

IOWA

Alcohol Sales Pilot Evaluation Report

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ALCOHOL SALES PILOT EVALUATION REPORT EXECUTIVE SUMMARY

Beginning fall 2021, beer and wine was available for purchase throughout Kinnick Stadium, except for areas immediately adjacent to the student section. Athletic events at Carver-Hawkeye Arena, Duane Banks Field, and Bob Pearl Field were also included in the pilot program during the 2021-22 school year. The pilot included decreased tailgating duration in parking lots controlled by UI event management, as well as allocating 30% of the alcohol sales proceeds to UI Alcohol Harm Reduction efforts.

The Division of Student Life in partnership with representatives from Athletics, the Department of Public Safety, the College of Public Health, and the UI Alcohol Harm Reduction Committee evaluated the alcohol pilot in alignment with the University of Iowa Alcohol Harm Reduction Plan and evidence-based environmental practices.

Alcohol Sales Pilot Recommendations

The evaluation consisted of a multi-faceted approach over the course of the 2021-2022 academic year. We evaluated current processes and behaviors within and around Kinnick Stadium and in Carver Hawkeye Arena as well as reviewed environmental influences and factors within the community.

As a result of the evaluation process and outcomes data, the following outline recommendations to increase protective environments, modify response to alcohol-related concerns, and adjust practices related to game day operations in alignment with the UI Alcohol Harm Reduction Plan.

- Recommendation 1: Maintain set operating hours for general parking lots (6 hours prior to kickoff) to increase and support protective factors related to alcohol use.
- Recommendation 2: Identify current practices and track entry refusal data for all sporting venues.
- Recommendation 3: Support concessionaire's obligations to document responsible server training of its employees and volunteers in alignment with state and federal laws.
- Recommendation 4: Support concessionaire's obligations to enforce identification practices in alignment with state and federal laws.
- Recommendation 5: Continue to support protective factors by allowing patrons to bring in closed water bottles, limit the number of alcoholic beverages sold per purchase, and ensure food and non-alcoholic beverages are sold in venues that sell alcoholic beverages.
- Recommendation 6: Continue to support the UI Alcohol Harm Reduction Plan by providing 30% of the proceeds from the sales to support alcohol harm reduction efforts.
- Recommendation 7: Continue to evaluate alcohol sales and limited operating hours for general parking lots around Kinnick Stadium.
- Recommendation 8: Support the continuation of the Emergency Department and Johnson County Ambulance Services evaluation on game days. See appendix for summary.

ALCOHOL SALES PILOT EVALUATION REPORT

Beginning fall 2021, beer and wine was available for purchase throughout Kinnick Stadium, except for areas immediately adjacent to the student section. Athletic events at Carver-Hawkeye Arena, Duane Banks Field, and Bob Pearl Field were also included in the pilot program during the 2021-22 school year. The pilot included decreased tailgating duration in parking lots controlled by UI event management, as well as allocating 30% of the alcohol sales proceeds to UI Alcohol Harm Reduction efforts.

The Division of Student Life in partnership with representatives from Athletics, the Department of Public Safety, the College of Public Health, and the UI Alcohol Harm Reduction Committee evaluated the alcohol pilot in alignment with the University of Iowa Alcohol Harm Reduction Plan and evidence-based environmental practices. Process and outcomes evaluation was used to measure pre/post changes in key indicators and community impacts.

Background

The University of Iowa is committed to providing a safe and healthy educational environment for all to live, work, and study. High-risk alcohol use is a public health issue that many colleges and universities across the nation experience and work to address. National College Health Assessment Data (NCHA) collected by Student Wellness shows that when compared to national averages, University of Iowa (UI) students drink more heavily and experience more negative consequences than at other institutions. Furthermore, excessive alcohol use is an ongoing concern for Iowa. The state consistently ranks above the national average for adult binge drinking. High-risk alcohol use negatively affects all aspects of student success and contributes to the incidence of other harmful behaviors, both on campus and in Iowa City. Alcohol research has shown that one of the most effective ways to decrease alcohol use and related problems is to reduce alcohol availability. Therefore, it is imperative that we evaluate the impact of increased alcohol access at university sporting events.

UI community members live, work, and socialize in an environment where individual goals, culture, peer behavior, and other environmental influences impact individual choices. Consistent messaging, policy alignment and environmental approaches regarding underage and high-risk alcohol use are imperative to supporting UI alcohol harm reduction efforts.

Alcohol Sales Pilot Evaluation

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Department of Public Safety Data

Comparisons between pre-pilot and post-pilot game day data regarding ejections, arrests/citations, and jail transports were conducted for Kinnick Stadium. There was one ejection, and no jail transports or arrests in Carver Hawkeye Arena during the period reviewed. Data from SHOUT (Students Helping OUT) response is also provided. Of note, UIPD and Athletics noted an increased emphasis on ejecting disorderly fans in the 2021 football season.

	Kinnick Stadium		
	2018-2019	2019-2020	2021-2022
Ejections/Removal	13	44	63
Jail Transports	15	2	2
Arrests	24	10	13

	UI SHOUT	
	2019-2020	2021-2022
Rides Given	39	30
Incidents Reported	45	33

Environment

Pre-pilot and post-pilot game-day data, if available, regarding student misconduct, emergency room and first aid, GuideLink, and Downtown District were evaluated and compared.

