LEEDS GATE
Gypsy and Traveller Exchange

Leeds Gypsy and Traveller Exchange

"Gypsy and Traveller Health – Who pays?"

Health Pathways: Cost-Benefits Analysis Report

Contents	Page
1. Introduction	2
2. The Scenarios	3
3. Pathway Flow-Diagrams	8
4. Cost Calculations and Conclusions	13
Annex	16

Real-Improvement

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Foreword

Gypsies and Travellers are a small but significant group of people who experience poorer health outcomes and face greater barriers to accessing services than the general population. The Government is determined to tackle health inequalities and for the first time has introduced legal duties on NHS commissioning bodies to reduce inequalities in access to and outcomes from services, and to integrate services where this will reduce inequalities. Health and wellbeing boards role have a crucial role to ensure services meet the needs of all the local community.

I encourage all those who commission and provide health and care services to consider the messages from the examples in this report, which show how attention to the needs of communities along with understanding of their culture can result in better outcomes for individuals and their families, and reduced costs. The needs of vulnerable people with complex health and care needs are best met when services are integrated at the point of delivery and providers work towards shared outcomes.

Martin Gibbs,

Health Inequalities Unit, Department of Health

The Marmot Review of 2010 'Fair Society-Healthy Lives' outlined the case for 'up front' investment to reduce health inequalities. Within the new health and social care architecture, clinical commissioning groups and health and wellbeing boards will very much have to 'do their business' in public. Commissioning decisions will be openly available for scrutiny and challenge. We have prepared this document to assist commissioners, and those who support commissioning, to justify and explain potentially unpopular spending decisions, for example, when that includes preventative work with minority groups such as Gypsies and Travellers. Although these scenarios are commonplace among the experiences of Travelling People, other groups have similar experiences and new approaches need to be found in order that healthcare providers can avoid an expensive game of 'catch up', and inappropriate or ineffective accessing of services can be minimised.

We would like to give thanks to Andy Bagley of Real Improvement for his work, to all members of the National Gypsy and Traveller Health Inclusion Project Steering Group for their valuable feedback, and especially to Dr Margaret Greenfields (IDRICS) for her work with us on the narratives.

Helen Jones

Chief Executive Officer, Leeds Gypsy and Traveller Exchange

1. Introduction

Leeds Gypsy and Traveller Exchange (GATE) works to improve the overall quality of life for Gypsy and Traveller communities in West Yorkshire. It also works in partnership with similar organisations elsewhere to achieve wider social benefits for these communities.

Health is a particular issue: the average life expectancy for Gypsies and Irish Travellers in Leeds is about 50 years of age, compared to the settled population of Leeds which is around 78 years. GATE is participating in a national project which aims to tackle and find solutions to these health inequalities.

As part of this project, Andy Bagley of Real-Improvement has been asked to compile a simple cost-benefits analysis based on two health scenarios or 'stories': one relates to dementia, the other to bowel cancer. These scenarios are based on the real experience of Gypsy and Traveller families in this country. For each scenario there are two versions; the first is based on what currently tends to happen in practice; the second shows how this can be improved with greater knowledge and understanding on the part of health and social care professionals.

The alternative versions of each scenario have been costed, solely in terms of the costs incurred by health and social care. Other benefits are evident in the second version of each scenario; these are mentioned but have not been costed in detail.

It is evident that, for both scenarios, the improved pathway not only offers clear benefits to Gypsy and Traveller people themselves, but also costs health and social care systems substantially less than the current situation. This is primarily because early intervention which recognises the social and cultural needs of Gypsy and Traveller communities, can prevent the need for much more expensive action later.

The rest of this report is divided into a number of sections:

- Section 2 tells the story of each scenario, describing two alternative pathways for each.
- Section 3 converts each story into a flow-diagram, highlighting the health and social care interventions at each stage
- Section 4 puts a cost to each of these interventions, for both pathways of each scenario, demonstrating the difference between the two.
- The Annex gives a comprehensive list of reference sources for the costs used.

These scenarios are based on individual 'stories', and have not been multiplied to indicate how many times they occur in practice. They are however based on real examples, and reflect the genuine experience of Gypsy and Traveller communities.

2. The Scenarios

A. Dementia and Carer Stress/Depression

Background

Mr and Mrs Small live on a local authority site in a rural area. One adult son and one adult daughter (Mrs Smith) also live, with their families, on the site; another daughter lives 30 miles away. Mr Small smokes heavily, has arthritis and is obese. His wife raises concerns about her husband's increasing 'forgetfulness' with her GP but the doctor finds Mr Small "rude and difficult" and suggests that he ought to lose weight and stop smoking if he wants to improve his health.

