

'One-stop shop': lung cancer patients' and caregivers' perceptions of multidisciplinary care in a community healthcare setting

Satish K. Kedia^{1,2}, Kenneth D. Ward^{1,2}, Siri A. Digney¹, Bianca M. Jackson¹, April L. Nelligan¹, Laura McHugh³, Kristina S. Roark^{2,3}, Orion T. Osborne², Fayre J. Crossley^{2,4}, Nicholas Faris^{2,3}, Raymond U. Osarogiagbon^{1,2,3}

¹School of Public Health, University of Memphis, Memphis, TN, USA; ²Focus Group Task Force, Thoracic Oncology Research Group;

³Multidisciplinary Thoracic Oncology Program, Baptist Cancer Center, Memphis, TN, USA; ⁴Alliance for Nonprofit Excellence, Memphis, TN, USA

Contributions: (I) Conception and design: SK Kedia, KD Ward, L McHugh, KS Roark, OT Osborne, FJ Crossley, N Faris, RU Osarogiagbon; (II) Administrative support: SK Kedia, KD Ward, L McHugh, KS Roark, N Faris, RU Osarogiagbon; (III) Provision of study materials or patients: L McHugh, KS Roark, RU Osarogiagbon; (IV) Collection and assembly of data: SK Kedia, KD Ward, SA Digney, BM Jackson, AL Nelligan, RU Osarogiagbon; (V) Data analysis and interpretation: SK Kedia, KD Ward, SA Digney, BM Jackson, RU Osarogiagbon; (VI) Manuscript writing: SK Kedia, KD Ward, SA Digney, BM Jackson, N Faris, RU Osarogiagbon; (VII) Final approval of manuscript: All authors.

Correspondence to: Raymond U. Osarogiagbon, MBBS. Thoracic Oncology Research Group, Baptist Cancer Center, 80 Humphreys Center Drive, Suite 220, Memphis, TN 38120, USA. Email: rosarogi@bmhcc.org.

Background: Multidisciplinary care is rarely practiced in community healthcare settings where the majority of patients receive lung cancer care in the US. We sought direct input from patients and their informal caregivers on their experience of lung cancer care delivery.

Methods: We conducted focus groups of patient and caregiver dyads. Patients had received care for lung cancer in or out of a multidisciplinary thoracic oncology clinic coordinated by a nurse navigator. Focus groups were audiotaped, transcribed, and analyzed using Creswell's 7-step process. Recurring overlapping themes were developed using constant comparative methods within the Grounded Theory framework.

Results: A total of 46 participants were interviewed in focus groups of 5 patient-caregiver dyads. Overlapping themes were a perception that multidisciplinary care improved physician collaboration, patient-physician communication, and patient convenience, while reducing redundancy in testing. Improved coordination decreased confusion, stress, and anxiety. Negative experience of serial care included poor communication among physicians, insensitive communication about illness, delays in diagnosis and treatment, misdiagnosis, and mistreatment. Physician-to-physician communication and patient education were suggested areas for improvement in the multidisciplinary model.

Conclusions: Multidisciplinary care was perceived as more patient-centered, effective, safe, and efficient than standard serial care. It was also believed to improve the timeliness of care and equitable access to high quality care. Additional studies to compare these perspectives to those of other key stakeholders, including clinicians, hospital administrators and representatives of third party payers, will facilitate better understanding of the role of multidisciplinary care programs in lung cancer care delivery.

Keywords: Quality of care; multidisciplinary model; serial care model; patient-centered care; focus groups; qualitative analysis

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Introduction

Lung cancer accounts for 27% of all US cancer-related deaths. The 5-year survival of all patients diagnosed annually has only increased from 12% to 17% over the past 4 decades (1). These dismal statistics reflect disease biology, but also the inherent difficulty of caring for patients with lung cancer, who are often enfeebled by cumulative age- and tobacco-related co-morbidities (2,3). In addition, care delivery is complicated because diagnosis, staging, and treatment require the involvement of multiple physicians with widely different skillsets, any of which may or may not be appropriate for individual patients (4).

