

Dealing with the tension

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Dealing with the tension: how residents seek autonomy and participation in the workplace

Francisco M Olmos-Vega,^{1,2}  Diana H J M Dolmans,² Nicolas Vargas-Castro¹ & Renée E Stalmeijer²

CONTEXT The workplace can be a strenuous setting for residents: although it offers a wealth of learning opportunities, residents find themselves juggling their responsibilities. Even though supervisors regulate what is afforded to residents, the former find it difficult to strike the proper balance between residents' independence and support, which could create tensions. But what tensions do residents experience during clinical supervision and how do they cope with them to maximise their learning opportunities? Understanding how residents act on different affordances in the workplace is of paramount importance, as it influences their learning.

METHOD Residents from different levels of training and disciplines participated in three focus groups ($n = 19$) and 10 semi-structured interviews ($n = 10$). The authors recruited these trainees using purposive and convenience sampling. Audio-recordings were transcribed verbatim and the ensuing scripts were analysed using a constructivist grounded theory methodology.

RESULTS Residents reported that the autonomy and practice opportunities given by their supervisors were either excessive or too limited, and both were perceived as tensions. When in excess, trainees enlisted the help of their supervisor or peers, depending on how safe they recognised the learning environment to be. When practice opportunities were curtailed, trainees tried to negotiate more if they felt the learning environment was safe. When they did not, trainees became passive observers. Learning from each engagement was subject to the extent of intersubjectivity achieved between the actors involved.

CONCLUSIONS Tensions arose when supervisors did not give trainees the desired degree of autonomy and opportunities to participate. Trainees responded in various ways to maximise their learning opportunities. For these different engagement-related responses to enhance workplace learning in specialty training, achieving intersubjectivity between trainee and supervisor seems foundational.

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INTRODUCTION

The workplace can be a challenging setting for residents: although it offers a great wealth of learning opportunities,^{1–3} residents find themselves juggling their responsibilities, which can be daunting.⁴ Even though supervisors regulate what is afforded to residents, they often find it difficult to strike a balance between residents' independence and support, which could create tensions between them. But what tensions do residents experience during clinical supervision and how do they cope with them to maximise their learning opportunities? Understanding how trainees act on different affordances in the workplace is crucial, as it influences their learning.^{2,5}

In his co-participation theory, Billet acknowledges that workplace learning is conditioned by two interdependent factors: what the workplace affords to learners, and how the latter decide to act on these affordances based on their interest, intentions and capacities.² Active engagement in the workplace has been previously described to be a crucial element of learning in postgraduate and undergraduate medical education.^{6–10} However, learning opportunities are not equally distributed among all learners,² and what is afforded to the learner is overwhelmingly regulated by clinical supervisors.¹¹ They, in turn, find it difficult to strike the right balance between independent practice and support,^{12,13} a decision based on a multitude of factors.¹¹ In this regard, different conceptual models of gradual independence and workplace learning have been described previously, which include grades of supported participation,⁷ strategies to balance learners' independence and patient safety^{13,14} and pedagogic practices that supervisors can adjust to match students' training level.^{15,16} Nonetheless, scant attention has been paid to the question of how residents respond to such supervisory practices when these do not match their preferences, which could result in tensions during clinical supervision. Apramian and colleagues have described how residents must negotiate procedural variations with their supervisors, in an effort to access practice and discover their preferences and principles of practice.^{17,18} What they did not explore, however, is how residents decide to act on *both* invitational *and* restricted workplace affordances, and how these co-participation practices could maximise residents' learning opportunities. The purpose of this study is, therefore, to explore and understand tensions that

residents experience during supervision, and how residents cope with them to maximise their learning opportunities.

The research questions are:

- 1 What tensions arise between clinical supervisors and residents during clinical supervision in the workplace?
- 2 How do trainees decide to act on such tensions to maximise their learning opportunities?