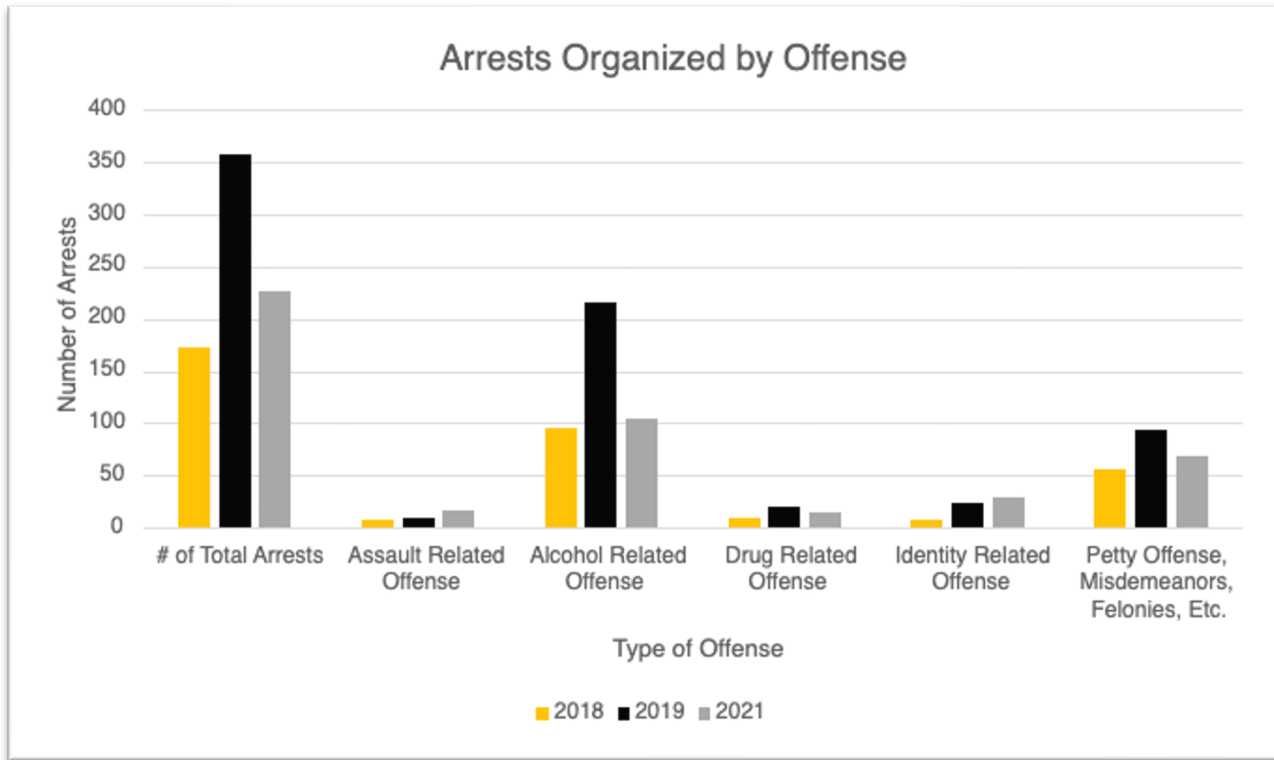
There was one referral to GuideLink (a local center for mental health and substance use assessment and stabilization) during a 2021 game-day, but it was not related to game-day activities.

Date	Number of Referrals
Sept. 4	0
Sept. 18	0
Sept. 25	0
Oct. 9	0
Oct. 16	1 (Law Enforcement referral of frequent pt.)
Nov. 13	0
Nov. 20	0

The charts and figures below reflect the incidents that have taken place in Iowa City. The arrest data was collected and organized by the dates of the football games for each year. During COVID-19, enforcement in the residence halls did not include room checks, which likely impacted the PAULA citations from 2019/2020 to 2021/2022.

	Student Accountability & Residence Education		
	2018-2019	2019-2020	2021-2022
Alcohol Use/Possession (PAULA)	144	153	14
Intoxication	7	15	8
Vandalism	2	5	15
Noise Complaints	0	0	0
Alcohol Transports	6	4	4
ETC	1	7	4

Data from Iowa City Police Department includes all arrests on game days in the Iowa City jurisdiction.



Game Day Data

Data regarding tailgating, ticket sales, attendance, and alcohol sales were evaluated during the pilot period for Kinnick Stadium and Carver Hawkeye Arena. This includes data regarding observations of Aramark sales staff, attendees, and the tailgating environment.

New parking lot hours limited most tailgating to a six-hour length. Themes from 2021 observations around Kinnick Stadium include:

- In tailgating areas and areas from downtown to Kinnick Stadium open containers were often observed.
- Lines for alcohol vendors were long and requests for identification were not consistent. Vendors were also seen selling more than two beers to patrons.
- Alcohol and food were largely sold separately, making it difficult for patrons to purchase food with alcohol.
- There were some observations of highly intoxicated individuals, as well as individuals being removed from the stadium.

Themes from 2021-22 observations around Carver Hawkeye Arena include:

- The atmosphere at Carver was generally “calm”. While alcohol was present, there were limited/no intoxicated individuals, and the concourses were clear of alcohol and other refuse.

- While request for identification was variable, most vendors were only selling one or two beers. Most vendors sold both alcohol and food, and the lines were generally short.
- Observers noticed some marketing throughout the stadium and overheard various commentary regarding alcohol by ticket holders.

