

COVID-19: Return to Youth Sports Preparing Sports Venues and Events for the Return of Youth Sports

David Pierce, Jessi Stas, Kevin Feller, and William Knox

Executive Summary

COVID-19 has impacted all areas of life, and youth sports is no exception. States and counties are publishing their own unique guidelines for permitting youth sports to return over designated phases, creating a patchwork of guidelines and dates for returning to practice and games. Governing bodies, sports facilities, and event operators are creating modifications and adaptations for participants and spectators to ensure a safe environment. The Sports Innovation Institute at IUPUI, a partnership between Indiana and Purdue universities in Indianapolis, and Grand Park Sports Campus (Westfield, Ind.) collaborated to better understand how COVID-related adaptations are perceived by parents, athletes, coaches, officials, and administrators. The results provide youth sports facilities and event operators with data on how specific adaptations are received by these stakeholders who are looking to return to youth sports in a timely, but safe manner.

Twelve adaptations were identified from a review of documents prepared by states, governing bodies, trade associations, media reports, and feedback from industry and academic experts. The survey questions were designed using the Kano Model (pronounced “kah-no”), which was selected due to its ability to determine how people feel about proposed adaptations during the COVID-19 pandemic. Each adaptation comprised three questions that assessed the respondents’ feelings toward the adaptation (functional question), their feelings if the adaptation did not exist (dysfunctional), and their assessment of how important it is for the adaptation to

David Pierce, PhD, is an associate professor of sport management in the Department of Tourism, Event, and Sport Management at IUPUI, a partnership between Indiana and Purdue universities in Indianapolis. He serves as the director of the Sports Innovation Institute and editor of the *Sports Innovation Journal*. Email: dpierce3@iupui.edu

Jessi Stas is the facility administrative manager at Grand Park Sports Campus in Westfield, Ind. Email: jstas@westfield.in.gov

Kevin Feller is a graduate student in the Department of Tourism, Event, and Sport Management and a graduate assistant for the Sports Innovation Institute at IUPUI. Email: kevfelle@iupui.edu

William Knox is the director at Grand Park Sports Campus in Westfield, Ind. Email: wknox@westfield.in.gov

occur (importance). The Kano Model is interpreted based upon these three scores, and each adaptation can be placed into one of five categories on a scatterplot.

The survey was distributed to 40 organizations that circulated the survey to their members. The survey reached a national audience that represents the landscape of youth sports. A total of 10,359 people from 45 states completed the entire survey, representing at least 13 different sports. Nearly 92% of respondents were parents, but with the option to select multiple roles; coaches (25%), administrators (10%), athletes (9%), and officials (3%) were also represented.

Results indicated that venues and events should invest heavily and visibly in sanitization of the facility, playing areas, and equipment before, during, and after events. Venue operators and event managers can feel confident the recommendations provided by the Centers for Disease Control and Prevention (CDC) and National Federation of State High School Associations (NFHS) to sanitize playing areas and equipment after each use will be well-received and welcomed by users. Promotion and monitoring of social-distancing guidelines, limiting personal contact between players, limiting admission to those under age 65 with no CDC-indicated pre-existing conditions, and completing a health and contact-information questionnaire prior to entering are seen by users as must-be adaptations in order for players and spectators to feel comfortable returning to youth sports during the COVID-19 pandemic. This means their presence does not bring satisfaction, but their lack of presence brings significant dissatisfaction. Respondents felt indifferent toward changing arrival and departure routines, closing amenities, and minimizing the capacity and rearranging bench areas for athletes. The presence or absence of these adaptations do not make a real difference in users' experiences. User sentiment regarding facemasks was mixed, with strong feelings about the use and non-use of facemasks. Finally, limiting entry to athletes and game personnel but excluding spectators was not well-received by survey respondents, especially parents. Youth sports venues and events should tread lightly when considering not allowing spectators into venues and expect negative backlash from parents should such policy be adopted.

Parents of recreational athletes viewed the adaptations in a more positive light and as a more necessary part of the youth sports experience than parents of travel athletes. A similar trend was found when comparing parents who are less willing to travel during the pandemic than those who do not expect their travel to be impacted. Travel sports parents demonstrated an increasing comfort level in traveling for competitions over the summer months, from 42% in May to 76% in August. The economic turmoil wrought by COVID-19 has touched nearly every component of American life. However, 59% of travel sports parents reported that the pandemic will not negatively impact their sports travel budget. Only 23% will experience a budget decrease greater than 25% related to youth sports travel.

Background

States, and even some counties, are developing their own, unique guidelines for permitting youth sports over the course of designated phases. This creates a patchwork of guidelines and dates for returning to practices and games. There are 41 states that have announced youth sports can return to practice and 29 states are allowing games to be played by the end of June. Nine states have yet to set a date to reopen practices, and 21 states have not set a date for the return to games. Tables 1 and 2 summarize the return of youth sports by state as of May 29, 2020.

