Reopening Collegiate Recreation During COVID-19: A Case Study of Plans and Policies

Leeann M. Lower-Hoppe¹, Annemarie Farrell², Robert J. Barcelona³, Shea M. Brgoch⁴, Chad Lowe⁵, and Domonique Dunn⁵

Abstract
The COVID-19 pandemic caused most collegiate recreation facilities and programs to shut down to slow the spread of the virus. Public health guidelines from the state/province, federal, and global level have inundated recreation professionals with messaging to inform reopening strategies. Rasmussen’s risk management framework served as a guide to explore the stakeholders, decisions, and environmental conditions influencing COVID-19 reopening plans and policies in collegiate recreation. A case study of four collegiate recreation departments was conducted, with document analysis employed to examine and interpret reopening plans. The findings highlight campus offices and leadership as major stakeholders in reopening guidelines; risk management decisions utilizing a phased reopening approach that emphasized screening, mask mandates, social distancing and touch points, equipment and floor plans, and cleaning; and communication as a critical environmental condition. Implications for collegiate recreation practitioners include strategies for decision making, dissemination of information, staff training, risk mitigation, and policy enforcement.

Keywords
Risk management, stakeholders, decision making, communication, policy formation

¹ Department of Human Sciences, The Ohio State University
² School of Business
³ Department of Recreation Management and Policy, University of New Hampshire
⁴ School of Kinesiology, Recreation & Sport
⁵ Department of Recreational Sports, The Ohio State University

Corresponding Author:
Leeann M. Lower-Hoppe, Department of Human Sciences, The Ohio State University. Email: lower-hoppe.1@osu.edu
The COVID-19 pandemic has severely impacted the way people across the world live, work, and play. As of this writing, there have been over 5.5 million deaths associated with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) worldwide - also known as coronavirus disease 2019 (COVID-19), and well over 800,000 deaths in the United States (U.S.) alone (JHU CSSE, 2020). In addition to the direct respiratory concerns associated with contracting COVID-19, quarantines and shutdown orders put in place to limit viral spread resulted in a “second wave attack” on physical and mental health due to physical inactivity (Woods et al., 2020). In the wake of the COVID-19 pandemic, most indoor (and some outdoor) physical activity venues were shut down to slow the spread of the virus. These closures were particularly disruptive for college-aged students as they lost access to campus recreation facilities and other supports for physical activity (Liu et al., 2020; Maher et al., 2021).

Prior to the COVID-19 pandemic, one-third or more of college students reported being negatively impacted by stress, anxiety, and depression, and approximately 40% reported experiencing moderate or serious psychological distress (ACHA, 2020a). Preliminary research suggests these trends have been exacerbated as the pandemic has progressed (ACHA, 2020b). For example, 71.2% of college students reported their stress and anxiety levels have increased since the pandemic began, and 48.1% showed a moderate-to-severe level of depression (Wang et al., 2020). Physical activity is a known facilitator of physical and mental health and can buffer against heart disease, obesity, stroke, anxiety, and depression (Slater et al., 2021). Yet research has shown that pandemic-related facility closings may have negatively impacted physical activity levels, particularly among the most physically active college students (Barkley et al., 2020). As such, it is safe to say the need to “get back to normal” for college students is acute, particularly as knowledge of COVID-19 treatment and therapeutics has increased. However, the need to fully reopen is balanced with the need to be vigilant against reoccurring infections and spread, particularly as new variants of the virus present themselves. This tension has created a dilemma for collegiate recreation professionals and those responsible for risk management on college campuses.

The safe operation of collegiate recreation facilities and programs relies on clear and unambiguous standards, policies, and procedures. However, the transboundary nature of the pandemic resulted in a wealth of information and protocols from the World Health Organization (WHO) and other national health systems such as the Centers for Disease Control and Prevention (CDC). These organizations developed COVID-19 prevention and control guidance for businesses and institutions of higher education that included recommended hand hygiene and respiratory etiquette, physical distancing, cleaning and disinfecting, communication management, employee training, and personal protective equipment (PPE). Further, U.S. state health departments issued sector specific operating requirements, such as the Responsible RestartOhio mandatory and recommended practices for university recreational facilities within the state of Ohio (Ohio Department of Health, 2020).

