

Rural patients' experiences accessing surgery in British Columbia

Nancy Humber, MD*
Paul Dickinson, BA†

From the *Department of Family Practice (Research Division), University of British Columbia, Vancouver, BC, and the Northern Medical Program, Faculty of Medicine, University of British Columbia, Prince George, BC

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Correspondence to:
Dr. N. Humber
Lillooet Medical Clinic
Box 850
Lillooet BC V0K 1V0
saffron2@tellus.net

Background: More than 33% of Canadians live in rural areas. The vulnerability of rural surgical patients makes them particularly sensitive to barriers to accessing health care. This study aims to describe rural patients' experiences accessing local non-specialist, family physician–surgeon care and regional specialist surgical care when no local surgical care was available.

Methods: We conducted a qualitative pilot study of self-selected patients. Interviews were analyzed using a modified Delphi technique and NVivo qualitative software.

Results: The needs of rural surgical patients were reflective of Maslow's hierarchy of needs: physiologic, safety and security, community belonging and self-esteem/self-actualization. Rural patients expressed a strong desire for individualized care in a familiar environment. When such care was not available, patients found it difficult to meet even basic physiologic needs. Maternity patients and marginalized populations were particularly vulnerable.

Conclusion: Rural patients seem to prefer individualized care in a familiar environment to address more of their qualitative emotional, psychological and cultural needs rather than only the physiologic needs of surgery. Larger studies are needed to delineate more clearly the qualitative aspects of surgical care.

Contexte : Plus de 33 % des Canadiens vivent en région rurale. La vulnérabilité des patients en chirurgie qui vivent en milieu rural les rend particulièrement sensibles aux obstacles à l'accès aux soins de santé. Cette étude vise à décrire le vécu des patients ruraux sur le plan de l'accès aux soins dispensés par des non-spécialistes, des médecins de famille et des chirurgiens locaux et aux soins chirurgicaux spécialisés en région lorsqu'il n'y avait pas de soins chirurgicaux disponibles localement.

Méthodes : Nous avons effectué une étude pilote qualitative portant sur des patients autochoisis. Nous avons analysé les entrevues au moyen de la technique Delphi modifiée et du logiciel d'analyse qualitative NVivo.

Résultats : Les besoins des patients ruraux en chirurgie reflétaient la hiérarchie des besoins de Maslow : besoins physiologiques, sécurité, appartenance communautaire et estime de soi–réalisation de soi. Les patients ruraux souhaitaient vivement recevoir des soins individualisés dans un environnement bien connu. Lorsque ces soins n'étaient pas disponibles, les patients ont eu de la difficulté à trouver satisfaction à leurs besoins physiologiques, mêmes fondamentaux. Les patients en maternité et les membres de groupes marginalisés étaient particulièrement vulnérables.

Conclusion : Les patients ruraux semblent préférer les soins individualisés dans un environnement bien connu pour que l'on réponde à un plus grand nombre de leurs besoins affectifs, psychologiques et culturels qualitatifs plutôt que seulement aux besoins physiologiques liés à l'intervention chirurgicale. Des études de plus grande envergure s'imposent pour définir plus clairement les aspects qualitatifs des soins chirurgicaux.

Over the past decade, the delivery of rural surgical services has become increasingly centralized. Small-volume surgical sites of 5000–20 000 residents, traditionally supported by family physicians with advanced surgical skills (GP–surgeons), have decreased by nearly 50% in British Columbia.¹ Driven by optimizing quantitative deliverables, such as cost- and resource-effectiveness, volumes and outcomes, the consequences of centralization scarcely reflect the qualitative emotional, psychosocial and cultural

impacts that closure of rural surgical services have on patients and communities.

Additionally, the closure of surgical services in small communities can effectively discontinue rural maternity services. Without local access to cesarean section, only 40% of women are able to deliver locally, as opposed to 85% when local surgical care is available.² Interestingly, the loss of rural surgical services appears to trigger a cascade effect, resulting in the loss of maternity services, access to acute and emergency care and the eventual transformation of these sites into stabilization and triage centres.³

Published literature suggests that parturient women undergo many psychological, financial, social and cultural costs and experience negative maternal–newborn outcomes when maternity care is not available in the local community.^{4–7} Because of the similar vulnerability of surgical patients, it is reasonable to extrapolate that patients accessing surgical services outside of the local community would have similar experiences. This study aims to describe rural patients' experiences accessing surgical care and to further describe and understand the physiologic, emotional, spiritual and psychological needs of rural patients when accessing surgical care.