Data from Placer.ai reports were analyzed to compare fan behaviors on game days for two seasons prior to alcohol service (2018 & 2019) and for the current season when alcohol was served at Kinnick stadium (2021). Placer.ai reports track cell phone use in geographical areas, providing a way to analyze the flow of people in areas of interest, such as the stadium and tailgating areas. The 2020 season data were not reviewed due to the pandemic fan attendance limits.

Kinnick Total Visits/ Game			
	Average	Range	% Average Change
2018/2019	110,800	80,000-139,000	
2021	101,400	88,000-110,000	-8.5%

Melrose Peak Attendance/ Game			
	Average	Range	% Average Change
2018/2019	21,321	12,500-30,000	
2021	27,500	18,000-42,000	+22.5%

Carver Peak Attendance/ Game			
	Average	Range	% Average Change
2018/2019	4,200	1,000-7,000	
2021	4,600	3,200-6,500	+9.5%

Iowa City/Downtown Peak Attendance/ Game			
	Average	Range	% Average Change
2018/2019	36,143	16,000-45,000	
2021	47,571	36,000-54,000	+31.6%

Placer.ai Reports data indicated that in the 2021 season, a greater number of people were concentrated in the key monitored areas, but for shorter periods of time, despite Kinnick attendance being lower.

Alcohol sales concluded at the end of the 3rd quarter of every game at Kinnick Stadium. There are 38 locations and 148 points of sale of alcohol at Kinnick Stadium. At Carver Arena, alcohol sales conclude in the 3rd quarter for Women’s Basketball, at the 12:00 minute mark in the second half for Men’s Basketball, at the conclusion of the 3rd of 4 events for Gymnastics, and at the 7th out of 10 scheduled bouts for Men’s Wrestling. There are 13 locations and 15 points of sale of alcohol at Carver Arena.

Prior and Current Ticket Sales Data*						
	Kinnick Stadium			Carver Hawkeye Arena		
	2018-2019	2019-2020	2021-2022	2018-2019	2019-2020	2021-2022
Game 1	65,059	66,459	63,297	10,294	9,340	10,996
Game 2	65,745	60,038	58,702	9,221	9,766	9,410
Game 3	65,777	61,683	62,393	10,507	9,361	11,273
Game 4	66,286	66,371	65,336	12,814	10,491	9,379
Game 5	65,825	65,723	64,580	9,923	8,855	9,688
Game 6	63,837	65,694	64,412	15,554	10,212	9,747
Game 7	62,545	56,398	61,113	12,981	9,952	11,906
Game 8	-	-	-	9,213	15,305	11,765
Game 9	-	-	-	13,017	11,244	10,577
Game 10	-	-	-	13,274	13,609	15,118
Game 11	-	-	-	11,378	9,486	10,097
Game 12	-	-	-	14,082	12,029	10,915
Game 13	-	-	-	13,155	14,481	14,390
Game 14	-	-	-	14,151	14,577	12,406
Game 15	-	-	-	14,426	13,480	14,250
Game 16	-	-	-	10,739	14,595	13,514
Game 17	-	-	-	11,568	12,678	TBD
Game 18	-	-	-	14,452	-	TBD
Game 19	-	-	-	14,570	-	TBD
Total:	455,074	442,366	439,833	234,319	199,461	TBD

Alcohol Sales

Below is a summary of the overall alcohol sales this past season, excluding summer sport events. Alcohol sales per event through May are outlined in the appendix.

- The total alcohol sales were \$3 million net.
- Athletics has currently received \$2.8 million in overall commissions for the year, of which \$1.2 million is from alcohol sales in the general seating areas.
- The current estimated payout to the Alcohol Harm Reduction Committee is \$339,150, which is the agreed upon 30% of commission.