Mrs Small who is 53 is diagnosed with liver cancer after ignoring symptoms for some time. Mrs Small's illness progresses rapidly and she passes away five months after receiving her diagnosis. During this time there are a lot of relatives visiting the site. Mrs Smith is very busy attending to her mother and all these visitors. She finds Mr Small demanding and erratic, he doesn't seem to recognise how ill his wife is, or even that she is ill.

When Mrs Smith speaks to her brother about her father's behaviour he is dismissive (perhaps in denial) and tells Mrs Smith not to fuss about Mr Small, that he is just naturally upset about his wife's illness and the family need to focus on the arrangements for her mother.

After Mrs Small's funeral Mr Small's behaviour gets worse. One day he becomes very angry saying that he is sick of his wife 'constantly shopping and visiting her mother' (who died some time ago). Mrs Smith and her sister go to the doctor. Mr Small will not accompany them. The doctor's response to the two daughters is somewhat abrupt. He doesn't like patients using their appointments to discuss someone's health that is not present. He has complained that Travelling people often use appointments in this way. He tells the sisters that 'Grief takes people in funny ways' and that Mr Small should come to see the doctor himself.

Mrs Smith is aged 33. She lives on the site with her husband (who is often away working in Germany), and two children - her daughter Shardaney who is 12, and David, her son aged 15. Mr Smith is very keen for the children, particularly David, to have the education which he feels he missed out on, and will only take David working with him in the school holidays (although when the holidays arrive he is often already away). David is resentful about remaining in school as his cousins and other peers on the site are already working with their Dads. Shardaney is a help to her mum and was very supportive when her gran (Mrs Small) was ill and died of liver cancer. She helps with her Grandad when she can and sometimes her schooling takes second place to this.

On the same site lives Mrs Smith brother (Big Davey Small) and his wife and their children. Mrs Smith takes most of the responsibility for her father's care. Davey's wife helps out a bit but she and Mrs Smith have never got on very well. Mrs Smith misses her husband and finds it hard to cope with her son when her husband is away. She is still mourning the loss of her mother.

Mrs Smith goes to see her doctor because her sister says 'if your nerves are bad you should go to the

doctor for some tablets". Mrs Smith replies that she barely has time to think and Lily gives her some of her own tablets "to tide you over".

Pathway 1

Mr Small will not go to the GP and there is no follow up to the two sisters' visit. Mrs Smith continues to deal with Mr Small's erratic behaviour alone. During subsequent months Mr Small's behaviour deteriorates. He is not eating or washing properly and there is a great deal of argument with his daughter. Other family members insist he is grieving and ignore Mrs Smith's worries. Mr Small drinks and smokes more heavily. After a bad fall at home he is admitted to hospital late at night.

On the hospital ward, the nurses do not appear understanding to his needs and his daughters are repeatedly told by staff that he is being non-compliant and abusive. Mrs Smith is upset to overhear one of the nurses saying to another patient 'Traveller men are like that'. The nurse also comments that it isn't helpful that so many family members are constantly visiting Mr Small, that is upsets the ward routine. Once Mr Small is seen to have 'got over' his fall his is discharged. Mr Small remains at home cared for by Mrs Smith, her daughter and occasionally by her sister in law.

Mrs Smith becomes increasingly concerned about her own health, and approaches her GP for the particular type of medication that her sister gave her, because it 'definitely helped her to sleep'. The GP reacts badly, telling Mrs Smith she must not share tablets which 'couldn't have helped that quickly', in quite an aggressive manner. He says she needs an appointment for CBT and doesn't explain what this is. He then gives her a prescription small dose of a different drug.

Mrs Smith feels humiliated by the doctor telling her off and rushed when she felt she had a lot that she needed to explain. At the chemist she is given no explanation of the new drugs and doesn't tell the pharmacist that she can't read the instructions. She is not compliant with the dosage and suffers side effects but assumes they are normal as she cannot read the contra-indicators.

Mrs Smith attends an appointment for CBT but does not return after one session because she didn't 'get the point of it', felt the therapist was 'too posh' and was embarrassed to explain she couldn't write when the therapist asked her to keep a journal of her feelings.

Young David finds Mrs Smith crying one day, she says she wishes the doctor had given her the same pills that her sister shared with her because they worked. She is increasingly depressed and isolated. Shardaney is missing school to help her mother and then is 'acting out' when she does go to school.

Mrs Smith is very surprised when her son brings her some of the original medication which he says he got from 'a friend at school' and this makes her very worried about who David is spending time with, in and out of school.

Mrs Smith's ability to care for her father is hampered; his behaviours becomes more erratic and his personal hygiene and health continue to deteriorate. The family accept that Mr Small needs someone to 'watch' him all the time but do not feel able to ask the GP's advice again. One evening, on taking his evening meal, Mrs Smith, discovers Mr Small has disappeared. The whole site turns out to search for Mr Small but he cannot be found. Mrs Smith is distraught.

