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Assessment of Recreational Cannabis Dispensaries' Compliance With Underage Access and Marketing Restrictions in California.

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2 **Assessing Recreational Cannabis**

3 **Dispensaries' Compliance to Underage**

4 **Access and Marketing Restrictions in**

5 **California**

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The increasing availability of cannabis to adults through legalization of recreational cannabis dispensaries (RCDs) raises concerns regarding underage access and exposure to products and marketing. The American Academy of Pediatrics “strongly recommends strict enforcement of rules and regulations that limit access, marketing, and advertising to youth”.¹ Currently all legalizing states prohibit sales to minors and require ID check, and most ban marketing activities appealing to children.² However, little is known about whether cannabis retailers comply. We assessed RCDs’ compliance to underage access and marketing restrictions in California.

Methods

Between June and September 2019, a research team at University of California San Diego identified and audited all the RCDs in California statewide (N=700).

A validated approach was used to construct a comprehensive list of RCDs.³ We complemented the state licensing directory with online crowdsourcing platforms, given research showing that more than half of active dispensaries in Los Angeles operated without a state-issued license.⁴ Trained researchers called dispensaries to verify the location, operation status, and requirements about patient ID card and doctor’s recommendation.

A validated instrument, Standardized Marijuana Dispensary Assessment – Children Focused (SMDA-CF), was adapted to audit the call-verified RCDs.² SMDA-CF includes items on underage access and point-of-sale marketing activities with particular attention to those appealing to children. SMDA-CF items have moderate to high reliability overall, with a median kappa score of 0.8.² Trained researchers

(aged 21-23 years) conducted the audits undercover in teams of two to improve data reliability. Observations on each dispensary were recorded right after the visit.

The institutional review board at University of California San Diego deemed this study non-human-subject research.

Results

Although California laws require age-limit signage, 67.9% of RCDs failed to comply. California laws further require ID check before any purchase, and overall compliance with this rule was high (96.8%). However, only 11.7% checked ID before entry. The majority (85.1%) checked ID after entry, where additional marketing items are displayed. Despite a low violation rate of children-appealing marketing restrictions on the exterior of the RCDs, 35.3% had children-appealing marketing items inside. Product promotions were common (85.7%), with 62.9% providing first time purchase discounts and 48.6% providing weekly or daily deals. Violations of free-sample ban were also common (21.6% for take-aways; 16.1% for on-site consumption). Moreover, 55.8% provided branded marketing materials and 38.9% promoted health benefits of cannabis.

Discussion

While RCDs in California were generally compliant with checking IDs, most RCDs did not check until customers entered the premises. Considering the low rate of compliance with age-limit signage, minors may unintentionally or even intentionally enter RCDs at which point they become exposed to marketing items hidden from casual outside observers, including advertisements, products, packages, and paraphernalia appealing to children, price promotions, free samples, brand awareness, and positive messaging. As more states liberalize cannabis, greater emphasis and resources need to be dedicated to enforcement of random

71 compliance checks to ensure that regulations intended to minimize access and
72 exposure to minors have teeth.

73 Study limitations include that we used California-specific, cross-sectional data
74 with possibly limited generalizability, binary indicators of instruments without
75 quantity information, and subjective evaluation of children-appealing items.

76 **Disclosures**

77 **Author Contribution:** Dr. Shi had full access to all of the data in the study and
78 takes responsibility for the integrity of the data and the accuracy of the data
79 analysis.

80 Concept and design, funding obtainment, acquisition, analysis, and interpretation of
81 data, statistical analysis, drafting of the manuscript, critical revision of the
82 manuscript for important intellectual content, administrative, technical, and
83 material support, supervision: Dr. Shi

84 Interpretation of data, drafting of the manuscript, critical revision of the manuscript
85 for important intellectual content: Dr. Pacula

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93 the data; preparation, review, or approval of the manuscript; and decision to submit
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Table 1. Compliance to Underage Access and Marketing Restrictions in Recreational Cannabis Dispensaries¹ in California, 2019 (N=700)

	Exterior (before entry) %	Interior (after entry) %	Exterior or Interior %
Access			
Security personnel present [^]	25.1	61.4	77.4
Surveillance camera present [^]	93.1	97.0	97.6
License displayed [^]	3.3	66.1	67.3
ID checked [^]	11.7	85.1	96.8
Age-limit sign [^]	17.2	21.3	32.1
On-site use restriction sign	NA	36.9	NA
Point-of-sale Marketing			
Children-appealing items ^{2#}			
Ads	1.1	10.7	11.4
Products	0.1	19.6	19.7
Packages	0	11.3	11.3
Paraphernalia	0	13.3	13.3
<i>Sum: any children-appealing items</i>	1.3	35.3	35.6
Product promotions			
Loyalty programs	NA	NA	25.1
Daily/weekly deals	NA	NA	48.6
Early bird/happy hour specials	NA	NA	30.4
Price discounts	NA	NA	41.0
First-time purchase discounts	NA	NA	62.9
Social media review discounts	NA	NA	15.7
Free samples with purchase, donation, or gambling	NA	NA	17.1
<i>Sum: any product promotions</i>	NA	NA	85.7
Free samples to take away [#]	NA	NA	21.6
Free samples to consume onsite [#]	NA	16.1	NA
Branded marketing materials	3.6	53.8	55.8
Signs, posters, ads that			
Promote health benefits	NA	38.9	NA
Display health warnings	NA	19.3	NA
Billboards related to cannabis	11.6	NA	NA
Images or wording indicative of cannabis	57.4	NA	NA
Biggest ads over 1,600 square inches	3.3	NA	NA
Other Sources of Exposure to Cannabis			
Observed anyone consuming cannabis	2.1	5.4	7.3
Smelled cannabis before entering outlet	11.7	NA	NA

Notes.

[^]Required by California state laws. [#]Prohibited by California state laws.

¹ Recreational cannabis dispensaries in this study were defined as brick-and-mortar retailers that primarily sell cannabis products to adults aged 21 or older without requiring a patient ID card or a doctor's recommendation.

117 ² Children-appealing marketing activities in SMDA-CF were defined as
118 advertisements, products, packages, and paraphernalia that are “characterized by
119 promotional characters (e.g., cartoons, animals, toys, or children), shaped like
120 commercially sold products usually consumed by children (e.g., gummy bears,
121 lollipop, fruits), or using bright colors (in products, mostly edibles) or bubble-like
122 fonts (on packages, branding, advertisements, or signage)“.