This technical guidance played a critical role in effective COVID-19 prevention and control, but the unprecedented level of information sharing (Merchant & Lurie, 2020) also led to concerns regarding how to manage information and decision-making. The WHO (2020c) described this phenomenon as “a massive ‘infodemic’—an over-abundance of information—some accurate and some not—that makes it hard for people to find trustworthy sources and reliable guidance when they need it” (p. 2). Impellizzeri et al. (2020) called for sport scientists to collaborate with sport practitioners and strategically distill information that can better inform practitioners’ COVID-19 response. To address this call, we teamed up with collegiate recreation professional staff to collect and analyze COVID-19 reopening policies in collegiate recreation for the broader aim of extracting guiding principles to inform risk management.

Conceptual Framework
The nature of the COVID-19 global pandemic created a dynamic environment that requires
managers to be flexible and operate across multiple levels of system administration (O’Brien, 2020). For example, to operate safely, collegiate recreation programs must adhere to a patchwork of state/province laws and guidance, university policies, and professional standards. Successful reopening also relies on staff’s ability to execute plans, as well as a willingness from patrons to engage in this new environment. This socio-technical system comprised of government, professional standards, university policies, and recreation personnel influences the uptake of risk management policies. Rasmussen (1997) suggests that, “safety…depends on the control of work processes so as to avoid accidental side effects causing harm to people, environment, or investment” (p. 184). While modern organizational environments are often characterized as fluid and ambiguous (Bolman & Deal, 2013), these conditions make it difficult for external (e.g., government; professional associations) and internal (e.g., organizations; management) stakeholders to formulate and enact policy in a time of rapid change.

Rasmussen’s (1997) risk management framework accounts for the interaction of multiple stakeholders engaged in managing risk in a dynamic environment. Adopting a systems approach, Rasmussen identified multiple levels of interdependent stakeholders engaged in the process of risk management. At the top level, the government manages risk through federal, state/province, and local legislation or regulations. Public policy filters down to the next level of authority, where professional associations interpret and implement government mandates and establish rules to control the activities of organizations within their purview. These rules are then operationalized within organizations to determine work conditions, policies, and processes. Organizational management then supervises staff who are responsible for implementing risk management plans. At this level, the prescribed action steps directly manage the identified risk.

For the system to function effectively, decisions made at higher levels (e.g., government, associations, organizations) should filter down and be reflected in the actions taken at lower levels (e.g., management, staff, work; Rasmussen, 1997). In turn, vertical integration should occur in which information about the risk status is transferred up the hierarchy to inform higher-level decisions (Cassano-Piche et al., 2009). For example, as fitness centers reopened in the U.S. with safety measures in place per state regulations (e.g., decreased capacity, increased sanitation, mask regulation; Eschner, 2020), data on COVID-19 cases linked to the facility were monitored and shared with professional associations (e.g., International Health, Racquet & Sportsclub Association). These associations then reported the data to elected officials lobbying to keep gyms open amidst rising COVID-19 cases nationwide (Chiu, 2020).

Successful risk management arises from bidirectional, ongoing interactions across stakeholders at each level of Rasmussen’s (1997) framework. However, deviation from normative regulations, policies, and procedures (at any level of the system) can propagate throughout and result in a system breakdown. It is at this juncture where accidents occur, contributing to a hazardous environment. In relation to COVID-19, a primary concern is spreading the virus (WHO, 2020a). To mitigate viral spread in collegiate recreation, the purpose of this paper is to investigate the risk management process associated with COVID-19 reopening policies and provide implications for policy development, dissemination, and enforcement. We attempt to answer the following research questions using Rasmussen’s (1997) risk management framework as a guide:

**RQ1:** What stakeholders are involved in developing and implementing risk management policies associated with COVID-19 in collegiate recreation?

**RQ2:** What are the decisions of key stakeholders identified, in relation to managing risks associated with COVID-19 through the actions of staff and patrons?