Table 1. Youth Sports Reopening Plan by State (as of 5/29/2020)

State	Reopen Practice	Reopen Games	State	Reopen Practice	Reopen Games
Alabama	5/23	6/15	Montana	4/27	6/1
Alaska	5/22	5/22	Nebraska	6/1	6/18
Arizona	5/28	5/28	Nevada	TBA	TBA
Arkansas	6/1	6/1	New Hampshire	TBA	TBA
California	TBA	TBA	New Jersey	TBA	TBA
Colorado	6/2020	TBA	New Mexico	TBA	2021
Connecticut	6/20	6/20	New York	TBA	TBA
Delaware	6/1	TBA	North Carolina	5/22	TBA
Florida	5/21	5/22	North Dakota	6/1	6/1
Georgia	6/8	Approval by County	Ohio	5/26	6/2020
Hawaii	6/2020	TBA	Oklahoma	5/15	5/18
Idaho	5/18	5/30	Oregon	5/26	TBA
Illinois	6/2020	TBA	Pennsylvania	Approval by County	Approval by County
Indiana	5/22	TBA	Rhode Island	6/1	7/2020
Iowa	6/1	6/1	South Carolina	5/31	6/15
Kansas	5/22	6/2020	South Dakota	6/1	6/18
Kentucky	6/15	6/29	Tennessee	6/8	6/8
Louisiana	6/5	6/5	Texas	5/31	6/15
Maine	7/6	TBA	Utah	5/16	5/16
Maryland	5/29	TBA	Vermont	6/1	6/2020
Massachusetts	6/15	TBA	Virginia	6/12	TBA
Michigan	TBA	TBA	Washington	5/28	5/28
Minnesota	5/26	6/15	West Virginia	6/2020	TBA
Mississippi	6/1	6/1	Wisconsin	6/1	TBA
Missouri	5/8	5/8	Wyoming	5/13	6/1

Table 2. Summary of Youth Sports Reopening Plans by State

Reopen Month	Reopen Practices	Reopen Games
April	1	0
May	19	8
June	20	19
July	1	1
TBA	9	21
Cancelled	0	1

Several travel tournaments have already been conducted in late May, as teams and families travel to compete in Missouri¹ and Florida² with more on the way as states reach new phases of reopening. With a staggered re-start across the country, governing bodies, sports facilities, and event operators are making modifications and adaptations for participants and spectators. The CDC published “Considerations for Youth Sports” in mid-May that provides guidance to youth sports operators on ways to safely restart youth sports.³ The NFHS also released guidance on opening up high school athletics.⁴ Modifications are important for health/safety concerns and to allay perceived risks many parents might have of COVID-19 and its impact on children. A recent survey from North Carolina State University indicated 50% of youth sports parents were afraid their child would get sick if he or she started playing sports again.⁵ In spite of parental concerns, data from the CDC show hospitalization rates are much lower than cumulative influenza hospitalization rates at comparable time points during recent influenza seasons and laboratory-confirmed COVID-19 hospitalization rates for 5-17 year-olds at 1.9 per 100,000 compared to the overall rate of 73.3.⁶

¹ <https://www.washingtonpost.com/sports/2020/05/14/youth-baseball-returns-missouri-with-aas-volleyball-tournament-planned-florida/>

² <https://www.floridatoday.com/story/news/local/2020/05/21/county-oks-return-youth-sports-tournaments-viera-stadium-complex/5234662002/>

³ <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/youth-sports.html>

⁴ https://www.nfhs.org/media/3812287/2020-nfhs-guidance-for-opening-up-high-school-athletics-and-activities-nfhs-smac-may-15_2020-final.pdf

⁵ <https://www.aspenprojectplay.org/coronavirus-and-youth-sports/reports/2020/5/12/survey-50-percent-of-parents-fear-kids-will-get-sick-by-returning-to-sports>

⁶ <https://www.cdc.gov/coronavirus/2019-ncov/covid-data/pdf/covidview-05-29-2020.pdf>

Purpose

In light of parental concerns around safety and the patchwork nature of youth sports returning across the country, the IUPUI Sports Innovation Institute and Grand Park Sports Campus collaborated to better understand how COVID-related adaptations are perceived by parents, athletes, coaches, officials, and administrators. The result provides youth sports facilities and event operators with specific data on how adaptations will be received by these stakeholders looking to return to youth sports in a safe way.

Methodology

We cultivated a list of adaptations from a review of documents prepared by states, governing bodies, trade associations, and media reports. An initial survey was pilot tested using professional and academic experts, converging on the 12 most important adaptations. The final survey was distributed to 40 organizations that were prompted to distribute the survey to their members and stakeholders via email and social media, as shown in Table 3. Approval for the study was obtained through the Institutional Review Board at Indiana University.

The 12 adaptations addressed in the survey include:

1. **Arrival and Departure:** Changing arrival and departure routines to limit time at the venue (i.e., waiting in the car for game/practice to begin, coming to the facility fully dressed, leaving immediately once the game is over)
2. **No Spectators:** Limiting youth sports competitions to players, coaches, and game officials
3. **Spectators under 65 with No CDC-Indicated Underlying Medical Conditions:** Limiting spectators at youth sports competitions to immediate family or maximum of two people who are under 65 and have no pre-existing CDC-identified conditions
4. **Health Screening:** Answering a questionnaire that asks for contact information, travel itinerary, lodging, and health (fevers, COVID-19 symptoms) to gain venue admission
5. **Social Distancing:** Sitting or standing at least six feet apart from others in spectating areas (i.e., blocking access to bleachers, sitting every third seat or row, standing on designated locations)
6. **Social Distancing with Respect:** Treating event staff with respect if they approach you to strictly enforce social distance guidelines
7. **Facemasks:** Being required to wear a facemask while spectating
8. **Increased Sanitization:** Facilities increasing efforts before, during, and after events (i.e., frequent and visible cleaning, hand sanitizer available throughout the venue especially at high touch areas)