METHODS

Methodology

We designed a constructivist grounded theory study to answer the research questions. As explained in detail in the following paragraphs, we follow the principal tenets of this methodology, which include: iterative data analysis and collection, theoretical sampling and data analysis using constant comparison methods.^{19,20} By following this methodology, we assured that our theory was grounded in participants' experiences. We chose constructivist grounded theory as the methodology because it allowed us to collect and analyse data systematically and generate empirically grounded conceptualisations that helped us answer our research questions.¹⁹ By using constructivist grounded theory, we could discern the why and the how of the social processes of residents' interactions with the workplace, and how they deal with invitational and restricted workplace affordances in relation to their learning. As the methodology is rooted in the constructivist research paradigm, analysis and interpretation of the data result from the shared experience between the researchers and the participants, whose views influenced the ultimate conceptualisations as presented in this manuscript.¹⁹

Reflexivity

Reflexivity refers to attending researchers' motives and preconceptions, as well as their position in relation to the participants, and how these factors affected the research process.²¹ In this respect, we provide information about the background of each researcher. The first author (FOV) is an anaesthesiologist who works in a teaching hospital and supervises undergraduate and postgraduate students; NVC is a doctor who, at the time of data collection and analysis, was completing his internship; and DD and RS are educationalists with

extensive experience in medical education research and qualitative methods. FOV holds a position as clinical supervisor in the research setting. He had direct contact with residents from the surgical disciplines but only supervisory interactions with all anaesthesia residents that agreed to participate in the study. We are aware that this power position could have influenced residents' decision to take part in the study and the subsequent results. To mitigate this influence, we assured anonymity of the results, researchers' triangulation and member checking, as we will explain in the next sections.

The study is part of a comprehensive PhD project of the first author. The overarching goal of the project is to explore and understand how supervisors and residents balance the tension between providing supervision and encouraging autonomy, and how residents learn from the supervisory interaction that is at the heart of such tension. The project follows a constructivist paradigm research approach throughout all the individual studies.

Existing literature on co-participation and workplace learning^{2,3,5} influenced the research process, including data collection and analysis, and provided sensitising concepts that informed the coding process and interview probes. Central to these frameworks is the fact that active participation in authentic workplace activities results in learning, which is the vision that guided our analysis.

Setting

We conducted the study at Javeriana University in Bogotá, Colombia, which has 19 programmes, with around 300 trainees working in the main teaching hospital, San Ignacio. Medical training in Colombia consists of a 6-year undergraduate programme that includes a final internship year. After completion of this 6-year programme, new doctors must first work in a rural area for over a year before being able to apply for specialty training. Depending on the discipline, specialty training can span from 3 to 5 years. Contrary to North America and Europe, residents only receive a small financial reward from their hospital, as they do not have a formal working contract with their employer. The reward could be as low as 100 dollars per month, with food subsidies to use within the hospital during day and night shifts. Some residents also receive a small remuneration of about twice the Colombian minimum wage paid by the government. In addition, residents must pay a tuition fee of about 5 000 American dollars each semester.

Data collection and analysis

We recruited residents from different levels of training and disciplines, both surgical and non-surgical, using purposive and convenience sampling. By using these sampling strategies, we assured a representative sample of residents that could cover all possible ranges of supervisory experiences, enriching and reinforcing the emergent theory. Having such a broad range of participants also secured transferability of the findings.²¹ FOV contacted each participant personally, explained the study objectives and invited him or her to be part of the study. Those residents that declined to participate told us that they did not have time in their schedule to attend the focus groups or to perform a semi-structured interview. We did not explore further reasons behind their negative answers.

For our data collection, we held three focus-group discussions with junior, intermediate and senior trainees, respectively, to have a broad range of opinions that could generate a great wealth of initial information.²² To foster the discussion and uncover the tensions, we used vignettes describing supervisory methods derive from the cognitive apprenticeship model.¹⁶ During the discussion, we initially explored to what extent residents' preferences regarding such methods matched supervisors' behaviour and if those circumstances resulted in tensions (see Appendix S1 available online). FOV acted as moderator of the discussions and NVC as an observer, taking notes of participants' dynamics and individual reactions. The focus groups were followed by semi-structured interviews, conducted by the first author, to explore the preliminary data categories in more depth. By using theoretical sampling, we decided which residents could provide experiences that could fill the gaps in the emergent theory. Discussions and interviews were audio-taped and transcribed verbatim for data analysis. We also included NVC's notes about focus group members' interactions for data analysis.