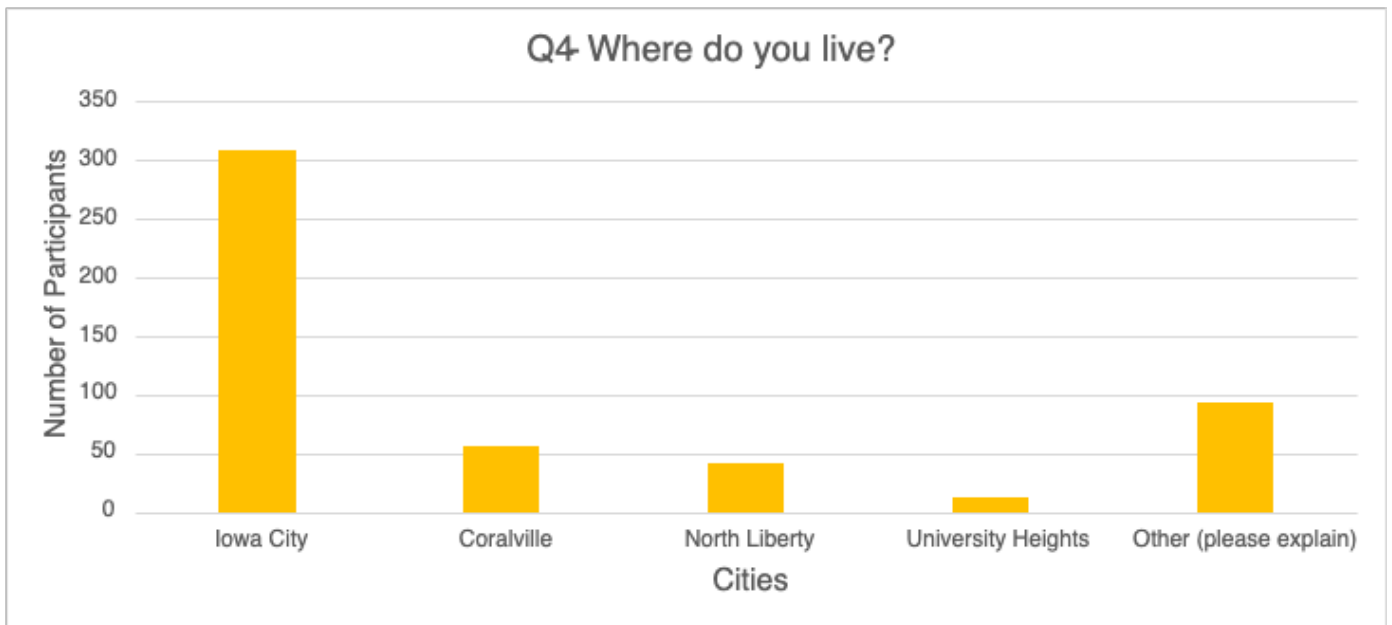
Experience Surveys

Data from two separate surveys was collected following the 2021 football season. The first survey (“Alcohol Pilot Survey”) was sent to University of Iowa students, faculty staff, and to residents in Iowa City and the surrounding community. There were 513 responses to the Alcohol Pilot Survey. The second survey (“Football Post Season Survey”) was sent by Athletics to 2021 football season ticket holders with 6,650 ticket buyers responding to this survey. Data collected from these two surveys was analyzed to assist in understanding perceptions related to alcohol sales in university sports venues and the community environment on game day in Iowa City.

The following outlines results from the Alcohol Pilot Survey.

Select Your Classification		
Classification	%	Count
University of Iowa Staff Member	56.72%	291
University of Iowa Student	24.17%	124
University of Iowa Faculty Member	9.55%	49
Community Member	9.55%	49

What is Your Age?		
Age	%	Count
26 and Over	77.39%	397
21-25	11.50%	59
18-20	10.72%	55
17 and Under	0.20%	1



*Other: Surrounding areas including Tiffin, Solon, Cedar Rapids, Des Moines, etc.

What activities have you participated in during the fall 2021 football season?		
Activity	%	Count
Watching the football game at home or at a friend's house	28.25%	341
Attending the football game	20.88%	252
Tailgating around Kinnick Stadium	15.91%	192
Tailgating at another location	9.69%	117
I did not participate in any football game day activities	8.04%	97
Watching the football game at a bar or restaurant in Downtown Iowa City	7.71%	93
Watching the football game at a bar or restaurant in another area	6.96%	84
Other (Please Explain)	2.57%	31



You indicated your overall football game day experience was somewhat positive, positive, or extremely positive. Why was it positive?		
Theme	Frequency (of 343)	Count
Experience	23.62%	81
Social Climate	15.74%	54
Energy	15.16%	52
Other	12.83%	44
Hawkeye Spirit	12.25%	42
Covid 19 (Mention of Masks/Distancing or In-Person)	9.62%	33
Alcohol	5.83%	20
Watched at home or on the television	3.21%	11
Safety	1.75%	6

Sample Quote:

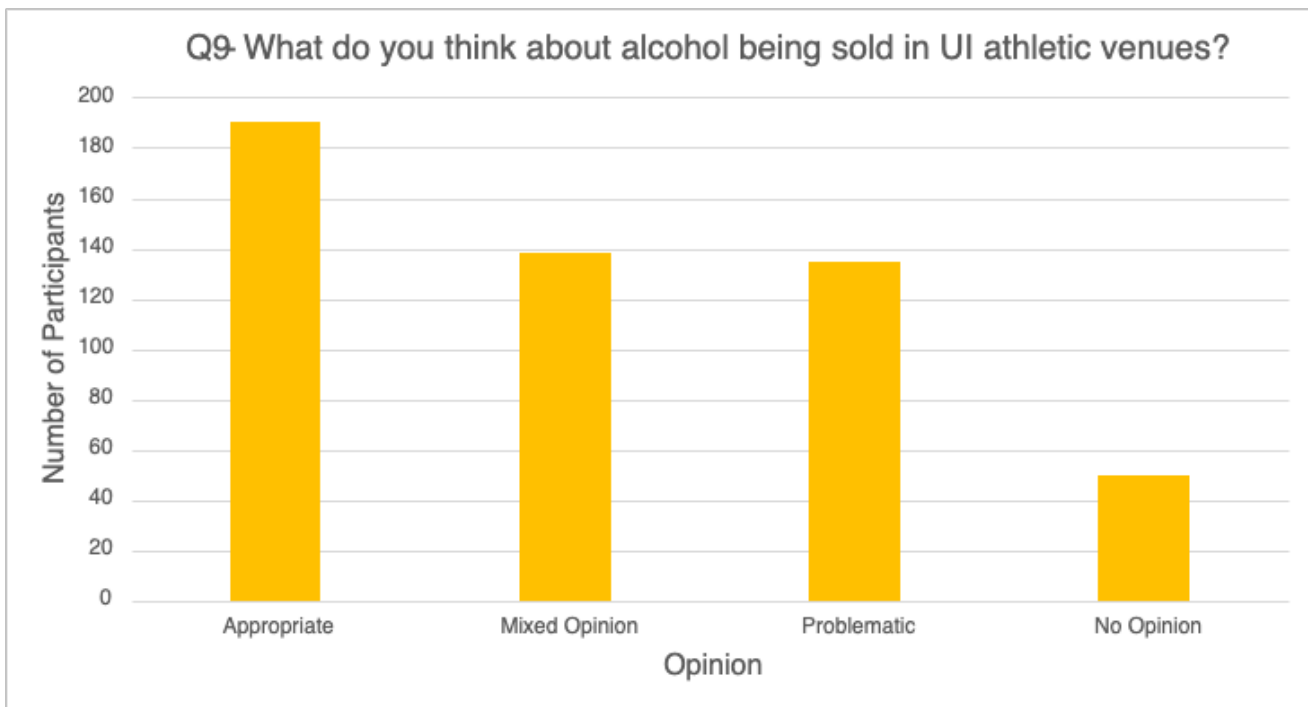
- “I just thought everything went so smooth. I never waited in line to get into the game more than 2 minutes. They scanned and we went. They were always friendly. Lines to get beer were quick moving and people were extremely nice in line and having the tv’s there to cheer on hawks with random strangers in line was great. The people at the register seemed to genuinely want to be there and always happy. Never had anyone rude or disrespectful next to us the entire season.”

