In some instances, the desire to cling on to increasingly inaccessible and inappropriate property can have negative consequences. Hanover Housing Group found that older people who are still living at home are reluctant to plan for their extreme old age. Of 164 people aged over 70 and living at home interviewed by Hanover Housing Association in 1997, 60% said that they would definitely not consider moving to a different type of accommodation as they grew older. Despite this, the Wanless⁵⁸ review of older people's services showed that up to 25% of the older person population do make a move after the age of 65. Hanover concluded that the unwillingness of older people to plan their housing future meant that deteriorating health is often the trigger for a move, and often means a last minute decision. In addition, many owner-occupiers cannot afford to adapt their home or keep it in good repair⁵⁹. Over one third of older people live in 'non decent' housing⁶⁰ and consequently are exposed to hazards within.

Whilst recent years have seen a growth in demand for specialist housing for older people, this has not been true for traditional sheltered housing. A recent study by the Joseph Rowntree Foundation showed that: 92% of Local

⁵³ Marsh et al (1999) Home sweet home? The impact of poor housing on health.

⁵⁴ Halpern D (1995) Mental health and the built environment: more than bricks and mortar? London: Taylor & Francis

⁵⁵ Dalley G. (2002) Independence and autonomy. The twin peaks of ideology Cited in Summer K (Ed) (2002) Our homes, our lives: choice in later life living arrangements Housing Corporation, Centre for Policy on Ageing, London

⁵⁶ Boaz A, Hayden C., Bernard M. (1999) *Attitudes and aspirations of older people: a review of the literature* (DSS Research Report 101) Leeds CDS

⁵⁷ Help the Aged (1999)

⁵⁸ Wanless (2006) Social Care review

⁵⁹ BMA (2003) Housing and Health: building for the future BMA

⁶⁰ Thomas M (2007) ILC-UK debate: Houseblockers: older people and the housing stock in an era of under occupancy. May 2007

Authorities and 79% of large housing associations are experiencing difficulties with 'hard to let' properties⁶¹. This results from a number of factors:

- Increased expectations and an unwillingness to accept substandard accommodation has resulted in a growing dislike for bedsit accommodation and shared bathrooms.
- In light of new space standards, many sheltered housing units are considered too small and do not allow people to have family and friends to visit, maintain privacy and move around safely.
- Little choice is available for those in public housing and, if in need, people will often take what is offered. This has resulted in sheltered accommodation being inhabited mainly by lower socio economic groups.
- Accessibility of some sheltered housing is unacceptably low. Many older schemes have difficulty in providing accessible accommodation and need significant refurbishment to comply with Decent Homes Standards. A significant percentage at present are not able to provide a 'home for life'.
- The majority of sheltered accommodation is for rent. Given the projected levels of owner occupation future demand for supported or specialist provision is likely to be in the independent sector or in mixed tenure schemes. It is also likely that older people will seek accommodation that is accessible and low maintenance but not described as specialist accommodation for older people. Demand for rented sheltered accommodation is likely to continue to decrease.

Oldman⁶² speculates that, from equivalent populations, people are more likely to move to residential care from sheltered housing than from ordinary housing, because wardens are able to negotiate placements on behalf of their tenants. Tenants who seen as risk to themselves or their neighbours may be directed towards residential care and wardens are in a good position to monitor the increasing frequency of falls or activated smoke alarms among their tenants. Whether this is the case must depend on the culture and training of wardens in sheltered housing and the policy of encouraging people to stay or to move into care homes will depend on individual schemes. Those who are still rooted in the idea of a 'continuum of care' are likely to have an expectation that tenants will move into residential and nursing care as they become more frail.

The role of care and repair services or Home Improvement Agencies [HIAs] may also be relevant. HIA interventions are traditionally aimed at helping people to remain living independently in their own homes but it may be difficult to assess whether HIA clients would be more or less likely to move into care homes. HIA clients are primarily owner occupiers and private renters, so any comparison with social renters would not really be appropriate. Some HIAs offer a "moving on" advice and support service to help people decide if they should move - whether into specialist housing, or into more accessible/suitable mainstream housing.

Blackman⁶³ in his general study for Office of the Deputy Prime Minister highlights the relationship between housing and health. He states.

