



21 Proof: A Responsible Beverage Service Training Program Summary Sheet

Program Description

21 Proof is a locally-developed, innovative Responsible Beverage Services (RBS) training program for employees of pouring and non-pouring establishments. It was developed by the Cambridge Prevention Coalition, Cambridge License Commission, and Cambridge Licensee Advisory Board in response to a need for a consistent RBS training among servers/sellers in the community to reduce underage commercial access to alcohol in the wake of documented sales violations among local alcohol licensees. Training content was created using focus groups with local licensees, best practices from the research literature, guidance from local prevention practitioners, and input from City officials.

Program Goals

The overarching goals of the *21 Proof* Program are to:

1. Increase knowledge of RBS practices among vendors and servers of alcohol
2. Improve skills related to RBS practices among vendors and servers of alcohol
3. Decrease the proportion of underage youth obtaining alcohol from commercial sources
4. Increase compliance with underage drinking laws among vendors and servers of alcohol

Customized Trainings

Four trainings are available to alcohol licensees:

Bars and Restaurants (Pouring Establishments)

- *Serving Smart* – for employees in pouring establishments
- *Serving Smart Best Practices* – for owners and managers in pouring establishments

Alcohol Retail Outlets (Non-Pouring Establishments)

- *Selling Smart* – for employees in non-pouring establishments
- *Selling Smart Best Practices* – for owners and managers in non-pouring establishments

Program Modules

21 Proof has four modules that are covered during the course of the four-hour training.

Module I: Setting the Stage	Module IV: Making a Difference (Skill Development)
<ul style="list-style-type: none"> • Alcohol use and abuse as a public health issue • How servers and retailers can reduce underage drinking • How attitudes and experience influence serving and selling behavior 	<ul style="list-style-type: none"> • Identifying and inspecting valid forms of age identification • Refusing service • Dealing with difficult customers (diffusion skills)
Module II: Drinking Versus Intoxication	Best Practices Module: Policies and Procedures
<ul style="list-style-type: none"> • Differences between alcohol abuse and dependence • How alcohol affects the body • How to recognize behavioral cues of intoxication in customers 	<ul style="list-style-type: none"> • Developing and enforcing written policies, including point of sale • Providing ongoing staff training and professional development • Supervising employees
Module III: Knowing the Laws	
<ul style="list-style-type: none"> • Relevant State liquor laws • Relevant City regulations • Legal liability 	

21 Proof Serving Smart – Results for Bars and Restaurants

21 Proof Serving Smart has been evaluated since its inception in August 2000. All participants in the training are asked to complete pretest and posttest questionnaires immediately before and after the training to assess its impact on their knowledge and skills. The following data are based on pretest and posttests completed by 1,222 servers in Cambridge, MA across 104 trainings conducted between August 2000 and May 2008.

Knowledge of RBS practices was assessed using five scales that closely matched the content of the training: (1) *knowledge of Massachusetts General Laws*, (2) *knowledge of behavioral signs of intoxication*, (3) *knowledge of factors affecting rate of alcohol absorption in the body*, (4) *knowledge of valid forms of age identification*, and (5) *knowledge of penalties for serving underage patrons*.

As shown in Table 1, training participants had statistically significant increases from pretest to posttest on all five knowledge measures. Overall knowledge of RBS practices – calculated by combining the five different knowledge scales – increased by 27% from the pretest to the posttest (a significant increase).

Table 1: 21 Proof Serving Smart Knowledge Measures

Knowledge Measures	Range of Scores	Respondents	Pretest Mean Score	Posttest Mean Score	t-test Value	% Change
Massachusetts General Laws	1-5	1162	4.15	4.62	25.95*	11%
Behavioral Signs of Intoxication	1-5	1085	2.88	4.49	35.45*	56%
Factors Affecting Absorption Rate	1-5	993	3.97	4.60	28.18*	16%
Valid Forms of Age Identification	1-5	1018	4.00	4.71	35.90*	18%
Penalties for Serving Youth	1-5	997	3.98	4.39	10.33*	10%
Overall Knowledge Change	0-20	918	14.12	17.95	51.42*	27%

* Indicates statistical significance at $p < .001$ as measured by paired t-test.

Skills related to RBS practices were assessed using two scales: (1) *confidence in abilities* and (2) *ID checking and service refusal skills*.

As shown in Table 2, training participants had statistically significant increases from pretest to posttest on both skill measures. Overall skills related to RBS practices – calculated by combining the two scales – increased by 11% from the pretest to the posttest (a significant increase).