The prevailing standard of care for lung cancer involves serial determination of patient needs by sequential referrals to specific care providers, including interventional radiologists, pulmonologists, thoracic surgeons, medical and radiation oncologists, and palliative care specialists. This serial care model, if not carefully coordinated, can introduce significant delays in care, and potential mismatches between patient needs and provider skill-sets (5-7). Theoretically, the multidisciplinary care model can mitigate this risk, and has been almost universally recommended as a means of improving the quality of care for cancer (4,5,8,9). However, the value of this model of care delivery has not been clearly established (10-12).

As a preliminary step towards a comparative effectiveness evaluation of serial and multidisciplinary care, we sought to understand patients' perceptions of both models. Specifically, we attempted to elucidate patients' and their caregivers' experience of care within the two models, perceptions of barriers to implementing multidisciplinary care, and meaningful benchmarks with which to measure the quality of lung cancer care delivery.

Methods

With the approval of the Institutional Review Boards of the Baptist Cancer Center and the University of Memphis, both in Memphis, Tennessee, USA, we conducted focus groups of patients undergoing care for lung cancer, and their informal caregivers.

The Multidisciplinary Thoracic Oncology Program

The Multidisciplinary Thoracic Oncology Program consisted of a weekly half day clinic during which patients were concurrently seen by a thoracic surgeon, medical oncologist, and pulmonologist, with real-time radiology

support and coordination by a nurse navigator. All patients were also discussed in a weekly conference involving a larger group of medical and radiation oncologists, pulmonologists, thoracic surgeons, pathologists, radiologists, and palliative care specialists (13). Recommendations were recorded and communicated back to clinicians responsible for actual care, irrespective of their level of participation in the program.

Patient-caregiver dyads

Patients who had received care related to an established or suspected lung cancer diagnosis within or out of the multidisciplinary thoracic oncology clinic in this community-based healthcare system in the preceding 6 months were invited to participate. Patients identified their specific informal caregiver, to form a patient-caregiver dyad.

Data collection

We conducted ten focus groups between March 2013 and January 2014. Patients and caregivers were separated in two different rooms to participate in the focus groups. A moderator and a note-taker introduced the study, obtained informed consent, conducted, audiotaped, and took notes on the focus group discussions. Each session was moderated by a Medical Anthropologist or Clinical Psychologist unaffiliated with the healthcare system. Participants were reassured of anonymity and confidentiality, in order to facilitate frank discussion. A standardized script was used to ensure consistency of questions across all focus groups. Each session lasted about 1-2 hours, resulting in over 15 hours of tapes and 256 pages of transcripts. Eight focus group sessions were conducted on the campus of the Baptist Memorial Hospital in Memphis. In order to provide the perspectives of patients from a rural environment distant from the location of the multidisciplinary clinic, we conducted two sessions in Grenada, Mississippi. The number of focus groups was not pre-specified, but rather was based on attainment of saturation in emerging themes.

Data analysis

We used verbatim transcripts of the audio recordings and field notes to analyze the content of each focus group session. Data were analyzed using Dedoose Software version 5.0.11, a web-based application for managing, analyzing, and presenting qualitative and mixed method research data (SocioCultural Research Consultants, LLC,

Table 1 Participants' demographic characteristics

Characteristics	Patients (n=22)	Caregivers (n=24)
Gender		
Male	10	6
Female	12	18
Race/ethnicity		
Caucasian	15	17
African American	7	7
Education		
High school	11	7
College	9	12
Post-graduate	2	5
Treatment status		
Active	9	
Completed	13	

Los Angeles, CA, USA). The software allows hierarchical linkage of codes for clear visualization of data structure. Three research team members independently reviewed these transcripts and developed a consensus plan to identify recurring themes and variants, using Dedoose. Collaborative coding, data reduction, display, and interpretation were conducted using Creswell's 7-step analysis framework (14). Overlapping themes were given greater emphasis than non-overlapping themes. All initial codes and categories were sorted and compared until core categories of recurrent themes emerged as a basis for Grounded Theory (15).