An hour later a police car arrives on the site with Mr Small who has been found wandering in a confused, partially dressed state. The police officer is a bit abrupt with the family saying that they

shouldn't be allowing a man with Alzheimer's to wander around and that he could have been arrested for indecent exposure. Indeed he was only returned home because he was recognised by a Sergeant. The family are told that Social Services have been informed that Mr Small is an 'Adult at Risk'.

A non-specialist social worker contacts the family. She doesn't want to visit the site due to an incident that happened to the dog warden who was visiting the site 20 years ago. With some difficulty the family manage to get Mr Small to the social worker's office. He becomes convinced the social worker is a probation officer and will not go there again.

The social worker will only visit the site with a police escort, which is embarrassing and humiliating for the family and causes further distress to Mr Small. The Social Worker tell the family that Mr Small should be moved into residential care. His family utterly dismiss this idea and simply request assistance to help with care at home.

The social worker asks 'and who is going to pay for all this, and who will be willing to come to the site to provide support'. She leaves leaflets which she tells the family are about 'personalisation' budgets. Mrs Smith is too embarrassed to explain that only her daughter is literate in the family and she doesn't want her reading anything which might 'frighten' her. Mrs Smith felt the social worker was implying that the family were being negligent by refusing residential care, so she stresses that the family can care for their father themselves.

Two weeks later however, as Mrs Smith stress continues to increase, Mr Small goes missing again. He is again found wandering by the police, who report the situation to Social Services. The social worker visits a second time (again with a police escort) and this time gives Mrs Smith no choice; she is not satisfied that Mrs Smith can care for her father and Mr Small is taken into permanent residential care for his own safety. Mrs Smith is left distraught.

Pathway 2

When Mrs Smith overhears the comment by a nurse to a patient that 'Traveller men are like that" i.e. difficult, Mrs Smith decides to make a complaint. A different nurse on the ward agrees with Mrs Smith that it is not okay for nurses to speak about Mr Small in that way and directs Mrs Smith to the PALS service. The PALS service staff have had 'cultural competence' training and have some prior knowledge of the difficulties, such as illiteracy, that Mrs Smith may be facing. They contact a hospital social worker they know who has worked at a Gypsy/Traveller support group as part of her social work training.

The Social Worker speaks to the ward staff on behalf of the family and also contacts the consultant to discuss the possibility of early onset Alzheimer's disease which she fears may be more prevalent amongst Travellers. She also speaks to Mrs Smith and her children, recognises the stress that Mrs Smith is suffering from, and contacts her GP.

Mrs Smith sees a new GP who is culturally aware and supportive. He acknowledges the difficulties she is facing, and helps her to identify the various stress points. He doesn't criticize her for sharing medication but reassures her she has done the right thing coming to see him. She gives her a

personal prescription of a small number of anti-depressants and asks if she is in touch with the local Gypsy/Traveller support group who might be able to help with benefits advice, and provide support.

Mrs Smith is referred to the support agency, obtains culturally competent emotional and practical support in accessing carers' benefits, and is introduced to the local drugs worker to discuss her concerns about David. The agency liaises with the social care team in relation to respite/day care for her father and agree to be present during assessments made, which reassures her.

Mr Small is supported by his family to undergo a thorough screening. The standardised questionnaire is adapted to recognise Mr Small's culture. MRI scanning and blood tests confirm suspicions that Mr Small does have early onset Alzheimer's disease. He is discharged to go home with an arrangement that the Social Worker will visit the following day.

The social worker visits as arranged. She is aware of literacy difficulties and has found some 'easy read' leaflets about the disease which she talks through with Mrs Small. She advises on accessing benefits and making use of the personalisation budget. Mrs Smith is clearly exhausted and the social worker is genuinely concerned about her ability to cope without respite.

The Social Worker arranges to visit a respite centre with Mrs Smith. At the respite centre there is one resident who is from a Gypsy background. The staff at the centre have been proactive in including images of Gypsy people in the building and have also negotiated for the Gypsy resident to be able to keep chickens. Mrs Smith is reassured and one of the centre staff agrees to visit Mr Small at home a few time to get to know him.

After several weeks of visits from Paul from the respite centre, Mrs Smith is able to persuade Mr Small to visit the centre for a few hours to help 'a poor old chap with his chickens'. Mrs Smith, and her daughter, enjoy three hours per week respite from their caring for Mr Small.