Table 3. Initial Distribution of Survey

Name	Type of Organization	Name	Type of Organization
Hamilton County Tourism	Destination Marketing	USJN	Governing Body
Indiana Soccer Association	Governing Body	CrossFit Thrive	CrossFit Gym
Indiana Fire Juniors	Youth Soccer Club	Westfield Washington Schools	School District
Max Lacrosse	Youth & Adult Lacrosse	Kohls Kicking Camp	Event Rights Owner
SBD Tournaments	Event Rights Owner	US Lax Events	Event Rights Owner
WYSA	Youth Rec Soccer	True Lacrosse	Youth Lacrosse Club
WYSI	Youth Rec Sports	Bearpaw Lacrosse	Youth Lacrosse Club
Bullpen Tournaments	Event Rights Owner	Chicago Fire	Youth Soccer Club
Empire Lacrosse	Lacrosse Club	Cheer Max	Youth Cheerleading
Alley Cats	Semi-pro Ultimate Team	USA Gymnastics	Governing Body
NXT Sports	Event Rights Owner	US Youth Soccer	Governing Body
Pacers Athletic Center	Indoor Facility	Carmel Dads Club	Youth Rec Sports
Westside United	Youth Soccer Club	Mudsock Youth Athletics	Youth Rec Sports
Top Tier Sports Ventures	Event Rights Owner	The Collective	Consulting Group
HSE Sports	Youth Rec Sports	Indiana Sports Corp/Sports Indiana	Sports Commission
Lax USA	Youth Lacrosse Club	Visit Fort Worth - Sports Marketing	Destination Marketing
USA Football	Governing Body	Maryland Soccer Foundation	Foundation
IHSAA	Governing Body	Maryland SoccerPlex	Facility
Hoosier FC	Youth Soccer Club	SportsETA Board	Professional Organization
Indy Select Academy	Youth Football		
Music Travels	Marching Band Agency		

9. **Playing Areas and Equipment:** Playing areas and equipment being sanitized after each competition
10. **Amenities:** Amenities being closed at sports venues (i.e., concessions, drinking fountains, lobbies, playgrounds, entertainment centers)
11. **Bench and Dugouts:** Minimizing the capacity of bench and dugout areas for athletes
12. **Personal Contact:** Limiting personal contact between players (i.e., handshakes, high fives, hugs)

The survey questions were designed using the Kano Model,⁷ which was selected because of its ability to provide an interpretive framework by pairing satisfaction measures for the presence and absence of COVID-19-related adaptations. The outcome of the Kano Model is the ability to determine how people feel about proposed adaptations to the youth sports experience to promote safety during the COVID-19 pandemic. Each adaptation contained three questions:

1. **Functional Question:** How they feel with the adaptation present
2. **Dysfunctional Question:** How they feel without the adaptation present
3. **Importance Question:** How important it is to have the adaptation

Every functional and dysfunctional answer pair resulted in a categorical assignment as shown below.

Dysfunctional (adaptation absent)						
Functional (present)		Like it	Expect it	Don't care	Tolerate	Dislike it
	Like it	Questionable	Attractive	Attractive	Attractive	Performance
	Expect it	Reverse	Questionable	Indifferent	Indifferent	Must-be
	Don't care	Reverse	Indifferent	Indifferent	Indifferent	Must-be
	Tolerate it	Reverse	Indifferent	Indifferent	Questionable	Must-be
	Dislike it	Reverse	Reverse	Reverse	Reverse	Questionable

The importance question was asked on a traditional 1-5 Likert-type scale ranging from extremely important (5) to not-at-all important (1). Answers to the functional and dysfunctional pairs were scored on the following scale:

	Functional	Dysfunctional
I like it	4	-2
I expect it that way	2	-1
I don't care	0	0
I can tolerate it	-1	2
I dislike it	-2	4

The functional question asked about their feelings if the adaptation was present. For example, for “Benches and Dugouts,” the functional question asked: *During the pandemic, how do you feel about minimizing the capacity of bench and dugout areas for athletes?* The dysfunctional question was similar but asked their feelings if the adaptation did not exist. For example, for “Benches and Dugouts,” the dysfunctional question: *How do you feel about athletes being allowed to sit in traditional bench and dugout areas at full capacity.* In sum, a total of 36 questions (12 adaptations times 3 questions) formed the basis of the

⁷ foldingburritos.com/kano-model/.

survey design. Because of the lengthy survey design, each respondent randomly received half of the Kano-related questions to facilitate survey completion.

After removing respondents classified into the *Questionable* category, the mean functional and dysfunctional scores for each adaptation were placed onto a scatterplot, divided into five areas for interpretative purposes as shown below. The size of the dot placed on the graph represents the respondent's self-stated importance rating; the more important the adaptation, the larger the dot.