**RQ3:** What are the necessary environmental conditions to support the actions of staff and patrons managing risks associated with COVID-19 in collegiate recreation?
Methods

Research Design

We approached the study from an interpretivist epistemology (Bryman, 2012) to understand the risk management process associated with COVID-19 reopening policies in collegiate recreation. The study was built from the perspective that “knowledge is subjective and bound to the natural contexts in which we enact our lives” (Hiller, 2016, p. 103), reflecting a relativist ontology. Based upon the study’s focus on collegiate recreation reopening policies, an interpretivist approach allowed us to interact with reopening plan documents to elicit meaning, gain understanding, and develop knowledge to answer the study research questions. Accordingly, document analysis was employed as the study methodology (Bowen, 2009).

Document analysis is the systematic process of examining and interpreting documents, considered particularly applicable to qualitative case studies (Bowen, 2009). While document analysis is often used in combination with other research methods, it can also be used as a stand-alone method for case study research relying upon documents of immense value. Documents can provide context on the conditions of a phenomenon, provide a means of tracking substantive developments in a phenomenon, and offer data for events that cannot readily be observed by the researchers or recalled in detail by informants. For this study, we utilized a publicly available document (published in June of 2020) containing the reopening plans of four collegiate recreation departments selected by NIRSA: Leaders in Collegiate Recreation to serve as guidance for member institutions - for the document analysis (see NIRSA, 2020).

Case Study

The case study included the reopening plans of four collegiate recreation departments at institutions across North America. The institutions are all members of NIRSA and will be referenced based upon their NIRSA Region: Region II, Region IV, Region V, and Canada. Table 1 presents a brief profile of each institution in the sample. Region II institution’s reopening plan document was three times longer than the other three institutions’ plans, which was taken into consideration when analyzing the data.

Data Analysis

While interpretive knowledge is not generalizable in the sense that it may be applied to other individuals in alternative contexts (Hiller, 2016), we enhanced transferability through the use of coding, with various themes emerging from the documents analyzed. Williams and Moser (2019) defined coding as, “processes that enable collected data to be assembled, categorized, and thematically sorted, providing an organized platform for the construction of meaning” (p. 45). Our analytic process utilized the development of codes, as each reopening plan was analyzed independently, no codes were developed prior to document analysis. The code book was maintained throughout the analysis and reviewed by researchers not directly involved with primary coding. Codes then provided a traceable and logical route from the raw data to themes identified by researchers. The themes identified in each document independently formed a clear pattern which became categories for a broad analysis across all reopening plans. Bowen (2009) described the process of thematic analysis:

The process involves a careful, more focused re-reading and review of the data. The reviewer takes a closer look at the selected data and performs coding and category construction, based on the data’s characteristics, to uncover themes pertinent to a phenomenon...The researcher is expected to demonstrate objectivity (seeking to represent the research material fairly) and sensitivity (responding to even subtle cues to meaning) in the selection and analysis of data from documents. (p. 32)

Each reopening plan was coded within Microsoft Word, with thematic categories drawn from codes organized into independent files. Institutional reopening plans were reviewed, and text coded into independent reports. When a new code emerged, a new file was added. Researchers then examined collated reports to observe the most robust themes that emerged.
To enhance trustworthiness of the analysis, a second researcher reviewed the reopening plans, in conjunction with the thematic coding reports to assess the relevance of topics identified. It was determined that the codes developed were drawn directly from the reopening plans and corresponded to the most salient themes.

While researcher positionality is often most associated with participant observation, considering reflexivity is an important aspect of quality control within the qualitative paradigm. Individuals on the research team are currently involved, or have had prior experience in the administration of recreational sport programming. Experiences as coaches, graduate students, and even facility members may have impacted the choice of topic, knowledge of NIRSA member institutions, and overall awareness of best practices in facility management. The research team seeks to represent positionality transparently, considering how our experiences may influence the research conducted.