"A large amount of research has demonstrated associations between poor housing conditions and heightened risks of illness and accidents. Housing design also presents possible health hazards such as crime, with crime itself a risk factor for depressed mental health and smoking. Health is affected by both conditions in the home, such as warmth or hazardous stairs or steps and conditions in the neighbourhood such as cleanliness, green space and the presence of more affluent households."

⁶¹ Joseph Rowntree Foundation, 'The future of sheltered accommodation, Croucher et al, 2004

⁶² Oldman, C (2000) Blurring the Boundaries: A fresh look at housing and care provision for older people. Pavilion /Joseph Rowntree Foundation.

⁶³ Blackman T (2004) NRU Scoping Assignment on Housing and Health, available from Blackman Durham University.

Blackman criticises the tendency to see housing solutions as the relationship between housing, health and social care rather than intervention to resolve a range of housing and neighbourhood issues. In particular, he looks at the potential health gain from spending on housing and neighbourhood improvement.

Hypotheses

1. That poor housing conditions have a direct impact on hospital and care home admissions.

Possible indicators

- Over the last year, track older people who have been admitted to hospital for asthma, bronchitis, and cross check whether housing or social care records indicate that they live in damp, cold or otherwise poor housing conditions.
- Cross check hospital and care home admissions of older people in poor quality housing against those who live in good, energy efficient housing with matched medical conditions.
- Look for any correlation between the use of HIA services and care home admission.

2. That some sheltered housing accelerates older people into care homes and does not allow people to remain in their own home for life.

Possible indicators

- Differential patterns of admission to care homes from sheltered housing.
- Average length of stay in sheltered housing.
- Reason for departure from sheltered housing.
- Numbers of tenants who remain in sheltered housing until death.

3. That delays in making adaptations to properties exacerbate falls and admission to care homes and hospitals.

Possible indicators

- Look for relationship between referral, assessment, installation of equipment dates. Cross check longest delays against care home admission or hospital admissions.

Topic 6 – Podiatry

Background

Foot problems which arise from toe nails, corns and calluses and medical conditions such as diabetes mellitus, may lead to pain. This is likely to have an effect on mobility and impinge on the social, physical and psychological well-being of older people thus affecting the overall quality of life and their vulnerability to fall.

Foot problems arise as a result of:

- Mobility issues, for as people age they may experience difficulties with bending and therefore inability to perform foot care
- Poorly fitting footwear, both in earlier life and at present may lead to calluses, corns and misshapen toes
- Underlying disease and deformity, for example diabetes, stroke and peripheral vascular disease.

In addition the normal ageing process will affect sensitivity, touch and vibration in the feet all of which put the person at greater risk of foot problems.

Referrals for treatment are generally via a General Practitioner or other health professional and are only available for those who are at medium or high risk according to criteria defined by PCTs. As statistics on podiatry services and information on the level of intervention are no longer widely collected, future services are unlikely to be planned effectively.

Nature and Evidence of the problem

Help the Aged⁶⁴ report that over two thirds of older people have foot problems and there is some evidence⁶⁵ that the proportion may be higher as many people are too embarrassed to seek help. Increasing demand for podiatry services has led to rationing, with people considered to be 'low' risk no longer being eligible for NHS podiatry. In September 2003, the NHS employed 3,807 podiatrists, an average of one podiatrist to over 2,000 older people. If the NHS was to offer the service to all older people in need of professional foot care it would be necessary to double the number⁶⁶.

The longer term impact of denying treatment to those considered to have a low risk is yet to be established. It has been suggested that 25% of people needing foot care are no longer receiving it⁶⁷.

There is relatively little published research on podiatry and podiatry services; in part, because there is no common assessment tool. However, in 2005 Campbell⁶⁸, as part of a larger study, looked at low risk podiatry problems and amalgamated the variables into five with the aim of designing a common assessment tool.