We collected and analysed the data in an iterative fashion. Initial *in vivo* coding and process coding were performed by FOV and NVC independently but were subsequently compared to reach consensus. *In vivo* coding refers to using participants' personal wording and language to code a fragment of data, whereas process coding involves using gerunds to connote action in the data. These two types of codes are part of grounded theory tradition, as they help the researchers to root the emergent theory in the data and to understand the social processes involved in it beyond a simple

description of the facts.¹⁹ Focused and axial coding allowed us to find emerging categories and their relationships using the principles of constant comparison.¹⁹ FOV, DD and RS discussed intermediate outcomes and conceptualisations to refine the final framework and determine if new data needed to be collected. Constant comparison during data analysis informed the semi-structured interview prompts to further explore the emerging theory. Using theoretical sampling we decided whether we had reached saturation; this occurred after the tenth semi-structured interview.¹⁹ After we had consolidated the results, we sent them to all participants for a member check and we received no further comments or changes. We used ATLAS.ti software v1.0.18 (From ATLAS.ti Scientific Software Development GmbH developer) to facilitate storage and analysis of the data. The first author wrote reflective memos that helped him with the interpretative analysis and served as a means of reflexivity throughout the research process.¹⁹

Ethical considerations

We obtained ethical approval from the Research Ethics Committee of Javeriana University and San Ignacio Hospital. Informed consent was obtained from all the participants. We coded all information that could potentially disclose the identity of participants so as to guarantee their anonymity in the results.

RESULTS

We interviewed a total of 25 residents aged between 25 and 33 years, 44% of whom were male and 56% female. We held three focus-group discussions with junior ($n = 7$), intermediate ($n = 6$) and senior trainees ($n = 6$). We also conducted 10 semi-structured interviews, three of which were with residents who had also attended the focus groups. See Table 1 for more details about participants' characteristics.

Our principal findings showed that residents experience two overarching tensions during their interactions with clinical supervisors in the workplace: supervisors gave trainees either too much or too little autonomy or too many or too few opportunities to participate. We found that residents associated the term *opportunities to participate* with procedural tasks, such as performing a surgery or putting in a central IV, and the term *autonomy* with decision-making tasks, such as

Table 1 Participant numbers by level of training and specialty programme

Programme	Level of training		
	Junior	Intermediate	Senior
General surgery	1	1	
Ophthalmology	1		1
Pathology	1		
Radiology	1	1	
Paediatrics	1		
Internal medicine		1	1
Geriatrics		1	
Anaesthesiology	2	2	3
ORL	1	1	
Gynaecology			1
Plastic surgery		1	
Urology			1
Neurosurgery	1		1
Total	9	8	8

deciding what drugs to use for anaesthesia induction or whether or not to order a diagnostic exam. Residents' responses to such tensions depended on how safe they perceived their learning environment to be. An unsafe learning environment was described as one in which the clinical supervisor was too frequently absent, bullied the trainees or created a hierarchical distance between them. Such conditions raised fears of supervisors' reactions if residents enlisted their help or sought their advice. In the following, we will describe these two overarching tensions placed on a continuum from a low to high degree of autonomy or opportunities to participate given to the trainee, and four responses to these tensions as depicted in Figure 1.

Perceived tension 1: Supervisors give too much autonomy and too many opportunities to participate

Being given too much freedom sometimes caused tensions in cases where residents did not feel prepared to take over the responsibility, either because the task was too complex or because the resident had not received the proper training to perform it. According to residents, such tensions arose when supervisors overestimated their level of experience, when a single supervisor was in charge of multiple residents at the same time, or in situations where trainees were expected to take

