

UC San Diego

UC San Diego Previously Published Works

Title

clinical pediatrics in the Mexican immigrant community

Permalink

<https://escholarship.org/uc/item/6xf1w72p>

Author

Young, Janine

Publication Date

2009-04-01

Copyright Information

This work is made available under the terms of a Creative Commons Attribution-NonCommercial-NoDerivatives License, available at

<https://creativecommons.org/licenses/by-nc-nd/4.0/>

Peer reviewed



Part 2

Clinical pediatrics in the Mexican immigrant community

A belief in the healing properties of rattlesnake vertebrae is just one of the aspects of Mexican culture that pediatricians should come to know and respect.

JANINE YOUNG, MD

Mexico remains the largest point of origin for immigrant children in the US.¹ As primary care providers, we have a responsibility to learn more about how these children's heritage may impact their health.

In Part I of this discussion (*Contemp Pediatr* 2009;2:30), we outlined alternative sources of health care, popular medications, as well as nutritional beliefs found in Mexican culture. We now conclude this series with a review of infectious diseases that may be more prevalent within this community. This will be followed by a discussion of cultural beliefs towards common childhood illnesses, along with folk illnesses and remedies.

Infectious diseases

When caring for Mexican-American immigrants, it is

important to be aware of the potential for increased exposure to certain infectious diseases.

Mycobacterium bovis

Many immigrants from Mexico and other Central and South American countries come to the US having been exposed to unpasteurized milk and cheese (*leche fresca* and *queso fresco*). This exposure to raw milk products may

Editor's note: Statements regarding beliefs, practices, and behaviors without citations have been included when such beliefs, practices, and behaviors have been regularly noted by the author and her colleagues practicing at a community health center, where over 95% of patients and/or their families are Mexican-American immigrants.

All Rights Reserved. Advanstar Communications Inc. 2009

DR. YOUNG is an assistant professor at the Department of Pediatrics, University of Colorado Health Sciences Center, Denver Health and Hospitals. The author has nothing to disclose with regard to affiliations with, or financial interests in, any organization that may have an interest in any part of this article.

IMAGES: GETTY IMAGES/DIGITAL VISION/RYAN MCWAY



Global medicine
For more info on this topic, see
www.contemporarypediatrics.com/360

- N** NEWS & UPDATES
- E** EDUCATION
- A** AUDIO
- C** COMMUNITY
- T** TOOLS
- V** VIDEO

continue once these patients are living in the US. Some families buy *leche fresca* and *queso fresco* from local US markets that import these foods from Mexico. Visiting relatives may also bring these items from Mexico. Children with continued exposure to these unpasteurized milk products carry an increased risk of contracting *Mycobacterium bovis* (*M bovis*).^{2,3} Children with *M bovis* disease are clinically indistinguishable from those with *Mycobacterium tuberculosis* (MTB), though infection from *M bovis* is more likely to present with non-pulmonary forms of the disease, such as scrofula.⁴

Other diseases that may be contracted from raw milk products include *Salmonella* species, *Campylobacter* species, *Listeria monocytogenes*, *Brucella* species, and *Escherichia coli* O157:H7.⁴

Mycobacterium tuberculosis

All Mexican-born children receive the Bacille Calmette-Guérin vaccine (BCG) within their first few days of life. This vaccine is known to significantly decrease the rate of disseminated MTB infections in infancy. However, BCG vaccine does not prevent the spread of MTB after infancy.⁵

If active TB is suspected in an infant or child, a tuberculin skin test (TST) should be conducted, regardless of the time since immigration, time since BCG vaccination, or age of the infant or child. Screening for latent TB infection should be done in all children born in Latin American countries, where TB is endemic.⁶ Ideally, a TST should be placed at least two to 10 weeks after immigration (the window of time when most patients will mount an immune response to TB infection or disease).⁴

Parasitic infections

Children may be infected with pork tapeworm cysts (*Taenia solium*) or beef tapeworm (*Taenia saginata*) by ingesting eggs via fecal-oral contact. The most common presentation of *T solium* infection is neurocysticercosis.⁷ While *T saginata* infection is typically asymptomatic, it may cause gastrointestinal symptoms such as nausea, abdominal pain, and/or diarrhea.⁴

Giardiasis (*Giardia lamblia*) is acquired through the ingestion of cysts in contaminated water, food, or via the fecal-oral route. Infected children are often asymptomatic. Those with symptoms may present with diarrhea, abdominal pain or distention, anorexia, weight loss, failure to thrive, or anemia.⁴

Any immigrant child with gastrointestinal symptoms or failure to thrive should have stools screened for ova and parasites. A complete blood count and differential should also be done to screen for eosinophilia, which may be seen in some parasitic infections.

