



Perceptions of early discharge following lung surgery: I'm a patient "get me out of here"

Samantha Louise Harrison¹, Pat Watson¹, Chloe Milburn¹, Fiona Bowe², Joel Dunning²

¹School of Health and Social Care, Teesside University, Middlesbrough, UK; ²Department of Cardiothoracic Surgery, South Tees Hospitals NHS Foundation Trust, James Cook University Hospitals, Middlesbrough, UK

Contributions: (I) Conception and design: SL Harrison, F Bowe, J Dunning; (II) Administrative support: P Watson, C Milburn; (III) Provision of study materials or patients: F Bowe, J Dunning; (IV) Collection and assembly of data: P Watson, C Milburn, SL Harrison; (V) Data analysis and interpretation: SL Harrison, P Watson, F Bowe, J Dunning; (VI) Manuscript writing: All authors; (VII) Final approval of manuscript: All authors.

Correspondence to: Dr. Samantha Harrison. School of Health and Social Care, Teesside University, Middlesbrough, UK. Email: S.L.Harrison@tees.ac.uk.

Background: Patients have been discharged from hospital one to two days post-surgery since the implementation of enhanced recovery after surgery programs. This study aimed to investigate the perceptions of individuals with a diagnosis of lung cancer on early discharge following a lung resection.

Methods: A qualitative study using Deductive Thematic Analysis was conducted. Nine individuals with a diagnosis of lung cancer who had undergone a lung resection and were discharged one to two days following surgery participated in semi-structured interviews.

Results: Five overarching themes were identified: (I) motivators for hospital discharge describing patients' desire to return home, (II) evolving feelings about early discharge and (III) coping at home post-surgery reporting heightened feelings of anxiety when faced with self-care and daily activities, (IV) the role of family members describing the physical and emotional support required from carers and (V) long-term recovery explaining the difficulty of re-engaging in activities due to symptoms associated with recovery and comorbidities.

Conclusions: Early discharge following surgery for lung cancer was acceptable to the majority of patients. However, a follow up phone call maybe necessary to mitigate fears about pain and to encourage activity.

Keywords: Lung cancer; surgery; discharge; interviews

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Introduction

Lung cancer is the second most common cause of cancer in the UK and the most common cause of cancer death (1). Surgery remains the only curative treatment and can also provide symptomatic relief improving quality of life (2). There are three surgical options depending on cancer stage (I) lobectomy (a lobe of the lung is removed), (II) pneumonectomy (the whole lung is removed), or (III) sublobar resection (a small section of the lung is removed). All three procedures can be performed using open or minimally invasive techniques.

Six days is the median length of stay in hospital following a lung resection (3). Enhanced recovery after surgery (ERAS) programs are patient-centered pathways combining anesthesia, nutrition, nursing, physiotherapy and psychology to reduce post-operative complications and accelerate recovery (4). The adoption of ERAS programs in thoracic surgery has been slower than in other cancers, perhaps due to the high mortality rates and complex surgical issues observed in this population. However, ERAS programs for individuals with lung cancer are effective at reducing mortality, post-operative complications, length of stay and subsequent hospital costs (5).

Early discharge from hospital has been increasing following the implementation of ERAS programs, with patients discharged home within two days after surgery. Despite the benefits of ERAS programs on length of stay and health care costs it is important to determine the impact of early discharge from hospital on patients' quality of life and experience of care (6). Qualitative research, which focuses on understanding experiences and opinions, is a useful methodology to glean this type of information. Patient satisfaction with early discharge is generally high following surgery for other cancers (7-9). Information and professional support bolsters feelings of security, swaying willingness to be discharged early post-cancer surgery (10).

However, individuals may feel dismissed when discharged early from hospital and this could be particularly true for those with lung cancer (11). Socioeconomic inequalities in incidence of lung cancer exist with greater prevalence reported in more deprived areas (1). Individuals from such areas often feel marginalised in their interactions with healthcare professionals and unable to communicate their concerns. Therefore, this study aimed to investigate the perceptions of individuals with a diagnosis of lung cancer on early discharge following a lung resection.

