Community Action on Health

Medicinal wastage: Exploring the reasons for low levels of adherence to statins

Final Report

April 2012

Community Action on Health is a charity working within Newcastle to tackle health inequalities through patient, carer and public involvement.

We are experts in innovative and practical involvement, working with patients, communities and harder to reach groups to gain the insight needed to design the best, most responsive and cost-effective services.

We have vast experience and expertise in gathering the views and opinions of patients, carers and the general public in relation to health services. For example:

- locating new GP surgeries
- services to include in new community health facilities
- visibility of existing health services
- changes to care pathways

We employ various quantitative and qualitative data collection techniques:

- Questionnaires – paper-based and online
- Participatory appraisals
- Drop-in events
- Face-to-face interviews
- Focus groups
- Informal group discussions

We also provide guidance on:

- how services can engage with patients, carers and the public
- developing patient-friendly services
- a patient-focussed approach to delivering health services

For more information about the services we can provide please contact Kieran Conaty on 0191 2263450 or email kieran@caoh.org.uk. Visit our website at: www.caoh.org.uk

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Section 1- Introduction

1.0 Introduction

1.1 The project

Community Action on Health (CAOH) is an independent charity working within Newcastle to tackle health inequalities through patient, carer and public involvement.

CAOH was asked by NHS North of Tyne to carry out research to find out why some patients do not take their prescribed statin medication or take it inconsistently.

1.2 Aim

To explore the reasons for low levels of adherence to statins in patients prescribed them for primary or secondary prevention of cardiovascular risk, e.g. leading to angina, stroke, heart attack, or associated with high blood pressure and diabetes.

1.3 Objectives

The key objectives of the project are to:

- Explore patients' experiences of taking statins
- Explore patients' motivations for statin taking
- Explore the information needs of patients around their statin therapy
- Identify any barriers to taking statins as prescribed
- Identify ways to overcome these barriers
- Understand how patients get their prescription
- Explore patients' knowledge of medicinal waste
- Explore patients' feelings and attitudes towards medicinal waste
- Sense check national research about reasons given for not taking medication properly or at all

1.4 Project context

As part of the national Quality, Innovation, Productivity and Prevention (QIPP) programme, NHS North of Tyne has identified Medicines Management as an area where efficiencies and reinvestment could be made. Medicinal wastage was identified as one of two workstreams and during discussions between the Medicines Management Team and Public Engagement and Communications Team at NHS North of Tyne, it was suggested that some research be carried out with patients in this area.

1.4.1 Medicinal wastage

For the purposes of this project, 'medicinal wastage' is defined as "drugs that are dispensed but are ultimately discarded". Recent estimates suggest that the gross annual cost of this wasted medication in England stands at £300 million per year made up in part by:

- £90 million worth of medication retained in peoples' homes
- £110 million worth of medication returned to pharmacies
- £50 million worth of medication disposed of by care homes

(Evaluation of the Scale, Causes and Costs of Waste Medicines, York Health Economics Consortium, University of York & The School of Pharmacy, University of London, 2010).

1.4.2 Causes of medicinal wastage

Authors of the above report looked to previous research in this field and also conducted their own research with regular medicine users, the general public, health professionals, PCT staff and pharmacists, to identify the reasons for medicinal waste. These can be grouped into patient related factors and health care system factors.

Patient factors:

Medication not taken/full course not completed

- Previous experience of side effects/anticipation of side effects
- Side effects
- Difficult to take
- No perceived effects/benefits
- Inconvenient to take
- Forgetfulness
- Confusion e.g. patients with complex treatment regimes
- Depression
- Low self-efficacy
- Physical disability – unable to leave home/access health services
- Stigmatising e.g. HIV medication
- Scares from media/family/friends about taking the medication
- Lifestyle events which disrupt medicine taking e.g. holiday
- Do not want to take the medication
- Lost medication
- Recovered/got better
- Believe the condition does not require medication
- Do not accept their condition
- Incorrect storage of medication
- Lack of support from family/friends

Over ordering/ordering when not required

- Stockpiling of medication - gain comfort/reassurance of having an oversupply
- To maintain benefit payments
- In case illness returns
- Third parties e.g. family ordering repeat prescriptions unnecessarily
- Exempt from prescription charges and obtaining medicines e.g. aspirin inappropriately
- Fear of having to have a consultation if all repeat prescriptions are not ordered each time

Health care system factors:

- Lack of information given to patients about taking medication in the recommended way
- Lack of high quality professional support given to patients for appropriate medicine use
- Relationship with health professional e.g. patient may have not intention of taking the medication but accept it from their GP as want to stay on good terms with them
- Change of medication
- Long prescription duration – if the patient's condition changes, medication may need to be discarded
- Speculative prescribing i.e. patients are given a drug to see if it works
- Over supply by GPs – value for money - e.g. GP gives a patient who is paying for their prescription more medication to offer them value for money
- Over supply by GPs – time constraints – e.g. Practices provide repeat prescriptions without reviewing the patient's condition due to a lack of time
- Over supply by pharmacists as they have little or no positive incentive to check that every item is needed
- Over supply by pharmacists as they have a incentive to dispense so they get the fee
- Change of packaging
- Get two different 'brands' of a product in one box
- Get split packs - uncertainty as to how much medicine has been taken
- Variations in pack sizes, e.g. 28, 30 or 31 days medication. Some medicines will be wasted if they are re-ordered every 28 days
- Failure to provide patient information leaflets
- Poor relationships between GPs and community pharmacists
- Using monitored dose systems e.g. calendar blister packs, give false confidence a patient can care for themselves
- Lack of appropriate medicine support in home settings e.g. calendar blister packs

Other

- End of life care drug wastage
- Medicines wastage in care homes

These identified causes will be cross-referenced with the findings of CAOH's research in the final report, to see if similar reasons exist within patients prescribed statins in Newcastle.

1.5 Statins

The report 'Evaluation of the Scale, Causes and Costs of Waste Medicines' (York Health Economics Consortium, University of York & The School of Pharmacy, University of London, 2010) also identified the main types of unused medication as shown in the table below.

Types of waste medication

Category of unused medication	Frequency	Percentage (%)	% Excluding 'other'
Other	75	16.1%	
Gastrointestinal	58	12.4%	14.8%
Skin	52	11.2%	13.3%
Pain	49	10.5%	12.5%
Cardiovascular	48	10.3%	12.3%
Central nervous system	41	8.8%	10.5%
Respiratory	34	7.3%	8.7%
Infections	29	6.2%	7.4%
Eye/ear/nose/throat	28	6.0%	7.2%
Nutrition/blood	20	4.3%	5.1%
Endocrine	13	2.8%	3.3%
Mental Health	10	2.1%	2.6%
I can't remember	9	1.9%	2.3%
Total	466	100.0%	100.0%

Excluding 'other' types of medication, cardiovascular drugs which include statins, is the fourth most frequently reported.

