

**Appendix 1: Topic guide- patient** [behaviour of interest is returning a questionnaire and/or attending a clinic]

Domains	Core questions	Possible prompts
<b><u>Opening questions</u></b> (understanding of their own trials at a general level and expectations when a trial finishes)		
<b>All non-retainers</b>	<ol style="list-style-type: none"> <li>1. Can you tell me how ended up taking part in the CGALL trial?</li> <li>2. What treatment/care did you get?</li> <li>3. Do you know anything about how you came to receive that treatment? (<i>randomisation</i>)</li> <li>4. What was your response/reaction when you heard which treatment you would get?</li> <li>5. How long have you been told to take part in the study?</li> <li>6. Tell me a bit about your experience with the treatment itself?</li> <li>7. Tell me a bit about your experience with the CGALL trial?</li> </ol> <p>(<i>By experience with the study, I mean from the first time you heard about the study to the last encounter you had. We are interested of hearing your experiences of returning information back to the study office</i>)</p> <ol style="list-style-type: none"> <li>8. What were some of the barriers (or things that made it challenging) for you to take part in the trial/study?</li> </ol>	<p><i>What made you decide to take part in the first place? /What appealed to you about the trial/study?</i></p> <p><i>(surgery or MM: pain manage.)</i></p> <p><i>- how was it assigned to you?</i></p> <p><i>-What do you know?</i></p> <p><i>-Duration of the study?</i></p> <p><i>-How are you feeling now?</i></p>

Domains	Core questions	Possible prompts
	<p>9. What were some of the enablers (or things that made it easier) for you to take part in the trial/study?</p> <p>10. Was your actual experience of being in the study/trial different to what you expected?</p>	<p><i>-What part have you enjoyed/disliked most?</i></p> <p><i>-in what ways/could you explain?</i></p> <p><i>- What has it been like being in the trial?</i></p>

