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Illuminating Mexican migrant adolescents' dental access and utilization experiences

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Objective: To illuminate Mexican migrant adolescents' dental access and utilization experiences. ***Research Design:*** Qualitative focus groups were conducted in English between July 2015 and March 2016 as part of a community-based participatory research project. ***Participants:*** Adolescents (n=61) aged 12-19 years, from Mexican migrant worker families, who sought healthcare services at a federally-qualified migrant health clinic in San Diego County, California. ***Method:*** Seven focus groups, with different sessions for 12-14, 15-16, and 17-19 year olds. Group size ranged from 4-14. Groups were audio-recorded, transcribed verbatim, then analyzed using content and general thematic analyses by two researchers using Dedoose qualitative analysis software. Analysis was guided by the Behavioral Model for Vulnerable Populations. ***Results:*** Multiple themes emerged: dental fear, difficulty with scheduling dental appointments, competing with family demands, family income and dental tourism, home remedies, lack of direct adolescent-provider communication, and negative dental visit experiences. Adolescents expressed high levels of dental fear and expressed negative dental visit experiences. Cost was a top barrier to care, despite most having dental insurance. Some described seeking dental services and braces in Mexico due to cost. Adolescents wanted providers to discuss their oral health and treatment needs with them directly as patients, rather than with their parents. ***Conclusion:*** Adolescents identified structural and communication barriers that impede access to dental care. Improved patient-provider communication may help build rapport, mitigate dental fear, and facilitate adolescents' understanding of needed dental treatment and their oral health status. Dental providers may benefit from training to enhance culturally competent communication with Mexican migrant adolescents, and should discuss treatment plans with adolescent patients directly.

Keywords: Adolescents, Oral Health, Dental Utilization, Access to Care, Dental Care, Qualitative, Migrant

Introduction

Adolescence is a unique developmental stage marked by increased independence in making health decisions and engaging in health behaviors that can affect oral health (Maida *et al*., 2015). Adolescents have specific oral health needs and concerns, including high rates of caries, orthodontic and restorative care, increased risk of traumatic injury, and dental phobia (Silk and Kwok, 2017). Estimates from the 1999-2004 National Health and Nutrition Examination Survey (NHANES) data indicate that more than half (58%) of adolescents aged 12 to 19 had dental caries in their permanent teeth, and Hispanic adolescents in families with lower income had more decay than those from higher income households (Dye *et. al.,* 2015).

In 2010, Mexican-Americans were the largest Hispanic/Latino subgroup among the 50.4 million Hispanic/Latinos living in the United States (U.S.) (Census Bureau, 2010). One of the most vulnerable Mexican-American subgroups include Mexican migrant and seasonal farmworker families, who have poor oral health due to the synergistic interactions between poverty, food insecurity, and limited access to dental care (Carrion *et al.*, 2013; Kline, 2012). Farmworkers are broadly defined by the U.S. Department of Labor as those involved in agricultural or horticultural work and include migrant and seasonal farmworkers. Migrant farmworkers move around according to agricultural season for employment, unlike seasonal farmworkers, who do not migrate (Arcury and Quandt, 2007). Historically, utilization of dental services has been low in agricultural worker families, and they face a multitude of structural barriers impeding access, including children not being eligible for Medicaid, lack of nearby providers that accept their coverage, and high cost (Carrion *et al.*, 2011). However, little research has focused on adolescents. This study does not focus on adolescents from migrant farmworker families exclusively. Rather, the term migrant was broadly defined to be inclusive of the many participants' caregivers who were employed in the local agricultural industry, or other day laborer industries that may require moving locally within the region. Adolescents from Mexican migrant families are considered hard-to-reach and vulnerable to many health problems, including oral health.

There is limited evidence from adolescent perspectives directly about their oral health. Their perspectives should be explored, independent of their parents. Weyant and colleagues (2007) reported that adolescents' perceptions about oral health treatment needs did not parallel those of their parents. Although most adolescents likely have dental insurance coverage, they may still encounter substantial access barriers. Mexican-American adolescents have described financial and clinic schedule constraints as dental access barriers (Aguirre-Zero *et al*., 2016; Maupome *et al*., 2015). This qualitative study sought adolescents' viewpoints to illuminate their dental access barriers and utilization experiences.