Method

Study design and ethical approval

Approval was obtained to conduct a qualitative study design using Deductive Thematic Analysis (DTA) from Teesside University, School of Health and Social Care research ethics committee (028/18) and South Tees Hospital NHS Foundation Trust Research and Development. All participants provided informed consent.

Participant selection

Individuals with a primary or secondary diagnosis of lung cancer who had undergone a lung resection within the previous 18 months and were discharged one to two days following surgery were identified from the thoracic surgery database at South Tees Hospital NHS Foundation Trust. An invitation letter and patient information sheet was mailed to the 18 individuals identified as meeting these criteria. Individuals were requested to phone a researcher to arrange a convenient time and location to provide informed consent and for the interview to take place. If no response was

received within two weeks, a reminder letter was issued.

Data collection

Face-to-face interviews were conducted in nine patients' homes by one of two researchers (P Watson, C Milburn) who were not healthcare professionals. The interviews lasted approximately 20–35 minutes (median 24 minutes). The thoracic surgery team (surgeon, physiotherapist and two nurses) contributed to the interview schedule (*Table S1*). Data saturation occurred following eight interviews and was confirmed in the ninth.

Demographic information was documented. Details on health and cancer diagnosis, the date and type of surgery, length of hospital stay, and hospital readmissions were recorded from the thoracic surgery database. Contact with health care professionals post-surgery was self-reported.

Data analysis

All interviews were recorded and transcribed verbatim by a professional transcriber. The data was stored and organised using computer software (QSR NVivo version 10; QSR International, Doncaster, Australia) and analysed using DTA. The analysis followed a six-step procedure (12). Stage 1: familiarisation—PW immersed herself in the data by repeated reading of the transcripts. Stage 2: generating initial codes—Applying the framework used in the interview schedule PW developed the preliminary list of codes, documenting what is relevant/interesting about the data. Additional codes were generated if new issues were identified. Stage 3: searching for themes—PW and SH confirmed the coding in two transcripts before PW organised the long list of different codes into overarching themes. Stage 4: reviewing themes—PW and SH reviewed and refined the themes to ensure that data within each theme was coherent. Stage 5: defining and naming themes—PW and SH checked all the data extracts coded under each theme. Thematic mapping was used to reflect the legitimacy of the themes within the context of the entire data set. PW, SH, FB and JD agreed the definitions of themes. Stage 6: writing the report—SH selected data extracts to support each theme and organised these to provide a logical account of the data (12).

Findings

Demographic, health, diagnosis and intra and post-operative

information is displayed in *Table 1*. Five overarching themes were identified and are described below. Additional quotes to support each theme appear in *Table 2*.

Motivators for hospital discharge

Patient narratives described the hospital as “noisy” and all individuals were eager to return home as soon as possible “I’d had a disturbed night so probably glad to get home” (ID 2). Despite positive views of staff “he’s [surgeon] very nice and the nurses were great” (ID 3) concerns about acquiring an infection were expressed and people felt better able to manage their personal hygiene at home “you can pick up bugs by being in hospital” (ID 5) “I like to be at home because I can keep myself neat and clean” (ID 3). Patients desired to free-up bed space and not to burden staff “I always feel as if I’m being a bit of a nuisance if I’m in hospital.” (ID 1).