Interviews with the public, health professionals, PCT staff and pharmacists during the research also highlighted the issue of statin-related waste.

"Inhalers…were, along with painkilling medicines, the items most frequently identified as commonly wasted. Other products often mentioned included statin based and blood pressure reducing medicines".

A recent study looking into 'Adherence and chemoprevention in major cardiovascular disease: a simulation study of the benefits of additional use of statins' (Shroufi A, Powles JW, . J Epidemiol Community Health 2010) noted that "by five years, adherence rates in routine practice have declined to approximately 50%".

The benefits of increasing adherence to statins are obvious in terms of health improvement for the individual and reduced pressure (both operationally and financially) on the health service through preventative care.

The report ‘Evaluation of the Scale, Causes and Costs of Waste Medicines’ (York Health Economics Consortium, University of York & The School of Pharmacy, University of London, 2010) actually looked at the economic impact of non-compliance in patients who were prescribed statins for primary prevention of cardiovascular disease. The economic impact was calculated in terms of the patient’s health not improving and the medical interventions required as a result.

Compliance rates were reported as: 59% fully compliant, 23% partially compliant and 18% non-compliant and the study estimated that patients who were partially compliant would cost the NHS an extra £38 per year and a non-compliant patient, £48. The figures are even more significant for secondary prevention where moving a patient from non-compliance to compliance would save £730.

In addition to this type of monetary saving, improving adherence would also result in a reduction in money being spent on medication which is ultimately wasted.

Section 2 - Methodology

2.0 Methodology

In order to meet the objectives of the project, a qualitative methodological process was employed.

2.1 Qualitative techniques

In order to gain a depth of understanding of people's experiences and motivations around their statin taking and medicinal wastage generally, a qualitative methodological approach was deemed to be the most appropriate, enabling the collection of meaningful data. Qualitative research is concerned with gaining an understanding of how people feel, their beliefs, reasoning and motivations and therefore fitted with the overall objectives of the research.

Group discussions or focus groups are commonly associated with collecting qualitative data and this technique was used to gain insight into people's views of the service they receive. A group setting with members sharing a common interest enables them to feel comfortable and able to give their views freely. In addition, interaction within the group may also produce other data, when for example a memory is triggered by someone else's comments.

However, a group setting is not always appropriate or convenient and therefore patients were also offered the chance to take part in the research via a face-to-face or telephone interview.

2.2 Participants

In order to recruit participants, the 10 GP practices with highest statin prescribing levels across the city were identified. They were then asked to take part in the research by identifying patients who they believed were either partially or non-compliant in taking their statin medication.

This was a particularly time consuming task as practice systems had to be searched manually and as a result only two practices agreed to take part. Therefore, in order to boost participant numbers an invitation was sent to the next 10 GP practices with the highest prescribing levels, asking them to take part in the project; no further organisations came forward.

The two practices who agreed to take part sent out invitation letters on CAOH's behalf resulting in six patients agreeing to attend a focus group, which was held on Tuesday 17th May at the City Library. The venue was chosen due to its accessibility and familiarity and participants were offered taxis to and from their homes. Participants received a £10 shopping voucher in recognition of the time they gave to the project.

Following this focus group NHS North of Tyne confirmed that they would like another group discussion. They suggested that any statins patients could be recruited, rather than only those who were partially or non-compliant to aid recruitment.

CAOH approached a GP practice which agreed to take part and in fact felt able to identify partial or non-compliant patients. However, time pressures on practice staff and holidays resulted in invite letters only being sent to patients at the beginning of December. There was no response from patients and a further batch of invite letters was sent in January; one patient agreed to be interviewed.

In January CAOH approached another GP practice to take part in the recruitment and they sent invitation letters to 80 patients who take statins. As a result of this, a further five patients asked to take part in research and a focus group took place on Friday 16th March at the West End Customer Service Centre and Library in Benwell. Again the venue was chosen because it was accessible and close to patients' homes; taxis were offered to transport people to and from the venue and participants received a £10 shopping voucher.

One further statins patient took part, having contacted CAOH about another piece of work being carried out at the time. This participant took part via a telephone interview.

In order to ensure the anonymity of patients we have not named the practices that helped with the recruitment but are very grateful for their assistance with this project.

For details of all participants, please see Appendix 1.

2.3 Focus group and interview format

In advance of the focus group and interviews participants were sent an information sheet explaining more about the project. They were asked to complete a consent form and were given the opportunity to ask questions before the discussion began. Participants were also reassured that the consultation was completely anonymous. Discussions were audio taped and transcribed at a later date.

Questions were developed in advance of the discussion, taking into account the aims of the project.

Questions covered the following themes:

- Information provision
- Support
- Experiences of taking the medication
- Attitudes to medicinal waste

Participants were also given the opportunity to discuss any other issues they felt relevant to the subject matter.

Section 3 - Findings

3.0 Findings

This section provides a summary of the findings of the focus groups and interviews.

3.1 Information

In order to gauge information needs around their condition and the medication, participants were asked about their experiences when they were first prescribed statins.

3.1.1 Reasons for being prescribed statins

All but two participants felt that their GP had clearly explained to them why they had been prescribed statins and described their cholesterol lowering properties and their role in reducing the chance of strokes and heart attacks.

> "They put me on it about 10 years ago after a heart attack but I had cholesterol checks up till then, it had been – I had never had a problem with cholesterol itself".

> "I've been on them for four years; for me cholesterol. That's about all I know about it actually".

> "Just that it was a case of going on to this medication to ensure that the fat tissues etc. do not build up in the arteries".

However, one participant admitted that they did not know why they had been prescribed statins and asked what they were for. The interviewer explained how statins lower cholesterol but the participant was adamant that their cholesterol was not raised. Further discussion revealed that they had angina and they were satisfied that the medication was related to the heart condition alone.

The participant had initially been prescribed statins when diagnosed in hospital with angina and had not been offered an explanation in hospital as to why they needed to take them. The prescription was then repeated by their GP without them having to physically go into the practice. Therefore there was no opportunity to ask about the medication.

> "But when I went to the hospital about this angina they didn't explain that they were statins or anything. They just said right you take these… and it automatically went to the doctor and the doctor replaced the prescription."