Evidence that foot health is a contributing factor to care home admission

⁶⁴ Help the Aged (2005) Best Foot Forward: older people and foot care Help the Aged London

⁶⁵ Malkin K Coffey J Boulton M Dawson J Lavis G Cooke P Jenkinson C (in preparation) Bunions: Patient Experience and Context of Seeking Treatment: A Qualitative Study

⁶⁶ <http://www.research.plymouth.ac.uk/podiatry/evidencebase.html>

⁶⁷ Help the Aged (2005) Best Foot Forward: older people and foot care Help the Aged London

⁶⁸ Campbell JA (2006) Characteristics of the foot health of 'low risk' older people. A principal components analysis of foot health measure

Although there is no direct evidence that a lack of podiatry provision for older people results in care home admissions, it can be speculated that as poor foot health can lead to social isolation, decreased mobility, and an increase in the number of falls and fractures, there is likely to be a number of people who are admitted as an indirect consequence.

Hypothesis

1. That the relationship between falls and foot problems is not clearly established and hence not monitored and resolved.

Possible indicators

- Is there a question about foot problems on the Single Assessment Process, particularly where peoples' immobility is evident and it is likely that they will have difficulties in cutting toenails?
- Does the falls service identify foot problems when they carry out an assessment?
- Where podiatry services are offered, is their frequency sufficient to ensure good foot care?
- If a person falls, are they checked for:
 - Toe nails that have been inadequately cared for and hence cause poor gait or discomfort?
 - Corns and calluses?
 - Medical conditions that may have lead to the foot problems?

Topic 7 – Stroke Recovery

Background

Approximately 110,000 people in England suffer from a stroke each year⁶⁹. The incidence of stroke increases with age and approximately 75% of stroke victims are over the age of 65. Of those who have a stroke about one third will die within the first ten days, one third will recover within one month and one third will be disabled and in need of rehabilitation. Stroke therefore has a major effect on people's lives and health and social care services. This literature review focuses on the potential for older people to make a full recovery from a stroke and how this may be influenced by the volume and type of rehabilitative programme.

The National Service Framework (NSF) for Older People (2001), Standard five stressed the importance of a multi disciplinary team approach to the rehabilitation of people with strokes. In 2005 The National Audit Office⁷⁰ reported on stroke services, identifying the need for further improvements in the care given. The recently published NSF Long Term Conditions (2006) included three quality requirements devoted to rehabilitation:

- Early and specialist rehabilitation;
- Community rehabilitation; and
- Vocational Rehabilitation.

The National Institute for Health and Clinical Excellence guidelines and the National Stroke Strategy are due to be published later this year. A toolkit for appraising the performance of hospital trusts and commissioners on stroke was produced in 2006.

Caring for people who have had a stroke uses a significant proportion of inpatient hospital beds and nursing homes places. The overall cost of stroke to the economy is estimated at around £7 billion each year, with stroke patients occupying 2.6 million hospital bed days annually⁷¹ at an annual cost to the NHS of £2.8b.

The Nature and evidence of the problem

People who have a stroke are more likely to survive, return home and regain confidence if they are admitted promptly to a stroke unit⁷². A stroke unit is a part of a hospital that provides care almost exclusively for patients who have had a stroke. The unit is characterised by the multidisciplinary approach to care. There is no set formula for the composition of a stroke unit. Indeed, they may be categorised in several ways:

- The acute stroke unit which admits patients acutely and continues treatment for several days and generally not longer than one week
- The combined acute and rehabilitation stroke unit which admits patients acutely and continues treatment for several weeks or months
- The rehabilitation stroke unit which admits patients after a delay of 1-2 weeks and continues treatment and rehabilitation for weeks or months
- A mobile stroke team which offers stroke care and treatment to stroke patients on a variety of wards

⁶⁹ Department of Health (2005) Reducing Brain damage: Faster access to better stroke care

⁷⁰ National Audit Office (2005) Reducing Brain Damage: Faster access to better stroke care

⁷¹ The House of Commons Committee of Public Accounts (2006) Reducing Brain Damage: Faster access to better stroke care

⁷² Department of Health (2001) National Service Framework Older People

Strand et al⁷³ identified that older people and those with severe strokes are likely to gain most from a stroke unit admission. Whilst there have been advances in stroke care over the last ten years and evidence to demonstrate the effectiveness of stroke units, only 62% of people who have a stroke are currently admitted to a stroke unit in England⁷⁴.

