Conclusion. MT remains a serious form of tuberculosis which may compromise the life-threatening. It was mainly seen in young nonvaccinated children but currently, except among HIV-infected persons, it is more common among older persons who experience more an endogenous reactivation. These findings emphasize the high efficacy of BCG vaccination in developing countries to prevent MT.

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769. An Outbreak of Multidrug-Resistant Tuberculosis, Minnesota 2016–2017

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Background. Multidrug-resistant tuberculosis (MDR TB) is more difficult to treat and outcomes are worse than for drug-susceptible TB disease. MDR TB cases in Minnesota increased from zero in 2015 to nine in 2016. Case investigations suggested an outbreak. We describe the public health response, challenges of contact investigations (CIs), and ongoing management of contacts.

Methods. CDC performed whole-genome sequencing (WGS) to evaluate relatedness of MDR TB isolates. We conducted CIs for infectious cases. We created outbreak specific guidelines for screening and management of contacts, and partnered with various agencies to increase MDR TB awareness.

Results. WGS results were consistent with an MDR TB outbreak that included 10 cases (70% pulmonary) as of April 2018. Limited provider awareness about TB contributed to delayed diagnoses. CIs identified 588 contacts; 8.7% ($n = 51$) of contacts had previously documented positive TB infection test results, and 14% ($n = 74$) were newly positive for TB infection (median age: 72 years). Eight cases were epidemiologically linked to one Hmong adult day center. Sixty-two contacts started a fluoroquinolone for latent MDR TB infection. Contacts who declined treatment began a 2-year clinical monitoring program.

Conclusion. In this outbreak, delayed diagnoses resulted in long infectious periods and hundreds of contacts. WGS results were consistent with recent transmission. We discovered adult day centers are an overlooked congregate setting. CIs were complicated by limited public health funding and high underlying TB infection prevalence in the affected community. Increased community and provider awareness and intensified screening of contacts resulted in additional case finding and prevention interventions.

Disclosures. **All authors:** No reported disclosures.

770. Multi-Drug-Resistant Tuberculosis Cases in Arkansas in 2017: A Tale of Two Threats

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Background. Multi-drug-resistant tuberculosis (MDR-TB) is a threat to TB elimination strategies worldwide. From 1998 to 2016, six cases of MDR-TB were reported in Arkansas. In 2017 alone, three cases were detected. We sought to describe the characteristics of these cases to inform our MDR-TB prevention strategy in AR.

Methods. The surveillance database identified three MDR-TB cases in 2017. A detailed review was done to define the demographics, clinical presentation, and laboratory reports relating to drug susceptibility testing (DST), including molecular detection of drug resistance (MDDR). A search was done in the Genotyping database for genotype patterns of the patient isolates.

Results. All three cases were born outside the United States and developed active disease after arrival in AR. Case 1, age 52, was born in the Marshall Islands, arrived in 2016, and had a history of Type 2 diabetes. He developed MDR-TB in February 2017. Case 2, age 42, was born in Mexico, arrived over 20 years ago, and was HIV positive. He developed TB in July 2016 with a pan-sensitive organism and completed an intermittent treatment regimen. A second TB episode with matching genotype but different drug sensitivities occurred in April 2017, less than 4 months after treatment completion, and was considered treatment failure. Case 3, age 56, was born in the Philippines, arrived in 1990, and was reportedly treated for latent TB infection in 1993 with 6 months of isoniazid. She visited the Philippines April–May 2017 and developed MDR-TB in October 2017. Her isolate was in cluster with a case in Oklahoma who came from Mexico in 2006 and was admitted in an AR hospital with a pan-sensitive organism. There are no epidemiological links between the two cases; only one isolate in each case. Because both isolates were identified in AR State TB laboratory, a complex contamination has been considered with no definite resolution at this time.