Table 2: 21 Proof Serving Smart Skill Measures

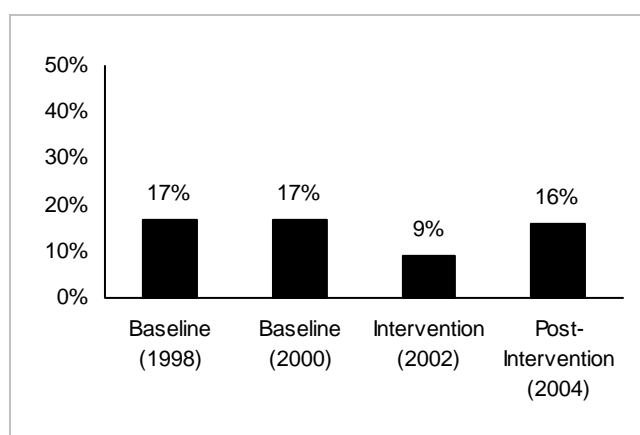
Skill Measures	Range of Scores	Respondents	Pretest Mean Score	Posttest Mean Score	t-test Value	% Improve
Confidence in Abilities	1-5	1148	4.07	4.53	24.85*	11%
ID Checking and Service Refusal	1-5	1146	4.43	4.68	15.66*	6%
Overall Skill Improvement	0-8	1141	6.50	7.21	25.96*	11%

* Indicates statistical significance at $p < .001$ as measured by paired t-test.

As part of a grant opportunity from the Massachusetts Department of Public Health's Bureau of Substance Abuse Services, the Cambridge Prevention Coalition (CPC) delivered an intensive round of *21 Proof Serving Smart* between August 2000 and February 2002. During this time period, the CPC trained 618 servers from 53 pouring establishments in Cambridge. This represented over one-quarter of the licensed pouring establishments in the City. Data from a community-level survey of all public school students in

Cambridge were assessed to determine whether or not there were any changes during this time period in the percentage of 11th and 12th grade students who reported obtaining alcohol from commercial sources. As shown in Figure 1, baseline data from 1998 and 2000 show that the percentage of 11th and 12th grade Cambridge students who reported obtaining alcohol from a commercial source was 17% across both years. This percentage then dropped to 9% in March 2002 immediately following intensive implementation of *21 Proof Serving Smart*, and then rose back up to 16% in 2004 two years after the intensive implementation. During the 12-month period preceding the 2004 survey, *21 Proof Serving Smart* was only delivered in an additional 3% of the licensed pouring establishments in Cambridge. This represents a 47% statistically significant decrease from 2000 to 2002 in the percentage of 11th and 12th graders who reported obtaining alcohol from a commercial source $X^2(1,616) = 7.99, p = .005$.

Figure 1: Underage Access to Alcohol From Commercial Sources



While these data do not allow for the conclusion that *21 Proof Serving Smart* directly caused this decrease, the pattern suggests that *21 Proof Serving Smart* may have contributed to the observed decrease. The only substantive community-level change in alcohol prevention activities during this time period was the introduction of *21 Proof Serving Smart* between August 2000 and February 2002 and then its gradual decline between March 2002 and March 2004 due to reductions in funding. Although it is possible that other factors contributed to the changes in the student data such as increased enforcement activities, these activities remained stable during this time period.

Participant feedback on *21 Proof Serving Smart* has been very positive. Questions that appeared on the posttests completed by training participants revealed the following:

- 78% were satisfied¹ with the quality of information provided
- 79% were satisfied with the organization of the trainer(s)
- 77% were satisfied with the training's ability to increase their knowledge
- 75% were satisfied with the training's ability to increase their skills
- 79% were satisfied with the trainer
- 95% reported that they were satisfied with the training overall
- 94% found the training to be relevant² to their work

¹ Responses are based on 5-point likert scales ranging from *Very Dissatisfied* to *Very Satisfied*.

² Responses are based on a 5-point likert scales ranging from *Not At All Relevant* to *Extremely Relevant*.

21 Proof Selling Smart – Results for Alcohol Retail Outlets

21 Proof Selling Smart has been evaluated since its inception in August 2000. All participants in the training are asked to complete pretest and posttest questionnaires immediately before and after the training to assess its impact on their knowledge and skills. The following data are based on pretest and posttests completed by 39 alcohol retailers in Cambridge, MA across six trainings conducted between August 2000 and May 2008.

Knowledge of RBS practices was assessed using four scales that closely matched the content of the training: (1) *knowledge of Massachusetts General Laws*, (2) *knowledge of behavioral signs of intoxication*, (3) *knowledge of valid forms of age identification*, and (4) *knowledge of penalties for serving underage patrons*.

As shown in Table 3, training participants had statistically significant increases from pretest to posttest on three of the four knowledge measures. Overall knowledge of RBS practices – calculated by combining the four different knowledge scales – increased by 21% from the pretest to the posttest (a significant increase).

