In the 3 months before the skin test, 5% had a coccidioidomycosis diagnosis code, 5% had a coccidioidomycosis serologic test code, and 5% had a fluconazole prescription. On the skin test date and in the 3 months after, 7% had a coccidioidomycosis diagnosis code, 15% had a serologic test, and 9% had a fluconazole prescription. Forty-four patients (11%) had noncapitated health plans; among those, the mean cost of skin test claims was $43.66 (range $0–$264). Mean costs were $31.57 (range $0–$184) to insurers and $12.09 (range $0–$264) to patients.

In the context of the large at-risk population in *Coccidioides*-endemic areas, coccidioidomycosis skin testing appears to be uncommon in this privately insured population. Real-world data on the test's use and performance in the general population are lacking, although it performs well for risk-stratifying prison inmates (*5*). Reasons for its low use could be its limited approved clinical indication to detect delayed-type hypersensitivity to *Coccidioides* in persons with a known history of disease or that the clinical implications of such testing may be unclear. Cost may also play a role, although it is unclear why most patients had capitated health plans. Reasons why most tests were performed in California rather than in Arizona (states where most coccidioidomycosis cases occur) are unknown.

Patient age was consistent with the test's approval for use in adults. However, few patients had coccidioidomycosis diagnosis codes, suggesting possible use of this test to screen for immunity in those with unknown exposure to *Coccidioides*, which has not been evaluated. Another explanation for the low frequency of coccidioidomycosis diagnosis codes in the 3 months before testing is a more distant coccidioidomycosis history. We observed laboratory testing and fluconazole prescription patterns that suggest that the test might be occasionally used as a supplemental diagnostic tool.

Patient return visit rate (35%) was comparable to that of tuberculosis skin testing. This proportion could appear falsely low if providers chose not to bill for reading the test results. In addition to lack of test results, limitations of this analysis include potential coding misclassification.

In summary, skin testing could be useful for evaluating healthy persons' risk of developing coccidioidomycosis but appears to be rare, even in endemic areas. Determining features of patients who receive a coccidioidomycosis skin test and assessing clinicians' knowledge and attitudes could provide insight into the test's clinical and epidemiologic value.

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Geographic Expansion of Sporotrichosis, Brazil

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Brazil has experienced geographic expansion of zoonotic sporotrichosis. Social problems in the country contribute substantially to the expansion. A comprehensive sporotrichosis control program is beyond the sphere of public health. A One Health approach is needed to control the disease in animals and humans.

High rates of human cases of sporotrichosis caused by *Sporothrix brasiliensis* transmitted by cats have been reported in Brazil since 1998 (*1*). The main referral center for the treatment of this mycotic disease, Oswaldo Cruz Foundation (Fiocruz) in Rio de Janeiro, recorded ≈5,000 human cases during 1998–2015 (D.F.S. Freitas, unpub. data) and 5,113 feline cases during 1998–2018 (S.A. Pereira, unpub. data). However, these numbers only represent cases diagnosed at 1 institution, and actual incidence rates likely are higher.

During 1998–2017, Brazil experienced a geographic expansion of sporotrichosis. The southeast region had the largest occurrence of human and animal cases (*1*,*2*), but outbreaks and case reports of feline sporotrichosis have been described from other regions (*3*,*4*,*5*) (Figure). In regions only reporting feline cases, zoonotic transmission probably is going unnoticed.

Zoonotic sporotrichosis also has been reported in the United States, India, Malaysia, Argentina, Mexico, and Panama (*2*). In Malaysia, isolates from cases caused by *S. schenckii* sensu stricto (*6*) have included clonal reproduction, which could indicate ongoing emergence of a genotype that is adapting to the feline host (*7*), similar to what was reported for *S. brasiliensis* in Brazil (*1*). Also, the occurrence of zoonotic sporotrichosis due to *S. brasiliensis* in Argentina is alarming because it points to a potential transboundary expansion of this virulent species to other regions in Latin America. Despite rules implemented for pet travel, poor control over road transportation might contribute to the spread of sporotrichosis in Brazil and could pose a risk for spread beyond its borders (*8*).

Fungal infections generally are neglected (*9*), and public health policies and strategic plans for prioritizing such infections are lacking. Inadequate surveillance of fungal infections leads to unnoticed emergence, such as seen with zoonotic sporotrichosis.