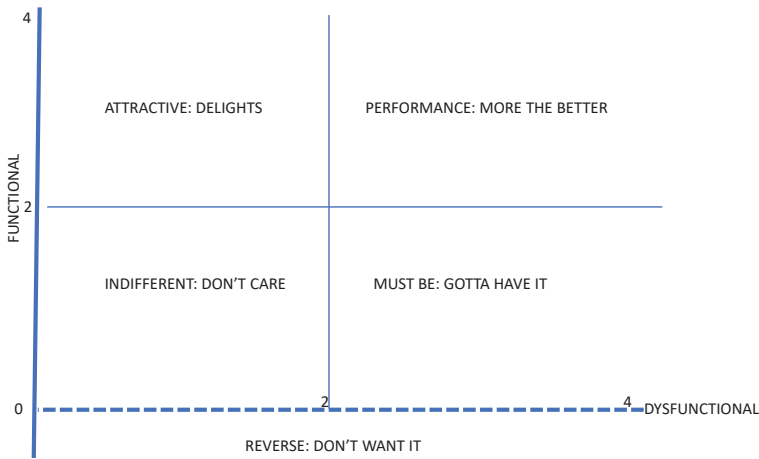


Figure 1. Interpreting Kano Model results.

The quadrants can be interpreted as follows:

1. **Performance:** Users like having these adaptations, and dislike not having them. The more of the adaptation that is provided, the more satisfied users become.
2. **Must-be:** Adaptations that are expected by users. If the experience does not have them, it will result in significant dissatisfaction.
3. **Reverse:** Adaptations that users do not want.
4. **Indifferent:** The presence or absence does not make a real difference in the user's experience. These occur for "I don't care" or "I can tolerate it" answers for functional and dysfunctional.
5. **Attractive:** Occurs when users like having an adaptation they were not expecting. Given the nature of the COVID-19 pandemic, it was hypothesized that no adaptations would land in this category.

In sum, the answers of the functional, dysfunctional, and importance questions provide a framework for understanding how parents, athletes, coaches,

officials, and administrators feel about each COVID-19-related adaptation at youth sports events. In turn, the results, discussed in the next section, can be used by venues and event operators to deliver a safe and user-friendly experience when families, athletes, and officials return to the field.

Survey Respondents

The survey reached a national audience that represents the landscape of youth sports. A total of 10,359 people completed the entire survey. Respondents hailed from 45 states and represented at least 13 different sports. Nearly 55% of respondents

Table 4. Respondents by State

	<i>N</i>	%
State of Residence		
Ohio	1368	13.2
Illinois	1284	12.4
Indiana	1216	11.7
Maryland	1026	9.9
Michigan	777	7.5
Kentucky	402	3.9
New York	361	3.5
Virginia	356	3.4
Wisconsin	326	3.1
Pennsylvania	323	3.1
Missouri	272	2.6
New Jersey	229	2.2
Massachusetts	113	1.1
California	107	1.0
Connecticut	91	.9
Florida	85	.8
Minnesota	85	.8
Texas	82	.8
Georgia	79	.8
Tennessee	68	.7
North Carolina	64	.6
Colorado	63	.6
I do not reside in the U.S.	46	.4
District of Columbia	44	.4

	<i>N</i>	%
State of Residence		
New Hampshire	38	.4
Kansas	27	.3
Nebraska	27	.3
Washington	25	.2
Iowa	20	.2
Arizona	17	.2
South Carolina	17	.2
Delaware	16	.2
Oregon	16	.2
Alabama	8	.1
Nevada	8	.1
Utah	8	.1
West Virginia	8	.1
Maine	6	.1
Oklahoma	3	.0
Rhode Island	3	.0
Wyoming	3	.0
Arkansas	2	.0
Vermont	2	.0
50 States, D.C. and Puerto Rico	1	.0
Idaho	1	.0
Mississippi	1	.0
TOTAL	10,359	100%

were female, 58% were between 40 and 49 years old, and 88% were white. Those engaged in competitive travel sports comprised 92% of the respondents, and 686 respondents represented recreational or non-travel youth sports. Nearly 92% of respondents were parents, but with the option to select multiple roles. Coaches (25%), administrators (10%), athletes (9%), and officials (3%) were also represented. Tables 4 and 5 present the demographic profile of respondents.

Table 5. Demographic Characteristics of Respondents

	N	%		N	%
Gender			Sport		
Male	4678	45.6%	Baseball	4071	39.3%
Female	5582	54.4%	Basketball	2731	36.4%
Age			Soccer	3670	35.4%
Youth	365	3.6%	Lacrosse	3644	35.2%
19-29 years	71	0.7%	Football	1663	16.1%
30-39 years	851	8.4%	Softball	989	9.5%
40-49 years	5840	57.7%	Volleyball	819	7.9%
50-59 years	2762	27.3%	Other	694	6.7%
60 and over	230	2.3%	Track & Field	649	6.3%
Role			Swimming & Diving	542	5.2%
Parent/Family Member	9501	91.7%	Hockey	519	5%
Coach	2543	24.5%	Tennis	310	3%
Administrator	1010	9.7%	Gymnastics	287	2.8%
Athlete	919	8.9%	Travel 50+ miles for play		
Official	314	3%	Yes	9597	92.6%
Ethnicity			No	686	6.6%
White	8972	88.0%	Total Respondents		
Prefer to not answer	704	6.8%	10,359	100%	
Hispanic, Latino, or Spanish	243	2.5%			
Black or African American	169	1.6%			
Other	217	2.1%			

Kano Model Results

Table 6 displays the categorical results for each functional/dysfunctional question pair for the 12 adaptations. These results are used to provide context for the interpretation of results discussed below.