METHODS

The objective of this qualitative pilot study was to examine rural patients' experiences accessing local surgical care and surgical services regionally when local surgical care was not available. The study focused on describing the impact that the presence or absence of local surgical services had on rural patients in terms of psychosocial issues.

Qualitative study design and the concept of "grounded theory" are well-suited to describe this phenomenon because the method focuses on describing thoughts, emotions and experiences of a particular group of individuals and keeps the data acquisition, analysis and presentation closely linked.⁸ Particularly for issues that are poorly understood, the method provides researchers with a more in-depth analysis, offering more varied opinions and clearer explanations to their answers than those collected in quantitative data. With a problem as complex as models of surgical service delivery and rural patients' feelings toward these models, it is necessary to rely on the qualitative process. It allows researchers to explore the origins of the issues, and allows the participants to guide the research process, thereby providing an evidence base that is reflective of the needs of the population study.

We collected data in a rural community of about 4000 residents and a catchment of about 5000, serving 37.7% First Nations people and operating with a solo practice GP–surgeon and GP–anesthesiologist.⁹ The Lillooet Local Health Area (LHA) is considered one of the more socio-economically disadvantaged LHAs in the province, with the number of individuals receiving income assistance nearly double the provincial average.⁹ Alcohol consumption is also twice the provincial average.⁹ Limited

public transportation, more than 2 hours transport time in ideal weather, and the presence of 6 reservations outside of the community create additional transportation barriers.

We recruited participants through an advertisement campaign, which consisted primarily of posters and newspaper articles. Patients were invited to share their stories but were told that in no way would their participation affect the referral or local surgical programs. Patients whose procedures could be performed locally were considered to ensure that participants had a choice in location of procedure. We also included participants who wished to have a procedure done locally but were unable to owing to human health resource issues. We considered surgeries performed between 1997 and 2006 for the study. Every effort was made to continue recruitment to ensure theme saturation and that patient self-selection reflected the general population. To ensure recruitment of both positive and negative, local and referred surgical patients, we made an effort to use neutral terminology, such as "share your story."

Whereas most participants were employed full-time, several were unemployed and relied on income assistance. Most were married and many had several children living at home. We collected these data qualitatively through the interview process. A research assistant conducted unstructured, one-on-one interviews and recorded the data. Participants were permitted to prepare answers beforehand to a limited list of broad questions, such as "What surgery did you have?," "When was it?" and "Where was it?" Interviews averaged 25 minutes in length; in total, 15 patients volunteered and were interviewed, totaling 6.7 hours of taped interviews.

The unstructured nature of the interview process has dictated some modifications to the full study's methods, which will feature "trigger" questions in a semistructured interview format to begin the participants' narratives of their surgical care experiences. Data collection for the full study is expected to begin in early 2010. The Behavioural Research Ethics Board of the University of British Columbia approved our study protocol.

Analysis

Analysis was guided by a modified version of the Delphi technique. We designed standard questions, asked of each participant, to help the researchers establish a consensus. Each of these standard questions allowed for controlled feedback from each interviewee, a critical component of the Delphi technique. The research assistant then broke down the interviews into themes, and deleted references to names or places or other identifying information to ensure patient confidentiality. Data were sorted using the QSR NVivo computer software program.

After careful review of each transcript, the research assistant created 7 basic themes into which all quotations were classified. Saturation of all 7 themes was reached after the eighth interview. The creation of the themes was based

on common observations or experiences expressed by most participants. The research assistant created additional sub-themes to group common opinions and observations about the specific concepts of surgical care mentioned above. To ensure an unbiased presentation of the opinions expressed, all 15 transcripts were considered. The quotations in each transcript were then assigned to the appropriate category.

RESULTS

The study participants articulated needs reflective of Maslow's hierarchy of needs¹⁰ (Fig. 1) and similar to those in other published studies describing parturient women's experiences. Our study involved 9 women and 6 men, ranging in age from 30 to over 65 years. In total, 22 surgical procedures were discussed in the interviews, with 12 performed locally and 10 performed in a tertiary hospital. Procedures performed locally included cesarean section, laparoscopy, appendectomy, cyst removal, carpal tunnel release and uterine curettage. All other surgeries discussed in the interviews were conducted in tertiary centres, primarily in Kamloops and Vancouver. Two patients had carpal tunnel corrective surgery in both Lillooet and Vancouver and, therefore, were able to compare both experiences.