Reliability and validity

We took steps to ensure rigor in the qualitative data collection and analysis. 'Credibility' (internal validity) was accomplished through member checking by asking participants in subsequent focus groups about topics mentioned during previous sessions; to increase 'transferability' (external validity), verbatim transcripts were used during data analysis to truly reflect the life-experiences of participants in their own words; 'dependability' (reliability) was enhanced by continual audits of transcripts against field notes and by research team members developing a consensus plan to ensure consistency throughout the data analysis process; finally, 'confirmability' was accomplished by using participants' own words to support each theme, with multiple researchers considering the context and appropriateness (16,17).

Results

We conducted ten focus groups involving five patient-caregiver dyads, including 22 patients and 24 caregivers (one caregiver attended without a patient, and one patient attended with two caregivers). Patients had either completed treatment for lung cancer within 6 months or were actively undergoing therapy (*Table 1*). They covered the spectrum from early stage, with curative treatment intent, to advanced stage with palliative care. Several themes emerged from these qualitative analyses, which are summarized under subheadings, with illustrative quotations (*Tables 2,3*).

Perceptions of multidisciplinary care

Physician collaboration

Participants preferred multiple specialists working together as a team to decide on the best plan of care. They believed that more input from different specialists decreased errors and confusion, resulting in a higher level of trust in the final treatment plan. Some felt that the multidisciplinary model provided a built-in second opinion (Theme [A] in *Table 2*).

Efficiency

Participants described how the amount of time dedicated towards travel, waiting for appointments, tests, and visits was reduced in the multidisciplinary care model. They preferred committing an entire day out of their schedule to see all the doctors to having their doctor visits stretched out over time. Participants reported how tests, such as CT, PET, or MRI scans, could be done efficiently and the results made available to all physicians. By coordinating these tests, they would not have to be repeated when a patient sees another specialist. Others described how the time dedicated towards cumbersome, repetitive paperwork may be reduced by only going to one location (Theme [B] in *Table 2*).

Patient-physician communication

Open and active patient-physician communication during the diagnosis and treatment process was deemed essential by many participants. This more active form of communication provided a sense of comfort. Patients and caregivers appreciated how they were always kept informed about succeeding steps and possible expectations so that they could better prepare for outcomes. The amount of one-on-one time spent between the patient and physician during an appointment was deemed to be vital. Patients and caregivers appreciated the sensitivity of the providers

Table 2 Sample patient and caregiver quotations in reference to multidisciplinary care