Common childhood illnesses

Below are some of the more common childhood issues or illnesses, and how some families within the Mexican-immigrant community perceive and treat them.

Colic

Some families will give chamomile tea (*té de manzanilla*) to their newborns hoping that it will prevent colic. They may also add sugar or honey for taste. Providers should always ask parents of newborns if they are giving any tea and, if so, in what amounts. If the parents (and/or family members such as a grandmother [*la abuela*]) are indeed giving the newborn chamomile tea, then it should be reinforced that the herb only be administered in water, and that sugar or honey should not be added given the increased likelihood of the development of dental caries, and a risk of botulinum spores in the honey. The amount of tea should also be restricted to no more than ½ ounce per day.

Greta, *azarcón*, and *albayalde* may also be used as home remedies for colic. Parents should be informed that lead is an ingredient in high concentrations in these remedies and may cause neurologic damage.⁸ (Table 1).

Gastroenteritis

Some families believe gastroenteritis is caused by *empancho* (Table 2). In response, parents will stop offering milk, formula, or breast milk during a bout of gastroenteritis, believing that the milk will cause further symptoms.⁹ They may exclusively give rice water (*agua de arroz*) to their infant or child, thinking that this will adequately hydrate them. They may also ask for anti-diarrheal or anti-emetic drugs. Aspirin-containing medicines such as bismuth subsalicylate or acetylsalicylic acid (eg, Pepto Bismol, Kaopectate) may also be administered.

Proper education about the role of oral rehydration solutions (*sueros*), the contraindications of aspirin in children under 18 (Reyes syndrome), and the fact that,



Figure 1

Table 1 Folk remedies (*remedios caseros*) found in Mexican culture

The folk remedies listed below can be administered by parents, grandmothers (*la abuela*), a female neighbor or relative (*una señora*), a folk healer (*curandero*), an herbalist (*yerbero*), or a massage therapist (*sobador*).¹⁻²

Yerba buena (peppermint)

Often used to treat flatus or colic.

Ajo (garlic)

Used as a cough syrup or an antibacterial.

Eucalipto (eucalyptus, such as Vicks VapoRub)

Used to treat cough, reactive airways disease, bronchiolitis, and tuberculosis. Some families will rub eucalyptus ointment on an infant or child's chest, under the nose, or make a tea from the herbs. Lipoid pneumonia has rarely developed secondary to the use of oil-based ointments introduced orally or intranasally.³ Families should be discouraged from giving such treatments to their infants and children.

Vertebrae from rattlesnakes

Some families will have Mexican relatives send a necklace made of rattlesnake vertebrae for young children to wear who are teething. The families believe that the bones prevent teething pain (Figure 1).

Greta, azarcón, and albayalde

Lead-based home remedies used to treat *empacho* (Table 2) or colic.¹

References

1. Destefano A: *Latino folk medicine: healing herbal remedies from ancient traditions*. Ballantine Books; 2001.
2. Folk Medicine in Hispanics in the Southwestern United States. Available at www.rice.edu/projects/HispanicHealth/Courses/mod7/mod7.html. Accessed on February 2, 2009.
3. Hoffman LR, Yen EH, Kanne JP, et al: Lipoid pneumonia due to Mexican folk remedies: cultural barriers to diagnosis. *Arch Pediatr Adolesc Med* 2005;159:1043

in the majority of cases of gastroenteritis, no medications are needed, is key to guiding families through this illness.