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The analysis for this paper is guided by the behavioral model for vulnerable populations (BMVP), which suggests specific vulnerable predisposing, enabling, and need factors contribute to health service utilization (Gelberg *et al*., 2000). BMVP has been applied to Mexican migrant families in dental utilization studies (Velez *et al*., 2017; Finlayson *et al*., 2014). Predisposing factors include demographic characteristics and health beliefs/attitudes. Enabling factors include different types of resources available to facilitate accessing care, from personal, family, and community sources. Lastly, need factors are either perceived or evaluated health status. The vulnerable domains focus on social structures, enabling resources, and perceived or evaluated health status related to migrant status.

Methods

Study Design and Setting

This community-based participatory research (CBPR) project was a collaborative effort between a federally qualified and migrant health center (FQHC), and an academic institution and its affiliated health disparities research institute. The partnership originally formed in 2012 to plan a one–year CBPR project to address oral health disparities and access to care. From 2013 to 2015, a community health worker-led oral health education intervention with Mexican migrant families was implemented in three target communities in northern San Diego County, California (Velez *et al.*, 2017). Caregiver feedback post-intervention indicated a strong desire to identify more ways to engage adolescent family members effectively in oral health promotion. Partners sought pilot funds for such formative research with adolescents from migrant families, broadly defined, using a CBPR approach. The team co-developed the semi-structured focus group guide to ask about a range of topics, with the intent of developing oral health education resources for use in the FQHC's Teen Clinic.

CBPR provides adolescents an opportunity to vocalize their oral health needs and dental care utilization experiences from their unique perspectives, and to shape future oral health interventions in their community (Amendola, 2013). Adolescents' health and risk behaviors are determined by constantly changing social, psychological, economic, and cultural forces (Rich and Ginsburg, 1999). Qualitative research takes a naturalistic approach to understanding and explaining social phenomena in depth (Masood *et al*., 2010), seeking to answer "how" and "why" questions through interactive discussions and behavioral observations. Focus groups were selected to understand adolescents' perceptions through dynamic and stimulating conversations, in small peer groups. Focus groups were conducted at convenient clinic or community sites in both urban and rural locations. The academic institution's Institutional Review Board (IRB) approved this study (protocol #1607091). FQHC staff and research assistants (RA) completed IRB and project-specific training.

Participants

The FQHC's main site included a teen clinic and dental services, and several clinic sites also hosted an afterschool program, where participants were recruited. FQHC staff verbally advertised the study to parents of adolescents and distributed flyers (in English and Spanish), enrolled eligible participants, and scheduled focus groups. Adolescent focus group eligibility criteria included: being 12-19 years old, receiving healthcare at the FQHC, and self-identifing as part of a Mexican migrant family. "Migrant" worker was defined broadly to include farmworkers as well as other types of migrant workers (i.e., domestic worker, day laborer or others engaged in other similar work). Research and FQHC staff determined data saturation based on difficulty recruiting and scheduling adolescents with parallel availability to scheduled focus groups, especially with older adolescents' academic and family obligations. Written informed consent in Spanish was obtained from a parent of each 12-17 year old minor before they could participate. Adolescents also completed a minor assent form in English before participating. Older adolescents (aged 18 or 19) provided written informed consent in English.

Focus Group Procedures

Two focus groups were held for each age group: 12-14, 15-16, 17-19 years in July 2015. One additional focus group was held in March 2016 to recruit more older participants and meet recruitment goals. One adolescent withdrew from the study. There were 61 participants across the seven focus groups. Group size ranged from 4-14 participants, and sessions scheduled with younger adolescents tended to be larger. Each session recruited adolescents to keep those at similar maturity levels/developmental stages together, but eligible adolescents were not excluded if they were older or younger than the target age range for that session. Most groups were composed of adolescents within the target range.

The groups were co-facilitated in English by at least two trained research and FQHC team members following a semi-structured guide. This paper focuses on conversations about three questions and probes regarding dental access and utilization (Table 1). Each focus group lasted 2-3 hours, including a refreshment break. RAs took observational notes of participants' reactions and about key concepts, to compare with audio recordings later, and as back-up in case of any problems with recording. All focus group sessions were audio-recorded with multiple recorders.