Theme	Patient	Caregiver
[A] Physician collaboration	<p>'No one has all the answers. A team is a lot better than an individual mind.'</p> <p>'After they explained everything, I didn't need a second opinion and went right on with the treatment.'</p>	<p>'That's why I like what we've got here now. When they did the biopsy everybody was on board. My primary care physician is back in the loop, our pulmonologist is back in the loop, but he's also with the group more or less. Everybody's all back on one thing. Personally a multidiscipline approach to anything like that far exceeds running here to Joe Smith to Sam Harris down the road down there.'</p>
[B] Efficiency	<p>'A lot of people come to Memphis from out of town for their medical, from far away, actually, and maybe to have it all on one day in one place is a lot easier for them than to try and find their way around everywhere else also.'</p> <p>'He sent me to the hospital, and when I got there, they had my records. They had everything, because doctor (in multidisciplinary clinic) or someone in his (group) had arrangements and prepared them for him.'</p> <p>'I do like the one concept, have not to go to different—because then you gotta start all over. You know what I hate to go in to a doctor is that catalogue of paperwork you have to fill out.'</p>	<p>'If I'm gonna take a day and take her to the doctor, I think she would feel better to see two or three doctors in one day than to have an appointment this week, and then next week somebody gotta take some time out of their schedule.'</p> <p>'No, she doesn't have to go here for her tests and there. Doctor (in multidisciplinary clinic) basically does all of her (tests). If she need that information when she go to doctor (non-multidisciplinary participating physician), he'll get in touch with doctor (in multidisciplinary clinic).'</p>
[C] Patient-physician communication	<p>'I mean doctor (multidisciplinary clinic) was very clear about what to expect so that I didn't have any scary, unpleasant surprises going forward. In fact, they prepared me for the worst-case scenario, and I'm not—I didn't get sick at all, but I was prepared in case I got sick.'</p> <p>'I felt more like a cow getting branded (serial care experience) versus me going in to see (multidisciplinary care doctor) and all them down there. When I went in there, I felt more human. I felt more as a patient, when I went in there, I felt at ease.'</p>	<p>'She's been kept very well-informed of like how long the chemo—because her first chemo took eight hours. She got there at 8:00 in the morning and left at 5:00. She knew that goin' in, that it was gonna be an all-day thing.'</p> <p>'I never heard anybody that so carefully gave the odds in a way that was somehow reassuring even though, you know, and the comparison of what your chances were if you took this treatment and if you took another treatment.'</p>
[D] Central point of contact	<p>'It ain't like gasoline. You can't go from one station to another.'</p>	<p>'With this, being able to walk into one place and all your doctors are there. You don't have to make appointments; you don't have to chase 'em down; you don't have to sit here an hour, go there an hour, go there an hour, take up a whole week. You're there.'</p>
[E] General satisfaction	<p>'I'm totally happy with my course of treatment. I feel like the doctors, doctor (multidisciplinary clinic doctor), called in the doctors he thought were necessary to look at me. I felt very well taken care of and I know that humans make mistakes but I feel like the man's got my best interest at heart. I feel really taken care of.'</p>	<p>'I'm impressed with all the caregivers and nurses (in multidisciplinary clinic), how kind they are, how thoughtful they are. I think that's made a lot of difference in how she feels about the care she's getting.'</p>
[F] Opportunities for improvement	<p>'I believe he gonna either won't have time to just focus on one patient, and then go to next patient. The time is cut real short.'</p> <p>'It looks like there's a system, but not everybody knows it's there.'</p>	<p>'There's more work to do, but I think the communication piece between the surgeon and the oncologist is where I can see this whole process a little more, it needs to tighten up. It wasn't made clear to us until, like I said, well into the process. It would be nice if in this group if we knew—for instance, we don't know who the pulmonologist is in that group, because obviously that would be the ideal person to be treating her as well.'</p>