Umbilical hernias

Some infants may be brought to visits with adhesive tape or wrapped cloth covering their umbilicus. Whether there is a true umbilical hernia or not, some families believe that these methods will prevent or cure umbilical hernias. If a family feels strongly that they would like to have something around the infant's umbilicus, then a loosely wrapped cloth would be a relatively harmless option. However, families should be discouraged from using tape, given that it can be quite irritating to the infant's skin.

Teething

In the Mexican-American population, some believe teething causes fevers,¹⁰ prompting the use of non-steroidal anti-inflammatory or homeopathic medicines. One such medicine used, Humphrey's Teething Pellets, lists the "active" ingredients chamomile, coffee, belladonna, and the "inactive" ingredient of sugar.

Necklaces comprised of rattlesnake vertebrae may also be used as a cure for teething (Figure 1).

Constipation and conjunctivitis

Parents may describe an infant as having constipation (*estreñimiento*) when, in fact, the infant has normal stool consistency, but does not have a daily stool. These infants may be given rectal suppositories, diluted formula, or water to help him or her stool daily. It is important to clarify with the family exactly what is meant by "constipation." Moreover, providers should evaluate the child for an underlying pathologic diagnosis, and if none is found, provide concrete counseling regarding normal/abnormal infant stool patterns and that there is no need for treatment in most cases.

Some families believe that conjunctivitis is caused by *sereno* (Table 2). Treatment may consist of drops of breast milk or chamomile tea to the affected eyes.^{11,12}

Parasitic infections

In many developing countries, parasitic infestations are a reality. In some rural areas, children may be offered anti-parasitic treatments (ie, mebendazole) on a semi-regular basis, recognizing that they have had chronic exposure to untreated water.

Some families come to the US expecting such treatments to be continued, particularly if the child is displaying signs or symptoms that they believe are indicative of parasitic infections. Family members may believe that



such signs of parasitic infection include hypopigmented patches on skin or grinding of teeth while sleeping. If families mention either of these symptoms and are concerned, it may be useful to ask whether they believe their child has a parasitic infection.

Data are lacking regarding the benefits of standardized screening for parasitic infections on all children emigrating from Mexico or other developing countries.¹³ Without overt signs or symptoms of diarrhea, abdominal pain, failure to thrive, anemia, or eosinophilia in an otherwise healthy child, the yield of screening an asymptomatic immigrant for parasitic infections would seem to be low.

Upper respiratory infections

Some families may expect antibiotics for upper respiratory infections or URIs (this is perhaps a universal expectation).¹⁴ There may be a belief that giving breast milk, formula, or regular milk will prolong the illness, causing more mucous production.⁹ In addition, some believe that cold beverages and foods can exacerbate an URI.

Asking families about what they are giving their infants and children during URIs, and explaining the need to continue to give milk, particularly to infants, are key to assuring proper nutrition. Be sure to also ask if the family is giving any antibiotics or other drugs.

Table 2

Folk illnesses found in Mexican culture ^{1,2}			
Name	Cause	Symptoms	Treatment
Empacho (Blockage of food or saliva in stomach or intestines causing obstruction)	Eating too much or at the wrong time, eating spoiled foods, changing formula types	Nausea, vomiting, diarrhea, anorexia, abdominal pain	Change in diet, giving herbal teas, abdominal massage with oil, powdered folk remedies such as <i>greta</i> , <i>azarcón</i> , and <i>albayalde</i> (high concentrations of lead)
Caida de la mollera (Fallen fontanelle)	Breast or bottle taken from the mouth of a baby too quickly; baby bounced too much	Problems feeding or swallowing (from soft palate sinking in), fever, diarrhea, vomiting, crying, fussiness	Pressure on the soft palate or feet, herbal teas
Mal de Ojo (Evil eye)	A jealous person looks at a child (intentionally or unintentionally) and causes a spell to be placed on the child	Fever, fussiness, diarrhea, vomiting	Folk healer (<i>curandero</i>) passes an egg or lemon over the child's body, and prayers are spoken
Aire (Air)	Extreme temperature changes (hot to cold)	Earache	Blow warm smoke into ear
Susto (Fright sickness)	Experiencing frightening event (eg, accident, death in family)	Diarrhea, nervousness, anxiety, sleeping problems, depression, souring of milk	Folk healer (<i>curandero</i>) passes an egg or herbs over the child's body, and prayers are spoken
Sereno (Night dew)	Moisture or cold air	Coryza, eye discharge, ear pain, diaper rash	Warm clothes, clean eye with chamomile tea or breast milk
Bilis (Bile)	Suppression of anger	Acting out, bad mood	Drinking tea or warm water
Chipi (Weaned baby or crying child)	Weaning a baby from the breast or birth of a new baby	Emotional or behavioral problems	Ignoring behavior, rewarding positive interactions