Participants completed a self-administered half-hour survey at the end of the focus group to collect session feedback, socio-demographic characteristics, and other access to care and dental utilization history information. Each participant received a dental goody bag, English/Spanish dental hygiene flyer and additional dental education materials, and a $10 gift card for taking part.

Data Analysis

Focus group recordings were transcribed verbatim in English and imported into Dedoose v7.6.6, for content and thematic analyses guided by the BMVP. One RA and the principle investigator (PI) independently reviewed transcripts multiple times to grasp focus group context. Analysis involved creating memos about excerpts relating to the BMVP or new ideas worth revisiting in the coding process related to access, utilization, or the care experience, even if it was not explicitly part of the BMVP.

Codes were developed initially based on the BMVP and the focus group guide, recorded memos from reiterative reviews, and refined throughout the coding process. Next, codes were attached to excerpts and clustered into topic groups. Heading topics of coding groups were labeled as parent codes, while child codes underneath provided explanations for the parent code. Coding groups were then clustered into preliminary themes. The RA and PI each shared lists of preliminary themes to justify their chosen themes and the transcripts to reach theme consensus.

All survey data were entered and analyzed using SPSS 24 for descriptive statistics.

Results

Participant socio-demographics are summarized in Table 2. About two-thirds (61%) of the participants were male. Half (54%) were 12-14 years old and most (67%) lived in large households. Many (43%) spoke both English and Spanish evenly with their families, but spoke in English more often with friends. Nearly all (90%) were US-born.

Adolescents' self-reported dental utilization history and characteristics are summarized in Table 3. Half (51%) of the adolescents had public dental insurance through Medicaid or the state's Children's Health Insurance Program.

More than half (61%) reported having a dental home and dental visit in the past six months. Very few (5%) sought dental care outside the U.S. About one-third (39%) reported cost as the top barrier. A few (16%) reported not being able to get needed dental care in the past year.

In accordance to the BMVP model, multiple traditional and vulnerable predisposing, enabling, and need themes emerged from the focus groups: dental fear, difficulty with scheduling dental appointments, competing with family demands, family income and dental tourism, home remedies, lack of direct adolescent-provider communication, and negative dental visit experiences.

Table 1. Focus group questions related to dental services and access barriers

Questions	*Probes*
Can you tell me what you think about going to the dentist?	How often do you go? When is it important to see a dentist?
What has been your experiences with dentists so far?	How did the dentist and staff treat you? Did they explain to you what was being done and/or the problem? Were you ignored and the dentist only spoke with your parents? Did you get the services or treatments you needed? Why or why not? What types of dental services or treatments have you received so far? Anyone afraid or nervous of going to the dentist office? What makes your nervous? Do you have any ideas/suggestions to help overcome the fear/nervousness?
Does anything get in the way of going to the dentist? What?	

Table 2. Participant socio-demographic characteristics (n=61)

		N	*%*
Age	12-14	33	54%
	15-17	22	36%
	18-19	6	10%
Sex	Male	37	61%
	Female	24	39%
Household size	2-4 people	18	30%
	5-7 people	34	56%
	8+ people	6	11%
Country of birth	United States	55	90%
	Mexico	4	7%
	Guatemala*	1	2%
Spoken language with family	English	10	16%
	Spanish	24	39%
	Both English and Spanish evenly	26	43%
Spoken language with friends	English	40	66%
	Spanish	2	3%
	Both English and Spanish evenly	18	30%

*This adolescent participant reported being born in Guatemala, but met inclusion criteria of self-identifying as being part of a Mexican migrant family

Table 3. Adolescents' Dental Access and Utilization (n=61)