Figure 2 displays the classification for each adaptation based on the Kano Model described above in the Methodology section. Table 7 presents the same results in numerical format.

Table 6. Categorical Results for Functional/Dysfunctional Question Pairs

Adaptation	Must-be	Performance	Attractive	Indifferent	Reverse	Questionable
Amenities	13.2%	8.0%	3.1%	37.2%	28.2%	10.3%
Arrival and Departure	24.3%	9.1%	4.4%	28.5%	21.6%	12.1%
Bench and Dugouts	14.7%	12.1%	6.7%	32.7%	25.1%	8.7%
Facemask	14.5%	7.2%	2.6%	20.5%	33.2%	21.9%
Health Screening	27.2%	13.7%	5.6%	27.7%	12.5%	13.2%
Increased Sanitization	41.5%	39.8%	6.2%	11.2%	0.3%	0.9%
No Spectators	30.7%	5.1%	0.6%	6.3%	33.0%	24.4%
Personal Contact between Players	31.2%	21.2%	3.1%	23.1%	12.9%	8.5%
Playing Areas and Equipment	32.6%	30.8%	6.3%	23.8%	2.2%	4.4%
Social Distancing with Respect	24.5%	19.0%	11.2%	25.2%	12.6%	7.5%
Social Distancing	33.2%	16.5%	3.8%	23.3%	14.7%	8.5%
Under 65 No Health Conditions	23.8%	24.9%	9.5%	11.2%	17.4%	13.3%

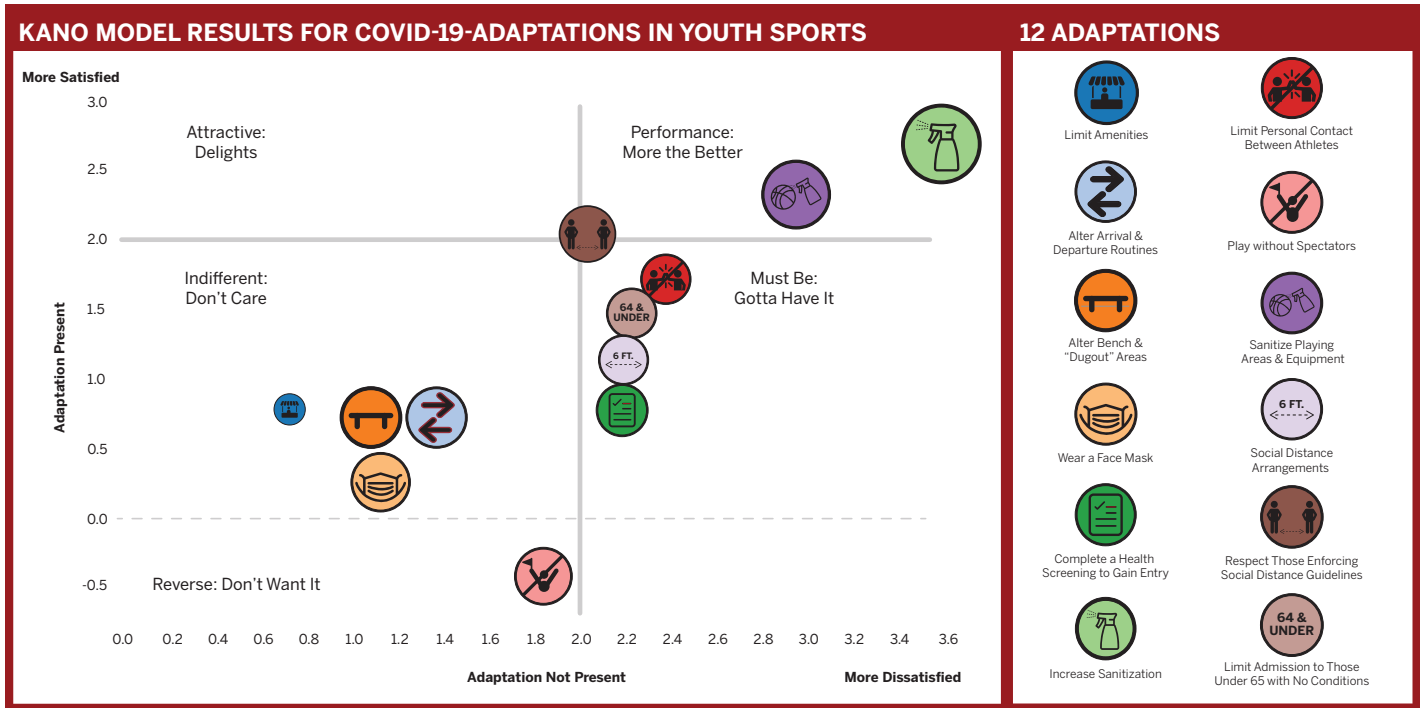


Figure 2. Kano Model results for COVID-19-adaptations in youth sports.