Evolving feelings about early discharge

Narratives emphasised that upon hospital discharge the majority did not feel dismissed from care but rather the decision to be discharged was made collaboratively with surgeons and ward staff “it was my decision, I didn’t have to go, they weren’t chucking me out or anything” (ID 8). Patients trusted surgeons and were reassured by their recommendations “I trusted him [surgeon], for all I didn’t know him” (ID 6). That said, whilst some patients expressed delight at being told they could go home “I was pleased, obviously, get me out of here” (ID 7), others were anxious “I was a bit apprehensive, no doubt about it” (ID 9). Patients also recalled family members concern “I think he [husband] was more worried than I was” (ID 8). Even those keen to be discharged expressed concerns when faced with caring for themselves “I couldn’t put the clothes on, I was trying to get dressed, I had no assistance whatsoever” (ID 7) provoking feeling of doubt about the appropriateness of leaving hospital early “have I done the right thing?” (ID 1). Patients reflected on the reassurance they would have received from staff had they still been in hospital. “I could have said to the nurse or somebody, you know, so is this normal after that operation” (ID 8). Patients were comforted by having the ward phone number to call, although most were reluctant to do so unless pain became severe “it [pain] wasn’t bad enough to have to phone someone up and ask” (ID 8).

Coping at home post-surgery

Pain

The initial days post-discharge were described as “very

sore” (ID 2) but the majority reported pain as resolving within a few weeks. However, one patient described pain as increasing in intensity “after I’d been home for, I’d say two weeks, I had a lot of pain” (ID 9). Individuals assigned pain to problems sleeping “I couldn’t sleep, I couldn’t lay on this side” (ID 4) and eating “The thought of eating made me sick” (ID 6). One female patient described the pain as being “right on your bra line. So, of course, you can’t put a bra on” (ID 6) provoking feelings of self-consciousness and reluctance to leave the house.

Despite pain, most were reluctant to take medications due to unpleasant side effects “I knocked the strong ones on the head and just carried on with paracetamol. Because, of course, then the painkillers have their own side effects” (ID 5). Instead, patients would opt for other ways of managing their pain “having a nice warm bath, and that didn’t half feel good” (ID 4).

Activity

Some considered recovery and activity to be facilitated by being discharged early from hospital “I’d have just been sat in that bed in the hospital. Whereas, I came home, yes, I used the stairs, it was slow. I was walking around here, I was walking out there” (ID 7). However, others expressed fear and found completing daily activities difficult “Yes, I couldn’t really do a lot, you know, and I was frightened, I think, to stretch too much and, you know” (ID 4) “going out was terrible. That took a while” (ID 6). In part, worry may be due to the limited information patients felt was provided at hospital discharge “they didn’t go into, you know, into detail, but just, she’s got to take it easy” (ID 5).

The role of family members

At the time of discharge individuals described struggling to retain information and felt family members should be included in discussions. “it’s nice to have somebody there that takes them bits in that you haven’t actually took in” (ID 4). Patients described significant reliance on family members for basic activities of daily living, such as getting washed and dressed and motivation for exercise “He [husband] was definitely helping me dress or undress” (ID 8), “well the main thing she did, was make me get up and walk.....I wouldn’t have done it without her” (ID 6).

Long-term recovery

Most people described not being able to get back to the things they were once able to do, despite it being at least nine months since their operation “I enjoy my gardening, you know, I have forty tubs, baskets and everything, but yes, I’ve

Table 1 Demographics, health and diagnosis and intra and post-operative information

