

“May I buy a pack of Marlboros, please?” A systematic review of evidence to improve the validity and impact of youth undercover buy inspections

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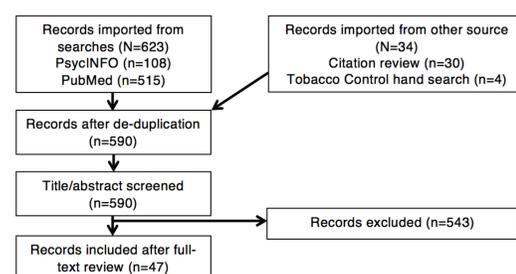
Background

- Limits on youth access part of comprehensive tobacco control
- Large investment in youth access inspections, especially by FDA
 - >495,000 retail inspections by FDA since 2010
 - \$178 million allocated by FDA for retail inspections since 2010
- Past compliance programs (Synar) have shown differences in implementation by states

Methods

- Iterative development of search terminology in four domains:
 - Tobacco (e.g., cigarette OR loosies OR cigars)
 - Access (e.g., sale OR retailer OR sell OR merchant)
 - Youth (e.g., adolescence OR minors OR underage OR juveniles)
 - Validity/Characteristics (e.g., validity OR protocol OR disparity)
- Systematic search: May 22, 2015, in PubMed/MEDLINE and PsycINFO
- Hand search of *Tobacco Control*
- Independent coding by two of title and abstract for inclusion if
 - US-based
 - 1980 to present
 - Empirically assess association between characteristics of youth, neighborhood, or purchase attempt protocol on likelihood or validity of underage sale
- Data abstraction
- Stratification by experimental, observational
- Assessed observational for confounding

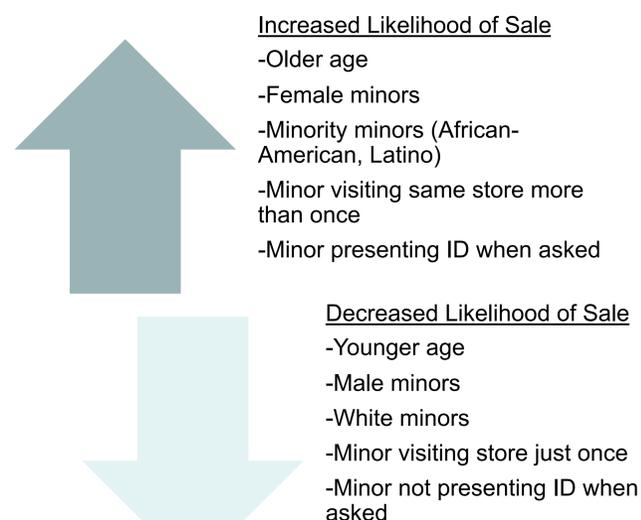
Figure 1. PRISMA flow diagram



Results

- Experimental studies, n=10, examined
 - Retailer familiarity with youth
 - Truthfulness
 - Use of minors who smoke
 - Purchase of non-tobacco product at same time
 - Use of identification card
 - Frequency of inspection
 - Non-completion of purchase
- Ecologically valid approaches yield substantial differences in violation rates compared to tightly controlled protocols
- Observational studies, n=, show
 - As age increases, likelihood of a sale increases
 - Greater likelihood of sale to African-American, Latino youth
 - Greater likelihood of sale to female youth
 - Unclear evidence of differences by neighborhood characteristics

Figure 2. Variables affecting rate of sale, experimental and observational



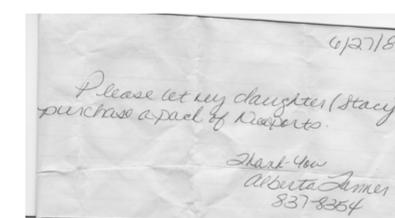
Recommendations

Table 1. Recommendations

Recommendations for Youth Recruitment, Age, and Appearance	Rationale
<ul style="list-style-type: none"> Use older minors Use minors who represent real-world youth smokers States should not artificially make minors look younger by requiring them to dress in a particular way (business casual dress codes, no makeup, no facial hair, etc.) Use experienced minors including those who smoke 	<ul style="list-style-type: none"> Younger minors often get cigarettes from older acquaintances Illegal to sell to a 17 year old regardless of appearance Youthful appearance can bias inspection results. Able to project confidence during a purchase attempt. Improve validity Ethical obligation to provide meaningful resources to quit
<ul style="list-style-type: none"> Match requested product to minor and neighborhood Carry identification cards and show them <i>if asked</i>. 	<ul style="list-style-type: none"> Reflect real-world behavior Presentation of ID does not necessarily preclude sale of tobacco products, and presentation of ID cards more closely reflects real-world experience of underage purchase attempts, as some underage youth may assume that the clerk would not actually check the date of birth.
<ul style="list-style-type: none"> Avoiding answering questions No evidence that lying about age improves validity 	<ul style="list-style-type: none"> Lying about age does not change the outcome If retailers use answering this question as a way to identify a compliance check in progress, it may not be legally problematic to allow minors to lie
<ul style="list-style-type: none"> Consider sending the same minor to conduct purchase attempts more than once at the same store 	<ul style="list-style-type: none"> Reflects real-world behaviors of neighborhood youth More frequent visits improve the reliability and compliance Consider for targeted enforcement in non-compliant "hot spots"

Conclusions

- Older research reveals gaps in our knowledge
- Troubling problems with validity and reliability in underage buy protocols
- Clear differences in violation rate by age of youth
- Unclear disparities by neighborhood characteristics



<http://www.infinitegarage.net/2010/09/other-peoples-collections-please-let-my.html>



<http://www.wecard.org/>



<https://www.dshs.state.tx.us/tobacco/laws.shtm>

Social Media

- Please feel free to post and talk about our research on social media
- Follow @ECUHP and @UNC_health_care for more research from our teams

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References

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