Table 7. Kano Model Results for Adaptations

Adaptation	Dysfunctional		Functional		Importance	N
	Mean	Std. Dev.	Mean	Std. Dev.		
Amenities	0.72	2.17	0.46	1.98	2.56	4,716
Arrival and Departure	1.32	2.33	0.83	1.97	3.04	4,429
Bench and Dugouts	1.01	2.22	0.82	2.16	2.81	4,586
Facemask	1.03	2.25	0.24	2.09	2.91	4,079
Health Screening	2.18	1.89	1.16	2.08	3.02	4,421
Increased Sanitization	3.49	1.20	2.81	1.27	4.30	5,017
No Spectators	1.81	2.26	-0.41	1.80	2.99	3,966
Personal Contact between Players	2.28	2.16	1.60	2.02	3.11	4,600
Playing Areas and Equipment	2.92	1.64	2.31	1.73	3.84	4,848
Social Distancing with Respect	2.02	2.19	2.01	1.89	3.19	4,805
Social Distancing	2.18	2.18	1.36	2.02	3.34	4,746
Under 65 No Health Conditions	2.19	2.26	1.50	2.45	3.14	4,553

Interpretation of Kano Model Results

Performance Adaptations

Adaptations classified as *Performance* are those that users like having and dislike not having. The more of the adaptation that is provided, the more satisfied users become.

1. Increased Sanitization

Respondents are greatly satisfied with increased efforts to sanitize the venue before, during, and after events. This includes frequent and visible cleaning in addition to hand sanitizers available throughout the venue, especially in high-touch areas. In the survey, respondents were asked who they believed should be responsible for increased sanitization efforts. The most popular option, chosen by 53% of respondents, was for professional cleaning crews to complete sanitization efforts. For those wanting professional cleaning crews to sanitize, 65% were willing to pay additional money in their registration fees or tip an amount to the facility to cover those costs. These respondents were willing to tip an average of \$10 for the enhanced sanitization efforts incurred as a cost to the venue. Only 16% of all survey respondents believed the responsibility for cleaning should fall on the athletes or parents to pitch in and help sanitize after each competition. Only 11% believe no additional sanitization was necessary. Finally, the importance rating for this adaptation was the highest of the 12 adaptations (4.3 out of 5), hence it is the largest circle on the graph.

2. Sanitization of Playing Areas and Equipment

Respondents are greatly satisfied with increased efforts by venues and event operators to sanitize playing areas and equipment after each competition. Venue operators and event managers can feel confident that the recommendations provided by the CDC and NFHS to sanitize playing areas and equipment after each use will be well-received and welcomed by users. Stated differently, the results of the survey suggest that venues and events cannot sanitize enough, and users want as much sanitization as they can get. This adaptation has the second largest importance rating (3.8 out of 5).

3. Social Distancing with Respect

Users are satisfied if everyone works together to treat event staff with respect when they approach people to enforce social distancing guidelines. This adaptation scored the highest percentage of people labeling it *Attractive* (11%), and it nearly landed in the *Attractive* quadrant. The media has reported many

examples of customers not treating employees with respect as they try to enforce social-distancing guidelines. Each venue needs to train its staff on how to approach people in a polite manner, but the results of this study suggest that staff can be confident that most users want to work together with event staff to create a safe environment at youth sports events. Signage and pre-event communication can support the efforts of staff monitoring social distancing. This adaptation has the fourth highest importance rating (3.2 out of 5).

Must-be Adaptations

Adaptations classified as *Must-be* are those that are expected by users. Users will feel significant dissatisfaction if the experience does not have the adaptation.

1. Limiting Personal Contact between Players

This question refers to personal contact between players outside of the necessary personal contact needed to play the sport. This can be thought of as limiting the 3Hs: handshakes, high fives, and hugs. Each sport has its own unique circumstances and game play modifications that sport governing bodies are currently developing. This survey did not ask questions specific to each sport as it relates to modifying rules and game play. However, a fundamental aspect of participating in youth sports during the COVID-19 pandemic return is that unnecessary personal contact outside of required gameplay should be limited. In addition to athletes competing on the field, the 3Hs also apply to coaches, officials, and parents. Athletes were less concerned with this adaptation. Athlete respondents placed limiting personal contact between players in the *Indifferent* category.

2. Spectators under 65 with No CDC-Indicated Underlying Medical Conditions

During the phased return amidst the COVID-19 pandemic, survey respondents believe there should be some limitations placed on those who attend youth sporting events. In what might be called the “No Grandparents Rule,” respondents placed *limiting spectators to immediate family or a maximum of two people who are under 65 with no pre-existing medical conditions* as a *Must-be* adaptation. Limiting exposure for those most at-risk for COVID-19 was a priority for survey respondents.

3. Social Distancing

Following social-distancing guidelines that ask people to stand at least six feet apart from others is considered a *Must-be* adaptation for survey respondents. While each venue is unique, this includes sitting in every third row or seat, standing on designated marked locations, and even blocking access to bleacher areas. With social distancing becoming commonplace in all aspects of life,

attendees are coming to sports venues and events familiar with an awareness of social-distancing practices. This adaptation has the third highest importance rating (3.4 out of 5).

4. Health Screening

Survey respondents view answering questions about their health and travel information a *Must-be* condition for the return of youth sports during the COVID-19 pandemic. Respondents were open, willing, and even expect to be asked questions regarding their contact information, travel itinerary, and COVID-19-related health symptoms to gain admission to the venue. Only 12% of respondents classified the health-screening adaptation as a *Reverse*, meaning they would be resistant to the adaptation.