References

1. EthnoMed: Hispanic Home Page. Available at <http://ethnomed.org/ethnomed/cultures/hispanic/hispanic.html>. Accessed on February 2, 2009
2. Folk Medicine in Hispanics in the Southwestern United States. Available at www.rice.edu/projects/HispanicHealth/Courses/mod7/mod7.html. Accessed on February 2, 2009.

Early childhood caries

Poverty and Mexican-American ethnic status have been shown to be independently associated with the development of early childhood caries.¹⁵ This increased incidence of caries clearly is exacerbated by the national shortage of pediatric dentists willing to care for impoverished children.¹⁶ Similarly, in Mexico, many families do not receive regular dental care for their children, and there is little understanding of the importance of routine fluoride treatments, dental cleaning, and check-ups. Therefore, educating families on proper dental hygiene, regular dental visits, and the effect of sugary beverages and snacks on the development of caries is essential to improve children's oral health.

Anemia and prolonged bottle-feeding

In a recent study, iron deficiency anemia was shown to be significantly more prevalent in Mexican-American children than Caucasians and African Americans.¹⁷ Prolonged bottle-feeding was also associated with a higher rate of iron-deficiency anemia. Among those young Mexican-American children who were bottle-fed beyond 12 months, the prevalence of iron deficiency was 18.5% compared to 3.3% among those children with neither risk factor. Given this finding, it is essential to not only follow standard screening guidelines for anemia at the 15-month and 2-year well-child care visits, but also to encourage discontinuation of bottle-feeding by 12 to 15 months.¹⁸

Pityriasis alba and hypopigmentation

Clinical experience suggests that some families believe that hypopigmented patches are indicative of an underlying illness such as a parasitic infection (see above), or a vitamin deficiency such as anemia. If an infant or child presents with such findings, it is useful to be aware that these beliefs may exist in some families and to address these beliefs, as needed.

Folk illnesses and remedies

It is always important to understand a family's specific concerns and what they believe may be causing a child's symptoms, which may include beliefs about folk illness.

Many of the folk illnesses described here have signs and symptoms that overlap with organic illnesses. It is important to be aware of this overlap when a family presents with one of the complaints listed below. It also is essential to ask whether the child is being given home remedies (*remedios caseros*) (Table 1).

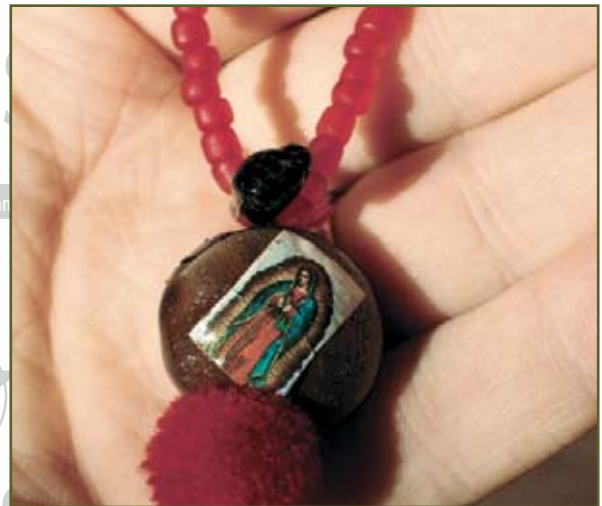


Figure 2 The *azabache* or *ojo de venado* (deer eye) are considered protection from *mal de ojo*, the evil eye.