Physiologic needs

Physiologic needs centred around planning for and access to appropriate surgical care. Patients were more confident

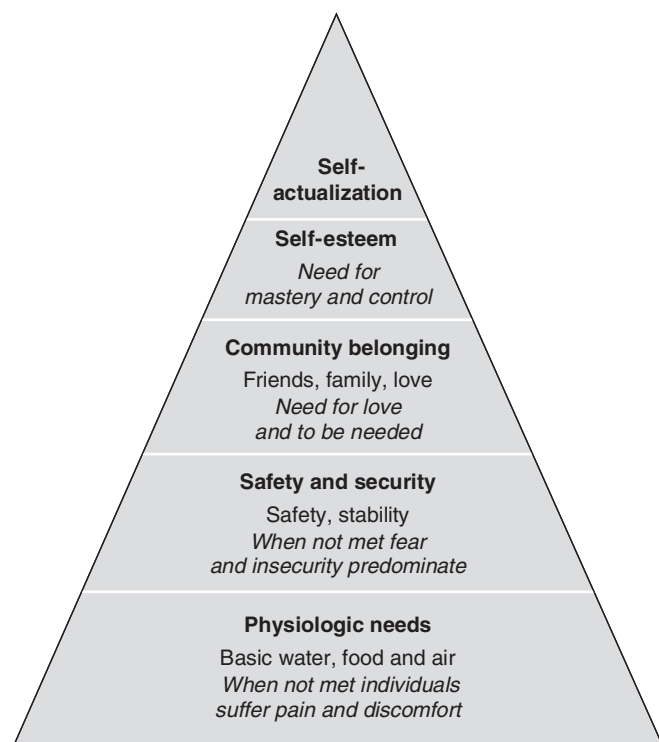


Fig. 1. Maslow's hierarchy of needs.

with the quality and confidentiality of local surgical care. Box 1 reflects both the ease with which patients access local care as well as the challenges when local care was not available.

Transportation and financial barriers were the most common challenges to satisfying physiologic needs. Some patients delayed surgery for prolonged periods owing to difficulty overcoming these barriers. Multiple visits and return transportation, often on the day of surgery, compounded these challenges. Some patients found that traveling to or from surgical care negatively affected their ability to fulfill the basic physiologic need for holistic surgical recovery. Financial costs also presented formidable challenges to accessing care outside of the local community.

Many patients were concerned about the burden, whether financial or emotional, that the surgery would have on family and friends. Parturient women were particularly vulnerable to these challenges owing to the strong relation between birth, family and the particular emotional needs of parturient women.

Need for safety and security

As seen in Box 2, participants uniformly expressed their need for safety and security as a strong need for individualized care from familiar health care providers in a familiar environment. When there was an unfamiliar environment

Box 1. Examples of rural patients' experiences and challenges accessing surgery in British Columbia according to the physiologic component of Maslow's hierarchy of needs

Ease accessing local care

Patient 7: "Probably for people that have never lived in a small town, they might be wary of having care in a small hospital, not realizing what good care you can get in a small hospital."

Patient 4: "I'm getting older now, I don't like big cities, and having to (drive) so it's, I guess, it's convenience ... plus, we have a super setup."

Challenge when local care not available

Patient 2: "I had no money, nothing you know? Like I was taken away in an ambulance and I had a light coat, the whole thing. So I had to go to social services, they put me in a hostel overnight. I was kicked out of there at 6:30 in the morning. The bus didn't leave until noon, I had to walk all the way from, you know down by the bridge to the North Shore, all the way up to the bus depot by the freeway. (Then) I hitchhiked (back home)..."

Patient 3: "You're not supposed to do anything the day of (the surgery) ... I shouldn't have been driving. I wrecked my car, so I ended back in emergency in Kamloops."

Patient 4: "[Y]ou have another child taking them out of town, and having someone watch them ... and even just for a cesarean, you're in the hospital for 3 to 5 days."