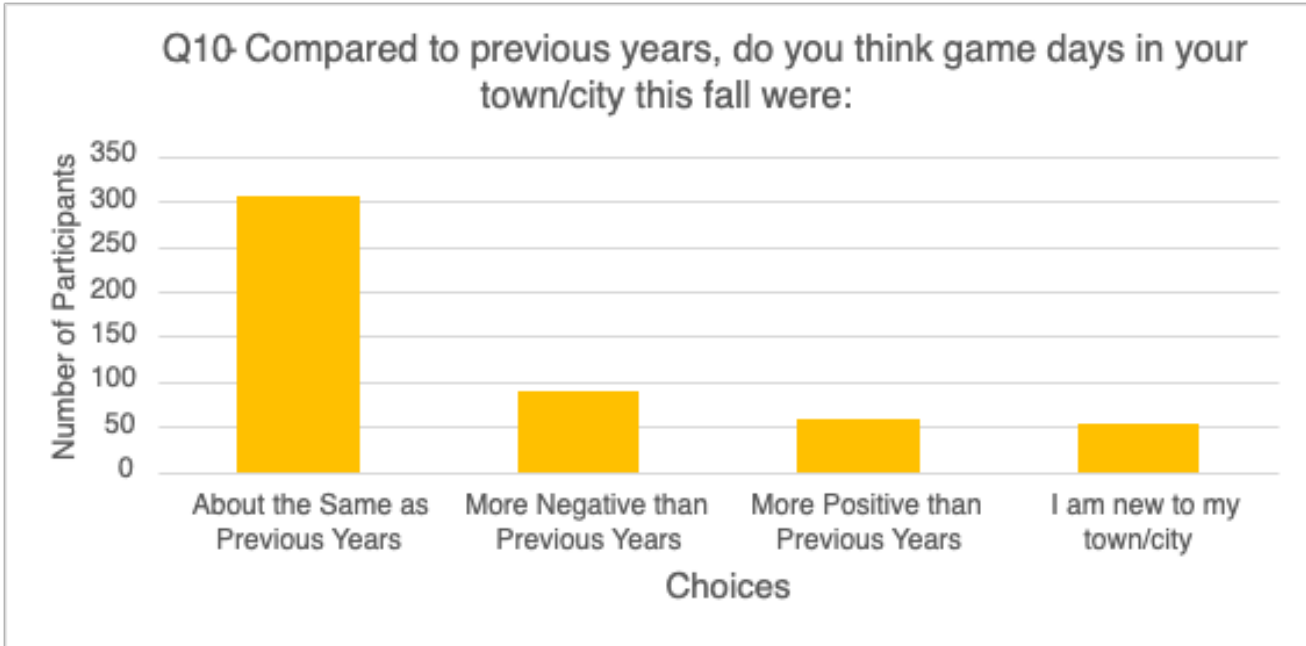
You indicated your overall football game day experience was somewhat negative, negative, or extremely negative. Why was it negative?		
Theme	Frequency (of 217)	Count
Drunken Behavior/Alcohol	29.95%	65
Traffic Issues (Vehicle and Pedestrian)	23.96%	52
Covid-19 and the Pandemic	11.98%	26
Trash and Vandalism	11.06%	24
Other	9.68%	21
Safety	9.22%	20
Noise Complaint	4.15%	9

Sample Quotes:

- “I went to the game with a lot of younger kids and we had to listen to drunk people yelling and cursing during the game. Serving alcohol in the stadium greatly takes away from the family atmosphere. Lets be honest, this is a money thing plain and simple. Take the revenue from alcohol away and its a no-brainer that you wouldn’t serve it in the stadiums. Is Iowa trying to create a legacy or capitalize? Pretty obvious answer if alcohol continues to be sold in the venues. I regularly attend Carver as well and all you see are people walking around with their alcohol. What message are we sending to the younger generation of Hawkeyes? We are saying its OK to do. In my opinion, selling is promoting.”

- “In stadium- Had an experience where the person seated behind me was extremely intoxicated, resulting in puking but proceeded to continue buying more alcohol during the game. Multiple games in the student section resulted in getting hit in the head or back by full, partially full or empty shooter bottles or beer cans. Realized most people who were able to purchase alcohol up to the fourth quarter were not sober to drive but proceeded to leave the parking lot immediately after the game.”