Caída de la mollera

When examining an infant or young child, it is useful to comment on the anterior fontanelle and its normal appearance, given that many Latino immigrant parents have heard of *caída de la mollera* (fallen fontanelle), and are concerned about it as a real medical issue. Some families believe that a fontanelle can fall if the nipple is taken from the mouth of a baby too quickly, or if a baby is bounced too much. Symptoms are thought to include problems feeding or swallowing, fever, diarrhea, vomiting, crying, or fussiness. The family may believe these symptoms can be relieved by methods (Table 2) including pressing on the soft palate or feet, and herbal teas.^{12,19}

One case report of an uncommon treatment for *caída de mollera* described an infant who had been held upside down, shaken, and his head placed in boiling water. These actions led to a subdural hematoma and ultimately the infant's death.²⁰ Clinicians should be aware of such beliefs and treatments, and discuss benign versus harmful interventions.

Empacho

Some families will present with a child who has nausea, vomiting, diarrhea, anorexia, or abdominal pain and state that the child has *empacho* (blockage of food or saliva in the stomach or intestines, causing obstruction). Some believe that *empacho* is caused by eating too much or at the wrong time, consuming spoiled foods, or changing the type of formula given. Families will treat *empacho* with a change in diet, herbal teas, abdominal massage



with oil, or powdered folk remedies with lead (eg, *greta*, *azarcón*, *albayalde*).^{12,19}

Although it is rare to encounter these folk remedies in the US, there are communities where these remedies are more easily accessible. Studies have revealed lead-based home remedy usage rates as high as 35% in Mexico,²¹ and 11% in some communities in the US.²²

Mal de Ojo (Evil eye)

Many families believe that if a jealous person looks at a child intentionally or unintentionally, a spell can be placed on that child, causing symptoms such as fever, fussiness, diarrhea, or vomiting. Many newborn babies will wear a bracelet with an amulet attached with a picture of a Mexican Catholic saint, *La Virgen de Guadalupe*, to protect the baby or young child from mal de ojo. These amulets (Figure 2) are called *azabache* or *ojo de venado* (deer eye).^{12,19}

Environmental hazard

Patients from Latin America may have an increased risk of lead exposure and intoxication.^{23,24} Lead paint is still used in some pottery, and there are traditional folk remedies specifically used in children that have high lead concentrations (upwards of 93% lead) to treat such ailments as colic, teething, gastroenteritis, and abdominal pain. These remedies include *greta*, *azarcón*, and *albayalde*. Some Mexican candies may also contain lead.²⁵⁻²⁷

A complete blood count and lead level should be performed on any child 6 years and younger who has recently emigrated from Mexico.²⁸ These tests also should be considered in older children with developmental delay or clinical findings suggestive of anemia or lead poisoning.

A culturally inclusive approach

By attempting to understand Mexican/Latino culture, beliefs, language, and practices, clinical experience suggests that the quality, satisfaction, and outcomes of clinical care that is provided may be greatly improved. □

References

1. Flores G, Youdelman, M, DesMeules M: Health care for immigrant children. State of the Art Plenary Session. Available at www.cincinnatichildrens.org/assets/0/78/1067/1395/1833/1835/e77365c1-3f26-4ab5-b6e0-3bf0ef3410fb.pdf. Accessed on February 2, 2009
2. Harris NB, Payeur J, Bravo D, et al: Recovery of mycobacterium bovis from soft fresh cheese originating in Mexico. *Appl Environ Microbiol* 2007;73:1025
3. Winters A, Driver C, Macaraig M, et al: Human tuberculosis caused by mycobacterium bovis-New York City, 2001-2004. *MMWR* 2005;54:605
4. Pickering LK: Red Book: 2006 Report of the Committee on Infectious Diseases: American Academy of Pediatrics; 2006.
5. Trunz BB, Fine PEM, Dye C: Effect of BCG vaccination on childhood tuberculous meningitis and miliary tuberculosis worldwide: a meta-analysis and assessment of cost-effectiveness. *Lancet* 2006;367:1173