Another patient, although they knew that the medication was related to cholesterol, was unsure as to whether they had been prescribed it because they actually had high cholesterol or as a preventative measure.

"I was going to say I was put on for, as a precaution or because I had high blood pressure – er, high cholesterol, but I'm going to have to find out because every time you go on holiday they want to know if you've been diagnosed with high cholesterol or you've been put on as a precaution because it makes the difference on how much you pay out".

3.1.2 Duration of therapy

Patients in the first focus group had all been made aware that they would probably be taking the medication for the rest of their lives, "the doctor said you could be on for life". However, all but one of the remaining participants did not recall specifically being told of the duration of the therapy. Most were however under the impression that they would be taking them for the rest of their lives.

"No, I never got any information like that".

"My understanding is until perhaps the doctor one day turns round and says 'don't'".

"No, no, it was just a case of 'we are putting you onto this medication' and I've been taking it ever since then".

3.1.3 Instructions for taking the medication

Aside from the participant who had been prescribed whilst at hospital, the others recalled being told by their GP how many tablets to take and when to take them. All stated that they took them at night although some speculated as to why this was the case and one recalled their GP being unaware of this instruction. Several also pointed out that there were instructions on or in the box too.

"Oh, at night time".

"Is it something to do with your body – it sort of works better at night and it's because of the body closing down through the night, something to do with that".

"In my case the nurse knew that it should be at night but I asked my doctor why and she just wasn't aware that you were supposed to take them then".

"The doctor told me just to take one at night time. It also tells you on the box as well".

3.1.4 Written information

Only one participant remembered being given any written information about their statin medication by their GP.

"I am sure I got papers off the doctor, because I asked him. I sure he gave me some information, he printed it off; I am positive".

Others mentioned the information sheet provided by the manufacturers which is inside each box of medication.

> "No, but that leaflet inside the box tells you everything, it tells you everything about the statin and why you should be taking it and what it does and how it's made up and what it consists of. It tells you everything in that little leaflet, well it's not little, it's the way it's wrapped up, it's two sided and some people can't be bothered to read it".

> "Well mind I generally find it inside of the box itself. If you get tablets there is always an information sheet".

However, they did not necessarily find all of the information useful, particularly the comprehensive list of side effects.

> "There is, but if you read all of the information you wouldn't take anything!"

> "Sometimes I tend to – when I read it I tend to concentrate on the negative aspects of it but I almost get the feeling with tablets in general we seem to have gone overboard with the negative side".

> "Yeah well it tells you not everybody is going to get these symptoms, it's just what could be possibly – you know, and some people I suppose would be frightened of reading all the different side effects but that doesn't frighten me, I think 'well I'll take note and see if I get anything of them and then I'll discuss it with the doctor'".

3.1.5 Additional information

Participants were then asked whether there was any other information they would like in order to help them take their statin medication.

Some initially commented on the manufacturer's information sheet and felt that the font size should "be made bigger, that tiny little writing!"

In the first focus group all but one patient supported the idea of their GP giving them some brief written information about their condition, taking the medication and possible side effects to look out for. One interviewee also agreed that they would like this information.

> "It would be useful".

> "I think certainly more information and more knowledge. Possibly the side effects of taking these things".

> "No I don't think I got enough actually. 'Cause I remember, well I just lost me Mam four years ago and she was diabetic and I only got to know the tablets by giving her tablets and when I became one I was getting the same so I just automatically thought, well I'll take them like me Mam did and that was it".

However, one participant did not believe that their GP would be prepared to or have the time to go through any further information.

> "I can't see a doctor going through all of that".

Another participant who is currently taking "nearly 20 tablets a day" for various illnesses requested more information about how any new medication they are prescribed might interact with their other medication, whether they should expect side effects and more importantly, reassurance that it will not stop their other medication working.

> "I would really like to know when you take different tablets, the cocktail effect you have which includes statins and other tablets because they certainly do, I proved it earlier in the year, I was on a tablet – omeprazole for bad indigestion, hiatus hernia. It was a very high dosage, I felt stupid on it, I felt dizzy and tired and I came off them after a month and within 24 hours I was totally different so you see you don't know how they're working with the other tablets you're taking…a doctor knows what tablets counter with another tablet and I wasn't given that information".

However, another participant felt that patients should not need this information and reassurance as they should trust that whoever has prescribed the medication is aware of what they are already taking and would not prescribe incompatible drugs.

Another member of this focus group challenged the patient about why they could not simply ask the doctor themselves whether it was compatible but the patient had been prescribed in hospital and did not feel comfortable asking them.

> "Well…I don't know, they're not as good as my own doctor".

Group members then mentioned that there was commonly held belief that any drugs a patient was prescribed in hospital superseded those prescribed by their GP.

> "But then the general belief, I don't know if it is right or wrong, that actually prescription from hospitals overrides the GPs".

> "And as if to say 'well whatever you get from the hospital the GP will follow'".

3.2 Support

In addition to the information needs of patients, participants were also asked about their support needs with regards to health professionals.

3.2.1 Relationship with GP

To understand whether participants felt able to question their medication regime, they were asked about the relationship they had with their GP.

All participants described having a good relationship with their GP and felt able to question them about their statin therapy. However, there was a belief that it was primarily up to the patient to ask questions and communicate any concerns to their GP.

> "Yes I go twice a year to see either the doctor or the nurse for a check-up anyway so if I want to discuss anything with them I can sit and talk to them and not feel any worry about…so there's no problem".

> "Yeah, I can go to Dr X and talk to Dr X actually, but I never ask about any of my medication I'm on, I just take them. I know it's wrong, 'cause in the last four years there are six of us who've all become diabetics…and we're all doing different things. So, it was like 'oh I don't do that', 'they've never told me that'.

> "My doctor explains every medication I go on, they explain it and it is brilliant because I ask questions".

> "I think you should ask that question [why am I taking this?] when you're immediately put on something though. I think lots of people will take the tablet and not even look at the leaflet that's inside and see what the side effects are… You know, you've only got one body and that's what you're putting in and you don't know what you're putting into it do you, unless you discuss it".

> "Well I mean the point is they prescribe something and you might start and take it and you might find side effects, then you have to go back to the doctor and explain, you have to inform the doctor how you are doing as well".

However two people, despite being "personally very pleased" with their GPs, highlighted the shortness of consultations. Moreover, one also felt that their GP was always very busy and therefore tried not to visit too often.

> "Sometimes I find that you don't have enough time with the doctor to discuss things apart from what you're going there – for the ailment you've gone to her – or him for".