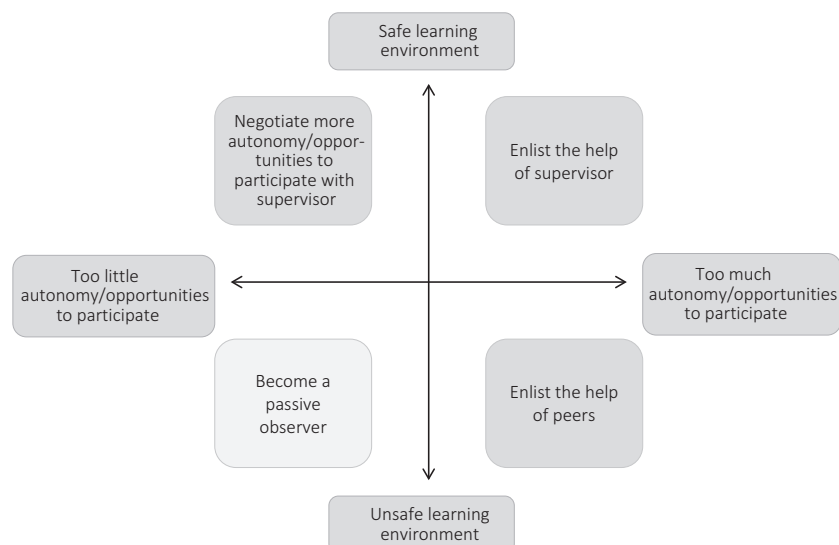


Figure 1 Trainees experienced two tensions: supervisors gave them either too much or too little autonomy, or too many or too few opportunities to participate. Trainees responded to such tensions depending on how safe they perceived the learning environment to be. Their responses are depicted in each square. The lighter shaded box shows the situation where intersubjectivity seems to be at its lowest level, as opposed to the darker grey boxes, where it is at a higher level.

over their supervisors' duties. As described in the following transcript:

As a senior trainee in the outpatient clinic all responsibility is resting with you, and in most cases, you already have the tools to solve the problems. However, some patient problems you cannot solve, and if the outcome is not a good one, the responsibility falls ultimately on the trainee, which is wrong because they did not support you in that difficult case. (Senior resident, clinical discipline)

Residents responded to this tension in two different ways based on how safe they perceived the learning environment to be: they either turned to their clinical supervisor for support or sought help from their peers.

Enlist support from their supervisor

Residents described this as a 'call for help' and they resorted to it when they were sure that the supervisor would respond positively to it; that is, when they believed the supervisor would support them in their particular needs, using the situation as a teaching moment, rather than using this rescue call as an excuse to restrict their autonomy or opportunities to participate:

For example Dr R., he let me perform the surgery by myself, but when there was something

I didn't know, I asked for his help, like "I don't know how to do this", and he, well, he went like "let me step in and assist you with that", and then he said "look at how I do it, this way is better", and he let me try a lot of times, 'till I got it right. With Dr G. it is kind of the same because he gently persuades me to correct my mistakes, and asks for the concept I have of a patient first, we work together as a team. (Senior trainee, surgical discipline)

Enlist peer support

If residents perceived the learning environment as unsafe, they shunned the clinical supervisor and sought support from their peers. Junior residents used this strategy because they trusted their advanced peers; they knew it would be safe to enlist their help, without having to fear punishment or being bullied:

Sometimes I think it is better [to be supervised by the senior resident]. In fact, there are some surgeries where I feel very comfortable with him [the senior resident], because he has performed this sort of surgery many times, he feels confident about his performance, and it hasn't been that long ago since he walked in my shoes. I guess he experienced the same learning curve, made the same mistakes, and he has more patience to walk you through it than does a person who is very experienced and, perhaps,

expecting you to do the procedure much faster.
(Intermediate resident, surgical discipline)

Perceived tension 2: Supervisors give too little autonomy or too few opportunities to participate

On the other hand, residents also felt their clinical supervisors sometimes deliberately restricted their opportunities to participate in patient care or their autonomy in decision-making tasks. It was described as supervisors taking over all patient care or imposing their personal preferences regarding decision-making tasks or procedural decisions. External regulations and fear of lawsuits increased chances of being exposed to such tensions. Supervisor practices that restricted resident's autonomy and opportunities to participate were presumed to stem from the assumption that the resident was not prepared to perform the task. Trust seemed to be central to this issue. Residents believed their clinical supervisors were less likely to restrict their autonomy and opportunities to participate when they had had sufficient contact with the resident:

I'm basically not allowed to do anything, because he [the clinical supervisor] won't make me do anything, and this is a surgical discipline. I cannot spend four years only observing him perform all the surgeries and then go out and work as a specialist and practise what I've been watching in the last four years. And my attending doctor's excuse is like, "how many surgeries like this one did you observe?", and I said "five", and then he said, "I'm going to do everything in this one, and then you can try the next one."
(Intermediate resident, surgical discipline)

In this case, residents had two responses: they either negotiated more autonomy and opportunities to participate with their supervisor or became passive observers.