**Findings**

**Stakeholders Influencing Risk Management Policies**

The global COVID-19 pandemic touched all aspects of civic life; no corner of government, education, healthcare or financial services was unaffected. Each sector played a role in establishing responses to both dealing with the crisis, as well as shaping polices regarding a return to social mobility. While it was clear in the reopening plans that each institution was greatly impacted by numerous external and internal stakeholders, the degree of specificity in protocol and identification of stakeholders varied greatly by institution. The four entities most often cited across the documents were internal campus administrative units, public health agencies, sport governing bodies, and federal/state/province government. (Table 2)

All institutions referenced campus offices and leadership as having a major role in reopening guidelines. While R-IV Institution referenced their campus legal affairs office announcing that “masks will be provided but not required,” the document provided by R-II Institution offered the most specificity and significantly more breadth of internal groups involved in the reopening process. Early in the document, the institution pledges that they will “identify other key campus partners and collaborators” and “work collaboratively with Environmental Health & Safety, Student Health, Risk Management, University Life, Disability Support Services, Human Resources, and other relevant entities so that they see and inform the plans for reopening.”

---

**Table 1. University Profiles.**

| Region II Institution | Region IV Institution | Region V Institution | Canada Institution |
|-----------------------|-----------------------|----------------------|--------------------|
| Abbreviation          | Abbreviation          | Abbreviation          | Abbreviation       |
| Institution Type      | Institution Type      | Institution Type      | Institution Type   |
| Location              | Location              | Location              | Location           |
| Number of Recreation  | Number of Recreation  | Number of Recreation  | Number of Recreation|
| Facilities            | Facilities            | Facilities            | Facilities         |
| Available Programming | Available Programming | Available Programming | Available Programmi|
| Department Affiliation| Department Affiliation | Department Affiliation | Department Affiliation |
| Reopening Date        | Reopening Date        | Reopening Date        | Reopening Date     |

Abbreviation: R-II, R-IV, R-V, Canada. Institution Type: Large, public university; Small, community college; Mid-sized, public university; Western Canada. Location: Southeast, United States; South, United States; Midwest, United States; Western Canada. Number of Recreation Facilities: 3, 2, 1, 1. Available Programming: Club sport; Intramural sport; Outdoor adventure; Fitness; Aquatics; Club sport; Intramural sport; Outdoor pursuits; Fitness; Aquatics; Sport and fitness; Club sport; Intramural sport; Climbing and adventure; Fitness; Aquatics. Department Affiliation: Student Life; Student Life; Independent; Athletics. Reopening Date: August 1, 2020; July 20, 2020; May 18, 2020; September 8, 2020.
R-IV Institution provided a blanket statement citing the role of the CDC in providing guidance on cleaning products, noting, “student staff will be in all activity areas and will clean touchpoints with a CDC approved disinfectant.” Canada Institution also referenced the use of specific cleaning agents identified by government agencies specifically stating, “staff conduct regular (every 2 h) disinfecting with U.S. Environmental Protection Agency (EPA)-registered disinfectants which are designated effective against COVID-19 virus will be used.”

The CDC was also mentioned specifically by R-II Institution addressing numerous topics, from cleaning to reopening strategy. Early in their reopening plan, the institution seeks to “…determine building load and capacity and maximum occupancy for various spaces according to CDC and Governor of (state) guidance.” Later in the report the CDC is identified again, referencing the need to, “follow guidance from the CDC and USA Swimming for use of aquatic facilities.” Furthermore, the Canada Institution referred to their appropriate federal health department’s recommendations as an important consideration, noting that reopening and social distancing policies will be “reduced, monitored and enforced as per (province health services) guidelines,” and later regarding cleaning, “disinfection of all common surfaces during mid-day closure - contingent upon university and (province health services) directives and staffing resources available.” Lastly, R-IV Institution noted state guidelines factored largely into what areas of the facility could open, including, “Per state mandate: close showers, changing and locker area,” and later added that those resources would “open when allowed by state regulations.”