6. Bloch AB: Screening for tuberculosis and tuberculosis infection in high-risk populations. Recommendations of the Advisory Council for the Elimination of Tuberculosis. *MMWR* 1995;44:18
7. Kraft R: Cysticercosis: an emerging parasitic disease. *Am Fam Physician* 2007;76:91
8. Centers for Disease Control and Prevention, National Center for Environmental Health, Childhood Lead Poisoning Prevention Program, Folk Medicine and Childhood Lead Exposure. Available at www.cdc.gov/nceh/lead/faq/folk%20meds.htm. Accessed on February 2, 2009
9. Guerrero ML, Morrow R, Calva J, et al: Rapid ethnographic assessment of breastfeeding practices in periurban Mexico City. *Bull World Health Organ* 1999;77:323
10. Taveras EM, Dourousseau S, Flores G: Parents' beliefs and practices regarding childhood fever: a study of a multiethnic and socioeconomically diverse sample of parents. *Pediatr Emerg Care* 2004;20:579
11. Destefano A: Latino folk medicine: healing herbal remedies from ancient traditions: Ballantine Books; 2001.
12. Folk medicine in Hispanics in the Southwestern United States, Rice University. Available at www.rice.edu/projects/HispanicHealth/Courses/mod7/mod7.html. Accessed on February 2, 2009
13. Stauffer WM, Kamat D, Walker PF: Screening of international immigrants, refugees, and adoptees. *Primary Care: Clinics Office Pract* 2002;29:879
14. Cespedes A, Larson E: Knowledge, attitudes, and practices regarding antibiotic use among Latinos in the United States: Review and recommendations. *AJIC* 2006;34:495
15. Iida H, Auinger P, Billings RJ, et al: Association between infant breastfeeding and early childhood caries in the United States. *Pediatrics* 2007;120:e944
16. Dental coverage and care for low-income children: the role of Medicaid and SCHIP. The Kaiser Commission on Medicaid and the Uninsured. Available at <http://www.kff.org/medicaid/upload/7681-02.pdf>. Accessed February 7, 2009
17. Brotanek JM, Halterman JS, Auinger P, et al: Iron deficiency, prolonged bottle-feeding, and racial/ethnic disparities in young children. *Arch Pediatr Adolesc Med* 2005;159:1038
18. Kleinman RE: Pediatric Nutrition Handbook. In. 5th ed: American Academy of Pediatrics; 2004.
19. EthnoMed Hispanic home page. University of Washington, Harborview Medical Center, 1992-2008. Available at <http://ethnomed.org/ethnomed/cultures/hispanic/hispanic.html> Accessed on February 2, 2009.
20. Guarnaschelli J, Lee JPFW: Fallen fontanelle (Caida de mollera): a variant of the battered child syndrome. *JAMA* 1972;222:1545
21. Baer RD, Garcia de Alba J, Cueto LM, et al: Lead based remedies for empacho: patterns and consequences. *Soc Sci Med* 1989;29:1373
22. Mikhail BI: Hispanic mothers' beliefs and practices regarding selected children's health problems. *West J Nurs Res* 1994;16:623
23. Lopez-Carrillo L, Torres-Sanchez L, Garrido F, et al: Prevalence and determinants of lead intoxication in Mexican children of low socioeconomic status. *Environ Health Perspect* 1996;104:1208
24. Tong S, Schirnding YE, Prapamontol T: Environmental lead exposure: a public health problem of global dimensions. *Bull World Health Organ* 2000;78:1068
25. Baer RD, Ackerman A: Toxic Mexican folk remedies for the treatment of empacho: the case of azarcon, greta, and albayalde. *J Ethnopharmacol* 1988;24:31
26. Bose A, Vashistha K, O'Loughlin BJ: Azarcon por empacho--another cause of lead toxicity. *Pediatrics* 1983;72:106.
27. Courtney JG, Ash S, Kilpatrick N, et al: Childhood lead poisoning associated with tamarind candy and folk remedies, California, 1999-2000. *MMWR* 2002;51:684
28. Binns HJ, Campbell C, Brown MJ: Interpreting and managing blood lead levels of less than 10 micrograms/dL in children and reducing childhood exposure to lead: Recommendations of the Centers for Disease Control and Prevention Advisory Committee on Childhood Lead Poisoning Prevention. *Pediatrics* 2007;120:e1285