<p><b>1. Knowledge</b></p> <p>[an awareness of the existence of something]</p> <p><b>All non-retainers</b></p> <p>(knowledge about the behaviours involved in being a trial participant)</p>	<p>Tell me about-</p> <ol style="list-style-type: none"> <li>1. What does 'taking part' in a trial/study means to you?</li> <li>2. What commitments/tasks are/were involved in the study/trial? <ol style="list-style-type: none"> <li>a) When the <u>trial started</u> what were you asked to do?</li> <li>b) Did someone tell you these things?</li> <li>c) <u>What else</u> were you asked to do?</li> <li>d) What was the <u>final/last thing</u> you were asked to do?</li> </ol> </li> <li>3. Was it clear at the time you decided to take part about what were expected of you?</li> <li>4. How would you know that you have finished taking part in the trial?</li> </ol> <p>WHETHER OR NOT THEY MENTION 'RETURNING QUESTIONNAIRE/SURVEY', THIS IS WHEN YOU SHOULD INTRODUCE THE BEHAVIOUR:]</p> <p><i>That's great. A key aspect of this study involved returning questionnaires I want to focus specifically on your views and experiences with returning questionnaires, whether or not you returned a questionnaire</i></p>	<p>-What were expected of you?</p> <p>-<b>What else?</b></p> <p>-<b>How often?</b></p>
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<p><b>2. Memory, attention &amp; decision processes</b></p> <p>(The ability to retain information, focus selectively on aspects of the environment and choose between two or more alternatives)</p> <p><b>All non-retainers</b></p> <p><i>(relate to their non-retention behaviour)</i></p>	<p>1. Do you remember any time during the trial, when you <u>did not return</u> a survey questionnaire?</p> <p><i>I can see here that you have been on the trial for X months and you have missed X questionnaires.</i></p> <p><u><i>If can't recall</i></u></p> <p>a) Can you think of anything that might have been happening at the time that influenced you/You can't remember?</p>	<p><i>-Did anything slip your mind in terms of returning the questionnaire?</i></p> <p><i>- Was it unexpected?</i></p> <p><i>-Were you unsure about anything?</i></p> <ul style="list-style-type: none"> <li>• <i>How to complete/return the questionnaire?</i></li> </ul> <p><i>-What happened?</i></p> <p><i>-Did you receive the Q?</i></p> <p><i>-Did you get a chance to look at the Q?</i></p> <p><i>- Did you receive <b>any contact</b> from the trial office for the clinic appointment?</i></p>
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<p><b>3. Environmental context and resources</b></p> <p>[any circumstance of a person's situation or environment that encourages/discourages]</p> <p><b>All non-retainers</b></p>	<ol style="list-style-type: none"> <li>1. What <b>would</b> have made it easier to return the questionnaire? <ol style="list-style-type: none"> <li>a. Anything else?</li> </ol> </li> <li>2. What <b>would</b> have made it harder to return the questionnaire? <ol style="list-style-type: none"> <li>a. Anything else? Time/other routine things they do (only if they struggle): Did you feel you had sufficient time?</li> <li>b. What resources were needed/lacked to be able to return the questionnaire?</li> </ol> </li> <li>3. What did you think of the questionnaire?</li> <li>4. Were there other factors/ reasons (of your life) that might have discouraged you to Return the Q? (e.g. issues with childcare, care for others, work)</li> <li>5. Among all the issues you have mentioned, which of these had the <b>biggest impact</b> on you?</li> </ol>	<p><i>-What was happening at the time (you received the questionnaire) that discouraged <b>you to return the questionnaire/attend the clinic?</b></i></p> <p><i>-lay out-difficult to follow length/time to complete</i></p> <p><i>-Any negative/positive experiences of the treatment/care/therapy that you received?</i></p> <p><i>-Any concerns of the side-effects of the treatment?</i></p>
<p><b>4. Beliefs about capabilities</b></p> <p>[acceptance of the truth, reality or validity about an ability, talent or facility that a person can put to constructive use]</p> <p><b>All non-retainers</b></p>	<ol style="list-style-type: none"> <li>1. How confident are you that you could have returned a questionnaire when requested?</li> <li>2. <b>What made it easier</b> to return the questionnaire? <ol style="list-style-type: none"> <li>a. How much did that influence whether you return the questionnaire?</li> </ol> </li> <li>3. <b>What made it more difficult</b> to return the questionnaire? <i>Any changes to your health that made it a struggle to accommodate returning Q</i> <ol style="list-style-type: none"> <li>a. How much did that influence whether you return the questionnaire?</li> </ol> </li> </ol>	<p><i>- What made you feel less/ more confident</i></p> <p><i>What practical/everyday issues would have made it easy to Return the questionnaire?</i></p> <p><i>-Can you tell me a bit more about it please?</i></p>

<p><b>5. Goals</b></p> <p>[Mental representations of outcomes or end states that an individual wants to achieve]</p> <p><b>All non-retainers</b></p>	<ol style="list-style-type: none"> <li>1. When you agreed to take part, where did returning questionnaires fit in your priorities?</li> <li>2. What else did you have on your plate at the time you were asked to return a questionnaire?</li> <li>3. How did things (priorities) change over time?</li> <li>4. How important was returning a questionnaire to you?</li> <li>5. How important was this compared to other things you were doing or were happening to you at the time? What else was more important?</li> <li>6. Were any of these activities more important than the others? - Did returning questionnaire for this study fit in with everything?</li> </ol>	<p>- <i>Why did you think that (based on their answer like very-not at all)?</i></p> <p>--<i>Any changes to your health/broader life commitments?</i></p> <p>-<i>could you tell a bit more around that ... (based on their response)</i></p> <p>-<i>Why did you think that (based on their answer like very-not at all)?</i></p>
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<p><b>6. Intentions</b></p> <p>[A conscious decision to perform a behaviour or a resolve to act in a certain way]</p> <p><b>All non-retainers</b></p>	<p>1. How much did you really want to return questionnaires for this study?</p>	<p>- How motivated were you to do this? -What reduced your motivation?  -What increased your motivation?</p>
<p><b>7. Skills</b></p> <p>[an ability or proficiency]</p> <p><b>All non-retainers</b></p>	<p>1. What skills are required to return a questionnaire?</p> <p>2. Did you feel comfortable communicating with clinic staff? (interpersonal skills)</p>	<p>- Did you think you would need any particular skills for returning a questionnaire? What are these?  - Have you needed to be good at anything else? (e.g. remembering things to do)  -What do you mean by that? -  -Would you have felt comfortable communication with clinic/research staff, if needed?</p>
<p><b>8. Behavioural regulation</b></p> <p>[Anything aimed at managing or changing objectively observed or measured actions]</p>	<p>1. What strategies/plans did you use to make sure you return the questionnaire?</p> <p>2. What (else) would have been helpful?</p> <p>3. Is there anything that the trial office could have done/ offered to make the questionnaire return easier?</p> <p>4. Is there anything you use that would remind you to do things (e.g. return a Q)?</p>	<p>Anything else?  -Having multiple options for returning information (e.g. via online/telephone/post) -seeing someone face-to-face</p>

