Piloting Risk-Limiting Post-Election Audits in Michigan

Kellie Ottoboni

University of California, Berkeley
DEPARTMENT OF STATISTICS

BIDS

BERKELEY INSTITUTE
FOR DATA SCIENCE

Risk-limiting audits

Examine a **random sample** of ballots to give confidence that tabulation errors would not change the electoral outcome.

Risk limit: chance of missing a wrong outcome

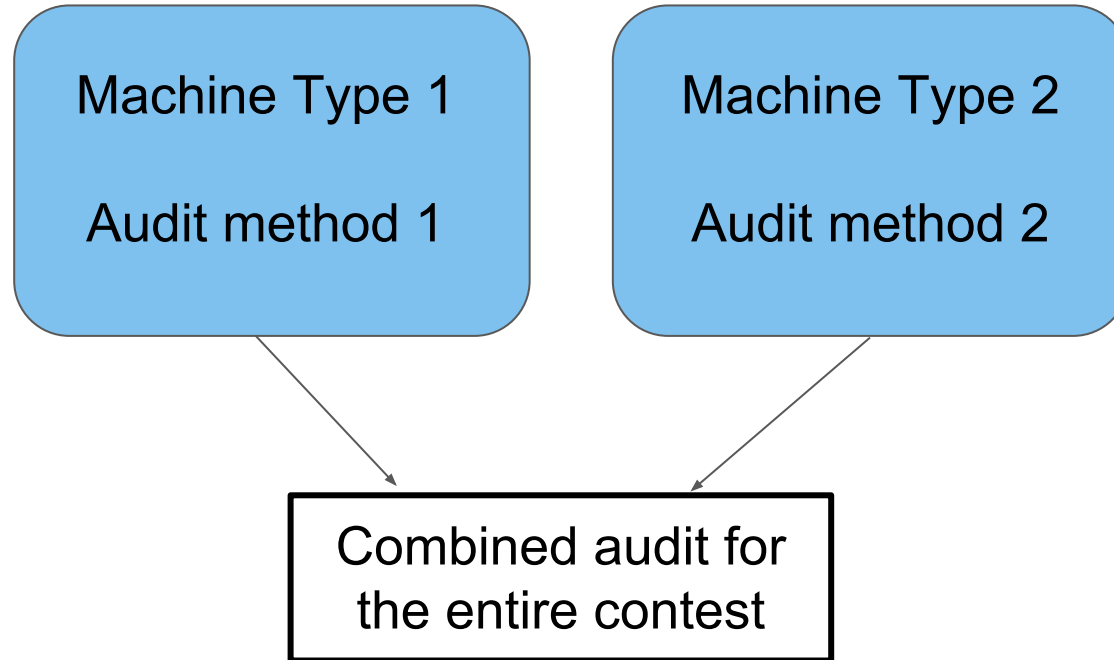https://www.verifiedvoting.org/resources/voting-equipment/

RLAs are hypothesis tests.

H_0: The reported winner is **wrong**.

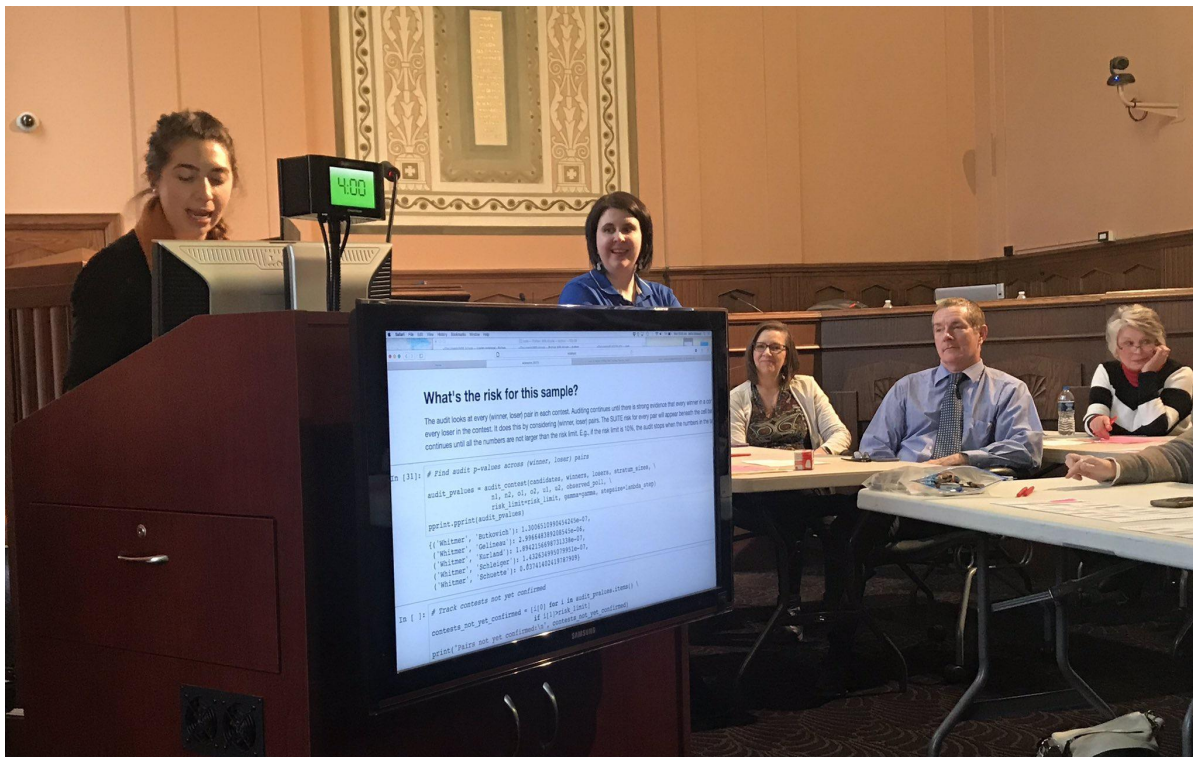Small p-value = high confidence

SUITE (Stratified Union-Intersection Tests for Elections)
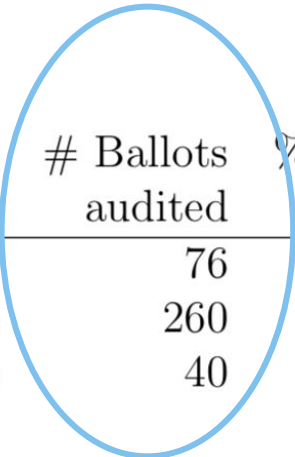
Software tool

Michigan Pilot RLAs

Michigan Pilot RLAs

City	Total ballots	Winner	Loser	Margin	% Ballots with a CVR	# Ballots audited	% Ballots audited
Rochester Hills	36,666	22,999	12,343	29%	0%	76	0.2%
Lansing	21,328	10,309	7,694	12%	50%	260	1.2%
Kalamazoo	27,666	20,699	5,569	55%	19%	40	1.4%

Thanks to Philip Stark, Mark Lindeman, Neal McBurnett, and the Election Audit Software working group for helpful contributions and suggestions developing the math and tool!

✉ kellieotto@berkeley.edu

🌐 www.kellieottoboni.com

🐦 @kellieotto