B. Bowel Cancer

Background

Mr Duncan Whyte, aged 62, a Scottish Gypsy-Traveller living in a house with his wife Mhairi 60, has been experiencing a number of painful and difficult 'stomach problems' for the last few months which seem to be getting worse. He often feels he needs to empty his bowels, but when he attempts to the sense of pressure isn't relieved, Mhairi has also noticed that he seems to have recurrent attacks of diarrhoea and sometimes constipation, and he complains that he can't enjoy her cooking the way he used to - he jokes that she's putting too much fat in the food, that it is all different cooking now they are in a house and they should be eating how they used to when they travelled.

Mhairi is a bit worried about Duncan because she remembers her Uncle Rory having similar symptoms and he died of a 'bad thing' which nobody wanted to talk about.

Pathway 1

Duncan has known that he has had this problem for some time, although he has hidden this from his wife until fairly recently. Duncan is terrified that he might have bowel cancer and remembers Rory's

illness very well as he was related to Uncle Rory's wife and watched his decline and death with horror.

Mhairi goes to ask her GP's advice. The GP is frustrated that Duncan is not present. He outlines possible causes of Duncan's problems in an offhand way and gives her some leaflets and a home testing kit but doesn't explain how to use it. Mhairi tries to raise the subject with Duncan but she doesn't feel confident about asking him to use the home testing kit, knowing that it would be culturally quite shaming. Duncan gets cross because he is embarrassed and the conversation ends with Mhairi in tears.

Some months later, a letter (to invite Mr Whyte to participate in a screening programme) arrives while Mrs Whyte is out shopping. Mr Whyte can't read much apart from his name but sees the NHS logo on the envelope. He is worried that he will land up rowing with Mhairi again if she sees the letter so he puts the letter in his pocket 'to think about later'.

As more time passes Mr Whyte is eating less and less and loses more weight. Despite Mhairi's pleading, he refuses to undertake the screening or go to the Doctor. Eventually an ambulance has to be called and Mr Whyte is admitted to hospital very ill with bowel bleeding and severe weight loss. Tests result in a diagnosis of third stage bowel cancer. Treatment is given, but this is not successful and Duncan passes away a few months later.

Pathway 2

One day Mhairi is told by her sister who lives on a local site that there is a Traveller Health outreach going to happen at the 'Traveller-friendly' GP surgery. Her sister wants to go along and asks Mhairi to come with her.

Mhairi and her sister Maeve attend the outreach day and hears the specialist nurses talk about the top five health conditions facing Travellers in their area. The nurses say that the doctors at this practice really want to know about these problems and anyone can come and talk privately to the nurses or doctors about their worries. As well as providing basic advice on common health conditions, the nurses also provide screening for everyone who comes, offering blood pressure tests, BMI checks, heart monitoring and cholesterol checks.

Mhairi sees the nurse privately and is told that she has high blood pressure which will need treatment and an appointment is made for her to see the GP later in the week. The nurse asks what might be causing it and Mhairi explains that she is worried about her husband's health, and tells the nurse about his symptoms.

The nurse tells Mhairi that it is very important that Duncan comes in for a check but stresses that there could be a lot of explanations – that aren't life-threatening. Even if it is early stage bowel cancer there is a very good (90%+) success rate if Duncan is screened and treatment for the condition begun early.

The nurse talks to her about bowel cancer screening, shows Mhairi a short DVD about 'home' bowel cancer testing kits which mean that Duncan can provide a 'sample' at home and avoid

