Introduction
Prompt, appropriate triage of patients with suspected pulmonary tuberculosis (PTB) is critically important. Highly sensitive, standard isolation guidelines enhance early detection of PTB and thus, mitigate risk to health care workers; however, many patients will be unnecessarily isolated.

Physical isolation (contact, droplet, or airborne) impacts patient safety, satisfaction, and psychological well-being. Prompt discontinuation of isolation once PTB has been ruled out is essential to minimizing these complications in addition to limiting costs.

Objectives
To examine the usage of airborne isolation (AI) by identifying reasons for “non-timely” discontinuation and predictors of compliance to CDC guidelines. Optimal compliance with CDC guidelines should result in timely (defined as <48h) discontinuation of AI in patients without PTB.

Methods
We identified all patients in AI for suspected PTB from Jun-Dec 2011 at a 500-bed, urban tertiary medical center, and performed chart reviews to identify AI practice, and delayed (>48h) or very delayed (>72h) AI discontinuation. We used descriptive statistics as appropriate and utilized logistic regression to determine independent predictors of adherence to CDC guidelines.

Guideline Compliance
Airborne isolation may be removed if either 1) another diagnosis is made that explains the clinical syndrome or 2) the patient has 3 consecutive negative sputum specimens (obtained every 8 to 24 hours) with at least one specimen collected in the early morning.

Results
We identified 113 patients (age 58±18 years; male 75%; white 18%; average sputum collection interval 21±12.9hrs). Delayed (>48h) and very delayed (>72h) AI discontinuation was noted in 81% and 49% of patients respectively. There were no statistically significant differences in demographics and clinical characteristics between the two groups.

Baseline and clinical characteristics between the two groups are displayed in Tables 1 & 2, with predictors of timely (<48h) AI discontinuation including: use of alternate diagnosis for discontinuation of isolation (p=.02), early infectious diseases consultation (p=.03), pulmonary consultation (p=.02), and need for >1 induced sputum (p=.05).

After adjusting for potential confounders, alternate diagnosis for discontinuation of isolation (OR 5.6, 95% CI 1.2-26.9), and early infectious disease consultation (OR 3.5, 95% CI 1.1-10.8) were independently associated with timely AI discontinuation (Table 3). Pulmonary consultation was independently associated with delayed AI discontinuation (OR 0.17, 95% CI .04-.62).

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Conclusions
Timely AI discontinuation occurs in only 19% of cases, and is an opportunity for improved efficiency, and potentially, patient satisfaction and safety. Increased awareness and standardizing protocols, as well as promptly securing an alternative diagnosis to PTB and early ID consultation, may improve CDC guideline adherence.

References