> "On the whole we only have so many minutes consultation with our GP…she has not got enough time…I try not to go to her too often 'cause I understand she is a very busy person".

3.2.2 Support to take medication

Participants reported having regular blood tests to monitor their cholesterol levels with their GP or practice nurse although the frequency varied between every twelve weeks for those with co-morbidities and once a year.

Members of one focus group also discussed how they receive their results; the majority only got to know their results (via a telephone call from their surgery) if their blood cholesterol level was too high. One participant however stated that they received their results no matter what their level was. Another directly asked for their results at their next monitoring appointment.

> “If it’s bad they’ll phone you, if it’s alright you don’t get to know until your next visit”.
>
> “The nurse phones me when it’s okay as well”.
>
> “If it’s okay you don’t get to know so when I go back I’ll say ‘well what was the count?’ I like to know, I keep it…”

All agreed that they would like to have more control over the results of their blood tests and regardless of the cholesterol level would like to be informed of it, rather than the current ‘no news is good news approach’.

> “I think the trouble with ‘no news is good news’ is that they might have tried to get in touch with you when you weren’t around or… you don’t know whether to expect it the day after, or a week after… How long do you wait before you realise that there’s not a problem?”
>
> “Because when you go to the hospital now they’ll ask if you would like a copy of the letter that they’re going to send to your GP and I think that’s great that you get that information so I’m thinking well why don’t they do that from the doctor’s surgery, you know, when you’ve been for a check-up?”

Participants were asked whether they knew that they could request a medication review with their GP or a community pharmacist. All but one participant was aware that they could have a review with their GP and recalled having them. Some also pointed out that the date of their next medication review was printed on the bottom of their prescriptions.

Five participants knew that this review could also be carried out by their local community pharmacist although three described being asked by the pharmacist, rather than arranging it themselves.

> “They used to do it in ‘Boots’ in Eldon Square. That’s the only time I’ve had it done and they ask you and they take you off to one of the other rooms”.
>
> “Now I went to pick a prescription up in October, November and they asked to have word with me and just asked me what…how I took them, ‘cause it had on me box, one Metformin in the morning and one at night and I said ‘no, it’s two in the morning and two at night’…‘cause maybe they might have thought, well why am I getting this many but I’m taking double the amount. And they also asked did I know what I was taking them for, that was it”.

Some liked the idea of the pharmacist being able to check their medication for them whilst another suggested that it was not necessary as “everyone gets a medication review regularly anyway from their GP”.

3.2.3 Additional support

Participants were then asked whether they required any other support from health professionals at their GP practice to help them take their statin medication and did not offer any suggestions.

Participants of the first focus group also discussed the usefulness of a support group for patients who take statins. They did not feel they personally needed this type of support but did acknowledge that patients who suffered significant side effects from the medication may find a support group useful.

> "I think yourself, if you are taking statins and everything is settling for you then there is no need for it".

> "I was going to say 90% probably don't have any side effects at all so maybe for the 10% that are having side effects it might help them. But not the majority I suppose".

3.3 Compliance

As discussed in Section 2 above patients who were believed to be either partially or non-compliant in taking their medication were initially targeted to take part in the project however, the second stage of recruitment included any patients who had been prescribed statins. All were asked how frequently they took their medication.

3.3.1 Frequency and reasons for partial or non-compliance

Three participants (one male and two female) stated that they were totally compliant in taking their medication and had never missed a tablet. The others varied in their behaviour, from simply forgetting to take their medication, to never having taken their statin tablet.

Three people said that they occasionally forgot to take their medication. One described having a routine for taking it and if this routine was disturbed, they sometimes forgot to take the tablet.

> "I always take mine at teatime - the tablets I take, I put in a little box on the windowsill in the kitchen so when I'm having my tea, I lift the box over and take them with water and occasionally if we have a late lunch I don't want any tea, so I forget those tablets but it's just occasionally".

Another participant was fully compliant with their morning medication regime but had difficulty remembering to take their statin medication because they are directed to take it at night.

> "I've got no problems in the morning at breakfast time taking tablets. I do have a problem late at night; I fall asleep in front of the TV and… I kind of wake up and go to bed".

The third participant initially stated that they took their statin tablet “every day, at night” and then later in the discussion admitted that they did not always take it, “I try to be regular but sometimes I forget and I’ve not had any adverse reactions from missing them”. However, aside from their forgetfulness, they also said that they were not keen on taking any drugs, due to their experiences of taking medication whilst in the army 50 years previously.

> “My problem with that is, I spent...three years in Malaya in 1962. I was attacked by a type of malaria and dysentery. I spent three months in hospital - I suffered - and despite the fact that they cured me I was fed a lot of tablets in the hospital and since then I have been rather wary and not too keen on taking too many tablets. Is that understandable?”

Finally, age also appeared to be a factor in this participant not taking their statin medication as instructed.

> “At this age, at my age, 77, am I going to be too concerned about missing a tablet?”

Up until a few weeks previous to their focus group, one participant had been fully compliant in taking their medication, having been prescribed statins several years ago. In contrast to the other participants who all took less than instructed, this patient accidently took double doses of medication for a two week period.

In addition to their statin tablet that they took at night, the participant took a further ten tablets each morning, related to their multiple sclerosis (MS).

Due to a change in appearance of the statin (Verstatin) packaging, they accidently started taking a statin tablet in the morning instead of an Epitol one for their MS and also their usual statin tablet in the evening, resulting in them developing gout.

> “A couple of weeks ago I was getting a lot of pain and I just thought it was the MS but it was not until I was looking at my tablets again that I actually realised I was taking a statin at night time and because they changed the boxes and everything all of the time I was taking a statin in the morning time as well. So I was doubling my dose of statin and that was causing all of the pain”.

> “It’s changing the labels or changing the packaging on the boxes is really confusing. I mean, I’m not very old but I would imagine a lot of old people looking at the box, pulling them out the bag and look and say “well that’s the tablet that I want”. So about two weeks I was in pain I actually went to see a doctor about it and he actually said I have got gout”.

The remaining participants had made a conscious decision to not take their medication or stop taking it.

One participant had decided not to take their statin medication as prescribed. They “usually take one, then miss a night and then take it the next night”. Their reason for

not taking it was because they believed that cramps they developed in their legs each night were a result of taking the medication.

> "I found that the statins for me, were making my legs go into cramp through the night and I stopped taking them and when I was hospital they didn't give me them and I never had any more cramp til I started taking them last week and then it started again the other night and I thought "it must be them statins that are doing it in". It is in my leg. I never took any last night. I thought best stay off them".