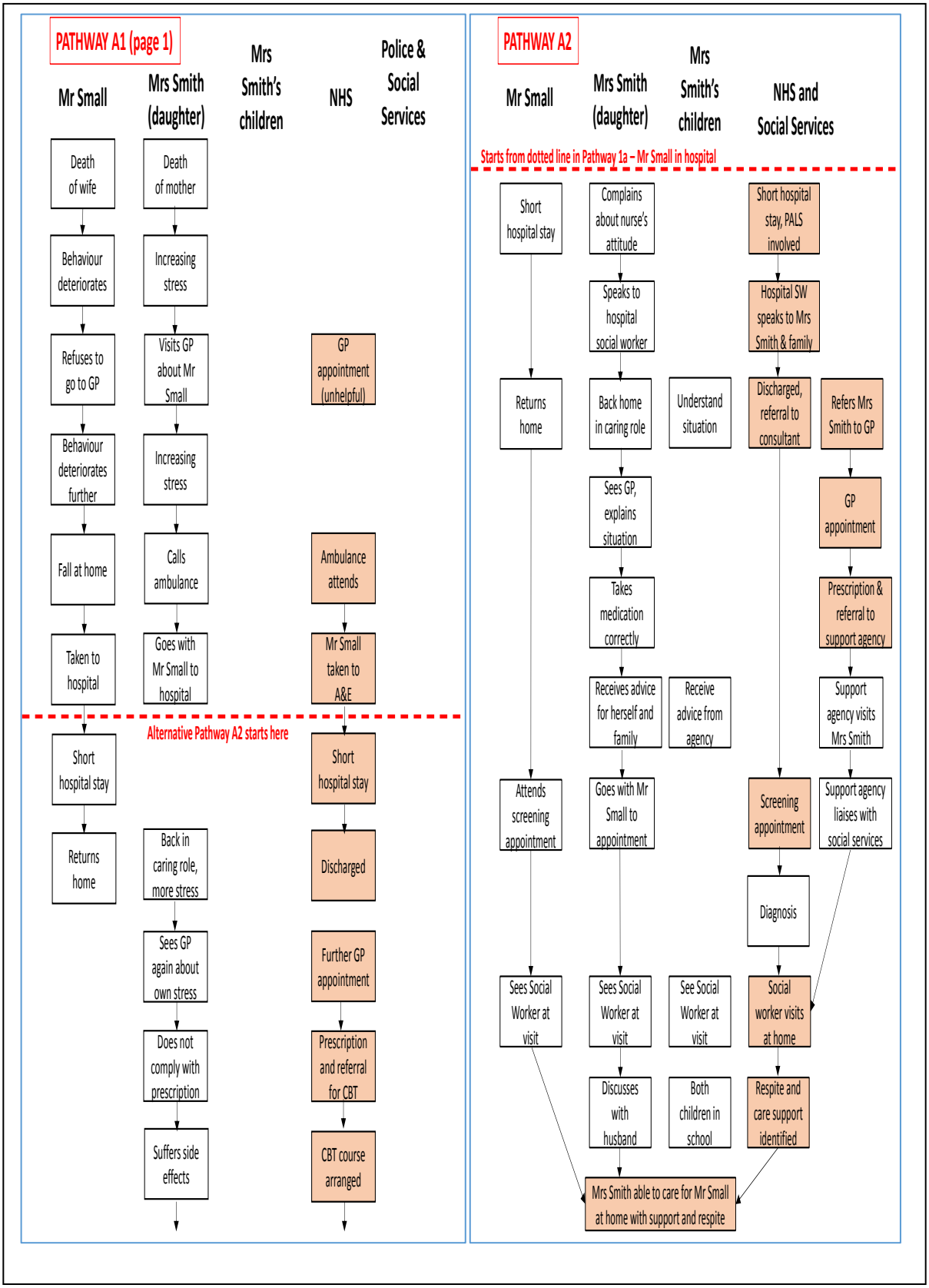
embarrassment. She gives Mhairi a bowel cancer testing kit and a leaflet which explains what she needs to tell Duncan and what he needs to do to have a preliminary screening test.

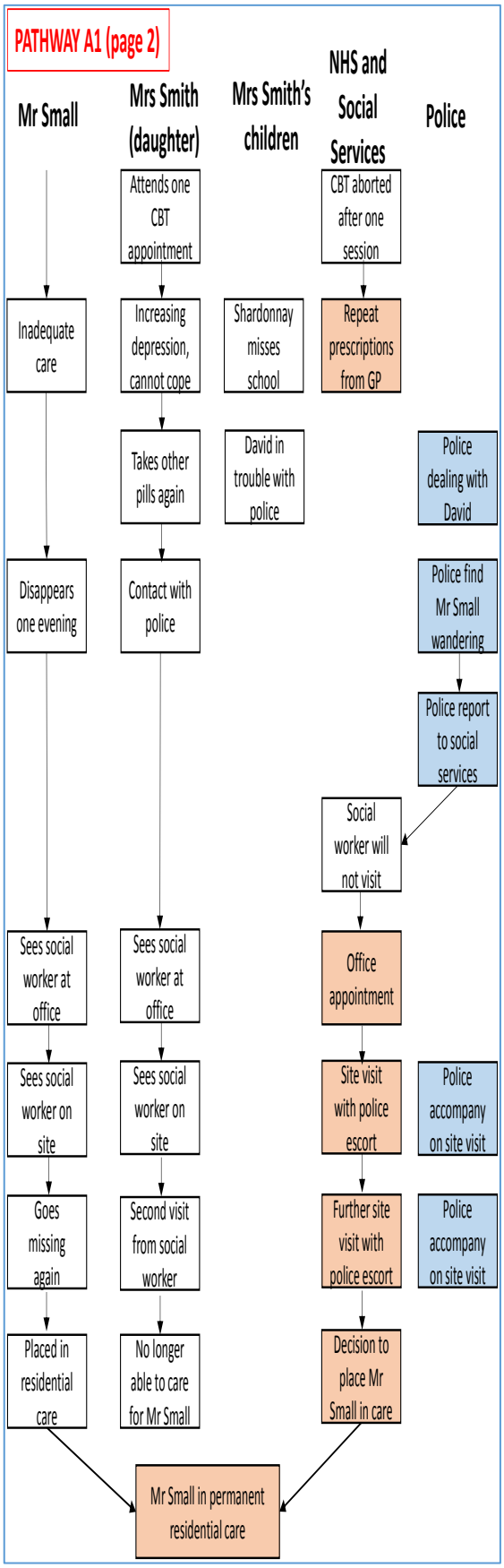
Mhairi goes home, talks to Duncan and explains that she is worried about him, that her worries are having an effect on her health (high blood pressure) and that he needs to get checked up to put her mind at rest. She explains that she spoke to the nurse and explained that it might not be the 'bad thing' but could be something very simple which can be sorted easily.