### Risk Management Decisions of Stakeholders

While each institution crafted their reopening plan in unique ways, there were numerous robust themes regarding reopening decisions that stretch across all documents analyzed. All institutions sampled utilized a phased reopening approach, with the first phase being the most restrictive in terms of programming offered, facility capacity, and areas opened. The areas addressed that were most salient across all reopening plans were: screening, mask mandates, social distancing/touch points, equipment/floor plans, and cleaning procedures.

### Screening

Reopening documents placed an emphasis on screening procedures for all visitors and recreation staff. All institutions identified the need for screening, but the specificity of policies related greatly varied. While Canada Institution merely noted that, “staff and participants will need to be screened,” R-V Institution provided more precise recommendations:

Members will be screened prior to being granted access to the facility. In the screening process, [recreation center] members must answer “no” to a series of questions before entering the [recreation center]. Additionally, members temperature may be taken. [Recreation center] members must have a body temperature less than 100.4 degrees to be granted access to the facility.

Both R-II and R-IV Institutions utilized guidance regarding self-screening, as well as a statement regarding the observation of known COVID-19 symptoms. R-IV Institution required that individuals, “self-screen before coming to

### Table 2. Stakeholder Identification.

| Stakeholder                  | Region II Institution | Region IV Institution | Region V Institution | Canada Institution |
|------------------------------|-----------------------|-----------------------|----------------------|--------------------|
| Campus Administration        | X                     | X                     | X                    | X                  |
| Public Health Agencies       | X                     | X                     | X                    | X                  |
| Sport Governing Bodies       | X                     | X                     | X                    | X                  |
| Federal | State/Province Government | X                     |                       |                    |                    |

Risk Management Decisions of Stakeholders

While each institution crafted their reopening plan in unique ways, there were numerous robust themes regarding reopening decisions that stretch across all documents analyzed. All institutions sampled utilized a phased reopening approach, with the first phase being the most restrictive in terms of programming offered, facility capacity, and areas opened. The areas addressed that were most salient across all reopening plans were: screening, mask mandates, social distancing/touch points, equipment/floor plans, and cleaning procedures.

### Screening

Reopening documents placed an emphasis on screening procedures for all visitors and recreation staff. All institutions identified the need for screening, but the specificity of policies related greatly varied. While Canada Institution merely noted that, “staff and participants will need to be screened,” R-V Institution provided more precise recommendations:

Members will be screened prior to being granted access to the facility. In the screening process, [recreation center] members must answer “no” to a series of questions before entering the [recreation center]. Additionally, members temperature may be taken. [Recreation center] members must have a body temperature less than 100.4 degrees to be granted access to the facility.

Both R-II and R-IV Institutions utilized guidance regarding self-screening, as well as a statement regarding the observation of known COVID-19 symptoms. R-IV Institution required that individuals, “self-screen before coming to
the facility for any of the following new or worsening signs or symptoms,” while R-II institution warned that “staff and patrons displaying symptoms of COVID-19 (e.g., cough) will be denied entry.”

Reopening plans addressed responsibilities for both facility staff, as well as patrons, reflecting the reality that the burden to slow the spread of COVID-19 would need to be shared across the entire community. While some institutions went into more depth about specific regulations, the desire to promote social responsibility was clear.

**Mask mandates.** Since the early days of the COVID-19 pandemic, government implementation of a mandatory mask mandate has been a contentious issue (Wagner, 2021). It should come as no surprise that mask mandates in documents varied greatly, with language specificity reflecting the lack of state/province consensus on mandate application. The lack of a nationwide mask mandate was an outcome of the debate around personal liberties, as well as the reality of separation of powers between the federal government and states/provinces. R-IV Institution provided the least strict guidance, adding that “gloves and hand sanitizer will be provided,” but offering no direction regarding masks. Canada Institution addressed but did not mandate the use of face coverings, writing, “participants may wear cloth face coverings or masks.” R-V Institution did state that “employees with direct customer contact will be highly encouraged to wear face masks and gloves,” while only R-II Institution mandated staff to wear face coverings, instructing:

> Staff will be required to use face coverings while working in recreation facilities. Staff will be required to wear a mask at all times unless they are outside or are alone with spacing of 10 feet or greater – such as in laundry rooms, offices or unoccupied spaces.