Indifferent Adaptations

For adaptations classified as *Indifferent*, the presence or absence does not make a real difference in the user's experience. These occur for "I don't care" or "I can tolerate it" answers for the combination of functional and dysfunctional answers. The importance scores also tend to be lower than other adaptations.

1. Arrival and Departure

Altering arrival and departure routines to limit time at the event or venue landed in the *Indifferent* category. This includes waiting in the car for a game or practice to begin, coming to the venue in full uniform because there are no locker rooms, and leaving immediately once the game or practice is over. Making this adaptation does not positively or negatively affect the user's experience.

2. Minimizing Capacity in Bench or Dugout Areas

One-third of survey respondents classified minimizing the capacity of bench areas for athletes as *Indifferent*, and the average for all survey respondents placed this adaptation squarely in the *Indifferent* category. Making modifications as to how players not in the field of play are arranged or socially distanced does not seem to impact the user's experience overall. The importance score was the second lowest of the 12 adaptations (2.8 out of 5).

3. Closing Amenities

Survey respondents were *Indifferent*, or do not care, if amenities need to be closed at the venue or during the event throughout the phased return of youth sports. Closures included concessions, drinking fountains, lobbies, playgrounds, entertainment centers, and the like. Analysis of qualitative feedback showed the only exception to this finding regarding amenities is that users would like

restroom facilities to remain open. The key to successful implementation of this adaptation is that the venue or event operator clearly communicates in *advance* which amenities will be open and closed so users can plan appropriately. The importance score was the lowest of the 12 adaptations (2.6 out of 5), and thus is the smallest circle on the graph.

4. Facemasks

Facemasks landed in the *Indifferent* quadrant, but for a different reason than the prior three adaptations discussed in this section. Making adaptations for arrival/departure, bench areas, and amenities were classified as *Indifferent* because the most frequently selected category for each of these was *Indifferent* (37% for amenities, 33% for bench, and 29% for arrival/departure). Facemasks landed in *Indifferent* based upon the significant disagreement between survey respondents over the issue of facemasks, just like in many other areas of American life during the COVID-19 pandemic. In fact, the most common classification for facemasks was *Reverse* at 33%, while 24% classified facemasks as either *Must-be*, *Performance*, or *Attractive*. In the question, respondents may have experienced confusion over whether a parent was answering the question on behalf of their child participating in a sport or as a parent spectator. In sum, it is difficult to draw conclusions on facemasks.

Reverse Adaptation (Don't Want)

1. No Spectators

Adaptations classified into the *Reverse* segment of the graph are those adaptations that users, overall, do not want to see. The only adaptation classified into the *Reverse* category was eliminating spectators from entering the venue and limiting entry to officials, players, coaches, and administrators. However, it is important to note that while 33% of respondents classified no spectators *Reverse*, 31% classified this adaptation as a *Must-be*. This showed significant disagreement between survey respondents regarding this adaptation. Officials and administrators were more amenable to no spectator policies, as both groups classified no spectators in the *Must-be* quadrant. However, this is a tenuous result at best because the “dot” on the graph just barely crossed over from *Reverse* to *Must-be* in both instances.

Differences between Travel and Recreational Sports

Figure 3 shows the differences between those involved in local recreational youth sports ($n = 686$) and those who participate in travel, elite, or club competitions requiring more than 50 miles of travel from home ($n = 9,597$). The circles represent the placement of adaptations for travel, and the dotted line shows how the results change when only looking at local recreational respondents. In general, there is

an upward right movement of the adaptations on the graph, demonstrating local recreational respondents view the adaptations in a more positive light and as a more necessary part of the youth sports experience.

Three adaptations changed classifications when comparing local recreational to travel respondents:

- Limiting personal contact between players moved from *Must-be* (travel) to *Performance* (rec)
- Changing arrival and departure routines moved from *Indifferent* (travel) to *Must-be* (rec)
- No spectators moved from *Reverse* (travel) to *Must-be* (rec)

Even for adaptations that did not change classifications, the clear trend in the chart is for the adaptations to move up and to the right. For example, even though minimizing the capacity of bench and dugout areas did not change quadrants, there was a major shift on the graph from the *Indifferent* quadrant to nearly reaching *Must-be*.

The difference in mindset between rec and travel parents is paralleled in the finding that 57% of rec parents would end participation in a league or tournament if an athlete tested positive for COVID-19 during the course of competition, compared to only 41% of travel parents.

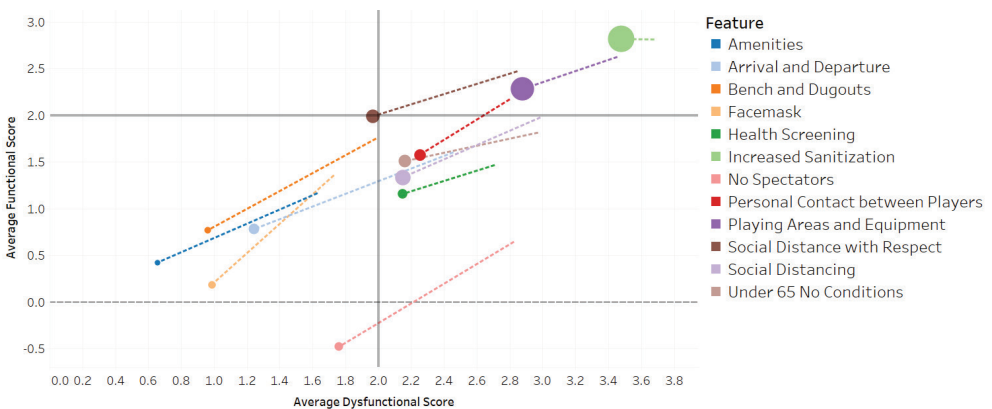


Figure 3. Comparing travel (dot) to rec (end of dotted line).