<p><b>All non-retainers</b></p>	<p>5. <u>Re-engagers</u>: Did the trial do anything differently to encourage you to return a questionnaire after you had missed the previous questionnaire?</p>	<p>-What else?</p>
<p><b>9. Emotion</b></p> <p>[a complex reaction pattern, involving experimental, behavioural and psychological elements by which the individual attempts to deal with a personally significant matter or event]</p> <p><b>All non-retainers</b></p>	<p>This may be bit of an odd question, but bear with me.</p> <ol style="list-style-type: none"> <li>1. What sort of feelings come to mind when you think of returning the questionnaire?</li> <li>2. -Were you happy/unhappy with;             <ol style="list-style-type: none"> <li>a. the treatment you received</li> <li>b. the questionnaire?</li> </ol> </li> <li>3. Was there anything that made you feel uncomfortable?             <ol style="list-style-type: none"> <li>a. (e.g. some people suggested that they did not want to be reminded of previous health issues)</li> </ol> </li> <li>4. If done: How did you find filling in the questionnaire?</li> </ol>	<p>-What made it difficult/easy?</p> <p>-Can you tell me more <b>what upset you/</b> why you were worried?</p> <p>-What else?</p> <p>-Can you tell me more, if that's okay with you?</p>
<p><b>10. Social influences</b></p> <p>[Those interpersonal processes that can cause individuals to change their thoughts, feelings or behaviours]</p> <p><b>All non-retainers</b></p>	<ol style="list-style-type: none"> <li>1. <u>Whose opinion</u> is important to you when completing the questionnaire?</li> <li>2. Did you feel <b>under pressure from anyone</b> to return the questionnaire? Who?</li> <li>3. <b>Did anyone support you</b> to return the questionnaire? Who?</li> <li>4. What is your experience <b>dealing with trial/research</b> staff?</li> </ol>	<p>-Who else?</p> <p>-Did you discuss the trial <b>with anyone</b> at the time you decided to take part?</p> <p>-How did the discussion go?</p> <p>-Did you discuss with anyone when the trial was <b>ongoing regarding any issues</b>?</p> <p>-What was it about (can I ask)?</p> <p>-How did the discussion go?</p>



	5. How does views of other patients (if any) affect your decision about returning a questionnaire/attending a clinic/keep taking part in the trial?	-How did you feel communicating with trial staff?
<p><b>11. Beliefs about consequences</b></p> <p>[acceptance of the truth, reality or validity about outcomes of a behaviour in a given situation]</p> <p><b>All non-retainers</b></p>	<p><i>The next few Qs I am going to ask is about consequences and understanding your views about these situations. Please do not feel that you are being judged for any situations</i></p> <ol style="list-style-type: none"> <li>1. What are the <b>upsides/downsides</b> of returning the questionnaire (<i>follow Qs from next domain and also ask-both directions</i>)</li> <li>2. What do you think will happen if you do not return a Q? <b>OR</b> What do you think might have happen if you were not taking part in the trial any longer?</li> <li>3. Do you feel that you made a difference to the trial? (<i>follow Qs from next domain</i>)</li> </ol>	<p>-Any advantages/disadvantages to you/the trial/future patients/health service providers?</p> <p>-Anything else?</p> <p>- In what way?</p>
<p><b>12. Optimism</b></p> <p>[The confidence that things will happen for the best or that desired goals will be attained]</p> <p><b>All non-retainers</b></p>	<ol style="list-style-type: none"> <li>1. Can you tell me more about [how you are contributing to research, making health care better]?... (<i>If it feels appropriate based on responses under above domain</i>)?  [<i>Jill: optimistic beliefs about consequences- ask them to tell more and keep it open for piloting</i>]</li> </ol>	<p>How this would benefit/disadvantage ...?</p> <ul style="list-style-type: none"> <li>▪ You</li> <li>▪ the trial</li> <li>▪ future patients</li> </ul>