Conclusion. MDR-TB, due to both primary and secondary drug resistance, remains a threat in AR. Cooperation and communication between all levels of healthcare are crucial to avoid delayed diagnosis of MDR-TB. Timely DST via technologies like GeneXpert and MDDR service at CDC is critical. Consultation from Centers of Excellence is vital in the treatment of MDR-TB complicated by diabetes and HIV. Whole-genome sequencing could provide clarity in the cluster with discordant DST patterns.

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771. Drug Resistance Tuberculosis (DR-TB), Comorbidities and Risk Factors Identified in a Prospective Multicenter Cohort Study in Indonesia

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Background. The numbers of patients with drug resistance TB (DR-TB) increased annually by over 20% globally in the last decade. However, data on the prevalence of DR-TB in Indonesia are limited. The objective of this study to estimate the proportion of DR-TB in new and previously treated TB cases, and to identify comorbidities and risk factors.

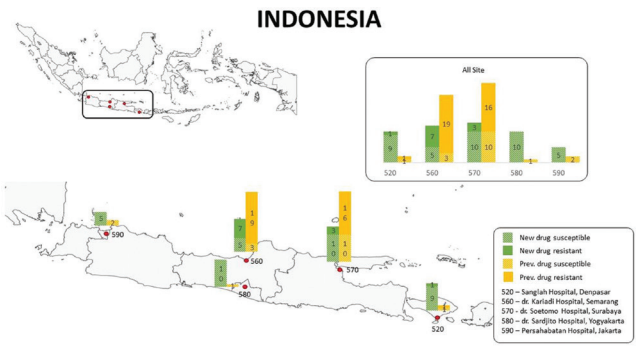
Methods. This study has been conducted at seven hospitals throughout Indonesia since March 2017. Clinically TB patients ≥18-year-old were enrolled and followed until 6 months after treatment completed. Demography and clinical data were recorded; sputum, blood, urine, and PBMC were collected at several time points. AFB smear, sputum culture, Xpert MTB/RIF, and drug sensitivity tests were performed. Drug resistance TB is determined by Xpert MTB/RIF.

Results. Of 151 enrolled patients, 103 (68%) were confirmed *M. tuberculosis* by Xpert MTB/RIF, and 47 (46%) were confirmed rifampicin resistance. The distribution of DR-TB in each study site is shown in Figure 1. Among those with comorbidities (38%), comorbidity with diabetes (based on HbA1c level and diabetes history), HIV, and cancer was 9%, 26%, and 7%. Demography, nutrition status, contact and treatment history, and comorbidities are shown in Table 1. DR-TB primary infection contributes to 23% of DR-TB cases. Biomarkers that may predict treatment failure and TB-genotyping are underway.

Conclusion. The proportion of DR-TB in both new and previously treated patients in our cohort was significantly higher than the estimated number from the WHO and Ministry of Health. TB is a serious threat for public health and mitigation plan must be implemented at all levels.

Table 1: Demography, Nutrition Status, Contact History, TB Treatment History and Comorbid Status

	520	560	570	580	590	All
Demography						
Age (Median, IQR)	38 (20)	41 (21)	42 (25)	37 (45)	22 (3)	40 (25)
Male (*n*, %)	9 (75)	16 (47)	26 (67)	9 (82)	4 (57)	64 (62)
BMI						
<18.5	7 (58)	17 (50)	20 (51)	5 (45)	5 (71)	54 (52)
18.5 to <25	5 (42)	13 (38)	13 (33)	5 (45)	2 (29)	38 (37)
≥25	0	4 (12)	6 (15)	1 (10)	0	11 (11)
Contact history with TB patients	2 (17)	1 (3)	8 (21)	2 (18)	2 (29)	15 (15)
TB treatment history						
New	10 (83)	12 (35)	13 (33)	10 (91)	5 (71)	50 (49)
Previously treated	2 (17)	22 (65)	26 (67)	1 (9)	2 (29)	53 (51)
Comorbid						
HIV	2 (18)	0	0	2 (18)	0	4 (4)
DM	1 (9)	14 (41)	13 (33)	0	1 (14)	29 (28)



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