

transplant, neutropenia (ANC < 1 500), or other immunosuppressive conditions. Patients with repeated infections were included once, for their first episode. **Results:** An increase in the incidence of DNS *E. faecium* was observed at our healthcare system starting in August 2023 (Figure 1). Of 75 patients, 55% were male, 52% were White, 33% were Black, with 92% identifying as non-Hispanic. The mean age was 65 years. A total of 57% of infections were healthcare-associated, with 27% occurring in ICU settings. Specimen sources included blood (20%), urine (5%), and abdominal (48%). Only 5 cases (7%) were considered colonization, while 10 cases (13%) with bacteremia had an ongoing intra-abdominal process. Prior antibiotic exposure was documented in 84% of cases, including vancomycin (51%), daptomycin (15%, high-dose (8-12 mg/kg daily) in 9% of cases), linezolid (13%), and rifaximin (5%). Immunosuppression was present in 39% of patients, and 72% had underlying gastrointestinal pathology (Table 1). Enterococcus was recovered from a previous culture in 20 cases (27%), with 9 (12%) being VRE. Among DNS *E. faecium* isolates, 59% were vancomycin-resistant, and 48% of those patients had prior vancomycin exposure within the preceding 90 days. **Conclusion:** Patients with DNS *E. faecium* frequently exhibit prior antibiotic exposure, immunosuppression, and gastrointestinal pathology. However, significant prior exposure specifically to daptomycin was not found. Approximately 40% of isolates were susceptible to vancomycin; therefore, clinicians need to be alert to the possibility of daptomycin resistance in vancomycin-susceptible *E. faecium* infections. Further study, including case-control analyses, to identify specific risk factors and clarify the role of prior antibiotics vs transmission in the healthcare setting is needed

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Table 1. Distribution of demographic and clinical characteristics of patients with Daptomycin-nonsusceptible *Enterococcus faecium*, 2023-24

| Patient characteristic                                                   | n (%)      |
|--------------------------------------------------------------------------|------------|
| Mean age (years), IQR                                                    | 65 (26-89) |
| Male,                                                                    | 41 (54.6)  |
| Race                                                                     |            |
| • White                                                                  | 39 (52)    |
| • Black                                                                  | 25 (33.3)  |
| • Other                                                                  | 11 (14.6)  |
| Ethnicity                                                                |            |
| • Non-Hispanic                                                           | 69 (92)    |
| Any Immunosuppression                                                    | 29 (38.7)  |
| • Steroid                                                                | 15 (20)    |
| • Chemotherapy                                                           | 8 (10.7)   |
| • Transplant                                                             | 10 (13.3)  |
| • Neutropenia                                                            | 6 (8)      |
| • Other                                                                  | 11 (14.7)  |
| Previous culture for Enterococcus                                        | 20 (26.7%) |
| • Previous VRE                                                           | 9 (12)     |
| ICU admission                                                            | 20 (26.7)  |
| Healthcare-Associated infection                                          | 43 (57)    |
| Antibiotics exposure 90 days prior to cultures for DNS <i>E. faecium</i> | 63 (84)    |

**Presentation Type:**  
Poster Presentation  
**Subject Category:** Occupational Health  
**Latent Tuberculosis Conversion Rates and Characteristics of Converters Among Healthcare Workers in High-Risk Departments**  
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**Background:** The Republic of Korea ranks second among OECD countries for tuberculosis (TB) incidence. National TB control guidelines mandate latent TB infection (LTBI) screening and treatment for healthcare workers

(HCWs), especially those in high-risk departments. At our 2,700-bed tertiary hospital in Seoul, annual LTBI screening and treatment have been actively implemented since 2017, targeting HCWs at elevated risk of TB exposure. This study evaluates LTBI conversion rates among high-risk HCWs and characteristics of HCWs with conversion (converters) over the past five years. **Methods:** Following national guidelines, HCWs were classified into three high-risk groups: those likely to have routine contact with pulmonary TB patients (Group A), those caring for immunocompromised patients (Group B), and those at risk of respiratory infections despite no routine TB contact (Group C). Annual screening included interferon-gamma release assay (IGRA) and chest radiography. HCWs with positive IGRA results (≥0.35 IU/ml) were strongly encouraged to undergo latent tuberculosis treatment. We analyzed data from HCWs working in high-risk tuberculosis units who had worked for more than five years from 2020 to 2024. HCWs with prior IGRA positivity were excluded. **Results:** Among 1,467 HCWs, 15.9% (233/1,467) had been diagnosed with LTBI before 2020, while the cumulative LTBI conversion rate between 2020 and 2024 was 5.3% (65/1,234). The annual LTBI conversion rates ranged between 0.7% and 1.5%. The median age of converters was 42 years, significantly older than non-converters (median 38 years; P = 0.02). Male converters comprised 24.6% (16/65) compared to 14.6% (171/1,169) in the non-converter group (P = 0.03). Longer tenure was observed among converters (median 16 years) than non-converters (median 12 years; P = 0.01). Although medical technicians and emergency room staff exhibited higher conversion rates, these differences were not statistically significant. Among LTBI cases, 78.8% completed treatment, with 9.1% demonstrating reversion. The annual incidence of active tuberculosis among HCWs at our hospital significantly declined to an average of 0.2 cases per year between 2020 and 2024, compared to 4.4 cases per year between 2015 and 2019. **Conclusions:** Annual LTBI screenings revealed conversion rates of approximately 1%, primarily affecting older, long-tenured, and male HCWs. Active LTBI treatment effectively reduced the risk of active TB among hospital staff.