<p><b>13. Reinforcement</b></p> <p>[Increasing the probability of a response by arranging a dependent relationship or contingency, between the response and a given stimulus]</p>	<p>1. Is there <u>anything specific</u> encouraged you to return a Q?</p> <p>2. Were you promised any reward/incentives to participate in this trial?</p> <p>a. <u>If yes</u> Was that reward depend on you returning a questionnaire?</p> <p>b. <u>If no</u> Would any reward/incentives have encouraged you returning a Q?</p> <p>4. What sort of incentives/reward would be acceptable to you?</p>	<p>-What are these?</p> <p>-Do you think it has any impact on your decision- whether to return a questionnaire?</p> <p>-monetary incentives -any other sorts of token for appreciation?</p>
<p><b>14. Social role &amp; identity</b></p> <p>(for patients it's all about personal identity)</p> <p><b>All non-retainers</b></p>	<p>1. Did you take part in any other research studies before?</p> <p>a. <u>If yes</u>, are you the sort of person who gets involved in research??</p> <p>b. If No, can I ask if there were any particular reasons?</p> <p>2. <b>In general</b>, when you start something, do you usually complete it?</p> <p>a. Does it depend on what it is and for whom?</p>	

Interview close out questions

- Is there anything that you would like to add about being a participant in the CGALL trial?
- Any other factors that you think might be important that we haven't covered?

**Appendix 2: Extended table of findings with TDF frequencies and belief statements**

<b>Domain</b> (Frequency = Participants who mention domain/Number of total participants)	<b>Specific belief</b>	<b>Sample quote</b>
Environmental Context and Resources  (9/9)	<p>The format, layout and postal administration of the questionnaire was (not) convenient for me</p> <p>It was (not) easy to schedule completion and return of the questionnaires with other priorities in my life</p> <p>Completing the questionnaire was (not) enjoyable and/or straightforward</p>	<p>That's it, yeah. It comes with an envelope to just pop it straight back in the post. You don't have to put a stamp on or write the envelope, so I don't see any issues with it [Participant 1].</p> <p>I much preferred it when I could give oral answers to a simplified version in which she said, "These are just the main questions that we need to know." That didn't take nearly as long, and it was quite focused and straightforward [Participant 2].</p> <p>---</p> <p>Well, as I say, I put it aside and then never got to it. So, clearly life got in the way for me. Yes, yes [Participant 2].</p> <p>No, not at all. It would never be a problem to sit down for ten minutes and answer the questions [Participant 1].</p> <p>---</p> <p>R - And any struggles to do with any parts of the study at all so far?</p> <p>P - No. Actually, in the questionnaire I asked about my health and this, that and the other, it was quite enlightening to thought about things [Participant 7].</p> <p>Tick box things. I think, probably... Sometimes, I ticked a box and I'm thinking, "Well, I'm ticking it, but maybe I need to explain a bit more. Probably I'm ticking it because I was not on one side...". You know what I mean? [Participant 5].</p> <p>There was a lot of, "Hmm, how I do I answer this one? I'm not quite sure." [Participant 9].</p>