Subject ID.	Demographics			Health and diagnosis				Intra-operation			Post-operation							
	Age (years)	Gender	Ethnicity	Lives with	Employment status	Smoking Status	Pack years	Spirometry [FEV ₁ L (%pr)]	Co-morbidities	TNM cancer stage-ECOG status	Tumour type	Lobe	Date of surgery	Type of surgery	Length of stay	Re-admittance (date)	Ring ward/ GP/ nurse input	
1	75	M	White British	Alone with family support	Retired	Ex-smoker	10	3.27 (107%)	OA, previous MI	T1a N0 PLO	Invasive adenocarcinoma	Right	June 17	VATS lobectomy	2 nights	No	No	Yes
2	77	F	White British	Husband + daughter	Retired	Ex-smoker	19	1.77 (96%)	Hypertension, Hypothyroidism	pT2a N0 R0	Adenocarcinoma	Left	Dec 16	VATS lobectomy	1 night	No	No	Yes
3	65	F	White British	Spouse	Retired	Ex-smoker	48	1.68 (59%)	Crohn's disease Previous lung cancer	T1a	Adenocarcinoma	Right	Dec 17	VATS radiolabelled nodule excision	Same day discharge	No	No	Yes
4	65	F	White British	Alone with family support	N/A	Ex-smoker	4	1.87 (70%)	COPD, arthritis	T1a N0 M0 R0	Adenocarcinoma	Right	Nov 16	VATS lobectomy	1 night	Yes - Dec 16	No	Yes
5	68	F	White British	Spouse	N/A	Ex-smoker	2	NA	Bowel cancer	pT2 N2 R0	Adenocarcinoma	NA	Dec 16	Robotic lingulectomy	1 night	No	No	Yes
6	70	F	White British	Daughter	Retired	Smoker	63	1.2 (57%)	COPD	T1a N0	Adenocarcinoma	Right	June 17	Open lobectomy	1 night	No	No	Yes
7	65	M	White British	Spouse	Retired	Ex-smoker	30	2.61 (72%)	Pacemaker	T1a N0	Squamous cell carcinoma	Left	Nov 17	VATS radiolabelled wedge resection	1 night	No	Yes	Yes
8	73	F	White British	Spouse	Retired	Never	0	1.84 (88%)	Previous bowel cancer, Heart bypass	Colorectal met	Carcinoid	Left	Oct 16	VATs wedge resection	1 night	No	No	Yes
9	73	F	White British	Spouse	Retired	Ex-smoker	11	1.91 (111%)	Autoimmune hepatitis	T1a N0 M0	Adenocarcinoma	Right	Mar 17	VATS Lobectomy	2 nights	No	Yes	Yes

NA, not available and indicates missing information; FEV₁, forced expiratory volume in one second; ECOG, Eastern Cooperative Oncology Group; OA, osteoarthritis; COPD, chronic obstructive pulmonary disease; VATS, video-assisted thoracic surgery.

Table 2 Patient quotes to support each overarching theme

Theme	Quotations
Motivators for hospital discharge	<p>"I just think sometimes there's some people in there worse than what you are and that gets you a bit, you know, a bit depressed, you know, but no, I felt loads better coming home". (ID 4)</p> <p>"I also think there's a lot of people that need to be in hospital, especially people who have nobody when they come out. Why should I block a bed when there's no need to" (ID 3)</p> <p>"Well I was a bit surprised but I was quite willing to go home because I felt great". (ID 1)</p> <p>"You do [sleep better at home]". (ID 2)</p> <p>"I thought, oh, you know, because it just seemed a bit of a big operation really for, you know, to go home that day, but I was alright when I came home really, you know". (ID5)</p> <p>"Oh yes, yes very pleased". (ID 6)</p> <p>"As much as I like hospitals because they look after you, I was in a ward full of, I'm saying old men, I'm sixty-five plus, but coughing, breaking wind, etc., it's not pleasant. (ID 7)</p> <p>"So I just thought, oh great, you know, it would be great if I could go home, you know". (ID 8)</p>
Evolving feelings about early discharge	<p>"We were just sat chatting I still think I felt rough and she said to me, I think you could go tomorrow, you know. And I said, you know, that would be great". (ID 1)</p> <p>"I was just, I was so glad it was all over". (ID 2)</p> <p>"Wonderful, I'd far rather be at home than being stuck in a ward all day". (ID 3)</p> <p>"I thought, oh, it just seemed a bit of a big operation really to go home that day, but I was alright when I came home really". (ID 4)</p> <p>"I didn't think, oh my god, you know, they're shipping me out and what if, what if, type of thing". (ID 5)</p> <p>"I was told I could ring the ward any time if you had any pain or any worries and I had to, it was good that I could do that." (ID 7)</p>
Coping at home post-surgery	<p>"Climbing out of bed here, I had to get the wife to help me out of bed and help me get dressed." (ID 7)</p> <p>"I could potter around the house, I couldn't have gone shopping, I think I'd have needed help." (ID 6)</p>
The role of family members	<p>"If I said, do so and so, of course he would do it, you know. The one thing I couldn't do mind, when I think about it, I couldn't lift anything heavy. He still has to do most of the lifting." (ID 9)</p> <p>"I'm a very lucky man, I know I'm very lucky, very lucky. I've got good family around me and didn't want for anything."(ID 8)</p>
Long-term recovery	<p>"I mean I still do all my own housework, I do my own gardening, my husband helps me" (ID 2)</p> <p>"I won't walk up hills, you know, I just can't. But that's because I've put weight on, that's not helping". (ID 8)</p> <p>"I do occasionally get short of breath but I've found, rather than, I think it's with having two, you know, the both, I've found that I'm alright walking but it seems to affect me more when the weather's bitterly cold". (ID 3)</p> <p>"Before I had the op they did say I had COPD, as soon as I had the op though it's flared it right up, you know, and every other month I'm ending up on antibiotics and steroids. So that's pretty much every other month I'm having them now". (ID 4)</p> <p>"I'm back to normal. I'm back to smoking and all sorts". (ID 6)</p> <p>"I've always been a good walker. And now I can't, I can't walk as far. I'm alright on the flat, that's why we had to move from a house to a bungalow because I couldn't cope with the stairs." (ID 5)</p>