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| Table 1. Demographics and Baseline Characteristics of Healthcare Workers with Positive and Negative Latent Tuberculosis Infection (LTBI) |             |                    |         |  |
|------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------|---------|--|
| Variable                                                                                                                                 | LTBI (n=65) | non-LTBI (n=1,169) | P value |  |
| Age, median year (IQR)                                                                                                                   | 42 (31-49)  | 38 (32-46)         | 0.02    |  |
| Male                                                                                                                                     | 16 (24.6)   | 171 (14.6)         | 0.03    |  |
| Working period, median year (IQR)                                                                                                        | 16 (10-24)  | 12 (7-20)          | 0.01    |  |
| High risk group type                                                                                                                     |             |                    | 0.48    |  |
| • Routine contact with pulmonary TB (Group A)                                                                                            | 32 (49.2)   | 488 (41.7)         |         |  |
| • Caring for the immunocompromised (Group B)                                                                                             | 24 (36.9)   | 509 (43.5)         |         |  |
| • At risk of respiratory infections (Group C)                                                                                            | 9 (13.8)    | 172 (14.7)         |         |  |
| Occupational type                                                                                                                        |             |                    |         |  |
| • Nurses                                                                                                                                 | 42 (64.6)   | 893 (76.4)         | 0.04    |  |
| • Physicians                                                                                                                             | 8 (12.3)    | 108 (9.2)          | 0.38    |  |
| • Nursing aides                                                                                                                          | 6 (9.2)     | 85 (7.3)           | 0.47    |  |
| • Medical technicians                                                                                                                    | 9 (13.8)    | 82 (7.0)           | 0.049   |  |
| • Pharmacist                                                                                                                             | 0 (0.0)     | 1 (0.1)            | >0.99   |  |
| Department                                                                                                                               |             |                    |         |  |
| • Inpatient area                                                                                                                         | 32 (49.2)   | 608 (52.0)         | 0.70    |  |
| • Outpatient clinic                                                                                                                      | 17 (26.2)   | 230 (19.7)         | 0.20    |  |
| • Emergency room                                                                                                                         | 8 (12.3)    | 85 (7.3)           | 0.14    |  |
| • Multi-area*                                                                                                                            | 3 (4.6)     | 88 (7.5)           | 0.62    |  |
| • Laboratory                                                                                                                             | 3 (4.6)     | 34 (2.9)           | 0.44    |  |
| • Operating room                                                                                                                         | 2 (3.1)     | 124 (10.6)         | 0.06    |  |

IQR, Interquartile Range  
Data represent n (%) otherwise indicated.  
\* A group, primarily consisting of physicians, who work across multiple departments such as outpatient and inpatient units

**Presentation Type:**  
Poster Presentation  
**Subject Category:** Occupational Health  
**Optimizing tuberculosis exposure investigation amongst healthcare personnel through risk stratification, a tertiary center experience**  
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**Introduction:** The estimated annual incidence of tuberculosis (TB) in the United States amongst health care personnel (HCP) is low at 2/100,000 persons. Current TB post exposure testing practices may result in many

HCP being contacted and tested, with very low yield, thus leading to increased health care resource utilization and HCP anxiety. Based on CDC criteria, Mayo Clinic, Rochester is a medium risk facility. Given that the only transmission we have seen in the last decade is from smear positive, symptomatic patients, we present an alternative, risk-based approach to defining exposure risk to guide followup testing for health care personnel exposed to TB patients. Our goal was to account for the most common exposure follow up (EFU) scenarios and not the rarest situations, which would require case by case discussion. We present a novel risk stratification definition for EFU testing at Mayo Clinic, Rochester and present 12 months' worth data pre and post initiative. **Methods:** Prior to July 2023, case exposure definition for screening was broad without clarity on duration of exposure or risk for acquisition of the disease. After the new definition was proposed in collaboration with Infection prevention and control (IPAC), Occupational safety and health, and Minnesota department of health, each case was reviewed to determine appropriateness of HCP exposure testing **Results:** In the time frame from July 2022 through June 2023, total of 5 EFUs were conducted, and 70 healthcare personnel were exposed (14 per EFU), and none developed TB infection [MS1] After implementation of new protocol, during July 2023 through June 2024, there were 11 EFUs, 102 healthcare personnel were identified as exposed (9 per EFU), and none developed TB. Of note, the low number of exposure investigations prior to July 2023 coincides with the universal [MS2] masking policy related to the COVID-19 pandemic. **Conclusion:** Existing public health guidelines do not establish minimum exposure time warranting follow up testing for tuberculosis amongst HCP. However, not all cases need extensive case management as this may lead to excessive costs and resources for testing, conducting EFUs and anxiety amongst HCP. With our proposed exposure risk stratification, we aim to not only reduce resources and time needed to conduct EFUs, but also decrease incorrectly identified HCP to assure the correct ones are being tested. We will continue to audit and review our data at regular intervals with continued feedback and discussion with stakeholders to adopt a more data driven approach to TB exposure followup.