The rise and spread of sporotrichosis cases in Brazil were overlooked for several years, making a

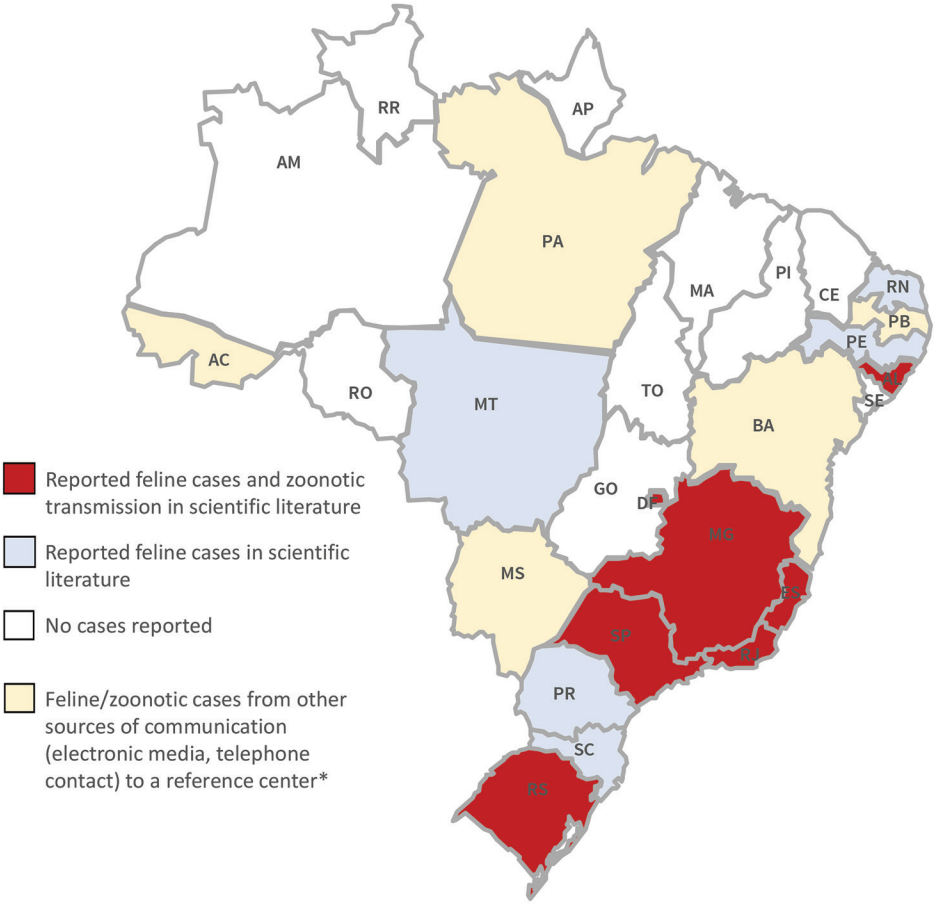

Figure. Occurrence of feline sporotrichosis and cases of zoonotic transmission in Brazil. *Reference center is the Laboratory of Clinical Research on Dermatozoonoses in Domestic Animals, Evandro Chagas National Institute of Infectious Diseases, Oswaldo Cruz Foundation (Fiocruz), Rio de Janeiro, Brazil. AC, Acre; AL, Alagoas; AM, Amazonas; AP, Amapá; BA, Bahia; CE, Ceará; DF, Federal District; ES, Espírito Santo; GO, Goiás; MA, Maranhão; MG, Minas Gerais; MS, Mato Grosso do Sul; MT, Mato Grosso; PA, Pará; PB, Paraíba; PE, Pernambuco; PI, Piauí; PR, Paraná; RJ, Rio de Janeiro; RN, Rio Grande do Norte; RO, Rondônia; RR, Roraima; RS, Rio Grande do Sui; SC, Santa Catarina; SE, Sergipe; SP, São Paulo; TO, Tocantins.

previously rare disease frequent and uncontrolled in many regions. Continuing socioeconomic and environmental difficulties, such as economic and social inequality, poverty, unemployment, urban agglomeration, and poor basic sanitation, coupled with scarce and inadequate health services, are fueling this expansion. In Rio de Janeiro, despite the high number of cases and the strain sporotrichosis puts on public health services, an animal sporotrichosis control program that included free diagnosis and treatment was not implemented until 16 years after the epidemic began. Nevertheless, given the chaotic situation in this region, the control measures used were insufficient. Even with the spread of the disease to other states in Brazil, compulsory notification is performed by only a few specific municipalities.