just got to take my time. I can't do what I used to do" (ID 7). "I can't go on the long dog walks and I would like to" (ID 8). Lasting limitations maybe a consequence of co-morbidities and poor general health with many patients suffering from breathlessness "I do occasionally get short of breath but I've found, rather than, I think it's with having two [lung cancer and chronic obstructive pulmonary disease (COPD)], you know, the both." (ID 3) "I'm more breathless now than I was before but I think it's because I'm overweight" (ID 2). However others were back dancing and swimming within six weeks "I mean I go line dancing" (ID 9).

Discussion

This is the first qualitative study investigating the perceptions of individuals with a diagnosis of lung cancer on early discharge following a lung resection. All patients were eager to be discharged from hospital as soon as possible, driven by a desire to be at home, trust in the surgeon and stoical attitudes resulting in reluctance to occupy healthcare services for longer than necessary. That said, feelings of anxiety were prominent when faced with managing activities of daily living at home and family members were heavily relied upon for physical and emotional support. The availability of the ward telephone number to call provided some reassurance but most viewed it only for use in extreme circumstances. Initial re-engagement in social activities and participation in activity outside the home was hindered by pain, feelings of self-consciousness, fear of infection and co-morbidities.

Reasons for desiring a quick discharge from hospital and stoical attitudes about not wishing to use NHS resources are consistent with the narratives of other patient populations, such as those with COPD, who also tend to be older adults and from lower socioeconomic backgrounds (13). Such attitudes may be driven by experiences of stigma caused by perceived culpability (smoking behaviour) and leading to patients feeling undeserving of healthcare resources (14).

Patients' willingness for early discharge was bolstered by the high regard in which the surgeon who had performed their operation was held. It is common for older adults to perceive medics as figures of authority to whom they are happy to grant decisional power (15). However, feelings of trust are also established through shared-decision making which is a feature of good clinical care (16) and has an important role in promoting patient autonomy, necessary for successful self-management. As in other types of cancer the majority of individuals were happy to be discharged (7-9)

and most felt they had been part of the decision-making process meaning they did not feel dismissed or abandoned. Yet, others harboured reservations and strategies to promote feelings of security were necessary to enable readiness for discharge (i.e., providing a ward telephone number) (10). Although this may be enough to quell most anxieties a scheduled follow up phone call appears necessary as many patients were unwilling to initiate contact and bother healthcare professionals.