Upon questioning from the group the participant stated that they had not mentioned the cramps to their GP yet but probably would, and asked the rest of the group what they thought they should do about it.

> "So what do you do, still keep taking them?"

Participants suggested that they inform their GP who may reduce the dose.

Side effects, or indeed perceived side effects was the reason for two other participants not taking their medication for several months, however they did so with the blessing of their GP.

> "About a year or two ago maybe…I became aware that there is one of the side effects, maybe something to do with muscle problem…and then with that being in mind, after a while unfortunately I had developed some problems with muscles in my arms and slowly, slowly, I started suspecting it was the statin and after a while I really – I had to discuss it with the GP and I went through a trial for – well he said 'give it up for a month and see what happens' and I wasn't quite confident with that trial so I tried it again and unfortunately it didn't work…we concluded that it had nothing to do with it, the statin".

> "There was a period where I stopped taking them…and I went back onto them…I went to a check-up at the hospital – the night before I was watching TV and I got these kind of pin pricks, irritation, and I assumed – for some reason I took a downer on the statins and I went to the doctors and I said, you know, 'can I come off them?' And they said 'yes' and eventually put me back on them".

Again with the support of their GP, one participant had recently stopped taking their statin medication completely, having taken it for over 11 years. They gave three reasons for non-compliance. Firstly, despite taking the tablet religiously for 11 years, their cholesterol levels had never gone down and they had the support of their GP to stop taking it.

> "I am sure about eleven year ago I was put on them and my level from that day to this day has never changed".

> "Even my doctor agreed and said XXX, you've took them for such a long time, if you want to take them you take them, if you don't want to take them - so I said I am not taking them".

Secondly they felt that the tablet itself made them ill as it was not sugar coated.

> "I felt as if some of the tablets…I have been taking, they're not like sugar coated and I find they leave a very bitter taste in your mouth and your throat, they upset my stomach I am not going to take something that is going to make me ill".

Finally, the individual had a number of other illnesses and was taking a lot of medication every day - at one point, up to 47 tablets per day. They were fed up with having to take so many tablets and the combination of so many tablets also made them feel ill.

> "You get sick of taking pills though - I know it is only one but it was a lot".

> "And I found reactions bad. Because all of your tablets are all mixed in together and you feel crap".

Another patient had recently decided to stop taking their statin medication without their GP's knowledge although this was not because of issues related to this drug. As with the participant discussed above, they had a number of conditions and as a result were taking a large quantity of tablets which had got on top of them.

> "I was taking about 23 tablets a day and it was getting too much for me, I didn't know where I was…I was just getting confused with them all, in the finish I just said 'I'm sick of all these tablets' and just locked them away".

The final participant had never taken their statin medication. This was because they enjoyed a glass of whiskey in the evening and were concerned that the tablet and alcohol would interfere with each other. This participant had earlier stated that they did not believe they were taking the medication for raised cholesterol but thought it must be something to do with their angina and therefore justified not taking the statin tablet because they took all of their other angina medication.

> "Well there is one tablet that I don't take. It is a one I am supposed to take at night time. I don't take that for the simple reason I like a glass of whiskey before I go to bed. So I don't like mixing tablets with whiskey I prefer to have my whiskey. Although I take other tablets for the same problem, my angina, I have to be straight here, I think is this one tablet I can do without".

Upon questioning from other group members the participant went on to say that they had never asked the doctor whether it was okay to take the tablet and continue to have their glass of whiskey "because he might tell me off!".

3.3.2 Perceived effects of partial or non-compliance

Participants were then asked whether they had considered the consequences of not taking their statin medication as prescribed; roughly half felt that there would be none.

As expected, those who had always taken their medication or only occasionally forgot to take it felt that their health would be negatively affected, as did the patient who had

accidently overdosed on their medication. One participant, who had stopped with the support of their GP, felt that their health had been affected whilst not taking the statin.

> "Yeah, cholesterol would go up".

> "If I didn't take it I would – I believe that there would be a build-up of fat tissues in the arteries and I just concentrate on taking them as administered or as advised".

> "My problem when I stopped taking them was that I had high blood pressure and I stopped smoking at the same time and it was difficult – it had an effect on my body…"

All others felt that there were no obvious negative effects on their health when not taking the statin and in fact two reported feeling better as a result of not taking their medication consistently. One participant was unconcerned with any negative effects on their health, given their age.

> "No difference in me, definitely not".

> "No. I think it does you good a drop of whiskey and it is just the one that I am not taking I am taking all of the other ones. I have a spray, so I think I'll be OK".

> "At my age, 77, am I going to be too concerned about missing a tablet? I've not had any adverse reactions from missing them".

> "I don't feel as though like, I couldn't say, 'right I've started them, I feel much better' and I can say 'cause I've stopped them, I feel better, you know what I mean? So…but I think it's silly 'cause if I really needed to be taking them I should be taking them, I shouldn't just say I'm just not taking them".

Finally, one participant felt that it was difficult to measure whether there would be any effects.

> "To know whether it has an effect on blood cholesterol or not where really it has to be like a trial, you check cholesterol level before and then you stop and I don't know stop for how long and then you check the level again and try to - and then go back and you know, like a trial to know whether there is or there isn't an effect".

3.3.3 Future compliance

All participants were asked how likely they would be to take their statin medication in the future and again as expected, those who had always taken their medication stated that they would continue to do so. In addition, the participant who had mixed up their medication had already acknowledged the mistake and reverted back to taking one tablet, daily, as instructed.

Patients who occasionally forgot to take their daily tablet also said that they would endeavour to take it as prescribed in the future. For patients who had stopped taking the medication for a few months with their doctor's approval, this was also the case.

Finally, the patient who had stopped taking all of their medication entirely, without their GP's knowledge, understood that they should begin again as soon as possible, but wanted to speak to their doctor about their medicine regime first.

> "Yeah, but I do need to be reviewed by me doctor for all my tablets again though as I say, 'cause I stopped them all... which was wrong, I shouldn't have done that, but I really, really need to get them sorted…so I need to go and talk to me doctor and Dr X is nice, I can talk to her…and I've phoned for an appointment and Dr X has been on holiday so it's not until Tuesday. But I want to get back started for me own health, do you know what I mean? To start all me tablets again…"

The remaining four participants had differing views about their future compliance.

The patient who had stopped taking their medication completely, with the approval of their GP, resolutely stated that they would not consider taking the statin tablet in the future, whereas the participant who had referred to their age was indifferent about their future actions.