The reasons for patients doing better than those given conventional care uncertain but it has been shown that stroke unit care probably improves patient outcomes by minimising preventable complications and enhancing independence in functional activities⁷⁵. No study has shown to what extent the beneficial effect of care in a stroke unit is due to specific rehabilitation strategies, the daily time spent in physiotherapy and occupational therapy or the effect of a more stimulating environment with competent staff encouraging and supporting patients and family members - or a combination of all of these factors. There is also a lack of evidence about the effectiveness of acute stroke teams without rehabilitation and mobile stroke teams⁷⁶, and of scientific evidence demonstrating the values of specific rehabilitation interventions after stroke is limited⁷⁷.

It is suggested that if a stroke results in neurological deficit, the fastest recovery occurs within the first three months. However, this may simply reflect the level of intervention at this time as compared to a diminution in intervention further into the stroke recovery period. Kaste suggests that rehabilitation should start soon after admission and continue for as long as an objective improvement in the neurological function continues. Once this point is reached a long term rehabilitation programme should be embarked upon with the aim of sustaining the improvement. There is some evidence to show that improvements in function seen whilst the patient is in hospital may be followed by a decline in function six months after discharge suggesting that some peoples recovery lessens in their own environment⁷⁸

Dietrichs⁷⁹ (2007) reflection on a literature review and personal research concluded that the ideal form of rehabilitation is still unclear, but it is known that post stroke rehabilitation 'should start as soon as possible, with good motivation, sufficient intensity and quantity and should be maintained over a long time'. It is also considered that rehabilitation should continue until the maximum recovery is made. However, there are no clear guidelines to suggest at what point the patient has achieved maximum recovery, or what the cost benefit of continuing to pursue recovery in relation to long term health and social care expenditure.

As a consequence of a stroke, carers can be plunged into a role which they were not anticipating and for which they are inadequately skilled. Carers in general, are a vital resource and it is known that their morbidity is high. About one third experience problems with employment and just under two thirds experiencing physical and mental health problems. The Sentinel Report (2004) showed that although carers are legally entitled to request a needs assessment less than half do so. In addition, it is known that carers psychological wellbeing is improved if they receive some training⁸⁰. Smith et al (2007)⁸¹ in a study exploring the experience of caring identified the need to facilitate carers in learning how to care.

⁷³ Strand T Asplund K Eriksson S Hagg E Lithner F Wester P (1985) A non-intensive stroke unit reduced functional disability and the need for long term hospitalisation. *Stroke* 16:29-34

⁷⁴ Royal College of Physicians (2007) National Sentinel Stroke Audit

⁷⁵ Stroke Unit Trialists Collaboration (1997) How do stroke units improve patient outcomes? A collaborative review of the randomised controlled trials *Stroke* 28:2139-44

⁷⁶ Kaste M Skyhoj Olsen T Orgogozo JM Bogousslavsky J Hacke W (2000) Organisation of stroke care: Education, Stroke units and Rehabilitation *Cerebrovascular Diseases* 2000;10(suppl3):1-11

⁷⁷ Johansson BB (2000) Brain Plasticity and stroke rehabilitation American Heart Association special report

⁷⁸ Hopman WA Verner J (2003) Quality of Life During and After Inpatient Stroke Rehabilitation *Stroke* 34:801

⁷⁹ Dietrichs E (2007) Brain plasticity after stroke – implications for post stroke rehabilitation *Tidsskr Nor Laegeforen* May 3;127(9):1228-31

⁸⁰ Department of Health (2005) Reducing Brain damage: faster access to better stroke care

⁸¹ Smith LN Lawrence M Kerr SM Langhorne P Lees KR (2007) Informal carers' experience of caring for stroke survivors *Disabil Rehab* Mar 15;29(5):389-94

Evidence that poor stroke recovery contributes to care home admission

A fast efficient response following the onset of a stroke will lead to less time in hospital and a decreased incidence of disability⁸². Indeed a metanalysis based on the Stroke Unit Trialists' Collaboration⁸³ showed a 25% reduction in death or the need for long term institutionalisation of patients treated in a stroke unit in comparison to those who are admitted to a medical ward. This finding has been supported by Jørgensen⁸⁴ who also found that mortality and the requirement for care in a nursing home was reduced for patients treated in stroke units. Furthermore, a randomised controlled trial compared patients treated and rehabilitated systematically by a stroke team with patients treated in a less systematic stroke programme. It reported that older patients treated by a stroke team were able to leave hospital on average 16 days earlier, went directly home more often and were more fully independent one year after the onset of the stroke⁸⁵. This finding supported those that Strand⁸⁶ identified some years earlier. Bagg⁸⁷ reported from a prospective study looking at the effect of age on functional outcomes after stroke rehabilitation concluded that age is not relevant in determining the potential to recover from a stroke.