Why were game days in your town/city more positive than in previous years?		
Theme	Frequency (of 74)	Count
Able to Attend in Person	24.32%	18
Experience	22.97%	17
Normalcy	13.51%	10
Alcohol/Drunk Behavior	13.51%	10
Other	13.51%	10
Covid-19	12.16%	9

Sample Quotes:

- “As it relates to the alcohol, I think the experience was positive. As a 41 year old person, I appreciate that alcohol is available [in] sporting venues. I attended 3 games and didn’t notice additional or new issue from fans near me that could have been contributed to alcohol sales in the stadium.”
- “Fewer obnoxious drunks in the stands because they didn’t need to tank up before entering Kinnick. Beer and wine sales in Kinnick allows fans to pace themselves better.”
- “The tailgaters were happy to be gathering and supporting the team. Being a season ticket holder for years I saw less fans being escorted out of the stadium due to over celebrating – I feel that they maybe didn’t have to over indulge pregame or sneak extra into the game. The “heavy” celebrating was better controlled by having access to alcohol in the game.”

Why were game days in your town/city more negative than previous years?		
Theme	Frequency (of 105)	Count
Alcohol and Drunk Behavior	42.86%	45
Covid-19 and the Pandemic	19.05%	20
Trash, Vandalism, and Noise Complaints	12.38%	13
Other	10.48%	11
Traffic and Parking Issues	6.67%	7
Lack of Family-Friendly Environment	3.81%	4
Understaffing	2.85%	2

Sample Quotes:

- “Alcohol seems to be in your face everywhere you go. For those who have issues with substance abuse find it quite challenging to go to sporting events.”
- “Drunkards at Kinnick Stadium being able to keep drinking and get more intoxicated. When you have a tailgate scene as alcohol-fueled as UI's - and add access to alcohol inside the stadium - it's a recipe for problematic encounters and experiences.”
- “It seemed as though allowing the sale of alcohol in Kinnick gave students the "right to act like animals." I know police officers who have worked game day in Kinnick and it's a losing battle for them in the student section.”

From the 2021 Football Post Season Survey, the sample consisted of 6,550 respondents. The survey highlighted three important questions regarding the alcohol sales in Kinnick Stadium.

Did you purchase beer, wine, or spiked seltzer at Kinnick Stadium this season?		
Age	Yes	No
21-29	67%	33%
30-39	72%	28%
40-49	65%	35%
50-59	58%	42%
60-69	41%	59%
70-79	23%	77%
80 or older	12%	88%

Overall, 55% of all survey respondents 21+ years-old reported purchasing alcohol at Kinnick Stadium in 2021. 76% of survey respondents (21+) who sit in premium areas reported purchasing alcohol, while 54% of fans sitting in the main stands (21+) purchased alcohol. Respondents in the 30-39 range purchased more alcohol than the other age ranges.

What impact did beer and wine sales to the general seating areas of Kinnick Stadium have on your decision to attend games?			
Age	I attend LESS games	It didn't impact my attendance	I attend MORE games
21-29	2%	72%	26%
30-39	1%	84%	14%
40-49	3%	88%	9%
50-59	3%	91%	6%
60-69	4%	94%	3%
70-79	5%	95%	1%
80 or older	1%	99%	0%

Overall, the sale of beer and wine did not have any impact on attendance decisions for 88% of the fans. 9% of fans reported attending more games due to alcohol sales. Only 3% indicated that they attended fewer games with concentration being in the 60-69 and 70-79 age range. For the age range 21-29, 26% of the respondents noted that they attend more games because of the sale of alcohol at Kinnick Stadium.

Lastly, 2021 Football Post Season Survey respondents were asked how alcohol sales impacted the game experience. More respondents reported the addition of alcohol sales as having a positive impact (43%) than a negative impact (18%). 39% were neutral.

Conclusions

Most survey respondents had positive experiences, and most respondents thought game days were about the same as previous years. However, alcohol-related offenses remained the leading cause of arrests, alcohol was the most frequently referenced reason for negative experiences, and there were substantial numbers of people who thought alcohol sales were problematic or had mixed opinions, and when combined are a larger share than those who approved.

The committee recognizes there is limited information and data on the short-and-long-term impacts of COVID-19 on alcohol-related behaviors. The change in enforcement of alcohol-related concerns also affects the data and will need to be studied further. The committee cannot definitively say the pilot was a success, but the committee is not able to say it was unsuccessful. Additional assessment and evaluation are necessary as alcohol continues to be sold in UI sporting venues.

Recommendations

As a result of the evaluation process and outcomes data, the following outline recommendations to increase protective environments, modify response to alcohol-related concerns, and adjust practices related to game day operations in alignment with the UI Alcohol Harm Reduction Plan.

The following recommendations were developed as a result of evidence-based practices, the evaluation process, and outcomes data on fan experience, key indicators, stadium environment, community impacts

- Recommendation 1: Maintain set operating hours for general parking lots (6 hours prior to kickoff) to increase and support protective factors related to alcohol use.
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Committee Membership

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- Shelly Campo, associate dean, Graduate College, and co-chair, UI Alcohol Harm Reduction Committee
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- Marcus Wilson, senior associate athletics director, Department of Athletics

*Comparative data from prior seasons may not align given changes in protocols, processes, and environment

**The short- and long-term impact of COVID-19 on alcohol use and related behaviors is yet to be seen and may affect this evaluation