Table 3 Sample patient and caregiver quotations in reference to serial care

Theme	Patient	Caregiver
[A] Patient-physician communication	<p>'Anyway, last year, I did my routine CAT scan, and he called me on the phone and told me, the cancer's back into both lungs. You have stage 4 lung cancer. You're gonna die in ten months.'</p> <p>'I wanted to tell you something. You have cancer, but in the lung. All your other stuff you have will kill you before the cancer will. That was his answer for me.'</p> <p>'Really, I ain't had no one-on-one—sit down and really had a one-on-one examination—because he's so busy, he'll look at my chart, ask me a few questions, then he'll say, "I'll be right back." Right back, no, and I'm waiting and waiting, and the next thing I know, you're setting up another appointment. Another appointment and it's the same thing, so I don't know.'</p>	<p>'Phone rang. It was the pulmonary doctor. They had found it. I just knew they were gonna say, "Blood thinner caused it," whatever. He said, "She has cancer." I said, "Oh my God. Doctor did you tell her?" I wasn't there is what bothers, is what I'm telling you the worst situation for me.'</p>
[B] Physician-physician communication	<p>'Now, had my pulmonologist seen my result, he told me later, he would've known that. However, my old oncologist also told me there was no reason for me to see my pulmonologist anymore. So he was out of the loop.'</p> <p>'This doctor gives you some pills, and doctor doesn't even read the thing what kind of pills you're taking and so you take some other stuff. One is not good with the other. Then it goes on and on and on.'</p>	<p>'My past pulmonologist told her she didn't need to see him anymore.'</p> <p>'They don't work together, it's kind of like on all of her medicines, one will take her off, one will put her back on.'</p>
[C] Inefficient use of time	<p>'One place. I don't like to be driven different places if I can just rather than go up all the way to Memphis or somewhere else. It's just so hard on me to go from here to Memphis.'</p> <p>'But I had to go through a lot of tests before they would do the surgery. That was what, I think, bothered me the most because it seemed like it took forever to get through all the testing before they did the actual surgery. I just wanted it over with.'</p>	<p>'We had a PET scan, I can't even remember. Was it last week, and we're not getting in to the other oncologist until the end of the month. That's an awful long time.'</p> <p>'We kept going back for tests.'</p> <p>'("I need to see doctor so and so", and they say, "Well, you know, it'll be a month".'</p>
[D] Misdiagnosis and mistreatment	<p>'When multidisciplinary clinic doctor pulled up that old PET scan, my cancer was there then, but nobody told me which put a chip on my shoulder, I guess. I know that's not what I was there for. I was there for what was going on in my inner ear. Nevertheless if you're a health care worker and you're looking at something with a couple of black spots over here on the lung, somebody needs to know. I would have appreciated the information.'</p> <p>'See, I was told, when I was given that false diagnosis, and I said, "I don't want chemo," it's a good thing because I didn't have cancer, and it could have done harm, really.'</p>	<p>'The other oncologist said that, "it was too small to do a biopsy." A needle biopsy. He didn't ever mention any other type of thing. We of course had put our faith in this other particular oncologist, so the multidisciplinary clinic doctor did the biopsy. Come back. She had, it was the silliest sounding name and all. It's called Boop, B O O P. It's a biological organizing organic pneumonia in the lung.'</p>
[E] Need for a second opinion	<p>'My children made the decision that I needed a second opinion and the daughter who's a practicing physician was leading that pack.'</p>	<p>'We were trying to go on and find somebody else to give another opinion.'</p> <p>'They wanna go right on and do surgery. We didn't want to. We were trying to go on and find somebody else to give another opinion.'</p>
[F] Satisfaction	<p>'No, I knew what I was gonna get before I ever got there. I can't say anything but good about my whole situation as far as the staff I'm going to see. The treatment I've gotten from them, from the doctor and the clinic and everything, has been nothing but just A1.'</p>	<p>'Well, yeah, it took I think—after—it took 2 weeks for him to get that appointment there because it took about a week for him to get over here, and then it took another week to get to Memphis. They were moving pretty fast—moved pretty fast with it, yeah.'</p>

and how information was relayed in lay terms. This demonstrated the sincerity of the physicians and reassured the participants about prognosis, thus helping them to feel more at ease (Theme [C] in *Table 2*).

Central point of contact

Patients and caregivers preferred having a central point of contact to refer to for questions and scheduling appointments. They found it burdensome to have to seek care from multiple specialists. They preferred to have care decisions made at a central location rather than going from location to location, referring to the multidisciplinary clinic as a 'one stop shop'. This was seen as very convenient. For many, it reduced anxiety and confusion associated with scheduling several appointments with multiple doctors and not knowing who to refer to for questions (Theme [D] in *Table 2*).

General satisfaction

Participants were generally satisfied with the level of care they received in the multidisciplinary clinic. Patients reported "feeling a lot better" or "feeling good" after treatment and appreciated the patient-centeredness of care (Theme [E] in *Table 2*).

Perceptions of serial care

Patient-physician communication

The manner in which diagnosis and prognosis are communicated affected the care experience. Participants reported multiple incidents of insensitive disclosure of disease, such as when providers called patients on the telephone to inform them of the initial diagnosis of disease, rather than during a face-to-face office visit, which was deemed more appropriate. Some physicians seem too blunt and direct when explaining information to patients, which came across as insensitive or callous. Participants were largely dissatisfied with this style of communication. Some participants had difficulty gaining access to, and spending time with, their physicians. There were concerns about the lack of patient-physician dialogue due to lack of time. Some patients had difficulty discussing health concerns because physicians seemed hard to 'pin down' or never returned to the patient's room during office visits (Theme [A] in *Table 3*).