Kaste⁸⁸ in a review of the literature found that the length of time the rehabilitation should continue is dependent on the severity of the stroke and the local availability of services, usually it is for 6-12 weeks and rarely more than 24 weeks. Continuing rehabilitation once the patient has been discharged is recognised as being important but only 27% hospitals have community specialist teams. Indeed there is a lack of coordination of support services following discharge from hospital which can leave the patient feeling abandoned⁸⁹. Therefore, it may be expedient to consider the development of generic acute/community professionals. This could be effective at many levels. Transition from the acute sector to the community can be traumatic for people who have undergone such a life threatening episode and the familiar face in the home situation may reduce anxiety for users and their carers. It is important to recognise the significant role played by the voluntary sector in supporting and encouraging both the service user and carer at this point and anecdotally, the sector is struggling to cope with the demand for their services.

In a follow up survey of 875 patients who had had a stroke the Healthcare Commission⁹⁰ identified a need for; greater emotional support for stroke patients, more information, and continued rehabilitation. In addition a need for help with benefits, personal care and home help was identified along with more information about stroke, in particular risk of further strokes.

Whilst it can be seen that rehabilitation is an important component in maximising recovery from stroke it appears astonishing that very little is known about the relationship between severity and type of stroke, the volume and type of rehabilitative input an individual receives and the outcome in terms of long term impairment.

⁸² Department of Health (2006) Improving Stroke Services: a guide for commissioners Department of Health

⁸³ Stroke Unit Trialists Collaboration (1997) How do stroke units improve patient outcomes? A collaborative review of the randomised controlled trials Stroke 28:2139-44

⁸⁴ Jørgensen H Nakayama H Raaschou H Larsen K Hubbe P Olsen T (1995) The effect of a stroke unit: Reductions in mortality, discharge rate to nursing home, length of hospital stay and cost Stroke 26:1176-1182

⁸⁵ Kaste M Palomaki H Sarna S (1995) Where and how should elderly stroke patients be treated? A randomised trial Stroke 26:249-253

⁸⁶ Strand T Asplund K Eriksson S Hagg E Lithner F Wester P (1985) A non-intensive stroke unit reduced functional disability and the need for long term hospitalisation. Stroke 16:29-34

⁸⁷ Bagg S Paris Pombou A Hopman MA (2002) Effect of Age on Functional Outcomes After Stroke Rehabilitation Stroke 33:179

⁸⁸ Kaste M Skyhoj Olsen T Orgogozo JM Bogousslavsky J Hacke W (2000) Organisation of stroke care: Education, Stroke units and Rehabilitation Cerebrovascular Diseases 2000;10(suppl3):1-11

⁸⁹ Department of Health (2005) Reducing Brain damage: faster access to better stroke care

⁹⁰ Healthcare Commission (2006) Caring for patients after they have had a stroke. A follow up survey of patients.

Hypotheses

- 1. That older people who have strokes and who have a high level of input from rehabilitative services are able to make a fuller recovery than those who have a limited input.**

Possible Indicators

- Identify the type and severity of stroke amongst a sample of older people.
- Identify type of programme and length of rehabilitative input, post stroke and after leaving hospital⁹¹.
- Identify where discharged to and where resident after six months.
- Identify if there are differential levels of recovery one year post stroke.

- 2. That if specific support and training is given to carers then stroke survivors improve their recovery and carers are able to manage for a longer period.**

Possible Indicators

- Numbers of older people post stroke who are admitted to care homes who previously had a regular carer.
- That carer groups can specifically identify a range of uniform factors that contribute to carer breakdown.
- Comparison of carers who are given an intensive programme of carer support prior to hospital discharge of stroke survivor and continued into the community have fewer admissions of the stroke survivor.

⁹¹ In the absence of any intensive programmes it may be necessary to develop such a scheme in order to test the hypotheses, although some evidence may be available from anecdotal accounts of stroke survivors.