Duncan is persuaded to see the Doctor, is reassured and has preliminary tests. The diagnosis is that he is suffering from haemorrhoids but may also have something benign such as polyps or colitis. Trust is generated and Duncan agrees to have further tests. These find pre-cancerous polyps, and treatment with minor surgery is able to resolve the problem.

3. Pathway Flow-Diagrams

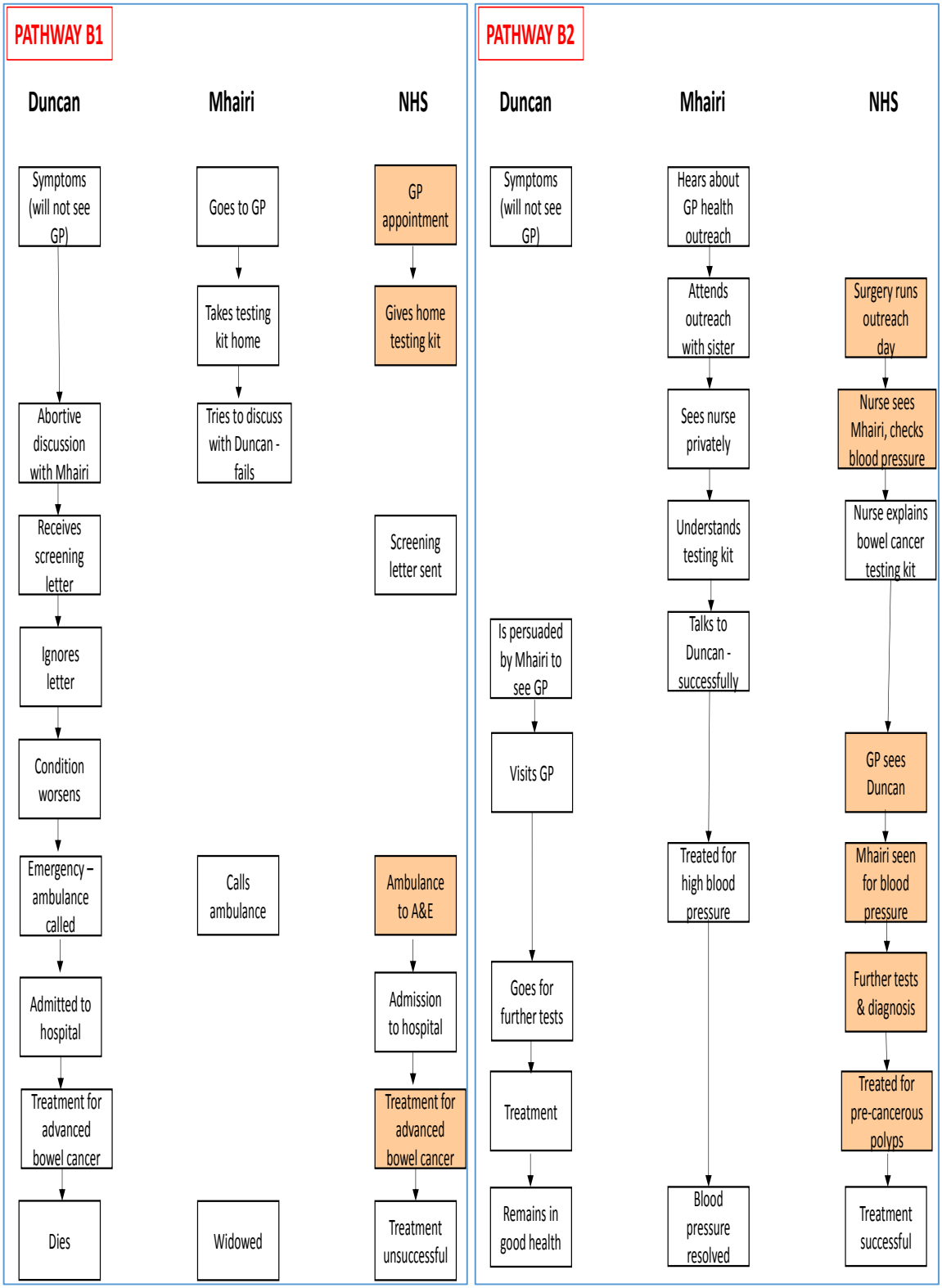
Current Practice	Improved Practice





A1 - TOTAL FINANCIAL COSTS £20,298.00	A2 - TOTAL FINANCIAL COSTS £8,884.00

Current Practice	Improved Practice



B1 - TOTAL FINANCIAL COSTS £22,956.00	B2 - TOTAL FINANCIAL COSTS £4,058.00

4. Costings Calculations and Conclusions

The tables below show costs associated with each step of NHS or Social Care activity, and their total, with explanatory notes. Reference sources for these costs are shown in the Annex. Where a cost is long-term (e.g. residential care) the figures quoted cover one year.

As noted in the introduction, only NHS and Social Care costs have been counted here; there will be other costs to other agencies (e.g. police, education), and above all human costs in terms of pain and suffering. Whilst not costed in this analysis, these costs too will clearly be higher in each of the first pathways than in the second.

A. Dementia and Carer Stress/Depression

Pathway 1

Event	Cost	Explanatory notes
GP appointment	£43	Cost of (short) GP surgery visit
Ambulance attends	£263	Cost of ambulance attendance and transfer to hospital
Mr Small taken to A&E	£66	Cost of A&E attendance leading to admission (minor injury)
Short hospital stay	£586	Cost of short stay on hospital ward
Discharged	£0	(included in above)
Further GP appointment	£43	Cost of (short) GP surgery visit
Prescription and referral for CBT	£43	Average cost of prescription per consultation
CBT course arranged	£708	Cost of 1:1 CBT, course of 12 sessions booked @ cost to NHS of £59 per session
CBT aborted after one session	£0	(included in above – no reduction for sessions not attended)
Repeat prescriptions	£129	Assumes three repeat prescriptions @ £43 each
Office appointment	£108	Cost of two hours client-related work @ £54 per hour
Site visit with police escort – repeated twice	£276	Cost of two hours client-related work @ £54 per hour on two occasions augmented by 28% for visit costs (% based on GP visit costs) – additional police costs not calculated