		N	*%*
Type of dental insurance	Yes, public dental insurance (Denti-Cal /Medicaid or Healthy Families/SCHIP[1])	31	51%
	Yes, Private Insurance	6	10%
	None	6	10%
	Don't know	18	29%
Time since last dental visit	Six months or less	37	61%
	More than 6 months, but not more than 1 year ago	10	16%
	More than 1 year, but not more than 2 years ago	7	12%
	More than 2 years, but not more than 3 years ago	1	2%
	More than 3 years, but not more than 5 years ago	1	2%
	More than 5 years ago	1	2%
	Don't know	4	6%
Dental home	Yes	37	61%
	No or Don't Know	24	39%
Type of dentist or place of usual source of care[2]	Federally Qualified Health Center or other Community Dental Clinic	17	28%
	Private Dental Practice	9	15%
	Hospital emergency room	4	6%
	Have a dental home, but don't know name/type	7	12%
	N/A	24	39%
Received dental care outside the United State in the past year	No	56	92%
	Yes	3	5%
	Don't know	2	3%
Main reason for last dental visit[3]	Check-up, examination or cleaning	27	44%
	Went for treatment	2	3%
	N/A	32	53%
Barriers to visit the dentist every year[4]	Cost	24	39%
	Afraid (of dentist, needles etc.)	16	26%
	Parents can't take time off work	13	21%
	No insurance	12	20%
	Hours not convenient	12	20%
	No problems (so no need to go)	11	18%
	Dentist too far away, or can't get there	8	13%
	Dentist doesn't accept insurance (e.g., Medicaid)	4	7%
	Can't find a dentist	3	5%
	Not important/Didn't think of it	3	5%
Needed dental care in the past 12 months, but could not get it at that time	No	40	66%
	Yes	10	16%
	Don't Know	11	18%
Currently in need of dental care	No	39	64%
	Yes	9	15%
	Don't Know	13	21%

[1] State Children's Health Insurance Program; a public dental insurance program in the United States
[2] Only asked of the subset of adolescents who reported a dental home
[3] Only asked of the subset of adolescents with a past year dental visit
[4] Questions are "select all that apply" so responses may not total 100%

Predisposing Traditional Theme: Dental Fear

Participants commonly expressed dental fear, a BMVP predisposing factor (an attitude), that may make them less inclined to visit a dentist. Needles were specifically mentioned frequently by participants of all ages.

Participants were frightened by the dental equipment noises and associated the sounds with the arrival of dentist or dental staff coming to work on their teeth.

The [drilling] noises are scary when you hear the drill from far away and you're scared that she's [dentist/ dental staff] coming.

-Participant (18-19 years)

Participants often shared experiences of parents using dental visits as threats or as a possible disciplinary action for child misbehavior, both during their early childhood and at present.

One time when I went, there [dentist office] was a lady... [dental staff was] Drilling in her teeth and she was screaming...Every time I got in trouble with my mom she would be like, 'If you guys don't stop I'll take you to the dentist.

-Participant (17-19 years)

Enabling Traditional Theme: Difficulty with Scheduling Dental Appointments

A few adolescents described problems with scheduling dental appointments, such as aligning days and time of availability, as a barrier to accessing dental care. Some noted long wait times (months) until appointments, if they could schedule one. Some participants opted to schedule dental appointments in Tijuana, Mexico.

Interviewer: So, it's really easy like if you want to go to the dentist you can make an appointment today? Do you think you can get one?

Participant 1: No.

Participant 2: Yeah, probably. I'll probably go to T [Tijuana, Mexico].

Participant 3: It [scheduling dental appointments at dental home] takes months.

-Participants (15-16 years)

Enabling Vulnerable Theme: Competing with Family Demands

Older adolescents recognized scheduling and getting to scheduled dental appointments was challenging. One participant shared the difficulty of dental appointments competing with other family demands. Dental appointments conflicted with her mother's work schedule. Thus, her mother tried to coordinate dental visits for all the children at once.

Personally, my mom's a single mom and she has five kids so one day she gets off work and takes us all to the dentist and (inaudible) her work schedule so we can't keep going back. If we don't get that one appointment, then it gets us all screwed. Two of my sisters have braces and they have to go every month to get their braces taken care of and that once a month we all go. If something hurts. To make an appointment again is kind of like a struggle because she works six days out of seven.

-Participant (17-19 years)

Enabling Traditional Theme: Family Income and Dental Tourism

All participants were aware of the high costs of dental treatment in the U.S. Many shared their family's financial hardship as the top barrier to dental care and favorably sought orthodontic treatment in Mexico.

Participant 1: I don't want braces because of my insurance doesn't cover it.

Interviewer: Do you think that's a big reason why many people don't go to the dentist?

Participant 1: Because of insurance? Yeah. That's expensive.

Interviewer: So, what is an alternative then?

Participant 1: Not going to the dentist?

Interviewer: Do they go elsewhere?