Patient 6: "It probably cost me over \$1500 for hotel rooms, motel rooms. Even at the seniors' rate. Add to that the parking, meals."

Patient 10: "...I had to be transported by ambulance to [the referral centre]. And I don't think I would have wanted to do — to have done that drive in labour. After I had [the cesarean] like, 2 days after, and you know, you are still in a bit of pain, still, ... to have to commute 2 hours on a windy, bumpy road, it wasn't ... you're still not feeling good."

Patient 11: "...[T]hey discharged me as soon as I was awake, then we had to drive [home, on the way], I was puking, and in pain and nauseated and carsick and everything else from the anesthetic all the way home. A very bad experience."

in a larger centre, patients felt a threat to their safety and security. Safety and security needs in urban settings were also challenged by short and infrequent doctor visits, delayed medical care, unfamiliar or inadequate communication, discharge planning, generic treatment and lack of continuity of care. Patients were dissatisfied with the volume-driven surgical care at larger centres and upset to make such an effort to travel only to see the doctor for “2 minutes.”

Community belonging

As described in Box 3, participants were best able to meet

Box 2. Examples of rural patients' experiences and challenges accessing surgery in British Columbia according to the safety and security component of Maslow's hierarchy of needs

Ease accessing local care

Patient 15: “I'd be more confident with her, [the local GP–surgeon] doing my surgery than I would with somebody who didn't know me, even if they were a specialist.”

Challenge when local care not available

Patient 6: “[H]e's [a specialist surgeon] doing — I don't know how many surgeries a day ... he has 20 seconds for you, and that's it. He doesn't have anything else. That's not criticism, that's just the way it is in a big hospital.”

Patient 12: “I know it was only the appendix or whatever ... it's terribly scary ... a huge city, is still disorienting and all the traffic lights, and stop lights, and people everywhere, and cars everywhere, it's ... really stressful.”

Patient 13: “[T]here's more control over what's going on with your case when you're looked after in the small hospitals as opposed to you're a number in the big hospitals.”

Patient 15: “...but when you're not well ... and then you get shuffled around like a load of lumber or something, it's just not proper care.”

Box 3. Examples of rural patients' experiences and challenges accessing surgery in British Columbia according to the community belonging component of Maslow's hierarchy of needs

Ease accessing local care

Patient 4: “You know the people, you're far more comfortable, they know you, it makes it a lot easier, it takes away all that anxiety when you're going in to surgery, and whether big or small, it's still a big deal, it's surgery ... and when it comes to recovery time, I think it's faster because of the aspect of knowing everybody ... then you're relaxed, things go better.”

Patient 5: “You might be a little nervous talking about some things like prostates and stuff like that ... but you know him ... had a beer with him after hockey, it does actually make things easier.”

Patient 10: “[Y]ou've got a bit of an enjoyment in showing your child and experiencing it with people you know in the community ... and then they were going to send me home [from referral center] and I asked to be transferred [home] because I knew the care would be different. And I did — I paid for the ambulance to bring me [home] and then I stayed [there] for a couple of days.”

Patient 12: “...because to phone the hospital, and I was panicking, and I recognized, you know, the nurses, and that it's somebody from Lillooet, ... to know he, [the husband] was, in a safe place...”

Challenge when local care not available

Patient 5: “If you're going out of town to a strange hospital, strange people, you panic. I don't care how good you think you are, you do get panicky.”

the need for community belonging when accessing local care through a complex personal and professional relationship with health care providers. Patients felt that local care was more continuous and less rushed in the community and that local care provided a relaxed and friendly atmosphere. In addition, nurses were able to communicate more effectively and to offer more individualized, culturally relevant care. Patients enjoyed the support of family and friends more when in their home communities. Community belonging was a particularly strong need of parturient women. As described in rural parturient women's experiences of childbirth, Kornelsen and Grzybowski¹¹ state that the need for love and belonging is as strong as the physiologic and safety needs.

Self-esteem and self-actualization

Local access to care seemed through a variety of ways to enable individuals to have a more positive surgical experience. A positive surgical experience seemed to foster positive self-esteem. Although patients did not directly express impacts on their self-esteem, Box 4 demonstrates more positive sentiments of surgical experience at rural centres.