Decision to place Mr Small in care	£352	Assumes two hours client-related work by social worker @ £54 p.h. and two hours at £68 p.h. from team leader
Mr Small in permanent care	£17,819	Average cost to Local Authority of long-term residential care placement calculated as £480 p.w. less Pension Credit £137.35 = £342.65 p.w. x 52 weeks
TOTAL	**£20,298.00**	

Pathway 2

Event	Cost	Explanatory notes
GP appointment	£43	Cost of (short) GP surgery visit
Ambulance attends	£263	Cost of ambulance attendance and transfer to hospital
Mr Small taken to A&E	£66	Cost of A&E attendance leading to admission (minor injury)
Short hospital stay	£586	Cost of short stay on hospital ward
Hospital SW speaks to Mrs Smith & family	£156	Cost of hospital social worker consultation (one hour)
Discharged, referral to consultant	£0	(included in above)
Refers Mrs Smith to GP	£0	(included in above)
GP appointment	£43	Cost of (short) GP surgery visit
Prescription & referral to support agency	£43	Average cost of prescription per consultation
Screening appointment	£170	Cost of consultant out-patient appointment for mental health
Social worker visits at home	£138	Cost of two hours client-related work @ £54 per hour augmented by 28% for visit costs (% based on GP visit costs)
Respite and care support identified	£352	Assumes four hours client-related work by social worker @ £54 p.h. and two hours at £68 p.h. from team leader
Care for Mr Small at home with support and respite	£7,024	Home care costs £108pw for 46 weeks = £4968* Respite care costs £342.65pw for 6 weeks = £2056*
TOTAL	**£8,884.00**	

B. Bowel Cancer

Pathway 1

Event	Cost	Explanatory notes
GP appointment	£43	Cost of (short) GP surgery visit
Gives home testing kit	£43	Average cost of prescription per consultation (used as equivalent in absence of specific cost for home testing kit)

Screening letter sent	£0	There will be a small administrative cost to issuing the letter, but no subsequent costs as Duncan does not respond
Ambulance to A&E	£263	Cost of ambulance attendance and transfer to hospital
Admission to hospital	£146	Cost of A&E attendance leading to admission (emergency treatment)
Treatment for advanced bowel cancer	£22,461	Average cost per patient of bowel cancer treatment (see Annex)
TOTAL	**£22,956.00**	