Future compliance of the other two participants would depend on whether they felt able to speak to their GP about their issues and concerns with taking the medication.

The patient who was non-compliant because they did not think they could drink alcohol whilst taking statins, knew that they only needed to ask the doctor, but was still apprehensive about doing it in case their GP said that they could no longer have their glass of whiskey in the evening.

> "Well as I say I have never enquired to the doctor whether it is feasible, whether I can".

One of the group did however instruct them to read the information sheet in the box and reassured them that it was safe to drink alcohol and take the statin tablet.

> "Look on your box if it says avoid alcohol, don't take it! It doesn't say avoid alcohol on statins".

As discussed in section 3.3.1 above, the final participant had not yet mentioned to their GP that they were struggling to take the medication due to night time cramps and asked other group members what they thought they should do. They did however say that they would probably go to their doctor eventually. In addition, this participant also suggested that better information about what the medication actually does might persuade them to take the statin compliantly in the future.

> “If it helps you from heart attacks and strokes, let’s face it we would rather take statin than have a stroke or a heart attack. So that is hard to find out, do they really help you?”

3.3.4 Support to take medication

All focus group members were asked whether anything would help them to comply with their statin therapy in the future. Seven patients put forward suggestions.

Six participants mentioned the medication’s packaging.

> “It’s terrible when they change the packaging”.

> “I rang the doctor to check if they were the right ones”.

> “They brought Glaxo in didn’t it to make some of the tablets. It confused me badly with that”.

They all agreed that it was unrealistic to demand that the packaging never changed and several acknowledged that changing the supplier (and therefore the packaging) might be financially beneficial.

> “Ahh I don’t think it’s a problem if they change the tablets because it’s cheaper somewhere else”.

However they did think that there should be some sort of co-ordination between the manufacturers in terms of the colour of the box.

> “They could at least make the same colour box at least”.

> “Yes definitely”.

If the packaging had changed, the other suggestion was to put a note in the prescription bag alerting patients to the change in appearance of the box and reassuring them that the medication was still the same. Although one participant felt that this would be overlooked if it was put inside the box itself.

> “I don’t think a note inside a packaging would help because, I mean, I don’t know if everyone is the same as me but I open my packaging and the leaflet inside goes straight in the bin and I don’t read it”.

Related to this, and referred to in section 3.1.5 above participants also requested that the font size on the information sheet be increased.

Also discussed above, participants would welcome some brief written information from their GP about their condition, taking the medication and possible side effects to look out for. In addition, one participant specifically said that they did not know what the role of the medication was and having this information may encourage them to take their

tablets as instructed. Another wanted information on the consequences of not taking their statin medication.

> "If it helps you from heart attacks and strokes, let's face it we would rather take statin than have a stroke or a heart attack. So that is hard to find out, do they really help you?"

> "Yeah I think I would want that, but I don't blame me doctor for any of this really, I just blame me'self, for not asking and for just taking the things. Just go along with it, whatever they give me, 'take two of these' and I take two of these and not asking what for or anything".

The patient who was not sure whether they could drink alcohol while taking statins agreed that this information would also be useful, but as mentioned by another group member, it is already available in the information sheet provided by the manufacturer.

One participant also felt it would be helpful that if their surgery was aware that they were not taking their medication, to give them a call to ask why.

> "Yeah, 'cause sometimes I feel as though I need a push, 'cause I would just sit there and just be poorly or something and in a couple of day's time I have me kids on me case".

Finally, as one participant mentioned that they sometimes forgot to take their tablet, blister packs with printed days of the week were also discussed. However, only two participants said that they would find them useful and in addition to the days being printed beside each tablet, one also suggested having the date.

> "Dated as well, then you don't take two, it might be the same tablet everyday".

3.4 Attitudes to medicinal waste

In addition to discussing the reasons behind statins patients not taking their medication as instructed, this project also sought to explore their behaviour and attitudes towards medicinal waste.

3.4.1 Collecting medication

Participants were initially asked how they get their statin medication and responses varied. Eleven people contacted their GP practice to order a repeat prescription, collected their script and went on to the pharmacy. One person got their medication delivered and one sometimes collected it themselves or had it delivered.

> "I phone for a repeat prescription, and I pick me medication up at Boots".

> "I only have one tablet to get – so really I just go".

> "I go and get mine".

> "What I do is I ring up for my prescription and it is taken to the chemist and the chemist delivers it to me".

> "Sometimes I pick them up sometimes they deliver, it all depends…Some of them I have to actually sign for – that have come from the hospital. I have got to be there to sign for them to get them."

3.4.2 Unused medication

Two patients said that they had had unused statin medication in their home at some stage. One had taken the tablets back to their chemist and the other who had recently stopped taking all their medication without their GP's knowledge still had them in their "cupboard at home".

This latter patient also discussed having obsolete medication at home belonging to their son and had asked their pharmacist what to do with it. They were told to "put them all in a bag and bring them in" and they would dispose of them and the patient was unsure as to whether they should also take their own unused medication, including their statins to the pharmacy and wanted to speak to their GP for confirmation.

> "And I was just thinking I should put mine in as well but I wanted to wait and ask Doctor X; do I take them in, do I start afresh or are they alright to keep 'cause I really don't know and I didn't want to put them in, incase when I go to the doctors she says they're fine to keep using, rather than put them in and waste prescriptions if they're alright and I've still got plenty in the house. Looking at my file she'll be able to say".

All other participants were also asked whether they had any other unused, or obsolete, out of date medicines at home and what they did with them.

Seven people had had some unused medication at some stage and five of this group said that they "took them back to the chemist". However, one person said that they had asked the pharmacist what to do with it and had been told that it could not be re-used and that they should "put it down the toilet". They felt that "you should be able to take them to the chemist". Another said it depended on whether the boxes had been opened.

> "The ones that are opened, if I can dissolve them I will put them down the toilet, the ones that are boxed go back to the chemist".

3.4.3 Reasons for having unused medication

Aside from the statins, patients had had unused prescribed medication in their home because it had gone out of date, they had an adverse reaction to medication, they had been erroneously given too many tablets by the pharmacist (three patients) or had been in hospital and therefore unable to take them.

"The only stuff I've got rid of is the sprays, like I've had two or three of them, I've never actually used them - I don't particularly want to be in a position to use them and they just go out of date".

"I have had reactions to it".

"I had to take one capsule a day and it told you after six weeks you haven't got to take anymore. So the chemist should have given us a month's supply and I got 60!"