However, when it came to a mandate for facility guests, the institution was less restrictive, requiring that patrons “wear a mask upon entering and leaving the building, and consider wearing a mask during your workout but this is at individual discretion especially during vigorous exercise.”

The different language used across reopening plans reflected the division across the country regarding mandating mask usage. This is an aspect of COVID-19 return protocol where there is considerable inconsistency across campuses, states/provinces, and nations.

**Social distancing and touch points.** Across the United States, initial public health guidance focused on social distancing and limiting surface touch points to slow the spread of COVID-19. Both these areas were well documented in all reopening documents. As each institution progressed from one reopening phase to another, restrictions began to ease, including number of staff allowed in office, gym space reopening, and occupancy numbers returning to pre-COVID-19 levels.

Canada Institution included a variety of blanket statements regarding distancing, reminding readers that “staff and participants will need to abide by social distancing requirements.” Furthermore, the institution specifically restricted gatherings throughout the facility, stating that individuals were “prohibited from congregating in common areas or break rooms.” Regarding touch points, Canada Institution moved purchasing to contactless transactions noting, “cashless and receiptless transactions are monitored and enforced.”

Unlike its Canada peer, R-IV Institution went into greater detail to define what social distancing would look like. Guidelines included only allowing “essential staff will work in the office” and permitting “only 2 staff will be allowed in the marketing suite.” Moreover, the institution stated that they would “reduce occupancy to 50% in all areas,” while enforcing that members must “maintain 6 feet of space between patrons.” Regarding touch points, the institution changed pre-COVID-19 policies to require members to “swipe their own university identification card to check out towels…and enter the facility.”

The use of plexiglass barriers to maintain “member and staff safety” was noted by R-V Institution. In addition, the document included a broad statement applying to all phases during
reopening that “members will be encouraged to exercise individually, rather than in larger groups (6 or less arriving together at one time).”

R-II Institution offered a broad statement on social distancing, reporting that “the maximum number of patrons allowed into the facility at one time will be established and monitored to encourage physical distancing.” In addition, they provided that only essential staff would be permitted in the building and the department would encourage people to “telework for employees who can remain at home without diminished work quality or service.”

Regarding distancing and touch points, all reopening plans viewed these strategies as both an effort to protect staff, as well as facility visitors. The key differences between reopening plans centered on the level of specificity in distance measures and protocol.

**Equipment and floor plans.** While plans to have staff and patrons socially distance were an important component, the success of distancing is dependent on facility and equipment layout. The need to adjust floor plans and provide directions for people to navigate the facility was a theme across all reopening documents.

Though the R-IV reopening plan did not offer specifics, a statement was included that staff would, “arrange equipment to maintain proper social distancing.” A similar sentiment was offered by Canada Institution, including language giving broad permission to manipulate activity spaces and equipment access. The document reminds guests that “adjustment of equipment layout or restricting access to equipment will be required.” Furthermore, the institution reflects the need for plans to be nimble due to the changing nature of the pandemic, noting that “activity spaces may need to be closed with limited notice to customers based on staff availability (e.g., not reporting to work if experiencing COVID-19 symptoms).” The document from R-II Institution went into more detail, noting that they would, “redraw floor plans for physical distancing…and determine physically distant pathways for entry and exit through main facility access points, hallways, and activity areas to ensure demarcation.”

Two reopening plans identified traffic flow patterns, as well as the use of floor marking to help people maintain social distancing as they navigate the facility. R-V Institution announced that “tape will be placed along the floor to indicate traffic flow and to encourage social distancing in areas where lines and groups may form.” Laying out a similar strategy, R-II Institution used the practice of floor marking made popular early in the pandemic in essential services such as grocery stores. The institution writes that they will:

- Develop a flow pattern in the building to mitigate as much close contact as possible. This would be similar to what the grocery stores are doing. This could consist of markings on the floor showing the direction and separating movement patterns by using barriers such as stanchions.