Negotiate with supervisor

When faced with restrictions on autonomy and opportunities to participate, residents would consider negotiating if supervisors' preferences were flexible enough and they trusted that the clinical supervisor would be approachable. According to residents, initiating a negotiation was a tricky move that depended on several factors. How complex was the task the resident was going to negotiate on? Would the resident be able to perform the task independently? Was the resident ready to be assessed by the supervisor? Did the resident sufficiently

engage with this supervisor so that the latter could trust the resident with this task? In the case of an affirmative answer to most of the above questions, residents felt in a position to negotiate autonomy and opportunities to participate, which they did, for example, by asking the supervisor if they could perform the surgery or if they could present a case and management plan to the supervisor in advance. The supervisor could respond constructively, engaging residents in a dialogue aimed to assess their readiness regarding knowledge and skills and to understand their reasoning behind the decision-making process. Such dialogue allowed them to convince trainees to change their minds by pointing out errors or increasing their chances of succeeding in the task. Some residents regarded these negotiations as valuable because they were opportunities to learn and practice in the workplace without compromising their autonomy:

I think this is the right way to do it in surgery. OK, so if you think you can do it, it is because you have shown to the attending doctor that you have the right knowledge and skills, so this is where the negotiation starts. "So Doctor, please let me do it" and he goes like, "why, how many have you performed this so far, what is the percentage of complications?" and you answer, and if the answers are right, then you get to do it. (Intermediate resident, surgical discipline)

Become a passive observer

If the clinical supervisor had created an unsafe learning environment in which the resident was exposed to bullying or mistreatment, the resident preferred to ask for specific directions from the supervisor on how to proceed with a given task. Residents learned supervisors' preferences to avoid confrontation and just performed the task accordingly; in this way they pleased the supervisor while sacrificing their autonomy and opportunities to participate. In such situations, according to the residents, they became passive observers:

For example with Dr A.: I don't negotiate with him; if he takes over the procedure, I just let him do that; it is like you start to understand who is who, and the different preferences they have; you know that even if you try to convince them to do the procedure, they will always say no, and perhaps even go like 'move away and just watch', so I just learnt to please them to avoid any conflict. (Senior resident, clinical discipline)

The case about intersubjectivity

Billett acknowledges that trainees' learning from such co-participation practices varies with the degree of intersubjectivity achieved between the actors involved.^{5,23} In sociocultural constructivism, Rogoff defined intersubjectivity as a shared understanding between the learner and the experienced adult regarding achieving a common goal or task.²⁴ Translated into our particular context, we argue that intersubjectivity implies a shared understanding between the resident and clinical supervisor and between the trainee and his peers in the workplace, whose joint goal is to provide patient care *and* attend to the residents' learning.

We determined that intersubjectivity had a paramount role in residents' workplace learning. By analysing those experiences where residents reckoned they had or had not learned from their interactions with supervisors, we noticed how important intersubjectivity was in assuring that residents' responses to perceived tensions resulted in learning. Satisfactory levels of intersubjectivity between residents and supervisors were obtained when trainees felt they were 'working as a team' and supervisors 'cared about my opinion' or engaged in an 'open dialogue'. We inferred that the common goal of residents, their supervisors and their peers was not only to get the job done but also to allow the resident to learn:

Initially, he [the clinical supervisor] took a decision on what to do with the patient, and it wasn't a dialogue at all [restricting autonomy/opportunities to participate]; however, I so much insisted on changing the course of action that it became a dialogue between him and me, so he considered it important for us to discuss the subject at length. It could be said that it was like a negotiation: much of what I proposed he regarded as alternatives; it was kind of like we reached a midpoint between the two opposite opinions. We ended up doing much of what he initially proposed, but he had gently made me change my mind; I learnt a lot from that. (Junior resident, clinical discipline)

Low intersubjectivity levels, by contrast, created a situation that was least desirable, relegating the resident to the role of a passive observer. In these cases, the supervisor's only concern was to provide patient care, without attending to the resident's learning. In residents' words, supervisors only 'cared about working and not teaching':

Some surgeons always prefer to perform the surgery by themselves; in fact, having a resident shadow them, to whom they have to explain everything, how to apply some stitches and stuff, is all very tedious to them; not all of them are used to teaching; they only want to get things done, so they would take over the procedure and make you watch and guess what they were doing. (Intermediate resident, surgical discipline)

DISCUSSION

In this study, we explored the tensions that residents experienced during clinical supervision and how residents handled them to capitalise on their learning opportunities. Tensions, in this context, sprang from an uneasy balance of affordances as moderated by the amount of clinical supervision provided to the resident. Engagement-related responses, by extension, referred to residents' mechanisms for coping with these affordances. According to residents' perceptions and accounts, we found that tensions arose when supervisors gave trainees either too much or too little autonomy or too many or too few opportunities to participate. Moreover, residents' responses to such tensions depended on how safe they perceived the learning environment to be and included enlisting the help of their supervisors or peers, negotiating autonomy and opportunities to participate with supervisors or becoming passive observers.