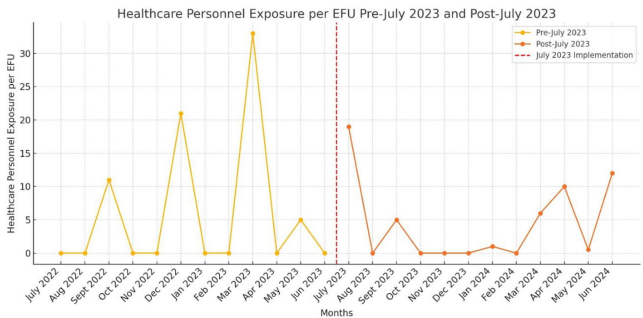
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Table 1: Risk-stratification criteria for healthcare worker tuberculosis exposure follow up

| Risk Group | Exposure risk factors (to be identified by IPAC)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Recommended threshold of unprotected <sup>1</sup> exposure <sup>2</sup> to unmasked source patient that would trigger mandatory postexposure testing |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1          | <div>Patient contact<ul style="list-style-type: none"><li>Aerosol generating procedure (AGP)</li><li>laryngeal TB</li><li>pulmonary cavity TB</li><li>lung abscess</li><li>AFB smear positive with cough</li><li>Any MDR<sup>3</sup> TB</li></ul></div> <div>Lab specimen contact<ul style="list-style-type: none"><li>Manipulation of TB culture outside biosafety cabinet</li><li>Splash of infectious clinical specimen (e.g., sputum) to mucous membrane</li><li>Microtoming frozen section TB specimens outside biosafety cabinet</li></ul></div> | Any duration                                                                                                                                         |
| 2          | <div>Patient contact:<ul style="list-style-type: none"><li>AFB smear positive without cough</li></ul></div>                                                                                                                                                                                                                                                                                                                                                                                                                                            | 15 minutes                                                                                                                                           |
| 3          | AFB smear negative                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 4 hours                                                                                                                                              |

<sup>1</sup>Unprotected means not using respirator.  
<sup>2</sup>Exposure proximity = in same room with patient.  
<sup>3</sup>Susceptibilities for Multi-Drug Resistant (MDR) TB can take time to result and if MDR TB is identified then IPAC will reach out again.

Figure 2  
Number of healthcare personnel impacted per exposure incident necessitating follow up testing during July 2022-June 2024



**Presentation Type:** Poster Presentation  
**Subject Category:** Occupational Health  
**Interview Findings with International Healthcare Providers on Cultural and Environmental Factors in Personal Protective Equipment Use**  
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**Background:** The influence of variations in healthcare environments and cultural factors on the appropriate use and effectiveness of personal protective equipment (PPE) remains insufficiently explored. This study aimed to investigate complex PPE-related challenges and identify potential solutions through in-depth interviews with international healthcare providers. **Methods:** Study participants were recruited through invitation emails sent to international conference attendees who showed interest to the researcher, contacts from the researcher's international networks, and authors of publications on PPE. After obtaining study consent and permission for recording, online interviews were scheduled for one hour per participant, except for one in-person interview. Participants were asked to complete an online pre-survey and, if possible, provide PPE pictures. An \$80 incentive was offered unless declined by the participant. Narrative responses were transcribed, reviewed, and analyzed. **Results:** From October 17, 2024, to January 9, 2025, interviews were conducted with 13 participants representing 12 countries (Bangladesh, Brazil, Ethiopia, Ghana, Japan, Malaysia, Mongolia, Saudi Arabia, Singapore, South Korea, United States, and Vietnam). The participants were predominantly doctors (69.2%) and male (61.5%), with an average age of 47 years and an average of 21 years of clinical experience. In beard-growing countries (Bangladesh, Ghana, Malaysia, and Saudi Arabia), men with long beards faced challenges in properly covering them with masks and had to use beard covers. Tropical countries (Bangladesh, Brazil, Ghana, and Ethiopia) often lack air conditioning in most healthcare settings, and healthcare personnel (HCP) frequently experience heat-related issues when wearing PPE. Singapore and Japan showed good PPE compliance due to their collective cultures. In Singapore, it stemmed from shared agreement and rule-following, while in Japan, it was driven by group conformity and avoiding inconvenience to others. In Vietnam, PPE compliance was high as bosses evaluated HCP' compliance, which could influence bonuses. Political issues impacted COVID-19 responses: in