Appendix

Alcohol Sales per Event FY-2022					
Date	Event	Opponent	Gross	Sales Tax	Net
9/14/21	FB	Indiana	399,861	22,634	377,227
9/18/21	FB	Kent State	253,361	14,341	239,020
9/25/21	FB	Colorado State	330,206	18,691	311,515
10/9/21	FB	Penn State	472,780	26,761	446,019
10/16/21	FB	Purdue	377,718	21,380	356,338
11/13/21	FB	Minnesota	356,218	20,163	336,055
11/20/21	FB	Illinois	356,455	20,177	336,278
4/23/22	FB	Spring Game	2,895	164	2,731
		Total Football	\$2,549,495	\$144,311	\$2,405,184
11/5/21	MBB	Slippery Rock	5,454	309	5,146
11/9/21	MBB	Longwood	5,292	300	4,993
11/12/21	MBB	UMKC	17,106	943	16,163
11/16/21	MBB	NC Central	6,067	343	5,724
11/18/21	MBB	Alabama State	8,080	457	7,623
11/22/21	MBB	Western Michigan	7,102	402	6,700
11/25/21	MBB	Portland State	9,665	547	9,118
12/6/21	MBB	Illinois	15,159	858	14,301
12/21/21	MBB	SE Louisiana	9,822	556	9,266
12/29/21	MBB	Western Illinois	16,083	910	15,173
1/3/22	MBB	Maryland	10,469	593	9,876
1/13/22	MBB	Indiana	24,620	1,394	23,227
1/22/22	MBB	Penn State	42,030	2,379	39,651
1/27/22	MBB	Purdue	39,495	2,236	37,259
2/6/22	MBB	Minnesota	26,021	1,473	24,548
2/13/22	MBB	Nebraska	18,424	1,043	17,381
2/17/22	MBB	Michigan	35,295	1,998	33,297
2/22/22	MBB	Michigan State	37,549	2,125	35,424
2/28/22	MBB	Northwestern	25,407	1,438	23,969
		Total Men's Basketball	\$359,142	\$20,303	\$338,839
11/4/21	WBB	Truman State	584	33	551
11/9/21	WBB	New Hampshire	602	34	568
11/11/21	WBB	Samford	1,138	64	1,073
11/17/21	WBB	Southern	1,017	58	959

12/5/21	WBB	Michigan State	799	45	754
12/18/21	WBB	UCF	2,233	126	2,107
12/21/21	WBB	Indiana University	675	38	637
1/2/22	WBB	Evansville	26	1	25
1/6/22	WBB	Northwestern	613	35	578
1/16/22	WBB	Nebraska	3,204	181	3,023
1/23/22	WBB	Illinois	2,401	136	2,265
1/31/22	WBB	Ohio State	1,475	83	1,391
2/9/22	WBB	Minnesota	3,250	184	3,066
2/14/22	WBB	Maryland	2,722	154	2,568
2/21/22	WBB	Indiana	2,666	151	2,515
2/27/22	WBB	Michigan	16,624	941	15,683
2/28/22	WBB	NCAA (Rd 1)	24,373	1,380	22,993
2/20/22	WBB	NCAA (Rd 2)	17,658	1,000	16,659
		Total Women's Basketball	\$82,060	\$4,645	\$77,415
11/19/21	WR	Princeton	18,713	1,059	17,653
11/28/21	WR	Army	12,663	717	11,946
1/7/22	WR	Minnesota	35,537	2,012	33,526
1/9/22	WR	Purdue	17,603	996	16,607
1/28/22	WR	Penn State	71,213	4,031	67,182
2/5/22	WR	Wisconsin	35,556	2,013	33,543
		Total Wrestling	\$191,285	\$10,827	\$180,458
1/8/22	GYM	Eastern Michigan	763	43	720
1/14/22	GYM	Texas Women's U	192	11	181
1/29/22	GYM	Nebraska	1,049	59	990
2/4/22	GYM	Penn State	1,893	107	1,786
		Total Gymnastics	\$3,897	\$221	\$3,677
9/22/21	BB	Mississauga	34	2	32
10/2/21	BB	IA Western CC	381	22	359
10/8/21	BB	Kirkwood	558	32	526
3/1/22	BB	Loras	895	51	844
3/2/22	BB	Cornell	342	19	323
3/19/22	BB	Texas Tech	1,319	75	1,245
3/20/22	BB	Texas Tech	1,270	72	1,198
3/21/22	BB	St. Thomas	297	17	280
3/25/22	BB	Central Michigan	385	22	363

IOWA

3/26/22	BB	Central Michigan	623	35	588
3/27/22	BB	Central Michigan	111	6	105
4/9/22	BB	Illinois	2,770	157	2,613
4/10/22	BB	Illinois	1,619	92	1,527
4/15/22	BB	Minnesota	1,209	68	1,140
4/16/22	BB	Minnesota	1,742	99	1,644
4/17/22	BB	Minnesota	415	23	392
4/19/22	BB	Bradley	250	14	236
4/26/22	BB	Western Illinois	396	22	374
5/3/22	BB	Illinois State	-	-	-
5/6/22	BB	Purdue	-	-	-
5/7/22	BB	Purdue	-	-	-
5/8/22	BB	Purdue	-	-	-
5/19/22	BB	Indiana	-	-	-
5/20/22	BB	Indiana	-	-	-
5/21/22	BB	Indiana	-	-	-
		Total Baseball	\$14,614	\$827	\$13,787
3/25/22	SB	Wisconsin	70	4	66
3/27/22	SB	Wisconsin	120	7	113
4/6/22	SB	Drake	98	6	93
4/8/22	SB	Minnesota	191	11	180
4/9/22	SB	Minnesota	981	56	926
4/10/22	SB	Minnesota	353	20	333
4/15/22	SB	Ohio State	533	30	503
4/16/22	SB	Ohio State	347	20	327
4/17/22	SB	Ohio State	69	4	65
5/6/22	SB	Purdue	-	-	-
5/7/22	SB	Purdue	-	-	-
5/8/22	SB	Purdue	-	-	-
		Total Softball	\$2,762	\$156	\$2,605
		Total	\$3,203,255	\$181,291	\$3,021,964