Shorter hospital stays place a greater care burden on family members and yet, carers are rarely included in discharge consultations due to time-restraints (11). Offering more information and support post-discharge may promote the continued use of pain medications and enable healthcare professionals to address other concerns (i.e., infections) enabling activity to be resumed more quickly and accelerating recovery. The promotion of activity is particularly important in this population who present with a high number of co-morbidities.

This study has three main limitations. Firstly, the small number of participant interviews limits the findings from this study, despite data saturation being reached. Secondly, patients underwent a variety of surgical procedures and rate of recovery will vary dramatically. Thirdly, it is likely that those who responded to the invitation to participate in an interview had a positive experience of surgery, hospital and discharge potentially biasing results. Fourthly, there was reliance on patient recall and perspectives of the experience may have changed over-time. However, non-healthcare providers conducted the interviews meaning patients could express any concerns openly.

Conclusions

Early discharge following surgery for lung cancer was acceptable to the majority of patients, although pain and anxiety were experienced by most in the initial weeks after returning home, hindering activity and placing a significant burden upon carers. A follow up phone call maybe necessary to mitigate fears and encourage activity.

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Footnote

Conflicts of Interest: All authors have completed the ICMJE uniform disclosure form (available at <http://dx.doi.org/10.21037/jhmhp.2019.06.05>). The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. Approval was obtained to conduct a qualitative study design using Deductive Thematic Analysis (DTA) from Teesside University, School of Health and Social Care research ethics committee (028/18) and South Tees Hospital NHS Foundation Trust Research and Development. All participants provided informed consent.

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Table S1 Interview schedule

Emotions during and after discharge

When did you have your operation?

Can you please tell me a bit about your lung operation and what happened afterwards?

When talking to the consultant about your operation were you given any indication of how long you were likely to be in hospital?

How did you feel when you were told you would be discharged from hospital after your lung operation? Consider prompts; happy, relieved, anxious, worried

Did it feel like you were being discharged too soon or were you ready to go home? What makes you say that?

Can you tell me a bit about the first few days at home? How did you feel? Did your feelings change when you arrived home?

Support

Were you asked what support you had at home?

What support did you have after being discharged from hospital? Prompts family and clinical staff?

Infection and complications

Did you experience any infections or other complications after leaving the hospital and returning home? Can you describe them? How did that make you feel?

Did this result in another admission if so?

Pain

During the time while you were in hospital and before discharge were you given any pain medication? If so what was it and were you able to take it home with you?

If answered yes, did it aid the pain?

Did you have any pain in the first few days after being discharged from hospital after your lung operation? If so how long did it last and did you need any medication or seek medical advice?

Do you still experience pain when doing day-to-day activities? E.g. walking up stairs, opening a cupboard? If so could you describe the pain? How long after your operation did that pain disappear?

Does the pain affect your normal breathing pattern? How?

Are you able to exercise and take part in activities? If not, why not? Prompt does this make the pain worse or better?

After discharge have you been able to speak to anyone about the pain that you are or have experienced? Who? What advice did they offer? How did you feel about that advice?

Before discharge, did you receive any education on ways that could help manage the pain at home, if so what information were you given?

Were your close family/partner also given advice on how to help manage the pain at home?

Pain management—if experienced any

After being discharged, how well did you manage the pain? In what ways did you manage the pain?

Were family members at home to help after discharge? If so how did they aid you? How did that make your feel?

To manage the pain better in your opinion should an intervention including education involving aiding the pain and exercises be put in place, either one to one or in a group setting? What are your thoughts on this?

If the intervention took place would it benefit you if a partner or family member attended to become educated also? If so why?

Finish Q. Thank you for your time, is there anything I haven't asked about your returning home after your lung operation that you think I should know and you would like to add?