Youth Sports Travel Habits

Impact of COVID-19 on Willingness to Travel for Youth Sports

Parent feelings regarding their willingness to travel impacts their perceptions toward the 12 adaptations. When looking at *parent* responses for those who participate in *travel sports* that require more than 50 miles of travel from home, 38% reported that the current pandemic makes them less willing to travel and more likely to seek opportunities to compete closer to home. In contrast, 60% reported the pandemic had no impact on their travel plans, while 2% reported the pandemic makes them more willing to travel than before.

Travel parents less willing to travel during the pandemic are represented by the dot in Figure 4, while travel parents not changing their travel plans are represented at the end of the dotted line. Figure 4 shows that travel parents less willing to travel perceive all 12 adaptations in a more positive light, and their inclusion will add to their satisfaction. In contrast, travel parents who are not less likely to travel during the pandemic have a lower left drift for each adaptation, feeling more indifferent about each adaptation.

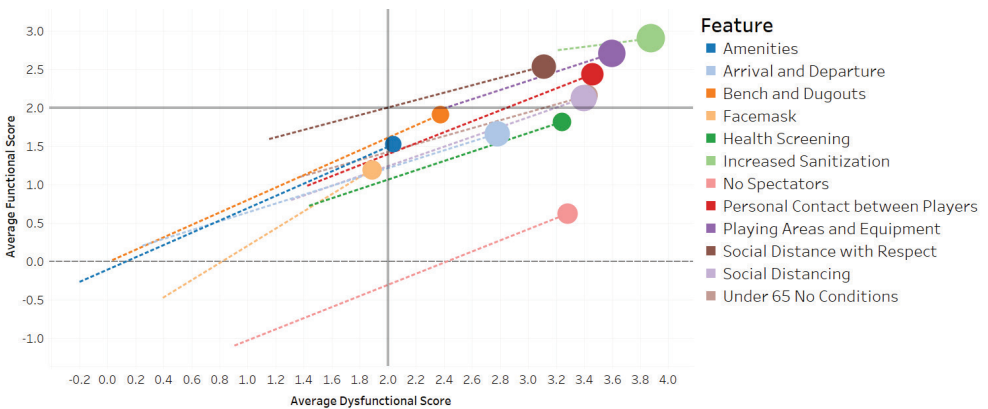


Figure 4. Comparing less willing to travel (dot) to no change in travel (end of dotted line).

Returning to Travel Sports

Travel sports parents demonstrated an increasing comfort level in traveling for competitions each month. Their comfort level increased from 42% in May to 76% in August. Figure 5 shows their comfort level for May to September.

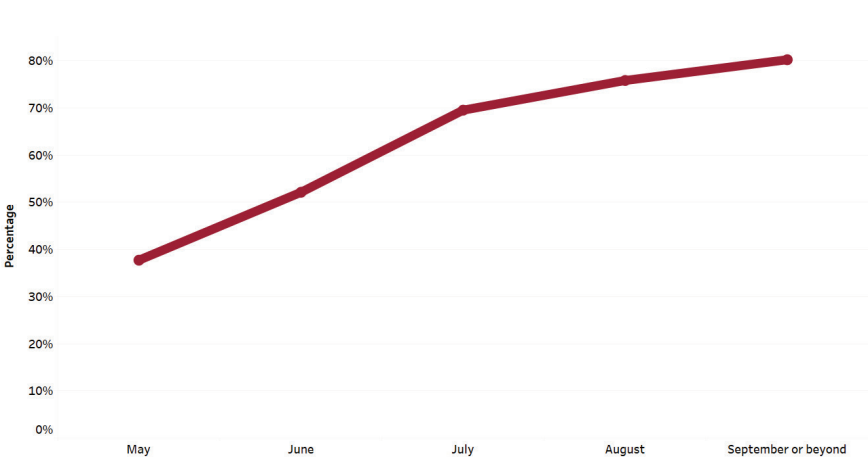


Figure 5. Comfortability returning to travel youth sports by month.

Impact of COVID-19 on Sports Travel Budget

The economic turmoil wrought by COVID-19 has touched nearly every aspect of American life. However, 59% of travel sports parents (*n* = 8,824) reported that the pandemic will not negatively impact their sports travel budget, and only 23% will experience a decrease greater than 25% in their youth sports travel budget (see Table 8).

Table 8. Change in Sports Travel Budget for Travel Sports Parents

	N	%
Budget has increased	350	4
Decreased by <25%	1504	17.0
Decreased by 25-49%	1165	13.2
Decreased by 50-74%	557	6.3
Decreased by +75%	390	4.4
No impact at all	4858	55.1
Total	8,824	100%