Participant 1: TJ [Tijuana, Mexico].

-Participants (17-19 years)

One adolescent shared that her family sought affordable dental treatment in Mexico because of the lower cost, despite the dentist's perceived poor performance.

Interviewer: Okay. So do you also experience dentists being a little too harsh when they're working on your teeth?

Participant: It depends on your dentist because I know that my parents normally go to TJ because the cost is less and the dentists over there are less better [performance] than here so it depends on your dentist. If they're too rough, then that just might be them. It depends on where you go.

-Participant (17-19 years)

Enabling Traditional Theme: Home Remedies

Participants mentioned taking home remedies, which was common in many households. Participants vaguely described these remedies, and did not know or share in detail their medicinal properties, side effects, or names, but took them when suggested by trusted family members. Home remedies were primarily used prior to visiting the dentist.

They [family] would give me some kind of little bottle with liquid to make it [dental pain] numb. Like, recently my gums were inflated and they would tell me 'Oh, put this on and rub it all over.'

-Participant (17-19 years)

Interviewer: So, do you use these home remedies first then going to the dentist?

Participant: We would do home remedies first and then we'd go to the dentist.

-Participant (17-19 years)

Need Vulnerable Theme: Lack of Direct Adolescent-Provider Communication

Dentists evaluated adolescents' oral health status during dental visits, but many participants reported that their dentist did not talk to them directly. Instead, dentists discussed participants' oral health status and treatment needs with parents, causing frustration among adolescent patients. Participants were not informed about their oral health needs.

They [dentist] need to tell us because it's our mouth. Why can't they tell us, you know, instead of telling our parents? It's my mouth it should be my concern instead of my parent's concern.

-Participant (17-19 years)

A few participants suggested they should speak up about their oral health interests and concerns, and others noted the delivery of oral health status information is a patient's right.

Need Vulnerable Theme: Negative Dental Visit Experiences

Participants' perceived oral health needs were influenced by their negative dental care experiences as dental care was associated with painful procedures, specifically tooth fillings and extractions. None discussed preventive care, though a few noted they went to the dentist for check-ups and cleanings.

Why I don't like going to the dentist? Because it can be painful sometimes like when you need a [tooth] filling.

-Participant (15-16 years)

I hate when they try to numb it and I still feel it. I hate the needle and the drilling part.

-Participant (15-16 years)

Discussion

This qualitative study identified multiple traditional and vulnerable predisposing, enabling, and need factors related to dental utilization and experiences among this sample of Mexican migrant adolescents. Most participants had high levels of dental fear, encountered significant financial and scheduling barriers to accessing care, and turned to home remedies or sought dental care outside of the U.S. Adolescent perceptions about dental care were largely negative, and the lack of direct communication from the dentist was identified as an important issue.

Dental fear can have potentially serious and lasting negative implications. It forms a vicious cycle that perpetuates if not handled early and appropriately, and can delay visits leading to more advanced dental disease (Armfield *et al*., 2007). Our findings are consistent with Mexican-American adolescents and parents in central Indiana, who reported fear as a dental access barrier (Aguirre-Zero *et al.*, 2016). Our participants described their dental fear progressing over time and threats of dental visits, which is alarming. In this sample, families tend to migrate locally within the region, and about two-thirds of adolescents identified having a dental home. The lack of continuity of care consequent to frequent relocation may serve as a significant barrier to overcoming dental fear (Castañeda, 2010). Identifying, understanding, and addressing adolescents' fear in its early stages is needed to disrupt the dental fear cycle. Dental providers and families can address this by changing the way dental care is discussed with adolescents to prevent fear persisting. There are important implications for parents to help reduce dental fear, and not threaten a dental visit as a disciplinary action.

Cost is consistently reported as barrier to dental care (Aguirre-Zero *et al*., 2016; Maupome *et al*., 2015; Lukes and Simon, 2006; Pham *et al*., 2015). Adolescents were acutely aware of this burden, and that costs were lower in Mexico. Our findings align with other research where Mexican-Americans and Mexican immigrants seek dental treatment in Mexico, regardless of immigration or citizenship status and quality of treatment (Maupome *et al.*, 2015; Bergmark *et al*., 2010). Younger adolescents rely on adult family members to help them access care across the border, which may not always be feasible due to travel distance or immigration status.