Pathway 2

Event	**Cost**	**Explanatory notes**
Surgery runs outreach day	£2058	Cost of one GP, practice manager and two nurses for 6 hours (GP: £221 x 6 (include practice overheads), Nurses £53 x 6 x 2, practice manager £16 x6 (salary costs only))
Nurse sees Mhairi, checks blood pressure	£0	(included in above)
Nurse explains bowel cancer testing kit	£0	(included in above)
GP sees Duncan	£63	Cost of (longer) GP surgery visit
Mhairi seen for blood pressure	£43	Cost of (short) GP surgery visit plus prescription
Further tests & diagnosis	£294	Cost of two hours consultant surgeon time (2 x £147)
Treated for pre-cancerous polyps	£1,600	Average cost of private treatment: colonoscopy (NHS costs assumed to be similar or slightly lower)
TOTAL	**£4,058.00**	

Conclusions

For both scenarios, the second pathway delivers results in greatly reduced costs to health and social care services, even when the long-term solution (e.g. residential care or care at home) is considered only for one year.

Also in both scenarios, the long-term care/treatment element is by far the largest component in overall costs. This demonstrates that some up-front investment, for example in appropriate social work engagement, or in GP outreach work, can pay for itself many times over in the longer term.

Annex

The table below quotes reference sources for all of the costs used in Section 4 of this report.

Cost Used	Amount	Source
Cost of (short) GP surgery visit	£43	*Unit Costs of Health & Social Care 2012* (LSE PSSRU) p183
Cost of (longer) GP surgery visit/clinic	£66	*Unit Costs of Health & Social Care 2012* (LSE PSSRU) p183
Cost of GP prescription (average per consultation)	£43	*Unit Costs of Health & Social Care 2012* (LSE PSSRU) p183 (rounded from £42.70)
Cost of ambulance attendance and transfer to hospital	£263	*Unit Costs of Health & Social Care 2012* (LSE PSSRU) p109
Cost of A&E attendance leading to admission (minor injury)	£66	*Unit Costs of Health & Social Care 2012* (LSE PSSRU) p109
Cost of A&E attendance leading to admission (emergency treatment)	£146	*Unit Costs of Health & Social Care 2012* (LSE PSSRU) p109
Cost of short stay on hospital ward	£586	*Unit Costs of Health & Social Care 2012* (LSE PSSRU) p109
Cost of consultant out-patient appointment for mental health	£170	*Unit Costs of Health & Social Care 2012* (LSE PSSRU) p47
Cost of 1:1 CBT per session	£59	*Unit Costs of Health & Social Care 2012* (LSE PSSRU) p53
Cost of adult social worker for client-related work (per hour)	£54	*Unit Costs of Health & Social Care 2012* (LSE PSSRU) p190
Cost of adult social work team leader for client-related work (per hour)	£68	*Unit Costs of Health & Social Care 2012* (LSE PSSRU) p190
Average cost of home care per hour	£18 weekdays £19 weekends	*Unit Costs of Health & Social Care 2012* (LSE PSSRU) p193
Average cost to Local Authority of residential care per week (same figure used for permanent and respite care)	£342.65	Age UK, quoting research report by Laing and Buisson, April 2013 (See note 1). £480 p.w. less Pension Credit £137.35 = £342.65 p.w.
Cost of consultant surgeon time per hour	£147	*Unit Costs of Health & Social Care 2012* (LSE PSSRU) p236
Treatment for pre-cancerous polyps	£1,600	Average cost of private treatment: colonoscopy from *Colonoscopy Costs in the UK* (See note 2)
Average cost per patient of bowel cancer treatment	£22,461	See note 3 for references and calculation

Notes:

1. http://www.ageuk.org.uk/latest-press/rising-numbers-of-older-people-forced-to-pay-for-free-residential-care/

2. http://www.privatehealth.co.uk/hospitaltreatment/whatdoesitcost/colonoscopy/

3. Cost calculated by taking total cost for bowel cancer treatment in England 2007 = £662,909,679 (excludes prevention and screening costs), updated to 2011/12 prices @ 3% p.a. = £746,110,684. Source: *Bowel Cancer Services, Costs and Benefits*, York Health Economics Consortium 2007, http://www.shef.ac.uk/scharr/sections/heds/modelling/colorectal-cancers)

   This is then divided by the number of new cases diagnosed in England per year = 33,218 (Figures for 2010 are latest available). Source: Cancer Research UK statistics http://www.cancerresearchuk.org/cancer-info/cancerstats/types/bowel/incidence/)

   The result of £22,461 is taken as the approximate cost of treating a patient with advanced bowel cancer (and is probably a conservative estimate in the case of Mr Whyte).