Table 3: 21 Proof Selling Smart Knowledge Measures

Knowledge Measures	Range of Scores	Respondents	Pretest Mean Score	Posttest Mean Score	t-test Value	% Change
Massachusetts General Laws	1-4	39	3.20	3.40	2.014*	6%
Behavioral Signs of Intoxication	1-5	32	2.84	3.94	4.365*	39%
Valid Forms of Age Identification	1-5	35	4.15	4.50	3.300*	8%
Penalties for Serving Youth	1-5	34	3.60	3.97	1.586	10%
Overall Knowledge Change	0-15	26	10.02	12.11	5.873*	21%

* Indicates statistical significance at $p < .05$ as measured by paired t-test.

Skills related to RBS practices were assessed using two scales: (1) *confidence in abilities* and (2) *ID checking and service refusal skills*.

As shown in Table 4, training participants had statistically significant increases from pretest to posttest on both skill measures. Overall skills related to RBS practices – calculated by combining the two scales – increased by 13% from the pretest to the posttest (a significant increase).

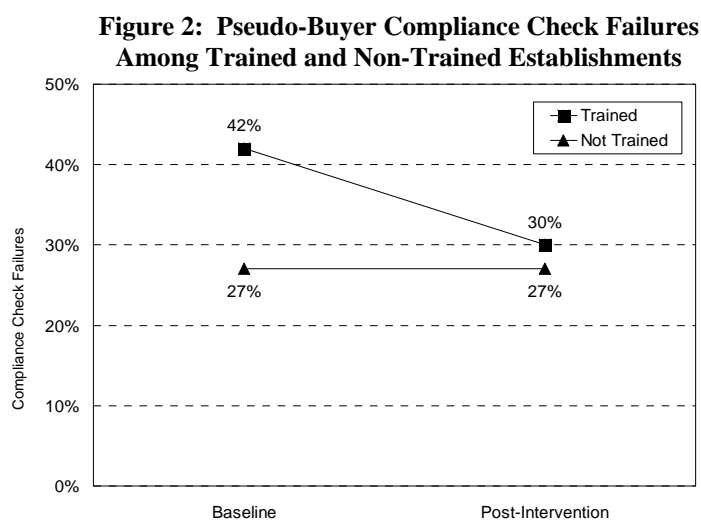
Table 4: 21 Proof Selling Smart Skill Measures

Skill Measures	Range of Scores	Respondents	Pretest Mean Score	Posttest Mean Score	t-test Value	% Improve
Confidence in Abilities	1-5	34	4.02	4.48	4.986*	12%
ID Checking and Service Refusal	1-5	33	3.95	4.24	2.379*	7%
Overall Skill Improvement	0-8	33	6.00	6.76	4.134*	13%

* Indicates statistical significance at $p < .05$ as measured by paired t-test.

As part of a youth alcohol prevention grant from the Massachusetts Department of Public Health's Bureau of Substance Abuse Services, the Cambridge Prevention Coalition developed a pilot study in April 2006. The purpose of this study was to assess the effectiveness of *21 Proof Selling Smart* on increasing compliance with underage drinking laws among vendors and servers of alcohol. Thirty-five of the 40 licensed off-premise alcohol outlets (liquor stores, grocery stores) in Cambridge were recruited to take part in the study. Thirteen stores received *21 Proof Selling Smart* and the other 22 stores did not. Pseudo-

buyers who were 21 years of age but who were perceived by a panel of experts to be under 21 years of age conducted four separate purchase attempts at all 35 stores over an eight-week period. At the time of the baseline purchase attempts, 5 of the 12 stores (42%) that were scheduled to be part of the training sold to a male or female pseudo-buyer. Of the 22 stores that were not going to be trained, 6 stores (27%) sold to a male or female pseudo-buyer without requesting age identification. By the end of the study period (week 8), stores that had been trained failed the compliance check on 11 of the 37 purchase attempts (30% of the time). Stores that had not been trained failed the compliance check on 16 of the 59 purchase attempts (27% of the time). Overall, there was a 30% reduction in the odds of a trained non-pouring establishment selling to a pseudo-buyer from baseline to eight weeks post-intervention (from 43% to 30%). There was no change among the stores that were not trained (27% at baseline and 27% at week 8). See Figure 2.



Participant feedback on *21 Proof Selling Smart* has been very positive. Questions that appeared on the posttests completed by training participants revealed the following:

- 97% were satisfied³ with the quality of information provided
- 94% were satisfied with the organization of the trainer(s)
- 100% were satisfied with the training's ability to increase their knowledge
- 100% were satisfied with the training's ability to increase their skills
- 94% were satisfied with the trainer
- 97% reported that they were satisfied with the training overall
- 100% found the training to be relevant⁴ to their work

³ Responses are based on 5-point likert scales ranging from *Very Dissatisfied* to *Very Satisfied*.

⁴ Responses are based on a 5-point likert scales ranging from *Not At All Relevant* to *Extremely Relevant*.