Physician-physician communication

Some problems within the serial care model were due to the lack of doctor-to-doctor communication. This included

failure to transfer medical records between healthcare establishments, to update patients' other physicians on their status, and failure to collaborate to develop a care plan. Patients were concerned about avoidable complications occurring because of poor communication between their specialists. Participants expressed concerns about the lack of oversight of prescribed medications. Different doctors prescribe medications that counter-act each other or produce side-effects. Many felt that this process would continue until the communication between providers improves (Theme [B] in *Table 3*).

Inefficient use of time

Participants discussed the general inconvenience and time-cost of dealing with multiple physicians in different settings, multiple appointments, and numerous trips to offices. This was especially difficult for out-of-town patients. Being involved with multiple specialists also contributed to delays in diagnosis and treatment. Patients had to wait longer for follow-up appointments since they had to adhere to physicians' schedules. Others experienced long delays, waiting for tests and results. This was unsettling to patients who were anxious to begin treatment (Theme [C] in *Table 3*).

Misdiagnosis/mistreatment

Some participants felt there was suboptimal evaluation when patients initially presented with symptoms, leading to under- or over-treatment, and even misdiagnosis. Conditions that could have been caught and treated early were not addressed by their physicians. Participants claim that they would appreciate such information, so that they could seek appropriate treatment in a timely manner. There were concerns that the lung cancer could have progressed during the time spent treating the wrong condition, or when the diagnosis was missed. Some patients reported being erroneously diagnosed with lung cancer and undergoing treatment, while some believed early tests that could have potentially revealed the lung cancer were ignored (Theme [D] in *Table 3*).

Need for second opinion

Participants generally desired a second opinion while under serial care, especially when patients were not comfortable with the initial diagnosis or treatment plan suggested. Many patients relied heavily on the opinions of their social support systems regarding second opinions, and were more likely to seek a second opinion if suggested by a caregiver or family member (Theme [E] in *Table 3*).

Satisfaction

Not all participants had a bad experience with serial care. Some participants were satisfied with the delivery of care provided through the serial care model. These participants reported having an open line of communication with providers, as well as a quick turnaround between appointments (Theme [F] in *Table 3*).

Opportunities for improving multidisciplinary care

Participants were encouraged to outline areas where the multidisciplinary clinic could improve.

Communication between doctors

Participants described room for improving communication between providers within the clinic, because of occasionally inconsistent messages relayed during the care process.

Amount of time spent with patients

Participants were also concerned about the possibility of limited one-on-one time between patients and physicians during office visits.

Clarity of model description and patient education about the model

Some participants were unaware that they were a part of the multidisciplinary clinic until later in the process. This information would have helped them better understand the logistics of the model, which was very different from their prior experience (Theme [F] in *Table 2*).

Benchmarks for model evaluation

To help us develop patient-centered benchmarks with which to measure the quality of implementation of the multidisciplinary care model, participants were asked to identify areas of highest priority to them. They identified clear, timely communication between physicians and patients/caregivers, consistency of physicians' messages, adequate consultation time, timely physician-to-physician communication, timely care, and ease of access to care.

Patient-physician communication should ensure that patients and caregivers understand the diagnosis and treatment plan in lay terms; alternative options and the reasons for recommending specific options must be explained; members of the team should spend sufficient time with patients to keep them informed and answer their questions. The timeliness of care was another critical

benchmark identified. The nurse navigator in the clinic was perceived as the key to alleviating problems with coordinating procedures, treatments, and appointments. Communication among physicians within and outside the multidisciplinary team was seen as pivotal in avoiding delays, conflicting messages, and redundant testing. To maximize benefit from the multidisciplinary care model, participants emphasized the need for easy access.

Discussion

Despite near-universal recommendation by experts (4,5,9,18), there is relatively little evidence to support the value of multidisciplinary care (10,12,19). Even the definition of 'multidisciplinary care' is highly variable, ranging from case discussions at tumor boards, to various formulations of group clinics at the other end of the spectrum (20). The practice is mostly limited to academic healthcare settings and other closed systems, such as the Veterans' Affairs Healthcare System. However, >70% of lung cancer care in the US is delivered outside such environments.