The impact of in-stadium alcohol sales on patient morbidity and health care utilization in Iowa City, Iowa

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Background: The medical care provided at the stadium is a collaboration between the Department of Emergency Medicine at the University of Iowa Hospitals and Clinics (UIHC) and the Johnson County Ambulance Service

(JCAS). UIHC provides physicians and nurses for first aid care inside the stadium and JCAS provides Paramedics and Emergency Medicine Technicians as first responders for any medical emergency. Patients who are too sick or injured to be seen at the first aid station are transported across the street to the UIHC Emergency Department.

Alcohol use contributes to a significant proportion of the patients treated on home game days, either due to injury or direct intoxication. In 2021, for the first time, alcoholic beverages were available for purchase by adults attending a home football game at Kinnick Stadium in Iowa City, Iowa. Previously, alcohol was only available to those with access to the club seats or stadium suites. Our hypothesis is that the wider availability of alcohol inside the stadium would lead to an increase in patients seen.

Methods: This is a retrospective case-control study. We examined 817 records from JCAS calls and 2,952 UIHC hospital records from every Saturday with a football game, home and away, in 2019 and 2021. There were 11 games in each season, with 7 each year played in Kinnick Stadium in Iowa City (games played on Fridays were excluded). Games played in 2021 served as the “case” and represent the exposed group, and games played in 2019 (the last full football season before the alcohol sales started in 2021) served as the control group. Trained extractors using pre-defined criteria reviewed each patient seen on the selected Saturdays and determined if each visit was “alcohol-related” or “not alcohol-related”. For example, a patient seen for an ankle sprain who was also intoxicated was considered to be an alcohol-related case. A patient seen for chest pain with no report of alcohol use was not considered to be alcohol-related. The number of patients and proportion of alcohol-related cases seen by JCAS and UIHC on each football Saturday in 2021 was compared to the number in 2019. The odds ratios and 95% confidence intervals were calculated. Stata (version 17.0; StataCorp, College Station, TX) was used for all statistical analysis.

Results: The results are summarized in Table 1. In 2021, there were a total of 505 emergency calls to JCAS on football Saturdays (home and away), and 29% of them were for alcohol related incidents. This is a significant decrease from 2019, when 36% of 456 calls were for alcohol (Odds Ratio (OR)=0.73; 95% CI: 0.54-0.98). Looking specifically at the 7 home games each season, the difference was more pronounced: 31% of calls in 2021 were alcohol related compared to 40% in 2019 (OR=0.66; 95% CI: 0.47-0.93). In the first 6 hours after kickoff (therefore excluding calls from pre-game tailgating parties), this reduction in calls was maintained (2021 (27%) vs. 2019 (44%). (OR=0.49; 95% CI: 0.28-0.86). Patients with an alcohol-related call had similar average blood-alcohol levels as measured by portable breath tests in both 2021 (0.23) and 2019 (0.20) ($p=0.46$).

In the UIHC ED, 1414 patients were seen on game days in 2021, and 8% of them for alcohol-related reasons. This is about the same as in 2019, when 9% of the 1538 patients presented due to alcohol (OR = 0.87, 95% CI: 0.67-1.13). On days with a home game, the proportion of ED visits that were alcohol-related was slightly lower in 2021 (8.0%) than in 2019 (9.6%), but this difference was not significant (OR=0.82, 95% CI: 0.60-1.13). Looking at the 6-hours immediately after kickoff, however, there was a significant reduction in the rate of alcohol-related ED visits in 2021 (6.7%) compared to 2019

(13.0%) (OR=0.55, 95% CI: 0.32-0.97). There was no difference in age, sex, or acuity level between alcohol-related visits in 2019 compared to 2021 (all p>0.2).

Conclusions: In-stadium alcohol sales in 2021 were associated with a significant decrease in alcohol-related emergencies when compared to the most recent full season of football games in 2019. There was a 50% decrease in alcohol-related emergency medical service calls and ED visits in the 6 hours following kickoff, despite the availability of alcohol for sale inside the stadium. As a result, we reject our hypothesis that the increased access to in-stadium alcohol would lead to more incidents. The reason for this decrease is unclear, but it is possible that fans drank less at tailgate parties knowing they could consume more once the game started. Long lines and a two-beverage limit at stadium concessions may have kept most patrons from consuming excessively.

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Table 1.

JCAS calls	2019	2021	Odds Ratio (95% confidence interval)
Total on any gameday (% due to alcohol)	505 (36%)	456 (29%)	0.73 (0.54-0.98)
Calls on days with home games	329 (40%)	347 (31%)	0.66 (0.47-0.93)
Calls in the first 6 hours after kickoff on days with home games	108 (44%)	110 (27%)	0.49 (0.28-0.86)
UIHC ED Patients	2019	2021	
Total patients seen on any gameday (% due to alcohol)	1538 (9%)	1414 (8%)	0.87 (0.67-1.13)
Patients on days with home games	1008 (9.6%)	895 (8%)	0.82 (0.60-1.13)
Patients seen during the first 6 hours after kickoff on days with home games	40 (13%)	20 (7%)	0.55 (0.32-0.97)