The absence of a comprehensive feline sporotrichosis control program in Brazil, the multifactorial difficulty in managing sick cats, and the lack of knowledge of sporotrichosis control measures by most of the population have contributed to the growing number of human and animal cases. A One Health approach is key for effective surveillance and successful control. Coordinated actions among veterinarians, laboratory practitioners, surveillance authorities, and other healthcare workers will ensure broader investigations and promote prevention, detection, and assistance for human and animal cases.

Early diagnosis of feline sporotrichosis is essential to guarantee appropriate prevention for owners, especially those at higher risk for infection, such as persons with immunosuppression. In addition, prompt treatment in felines can rapidly reduce the fungal load and risk for transmission of *Sporothrix* by cats (*10*). Thus, the availability of itraconazole, the first-line treatment for humans and animals, is essential in health units of affected areas.

The pattern of feline sporotrichosis appears to be changing in the world, with new cases of zoonotic transmission by other *Sporothrix* species appearing (*1*). Health authorities from neighboring countries should be aware of the signs and symptoms of disease to identify cases early and rapidly implement prevention and control measures. Atypical cases and treatment failures emphasize the need for studies focusing on the detection of potential antifungal resistance and alternative therapeutic strategies. The emergence of new species or changes in the behavior of known species also should be assessed, to identify variations in the ecoepidemiology and in host–pathogen interactions.

If health authorities in Rio de Janeiro had taken measures to control and prevent sporotrichosis in the feline population at the first appearance of human cases, the current scenario could be different and likely would have cost less to the health system in the long term. Considering the remarkable spread of sporotrichosis in the past decade, effective public health actions, including free medication and service for animals, are urgently needed to prevent additional cases in affected areas. We encourage a One Health approach to curb further expansion of sporotrichosis in humans and animals in Brazil.

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Need for BCG Vaccination to Prevent TB in High-Incidence Countries and Populations

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An estimated one quarter of persons worldwide are infected with *Mycobacterium tuberculosis*. In 2018, the World Health Organization issued revised guidance on bacille Calmette-Guérin (BCG) vaccine for high-risk groups. The World Health Organization should consider guiding countries on a case-by-case basis in developing appropriate BCG policies to deliver equitable healthcare and protect public health.

In 1993, the World Health Organization (WHO) recognized tuberculosis (TB) as a global emergency (*1*). Twenty-five years later, TB remains a major public health challenge. It is the single leading infectious cause of death globally. An estimated one quarter of the world's population is infected with *Mycobacterium tuberculosis* (*2*). In 2017, 10 million persons became ill with TB, and 1.6 million died of it. That year, an estimated 1 million children became ill with TB, and 230,000 died (*3*).

Ending the TB epidemic by 2030 is a primary goal of WHO and, if achieved, will contribute to WHO's Sustainable Development Goal 3, which is concerned with health (*4*). In keeping with Pillar 1 of the End TB Strategy, no opportunity to control TB should be missed. The treatment for latent infection in combination with treatment measures for active disease or with preexposure vaccination can substantially decrease TB incidence (*5*).

Until a new TB vaccine is developed, *M. bovis* bacille Calmette-Guérin (BCG) remains the only effective vaccine for TB (*6*,*7*). BCG's overall efficacy, including cost-effectiveness, has been questioned by studies that were confounded by the cross-reactivity of antigens and the absence of measures to exclude latent infection before vaccination. None of these studies considered BCG's primary preventive effect on drug-resistant TB and tangential benefits, such as avoidance of prolonged treatment and unwanted adverse effects. BCG's importance is again increasing in light of new, encouraging evidence about its efficacy and because of the limited availability of alternative new anti-TB strategies.

BCG effectiveness in preventing the life-threatening forms of TB in children is unquestionable. Vaccination at birth or shortly thereafter protects against disseminated and pulmonary TB in young children (*4*). Vaccination is cost-effective in the following groups: infants in settings where TB incidence rates are >20 cases/100,000 population or 5 cases/100,000 smear-positive cases per year; school-aged children in high-risk settings in school-based catch-up programs; and settings with low TB incidence where vaccination of specific populations, such as immigrants from high-incidence countries and healthcare workers, is selectively administered. High global coverage and widespread use of BCG in routine infant vaccination programs could prevent >115,000 TB deaths per birth cohort during the first 15 years of life (*8*).

WHO therefore recommends that, in countries with a high incidence of TB, a single dose of BCG should be provided to all infants at or soon after birth as part of the national schedule. In countries with low TB incidence, BCG may be limited to neonates and infants in recognized high-risk groups or to older children who are skin test–negative for TB infection.