"This other bloke, [when the participant went to get some more medication] he gave us a bottle like that with 158 in, I said they're no good to me, he said what do you mean? Well if you read the paper work, after six weeks you've got to dispose of them. He said 'oh have you?'"

"My chemist gave me nearly 200 extra of my diabetic tablets and I went back with them…and she said 'oh thank you very much, you're very unusual because a lot of people would have kept them'".

"Sometimes it happens that I know at the time of prescribing something there will be a difference of the number of tablets because of hospital admission and I even ask the doctor sometimes I say 'maybe if you give me only so many tablets to start with and that will…' but in general I try not to have extra and if any extra happens I take it back to the chemist".

3.4.4 Ordering repeat prescriptions

Participants were asked about their behaviour around ordering repeat prescriptions and specifically whether they ordered repeat prescriptions for all of their medicines at the same time or just what they had run out of at that time.

All participants stated that they only ordered the medication that they needed and pointed out that for many medicines it was only possible to order one month's supply at a time.

"Yes I just order what – as you go along – as you get down on certain tablets – you just order them".

"When I phone up for a repeat prescription I'll just ask for some things to be removed".

"'Cause I was on Gaviscon and these acid tablets and when it was gone, when I was phoning for my prescription I used to say just 'just miss the Gaviscon off', I didn't want to take it 'cause I wasn't using it, you know what I mean? I would just knock that off the prescription, I wouldn't just take it 'cause it was on the prescription, it's just a waste".

"I get mine for a month so they just give me everything".

"For some things like Paracetamol and Tramadol, they only give you one month's supply, some other pills, like Lisperil and your statins they give you two month's supply so actually one month you order everything, the second month you only order half your tablets".

3.4.5 Attitudes to unused medication

Finally, participants were asked whether they thought that there was any impact when medicines are prescribed and then not used.

All agreed that there was an impact when the medication was not used and several people were particularly upset that medication returned to the pharmacy was not reused. One participant did however raise some concerns with reissuing medication.

"I always thought the tablets I was taking back to the chemist were used for third world countries and stuff like that".

"The chemist takes them.
And they don't re-use them!
No they put them in a waste disposal and somebody has to sort them out".

"They're destroyed.
Yeah even before actually I opened the box. I said 'this box is extra' they said 'well sorry we still cannot give it to anyone else' and this I cannot understand. Well it's contamination isn't it, but to me if the box is sealed, even in the box they're in these blister packs where they're…so there's no germ can get in that really.
Absolutely".

"I said 'they're no good to me, I don't want them, I don't want them in my house' she [the pharmacist] said 'oh they'll probably just get destroyed' and I thought 'my goodness what a waste of money'".

"Well it's always difficult that one, as I say, for the sake of safety, having been in previous hands, it would be better to err on the side of safety and have them destroyed albeit it might be wasteful financially but it could be really costly to try and repair someone who has been damaged by these, how shall I say, faulty medication".

In terms of the actual impact, participants initially mentioned the cost to the NHS and enquired as to how much waste statin medication cost.

"Well it's the cost isn't it?"

"It's a cost to the National Health Service.
Exactly".

"Expensive waste isn't it".

> "My friend, her next door neighbour was in hospital and they kept delivering medication, she had a key to go in…and they just got destroyed. I said what a waste; surely they must know she was in hospital getting looked after".

> "Do you know how much it actually costs to do – like your statins or your medication?"

One participant also mentioned the actual impact on a patient's health of not taking the medication.

> "Apart from whatever effect it has on your condition and because that's the main reason".

The focus group facilitator/interviewer then provided participants with some information about the costs and all agreed it was a considerable amount of money and therefore not reissuing unused medication was even more unjustified. However, one person stated that they were not shocked by the figure.

> "It seems like a lot of money".

> "My husband was obviously – he died of cancer so he was treated at home and you know the plastic sheeting they give you and the disposable nappy thing they give you, all those were sealed never even opened and the care home wasn't allowed to take it. It's serious when it's already sealed. That can't be used. It's serious".

> "It's really not justified. We talked about the tablets which are still in their blister and box and I haven't even touched them, it really cannot be justified at all and you said £300 million, pardon me, which is shocking".

> "I'm not shocked because I know people who tend to go that way and it's a case of - because they're not handing money over for it it's just an ongoing – there's so much – they think it's their right to have etc., etc".

Whilst discussing the costs of medication, participants of the second focus group were also asked whether they felt that providing patients with more information about how much medication costs to produce, would be useful in terms of raising awareness around medicinal waste. Participants thought that providing specific information would not be helpful but that promoting a message around the NHS not having unlimited resources would be.

> "I don't think they should…I think it's important that the doctors and nurses and people delivering it probably know how much it costs but as far as the patient's concerned you'd probably get some patients bragging about how much their drugs are costing, others saying 'well it costs so much I shouldn't really be on it'".

"When it comes to us as individual patients, needing medication prescribed by the GP I cannot really see where the relevance of knowing what is the cost of that medication is".

"It would just be a matter of helping people understand that the NHS…isn't an open house, it isn't free, it isn't - resource depleted it would be in terms of people knowing that they're getting this drug and it does cost this much money and yes, everyone's entitled to it but they're aware that it shouldn't be just something to be carefree about".

"What it really means I mean, people need to be reminded and know that medication is quite an expensive thing in general. Whether you take them or you don't take them you become aware that it's something that costs a lot".

"I think it would be helpful… there would be nothing wrong with putting literature out in the surgery to tell people the cost etc., etc. and make them aware of the use of medication".

Unprompted, participants did not suggest any other impacts however again the facilitator/interviewer gave participants some information about the environmental impact of unused medication – in its production and also informal disposal by flushing them or putting them in the bin.

Participants discussed this information and two admitted "well, you don't think about the environment do you?"

Three people said that they had flushed medication down the toilet because they had been instructed to by the pharmacist although one suggested that this was an outdated instruction. Others felt that this was not the appropriate thing to do.

"Some of them I have, yes".

"They tell you to".

"You can't take them back – some of them, you can't take them back, they will just tell you to dispose of them, put them down the toilet, boil them in the kettle".

"Well I'm aware that what used to be done in the old days was – I've done it myself, flushing it down the toilet…but as one becomes aware of the environment, more so nowadays, if any tablets were - a build-up on my own basis, well they would go back to the pharmacist. Let them dispose of them in the right sort of way".

"I don't throw any tablets away so I mean, I would never flush them down the toilet or anything like that".

"I think it is wrong".

One of the participants who disposed of medication themselves did however have strong views about disposing of it in a household bin in relation to child safety.

