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Environmental Risk Assessment Tool for Correctional Settings

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Background and Purpose

- Response to previous CPC meeting request
- Purpose
 - Gathering TB environmental risk data
 - Apply environmental data to support CI (awareness)
 - Partnering tool to other CI resources



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Environmental Risk Assessment Part 1

- Overview of index
 - Markers for infectiousness (assessing risk)
 - Period of infectiousness



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Environmental Risk Assessment Part 2

- Environmental details of exposure points
 - Dimensions
 - Environmental controls present
 - Environmental markers
 - Other considerations

Case Study: Background

1. *Facility A inmate* with TB symptoms* - presents to nurse
2. Report test to LHD
3. Inmate placed in airborne infection isolation room (AIIR)
4. Recommend contact investigation (CI)
5. *Facility A* - activates CI team*



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Case Study: Case Interview & Selecting Exposure Sites

1. Interview case
2. Determine exposure sites based on interview
 - a. Cases' cells
 - b. Recreation area
 - c. Clinic waiting cell
3. CI team evaluates sites



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Case Study: Case's Cell & Cell Block



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Key Findings:

- Size of a small bedroom
- No fans or windows to outside
- Recirculating ventilation w/ lent sheet air filters
- 3-4 ACH
- Neutral pressure to hallway*
- Airflow is toward the end of the block hallway (exhaust vent)*



Case Study: Recreation Area



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Key Findings:

- Size of a house (large classroom)
- open ceiling
- industrial fan to increase airflow
- Air is supplied from outside*
- 8-9 ACH (with fan on)
- Air pressure is neutral to inside hall



Case Study: Clinic Waiting Cell



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- Key findings
 - Size of small bedroom
 - Ventilation - recirculating system with pleated filters
 - Supply and exhaust vent in waiting cell
 - Air pressure - neutral to adjacent hallway
 - 7-8 ACH





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Case Study: Ideas for Application of Environmental Findings

- Cases' cell wing has higher priority due to poorer ventilation markers and limited air filtration
- Ventilation and air filtration is average for the clinic, but investigation should consider patients at risk of progressing to TB disease, if infected.
- Given the mixing of outside air, openness, and ACH, the recreation area appears lower priority. This does not necessarily exclude the contacts from the area.



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Works Cited

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- National Tuberculosis Controllers Association. (2005). Guidelines for the investigation of contacts of persons with infectious tuberculosis. Recommendations from the National Tuberculosis Controllers Association and CDC. MMWR. Recommendations and reports: Morbidity and mortality weekly report. Recommendations and reports, 54(RR-15), 1.
- Parsons, S. (2006). Prevention and control of tuberculosis in correctional and detention facilities: recommendations from the CDC.

Your Input?

1. How would you adapt this tool, or make it more applicable to the jurisdiction you serve?
2. What areas of the assessment do you feel need to be removed or added onto?
3. Do you see the facilities in your jurisdiction using this risk assessment?



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