Whereas this study describes how residents managed challenging situations during clinical supervision to maximise their learning opportunities, it also highlights the importance of achieving an appropriate level of intersubjectivity between residents and their supervisors or peers for the success of such learning efforts. Our results suggest that pedagogic practices that encourage an open dialogue could be the key to achieving an optimal level of intersubjectivity.²⁵ In addition to confirming how difficult it can be to give trainees the desired amount of autonomy and opportunities to participate,^{11–13,26} our findings expand our understanding of how residents take advantage of such imbalance. Even when the clinical supervisor did not provide the expected amount of autonomy or opportunities to participate, residents struck back and forced them to engage in productive pedagogic practices that benefited them, restoring the balance and easing the tension. We argue that achieving intersubjectivity and providing a safe learning environment constitute the key to finding the

proper pitch. Such results matter because they confirm the crucial role of those factors in the search for the right fit between affordances and engagement, a fit that assures workplace learning. A safe learning environment that fosters intersubjectivity relates our findings to the Fuller and Unwin concept of expansive apprenticeships,²⁷ characterised by a rich learning milieu that assures a gradual progression to full learner participation and also provides an alignment between organisational and individual capacity.

Further implications of our results are also worth noting. Apramian and colleagues described residents' responses to variations in surgical supervisors' procedures and their various restrictions, their negotiation strategies when confronted with different thresholds of practice, and how they deemed such restrictions desirable in surgical training.^{17,18} Our study complements their findings by highlighting the reverse source of tensions arising from too much autonomy and too many opportunities to participate and how residents coped with these. Furthermore, supervisors' procedural variations could shape competence judgements in residency training.²⁸ The tensions revealed in our study underpin the difficulty in making such decisions. Practical implications arise from this situation, to the extent that a safe learning environment and achieving intersubjectivity could also influence competence judgements, facilitating entrustment assessments in the workplace.²⁹

Active engagement is crucial for workplace learning⁶⁻⁹ and we expand this principle by describing how trainees can best be engaged in workplace affordances. A final merit of our study is that it highlighted the role of senior peers as agents who can support residency learning in the context of the autonomy and opportunities to participate balance, especially when the relationship between resident and supervisor is not optimal. This finding emphasises the importance of the community and the context as learning facilitators in the workplace, beyond what has been described as 'the power of the one',^{30,31} or the myopic vision of clinical supervisors being solely responsible for residents' learning.

However, some limitations are worth noting. First, we must consider the unique characteristics of the research setting that may affect the transferability of our findings. In Colombia, residency training tuition fees are high and residents do not receive any formal financial allowance for their services. This reality may have influenced residents' decisions and motivation

to engage in the workplace, and outcomes could be different in other countries that have paid residency programmes. Second, we only investigated residents' perceptions. Future research should explore why and how clinical supervisors respond to the described residents' engagement the way they do and how contextual factors influence such interactions. It is also important to determine how other workplace actors, such as peers, nurses or undergraduate students, affect the autonomy and opportunities to participate balance, and which characteristics of such interactions contribute to learning. Third, given the fact that we revealed sensitive issues such as bullying, it was impossible for us to describe particular situations pertaining to specific disciplines without breaking participants' anonymity. Although the differences were minor and engagement-related responses were present across diverse disciplines, anonymity issues prevented us presenting more detail. Fourth, based on our study design it was difficult for us to determine the influence of some important variables on our overarching results, such as gender or race.

Contributors: FOV, DD and RS designed the whole study. FOV and NVC collected all the data by conducting the focus groups and the semi-structured interviews. All four authors contributed to the iterative analysis and drafting of the final version, and approved the final manuscript for publication. All authors hold complete accountability for all aspects of the work to ensure its accuracy and integrity.

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SUPPORTING INFORMATION

Additional Supporting Information may be found in the online version of this article:

Appendix S1 Questioning Route Residents' focus groups.

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