In order to bridge the gap between expert recommendation and actual practice of multidisciplinary care, it is important to understand the value of multidisciplinary care (and answer the question, 'why should it be done?'); expose the barriers to implementation (to answer the questions, 'why is it infrequently done?', and 'can it be done?'); and to determine how best to measure the key attributes of effective multidisciplinary care in order to enable optimal implementation (to answer the question, 'how should it be done?'), leading up to objective comparison to outcomes of standard serial care.

Prior reports have mostly covered provider perspectives on multidisciplinary care (21,22). However, care delivery systems exist to serve patients and caregivers. Patients depend on their caregivers for access to care, and caregivers share the emotional and financial burdens of sickness with patients (23,24). Their perspectives need to be considered carefully in any effort to develop effective and sustainable care-delivery programs.

The identified benefits of multidisciplinary care covered the Institute of Medicine's six aims of healthcare quality improvement (patient-centeredness, safety, efficacy, efficiency, timeliness, and equity) (25). This by itself justifies the effort needed to develop multidisciplinary lung cancer care programs within community-based healthcare systems. For example, the belief that multidisciplinary care

significantly improves the quality of communication about lung cancer, and patients' level of trust in their proposed management, to the extent that second opinions were deemed unnecessary, is clearly a patient-centered benefit.

A single point of contact addresses the domains of efficiency and patient-centeredness. Less redundancy in testing, and fewer doctor visits suggests greater efficiency of care. Mapping out the pathway of care early and emphasizing same-day scheduling potentially improves the timeliness of care. It may also improve the appropriateness of pre-treatment testing and treatment selection, which may in turn improve the efficacy of treatment. Participants' perceptions that the quality of care is better and the likelihood of mis-treatment is lower in the multidisciplinary care model, raise concerns about the safety and equity of care within the standard serial care model. Finally, access to more convenient and uniformly high quality care addresses the domain of equity.

In this qualitative study, we found that patients receiving care within a large, demographically and geographically diverse healthcare system, and their caregivers, strongly favor the multidisciplinary care model of lung cancer care delivery. Among other characteristics, the model was perceived to be more patient-centered and efficient. This suggests that establishing a multidisciplinary thoracic oncology program is likely to be favorably received by patients and their informal caregivers.

Limitations of this study include our qualitative, focus group-based approach which is subjective, relatively unstructured, and involves researchers' interpretations of themes from transcripts of discussions. To provide objectivity to the analysis, we used the same script for all focus groups and had three researchers independently review the transcripts before developing consensus on recurrent themes. Our relatively small sample size may not fully represent all lung cancer patients' and caregivers' experiences with multidisciplinary or serial care. However, our participants were demographically, socioeconomically, and geographically diverse, to help achieve diversity of perspectives. In addition, following the standards of Grounded Theory, we continued conducting focus groups until we reached the point of thematic saturation, when no new information was being discovered (15).

Although we broadly solicited subjects, it is possible that participants were skewed towards advocates of the multidisciplinary model; our findings may not be applicable to other patient and caregiver populations; lung cancer patients and caregivers may have different feelings towards

their care than those with other types of cancer; the providers associated with this particular multidisciplinary clinic may have appealed to the participants, so findings may be based on a provider effect, and not a model effect. However, our questions were open-ended, covered a wide range of topics, and elicited feedback on a variety of care logistics. Participants discussed infrastructural and efficiency benefits, including the value of the central point of contact, nurse navigation, and flexible but timely scheduling and referrals. This suggests that the favorable perceptions are generic.

Additional work is needed to critically examine the barriers to developing multidisciplinary care programs and to develop meaningful performance benchmarks for such programs from the perspectives of other key stakeholders, such as the different involved healthcare providers, institutional administrators, third party payers, and healthcare policymakers. These efforts will enable optimal development of multidisciplinary care programs that are feasible, effective, and sustainable within the usual practice environments where the majority of patients receive care for lung cancer.

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Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

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