DISCUSSION

There is a subtle perception that “ivory tower” subspecialist medical care is the gold standard to which health care delivery should aspire. Rural generalist care is much different than quaternary medicine, as practitioners tend to provide a broad scope of practice with isolated and limited resources. This is very different than quaternary medicine where subspecialists, who provide a narrow scope of practice, are thought to deliver the best surgical care. Rural patients are also different than their urban counterparts:

Box 4. Examples of rural patients' experiences and challenges accessing surgery in British Columbia according to the self-esteem/self-actualization component of Maslow's hierarchy of needs

Ease accessing local care

Patient 10: “They can take their time and do a terrific job, and they do. The same thing — when I had to go back to the hospital after I got home, being in alone room by myself, and a good night's rest, and a good day's rest, well, I was just as good as new again. I think that part is very important, to a person in recovery.”

Patient 11: “[locally], I went in, had the surgery done, no problem with the surgery, and it ended up looking better and feeling just fine. Went home, straight home, and didn't look back. It was just excellent.”

Patient 12: “[I]t was like day and night. Here everything was clean and scrubbed and you had — a doctor you knew came in twice per day to see how you were doing, and I just went straight ahead from there.”

Challenge when local care not available

Patient 2: “I have other friends kicked out, stuck...I was lucky [with] this one, they did the gallbladder, like then you get kicked out of the hospital at 3 in the afternoon, you got 18 staples in your gut, and I wouldn't have been wearing shoes except for my girlfriend at the time put my shoes on for me.”

rural culture defines a different population with its own challenges in accessing health care as well as its own disparities and determinants of health.¹² It is these challenges that make accessing care substantially difficult for rural residents.

Consequently, culturally sensitive care seems to be different for rural patients than for their urban counterparts and more accurately reflects the rich tapestry of rural health care delivery. Multiple shared experiences — community, personal and medical — create a unique doctor–patient relationship. When rural patients face surgical experiences, they prefer care to be delivered by physicians they know and trust because it lessens the barriers in access they already face. This doctor–patient relationship underpins the very fabric on which rural health care is delivered and creates a culturally different context in which rural residents make health care decisions. Even in the case of an emergency appendectomy, 1 participant expressed frustration that local service had been unavailable, regardless of his admission that a specialist surgeon would deliver the best surgical care from a clinical perspective. To all rural patients interviewed in this pilot study, being in their own communities with familiar health care providers took precedence over perceived quality of surgical care. This indicates the rural patient's placement of familiarity and trust over all other aspects of medical care.

Individualized care seemed to facilitate greater ability among rural patients to feel a sense of control over their own health. Patients were more relaxed owing to their strong personal relationships with their health care providers, and they felt they had more control over their operative experiences. As Hogue and colleagues¹³ noted, “a sense of control or mastery has been shown to reduce psychological distress and positively affect physical health, as well as to buffer the negative consequences of stressors on mental and physical health.” Clearly, the ability to access individualized care from familiar health care providers was very important to all patients in our study. They felt that regional surgical care was impersonal and generic. Many were concerned about the different and often confusing communication styles of health care providers at larger centres. In particular, patients felt that urban health care providers provided brief, clinical descriptions of their conditions that were often difficult to understand and inadequate in addressing the psychological stress they experienced before and after their surgical procedures. Most patients in this situation were unable to move past procuring Maslow's first 2 basic physiologic and safety and security needs.

Local access was clearly simpler for all patients, both for elective and emergent surgical care. Transportation was challenging. Many were faced with transportation barriers that sometimes led to detrimental effects on their healing and recuperation. The 2 most extreme examples of this problem were the patients who hitchhiked home and who drove after conscious sedation. For marginalized patients

in particular, managing both transportation and financial burdens presented a formidable challenge.

Most patients expressed a strong need for community belonging. Patients were more relaxed in their home communities owing to their personal relationships with their health care providers. In this environment, they felt they had more control over their operative experiences. Separation from their social networks created more stress for patients. Indeed, many patients attempted to return to their home communities as quickly as possible.

Parturient women are particularly affected by the presence or absence of local operative delivery. Because local access to cesarean section allows more women to remain in their own communities for their birth experiences, these low-volume GP–surgical programs provide the backbone of rural maternity care. This study further supports the already published literature documenting the strong link between emotional, social, physical and psychological needs of parturient women and the negative affect of transportation on both the birth experiences and maternal/newborn outcomes. The early results from the present pilot study seem to indicate a strong desire among rural patients for local care. However, owing to the small volume of interviewees, it is necessary to conduct a larger study in several communities before this conclusion can be considered valid. Therefore, researchers are preparing to collect further data in a larger study within the next 2 years.