<p>Social Influences (9/9)</p>	<p>I did not feel pressurised to complete and return the questionnaires</p> <p>I (did not) receive support from family members to complete and return the questionnaires</p>	<p>R – And did anyone support you to return the questionnaire?</p> <p>P – No, I mean, my partner’s here but he doesn’t really take any notice of my post anyway. No, I’ve got no pressures from anyone. Nobody encourages me either. At first, my sister half encouraged me to take part because I was about 90% sure I was going to do it, and then after talking to her and a couple of others, just things that were said I just said, “Yeah, I’ll do it.” [also coded under belief statement “support from family members” –[Participant 9].</p> <p>---</p> <p>Once I’ve filled it in, my husband supports me in terms of he gets it to you, as in he posts it for me because I don’t go out to post it when I’ve got work or whatever. But that’s the only support, (inaudible) support, my husband is understanding. He understands the pain and he helps me when I’m suffering and stuff, but no, I don’t have any other support, not really [Participant 6].</p> <p>R – And does anyone support you to return the questionnaire?</p> <p>P – No, like I say, I just do it straightaway.</p> <p>R – And it’s all off your own back, you’re able to post it yourself and such.</p> <p>P – Yeah [Participant 8].</p>
<p>Beliefs about consequences (9/9)</p>	<p>Completing and returning the questionnaires will help people with gallstones in the future</p> <p>The questions were not relevant to my circumstances</p>	<p>P – Just to help other people further down the line, really. If the questionnaire helps the study, it can obviously benefit other people further down the line. [Participant 8].</p> <p>---</p> <p>I think filling it in would have been medical management, and I’ve not had any medical management. It was a bit like, yeah, I’ve not had anything to help with it so I was just filling it in in terms of the first time. [Participant 8].</p> <p>Well, there were a few. I mean, I started off well and then because nothing had happened... I hadn’t had any pain or anything and then I’d put them aside and then</p>

	It's important to fill in the questionnaires for the research team	<p>somebody would send another one and say, "You haven't completed it." [Participant 2].</p> <p>---</p> <p>No, like I said, just the information for yourselves to go towards the study and get the information that you need, really. That's the only thing that pushed me to do it, if that makes sense. [Participant 8].</p>
Reinforcement (7/9)	(No) incentives or rewards would have encouraged me to complete and return the questionnaires	<p>I suppose so. Obviously if it's going to benefit and you're going to get something back, it would be nice...[Participant 8]</p> <p>Yeah, I just want to do it because I want to do it. I don't really want anybody to try and bribe me to do it or encourage me to do it due to any kind of incentive, no. In some ways, actually, that would put me off. [Participant 1].</p>
Behavioural Regulation (8/9)	<p>It would (not) have been better to receive the questionnaire in a different format</p> <p>I (do not) make a plan to help me complete and return the questionnaires</p>	<p>Yeah, I suppose that's possible. Over the phone would be fine; face to face wouldn't be ideal because I don't live that close to Aberdeen. Over the phone would be all right, I wouldn't mind that, but in some ways that would be more difficult to fit into your day as well. Filling it out on a piece of paper, you can do that when you've got a few minutes to get it done and from my point of view, I'd probably find that easier to fit in. [Participant 1].</p> <p>Initially. I mean, even if they were sort of three, six months apart, it would have been something. I find it easier to talk to a person probably than have to fill in these forms. [Participant 5].</p> <p>---</p> <p>I would actually think, "Well, I've got to get this done" and do it and then send it off. Saying that, yes, probably... You're right, I would probably say, "Oh, I'm going to sit down this evening, fill this questionnaire in and then get it sent off." So, yes, in that way, there was a plan. [Participant 5].</p>

	The timepoint of receiving the questionnaires influences questionnaire completion	<p>The questionnaire thing for me is a barrier because I'll think, "Oh, I'll put it to the side, I'll do it when I've got time," and I never get the time. I've got my second one to fill and it's been there for months. Really bad! [Participant 6].</p> <p>---</p> <p>I suppose if the questions had been really complicated or difficult to answer, maybe. Or if you just can't remember what exactly has happened over the time. I suppose the time between questionnaires, if it's every three months then that's not too bad, but if it was longer than that then I'd definitely have trouble remembering exactly what symptoms I'd had and how many times and all the fine details. [Participant 1].</p> <p>We're all busy and I think I'd have been more engaged with it, had I had a lot of symptoms and I was really desperately wanting to get sorted out, which I actually feel a little bit more now. [Participant 2].</p>
Beliefs about capabilities (9/9)	I was (not) confident that I could return the questionnaire(s)	<p>R – How confident are you that you could return a questionnaire when requested?</p> <p>P – 100%, I know I can. [Participant 1]</p> <p>As I say, it was the paperwork just kind of threw me and... I should have been more on top and organised with that, but – [Participant 2].</p>
Intentions (9/9)	I am (not) committed to completing and returning the questionnaires	<p>P – Well, there's not a lot... It's commitment to answering the actual survey questions that took... not the survey, the questionnaires that come in. You've got to commit to that. I think you have to, because otherwise there's no point you doing it. [Participant 5].</p> <p>There's something about these forms that you just look at them... like a tax form... You just look at it and think, "Oh, I'll do it later." You know. [Participant 2].</p>