> "I have never, ever put in the – I wouldn't put them in the household bin – no way because they get put on a heap, kids could go through those heaps, you have to think where kids are concerned about that".

Finally, one participant felt that unused medication getting into the water system was not a problem because the water treatment system would remove any traces of medication.

> "We are okay here; the sewage goes to a sewage farm and is treated".

3.5 Summary

It is clear to see from the findings above that patients are generally satisfied with information and support they receive around their statins. However, two people were unsure why they had been prescribed the medication and six did not recall being told how long they would be taking it. Only one patient who had been prescribed their medication in hospital had not received instructions for taking the tablet whereas twelve had not received any written information from their GP practice about their medication.

In terms of additional information to help them take their medication, six patients requested some brief written information about their condition, taking the medication and possible side effects to look out for. One patient wanted more information about how any new medication they are prescribed might interact with their other medication, whether they should expect side effects and reassurance that it will not stop their other medication working. Finally, some asked for the manufacturer's information sheet to be printed in a larger font.

All participants reported having a good relationship with their GP and felt able to question them about their medication. They felt that the support they received from their GP or practice nurse was adequate although members of one focus group requested the results of their monitoring blood tests regardless of the cholesterol level. Patients were aware that they could have a medication review with their GP although only five were aware that a pharmacist could also carry out the review.

Ten people were partially or non-complaint in taking their statin medication mirroring both patient and health care system factors identified in the 'Evaluation of the Scale, Causes and Costs of Waste Medicines' (York Health Economics Consortium, University of York & The School of Pharmacy, University of London, 2010).

Three of the group only occasionally forgot to take it because:

- They fell asleep before taking it
- Their usual routine was disturbed
- They simply forgot

However the patient who simply forgot also admitted that they did not like to take any medication and that because of their age they did not think it mattered if they missed some tablets.

A change in packaging resulted in another patient temporarily taking double doses of their statin medication.

Others had chosen not to take their medication due to:

- Perceived side effects
- No change in cholesterol levels
- Being on lots of medication
- A belief they could not drink alcohol whilst taking them

About half of patients believed that not taking their statin medication would have no impact on their health or had not experienced any ill effects.

In terms of future compliance, one patient was adamant they would not take it again whilst another was unconcerned about their future behaviour due to their age. Others said that they would need to speak to their GP about their medication before deciding whether they would start taking it as instructed.

The following suggestions were put forward by seven participants, to help them take their statin medication:

- Co-ordination between statin manufacturers around the colour of the box or, if the packaging changed, the inclusion of a note in the prescription bag alerting patients
- Larger font size of manufacturer's information sheet
- Brief written information from their GP covering their condition and why they were taking the medication, how to take it correctly, possible side effects and the consequences of not taking it
- Prompt from the surgery if they became aware a patient was not taking their medication
- Blister packs with the date and day printed on them

Most participants had had unwanted medication in their home at one stage due to being prescribed too much by their pharmacist, it going out of date, the patient having an adverse reaction, or the patient being in hospital. The majority of patients returned any unused medication to their pharmacy. However, one patient still had theirs at home in case their GP said it was safe to use. Another had been instructed by their pharmacist to flush it down the toilet.

All participants mentioned the financial cost of unused medication and felt that unopened medication returned to their pharmacy should be reissued. Upon being presented with information about the financial costs participants agreed that it was a substantial amount of money and therefore felt that there was an even stronger case

for reissuing medication. In terms of changing behaviour around unused medication half of the participants discussed having an awareness raising campaign about how much it costs the NHS. Unprompted patients did not identify any other impact.

Section 4 – Recommendations

4.0 Recommendations

It is suggested that both the Medicines Management Team and Public Engagement and Communications Team at NHS North of Tyne take time to analyse the findings of this research, in order to understand the reasons for partial or non-compliance and gain insight into attitudes surrounding medicinal waste.

As a result of this research, some recommendations have been made. Some of the measures recommended here may already be in place and others may be outside the control of NHS North of Tyne however they remain included as they were identified as issues by the patients.

4.1 Statins

- GPs should consider providing new statins patients with a brief information sheet explaining:
  - Their condition and why they are being prescribed the medication
  - How to take the medication correctly
  - Possible side effects to look out for and what to do if they have any
  - The consequences of not taking the medication

- For those patients taking other medication information should be provided about:
  - How the statin medication will interact with their other medication – including reassurance that it will not stop their other medication working
  - Whether they should expect side effects and what to do if they have any

- Consider prompting patients with a telephone call, letter or invitation to attend a medication review if the surgery becomes aware that patients are not taking their medication as instructed

- Raise awareness of medication reviews available in pharmacies and how to go about booking one

- Provide patients with the results of the monitoring blood tests as standard and regardless of their cholesterol level

- Consider asking statin manufacturers to co-ordinate the colour of the box or if this is not possible, include a note in the prescription bag alerting patients if the packaging has changed

- Ask manufacturers to print their information sheets in a larger font size

- Make available blister packs with the day, and date if possible, printed on them

4.2 Medicinal waste

- Consider developing an awareness raising campaign which highlights the costs both financial and environmental, of unused medication

- Raise awareness of how to dispose of unused medication appropriately

- Examine the legal requirements around the reissuing of unused medication and if not possible, inform people about the reasons why

Appendices

Appendix 1 – Participant profile

Gender

	Frequency	Percentage (%)
Female	6	46.2
Male	7	53.8
Total	13	100.0

Age

	Frequency	Percentage (%)
16-30	0	0.0
30-59	3	23.1
60+	10	76.9
Total	13	100.0

Location

	Frequency	Percentage (%)
Benwell	3	23.1
Cruddas Park	1	7.7
Denton Burn	1	7.7
Fenham	4	30.8
Newbiggin Hall	1	7.7
Throckley	1	7.7
Walker	2	15.4
Total	13	100.0

Ethnic background

	Frequency	Percentage (%)
White British	12	92.3
White Irish	0	0.0
Any other White background	0	0.0
Mixed White and Black Caribbean	0	0.0
Mixed White and Black African	0	0.0
Mixed White and Asian	0	0.0
Any other Mixed background	0	0.0
Chinese	0	0.0
Asian or Asian British – Indian	0	0.0
Asian or Asian British – Pakistani	0	0.0
Asian or Asian British – Bangladeshi	0	0.0
Any other Asian or Asian British background	0	0.0
Black or Black British – Caribbean	0	0.0
Black or Black British - African	0	0.0
Any other Black background	0	0.0
Any other ethnic group – Middle Eastern	1	7.7
Total	13	100.0