Cultural theorist Anthony Giddens¹⁴ observed that “social divisions and other fundamental lines of inequality, such as those connected with [sex and race] can be partly defined in terms of differential access to forms of self-actualization and empowerment.” Accessing surgical care outside of the local community creates more social disruption, financial difficulty and the perception of culturally indifferent care. Although rural residents are not racially different for the most part from their urban counterparts, they desire a culturally different style of surgical care. This is important in situations, like surgery, when patients feel even more vulnerable. Rural residents therefore have to overcome multiple barriers that impede their needs. For marginalized populations, including the elderly, First Nations and those of low socio-economic status, the challenges are substantial. This creates a considerable barrier to moving through Maslow's hierarchy of needs and eventually meeting the needs of self-esteem and self-actualization.

Maslow's term “self-actualization” is the final level of psychological development that can be achieved when all basic requirements are fulfilled and “actualization” of the full personal potential takes place.¹⁰ Participants who received local care were able to move through Maslow's hierarchy of needs, with some even expressing evidence of better self-esteem and self-actualization. Two patients expressed a negative effect on their self-esteem as a result of challenges to individualized, rural, culturally sensitive surgical care. Additionally, Maslow's “dynamic–holistic”

theory of health states that health comprises physical, emotional, spiritual and psychosocial needs.¹⁰ If we address surgical care without addressing all of these needs, we fail to address surgical care delivery holistically. Holistically, patients recovered to full functioning better with local care, as evidenced by quicker return to work and a more positive recollection of the surgical experience. Whereas clinical data do not currently suggest that low-volume surgical programs provide superior outcomes, this study suggests that, from a holistic perspective, rural patients may actually receive superior care in the low-volume model. Again, it is difficult to substantiate these conclusions based on pilot study data; however, a complete study in several communities will provide further insight into this possibility.

Limitations

This study is limited by its small sample size and the shared community of the surgeon (N.H.) and patients. Although the researcher was not directly involved in the gathering or transcription of the data, and patients were recruited through neutral methods, patients who endured negative local surgical experiences may not have felt comfortable to come forward to volunteer for the study. The study, owing to its qualitative design, also reflects only the phenomenon as described in the community studied and is not generalizable to other communities. Therefore, plans are in place for a complete qualitative study, involving 2 or more communities served by GP–surgical programs. In addition, qualitative research relies on self-selected participants, meaning the nonresponder bias can be substantial, particularly in a pilot study such as this. Nonetheless, since participants often tend to represent the 2 extreme positions on an issue, researchers can generally arrive at conclusions between the 2, thus providing a generalization that represents the interests of all parties.¹⁵ Although patients in our study were self-selected, study participants tended to be able to articulate their experiences well. Although care was taken to ensure that all participants contributed to the major themes in this paper, other important needs from nonparticipants may not have been identified. It is, however, impressive that the needs and experiences of the selected surgical patients are strikingly similar to those from larger studies of patients' experiences accessing maternity care. Although every care was taken to ensure neutral and thorough enrolment in the study, there may have been subsets of the population who did not participate in the study.

CONCLUSION

Rural patients in this community seemed to prioritize familiarity, trust and individualized care when accessing surgical services and strongly preferred a local model of care. Patients' needs were met more easily with local

access to surgical care, with the converse also true; negative surgical experiences — though not necessarily negative outcomes of surgical procedures — seemed to negatively affect patients' holistic health. Patients' experiences accessing surgical care reflect similar themes to those of patients accessing maternity care. It is imperative that we examine in more detail the qualitative emotional, psychological and cultural needs of patients and not only the physiologic needs of surgery. By attending to all aspects of health, we ensure optimal quantitative and qualitative outcomes. Larger studies are needed to clearly describe all of the needs of surgical patients and allow health care administrators and policy-makers to more effectively plan surgical service delivery in rural British Columbia.

Competing interests: None declared.

Contributors: Dr. Humber designed the study. Both authors analyzed the data, wrote and reviewed the article and approved the final version for publication.

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