<p>Knowledge (9/9)</p>	<p>The activities and tasks involved in the trial did (not) meet my expectations</p> <p>I was (un)aware of when the trial/my participation ended</p>	<p>It's the same as most questionnaires like that where you've got, I think, to give a level of how much something's inconvenienced you. Yeah, just what you'd expect from a questionnaire. Sorry, I'm not very helpful on this one! [Participant 1].</p> <p>Well, actually the paperwork that comes through, some of the questions that we're asked were sort of non-sp-... (inaudible) non-specific [Participant 5].</p> <p>---</p> <p>I think at the appointment initially, they said that the trial had been extended. They didn't give me a timeframe for how long it would go on for. [Participant 1].</p> <p>Yeah, I know it's every six months that they wanted me to do a questionnaire... two is coming to mind, two plus. [Participant 6].</p>
<p>Skills (9/9)</p>	<p>Literacy and communication are key skills required to complete the questionnaires</p> <p>You need a good memory to complete the questionnaire accurately</p>	<p>But actually, the actual skill involved is trying to be... I mean, hopefully, you're literate enough to be able to do it...[Participant 5].</p> <p>---</p> <p>It's hard, it's very hard. "During the past four weeks, to what extent has your physical health and emotional... how have they interfered with your personal life or your home life?" Things like that. You forget, do you know what I mean? You kind of forget in that four weeks what's happened. They should ask me about it there and then, so this questionnaire, "How are you feeling today?" or whatever, or last week, or, "When was your pain bad?" But the last four weeks, I can't remember how it interfered with my neighbours, with my family. It is a valid question, it's just me, I'm a busy person, I don't have...[Participant 6].</p>

<p>Emotion (9/9)</p>	<p>Completing and returning the questionnaire(s) (does not) trigger unpleasant emotions such as boredom</p> <p>Completing the questionnaire brings me satisfaction and a sense of responsibility</p>	<p>R – Yes, I understand. This may be a bit of an odd question but bear with me. What sorts of feelings come to mind when you think of returning a questionnaire?</p> <p>P – Just slightly bored. [Participant 2].</p> <p>R – What sort of feelings come to your mind when you think of returning a questionnaire? Any sort of feelings you experience?</p> <p>P – Not really, I think I'm quite matter-of-fact about it all. [Participant 7]. ---</p> <p>Well, you've completed a job, you know that it's important, it helps in clinical trials, it's helping finding out stuff. That's the upside of doing it, and you feel satisfaction, that you're making a difference. [Participant 4].</p>
<p>Social Professional Role and Identity (9/9)</p>	<p>My personality and social role influence my impression of the questionnaire in terms of content and format</p>	<p>My (inaudible) thing is, honestly, I'm a social person. I like to speak to somebody, have a consultation and you will get your answers. [Participant 6].</p> <p>I'm not one for paperwork, so ... it's not something I look forward to. [Participant 3]</p>



## Appendix 3

TDF Domain	Exploratory themes						
	<i>Unclear expectations of trial participation</i>	<i>Personal attributes for questionnaire completion</i>	<i>The significance of questionnaire non-return</i>	<i>Commitment to returning the questionnaires given other priorities</i>	<i>Individual preferences for presentation mode and timing of the questionnaires</i>	<i>Internal and external strategies to encourage questionnaire return</i>	<i>Sources of support</i>
Knowledge	✓						
ECR				✓	✓		
Beliefs about consequences			✓	✓			
Behavioural regulation		✓		✓	✓	✓	
Skills		✓					
Social Influences							✓
Beliefs about capabilities		✓					
Emotion			✓				
Intentions				✓			
Goals				✓			
Social Professional Role & Identity				✓	✓		

**Figure Caption:**

Figure 1. Overarching themes and associated TDF domains. Note: ECR = Environmental context and resources, SPRI = Social professional role and identity.