Adolescents were also keenly aware of the difficulty of scheduling dental appointments, even if they could afford them. Scheduling appointments may pose challenges for larger households and working families due to clinic hours (Aguirre-Zero *et al.,* 2016; Lukes and Simon, 2006), thus giving parents tough choices between going to work or visiting the dentist (Maupome *et al*., 2015). Our findings suggest adolescents may feel guilty if their parents take time off work for their dental treatment, and some may feel inclined to delay visits. Adolescents relied more on home remedies first, which may affect their assessments of dental symptoms, and delayed problem-based care-seeking. In other studies, migrant parents viewed dental visits to be too costly and problematic when compared to a full day's pay, thus causing many to seek emergency care (Carrion *et al.*, 2011; Castañeda *et al*., 2010). Foregoing needed care may make dental problems more complex and expensive to treat. Other studies have shown that parents are less likely to receive dental care than their children, suggesting parents may prioritize their children's needs over their own and the diminishing importance of dental visits over time (Quandt *et al.*, 2007). Adolescents' guilt may additionally fuel the crippling value of dental visits and should be collaboratively addressed by dental providers, parents, and adolescents.

Overall, participants appeared to discount the importance of preventive care (e.g. check-ups/cleanings every 6 months) and only felt they needed to attend the dentist when there is a problem. Problem-driven care-seeking may exacerbate other barriers. Oral health promotion could therefore emphasize the importance of regular preventive care. Further research is also needed to investigate the implications family demands may have on adolescents' oral health.

Several participants reported using home remedies for dental pain in lieu of, or before seeking professional care. Culture shapes an individual's concept of disease, illness, and treatment (Risser and Mazur, 1995). Use of home remedies may be influenced by familial cultural factors/preferences, and warrants further study to understand the sociocultural dimensions surrounding their use. Older adolescents in particular may soon be making their own decisions about care-seeking and using home remedies independently.

These adolescents hoped to be recognized for their growing maturity and wanted to be part of the discussion between dentists and their parents about their oral health and to receive their dental exam results directly. The quality of patient-provider relationships plays a critical role in adolescents' disease management and health outcomes (Monaghan *et al.*, 2013; Flickinger *et al.*, 2013). Failure to bridge the communication channels between adolescents and providers can perpetuate dental fear and guilt. Open communication promotes rapport-building towards positive dental experiences. Fico and Lagoe (2018) found dentists' disregard for patients' concerns/feelings to be the most frequent negative communication experience. Dentists should provide adolescents with age-specific oral health information, invite their questions, ensure they and their parents understand any needed treatment, and include them when developing treatment plans. Adolescent patients have a right to participate fully in making decisions about their care, and have their preferences be heard (American Academy of Pediatric Dentistry, 2014). The American Academy of Pediatric Dentistry's policy identifies minor patients' rights, but also identifies their responsibilities, which includes asking for clarification if needed. Adolescents have a right to be informed during all stages of their care, and parents and providers should actively support this open communication. Our study results suggest that dental providers could benefit from culturally competent and age appropriate communication and rapport building training to better engage with Mexican migrant adolescents about their oral health and treatment to improve dental experiences.

Like all research, this study had some limitations. The focus groups were long, and participants may have been fatigued, even with a break. Younger participants tended to provide briefer narratives, or to simply agree with the more talkative dominant speakers apparent in most groups. Facilitators used different strategies to engage all participants and encouraged everyone to share

their views. Social desirability and recall biases could have affected responses. Additionally, our findings may not be generalizable to all adolescents. The study has several strengths in presenting adolescents' beliefs about dental visit experiences in their own words. The open-ended focus groups were a reasonable method to explore understudied oral health topics. The number of groups was appropriate for qualitative analysis. The sample was gender-balanced, though more participants were younger (ages 12-16), which reflected the age distribution of those participating in the FQHC-affiliated afterschool program.

In conclusion, Mexican migrant adolescents identified and encountered several barriers to dental services and expressed rather negative care experiences. Financial barriers were significant, despite most having dental insurance coverage. Dental providers may benefit from training to enhance culturally competent communication, which may help build rapport, mitigate fear, and facilitate adolescents' understanding of dental treatment and their oral health.

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