- As was observed in other areas of risk mitigation policies, the level of detail provided varied across reopening plans, with some institutions providing precise flow patterns and others utilizing broad statements about the goals of limiting traffic and enhancing staffing levels.

**Cleaning.** From the earliest days of the COVID-19 pandemic, public health officials stressed the need for good hygiene and proper cleaning of surfaces to mitigate disease transmission (CDC, 2020b). Though the level of specificity within documents varied by institutions, all documents included cleaning processes.

The reopening document from R-IV Institution provided the least detail, stating “the facility would provide gym wipes and hand sanitizing stations.” Other documents went into more detail with cleaning protocol, staffing requirements and impact on facility hours. R-V Institution included information that detailed both staff and patron responsibility. They advised that “members have always been asked and will still be expected to wipe down their equipment before using and after using it. As always, we have disinfectant wipes stations spaced out throughout the facility.” Later in the document the institution reflected on potential staffing impact, stating that “additional
employees will be circulating throughout the facility to clean and sanitize between equipment use, but they will maintain social distancing guidelines.”

Canada Institution focused much of its attention to considerations in staffing and facility hours. The document dictates that “cleaning & sanitization processes will need to be increased….staffing to meet additional cleaning and sanitization protocols will be required.” To meet COVID-19 protocols, the plan noted the department may need to “consider closing throughout the day to provide time for ‘deep cleaning and sanitization’ of high touch surfaces.” While offering the most in-depth plan for reopening, R-II Institution provided cleaning guidelines for multiple areas and types of equipment. The plan establishes:

Our regular cleaning checklist will be used to provide accountability for cleaning of all areas of the facility. A schedule for sanitizing shared equipment, including exercise machines, gear (e.g., handles, etc.) and group fitness instructor tools (e.g., microphones and stereo equipment), should be developed and implemented, along with clear guidelines about whom should administer the cleaning and best practices for doing it.

Aspects of facility cleaning were spread out throughout the reopening plans, reflecting the overall importance it played in COVID-19 risk mitigation. Difference in the organization and level of detail provided may reflect if the document was an external, public-facing communication, or an internal document used to train and educate staff.

Environmental Conditions Supporting Risk Management

COVID-19 reopening plans require a certain amount of flexibility to be responsive to changing epidemiological conditions, scientific advances, and public health directives. However, for plans to be successfully implemented, all documents noted similar environmental factors necessary for a safe reopening. Both R-II and R-IV Institutions utilized identical language, articulating that operations would be “largely driven by health and safety considerations.” R-II Institution largely focused on following CDC recommendations, while their R-IV peer did not name the CDC specifically, but outlined the importance of PPE availability and following health department guidelines. Canada Institution detailed the need to have staff trained on disease mitigation processes.

Communications. A carefully crafted communications strategy became an essential tool to be responsive to stakeholders during the COVID-19 pandemic. While reopening documents varied in both depth and breadth, each contained a section on communications plans. All institutions noted the type of signage necessary to help direct guests. R-V Institution’s plan included, “Signage will be posted on exterior doors to notify [recreation center] members that no one with a fever or symptoms of COVID-19 will be allowed access to the facility.” Similar signage was included by Canada Institution. Both R-II and R-V Institutions listed the importance of regular facility announcements through the public address system to remind patrons of policies. One return plan noted that “every 30 min, staff will announce physical distance & cleaning protocol reminders on public address system.” Though Region-II Institution included a list of signage topics, a statement was included to provide overall guidance for COVID-19 communications, advocating the “communication plan should be designed to reach various target audiences that may include and are not limited to student employees, professional employees, student members, employee members, public members, alumni, parents, athletics, clubs, rental groups, etc.”

Discussion

The purpose of this paper was to understand the risk management process associated with reopening collegiate recreation departments in the wake of COVID-19. An analysis of policy documents from four institutions examined the processes and challenges of mitigating the spread of COVID-19. For collegiate recreation
departments, several interdependent stakeholders were engaged in developing and implementing COVID-19 risk management policies in a top-down approach that mirrored Rasmussen’s (1997) framework. While federal, state/province, and local COVID-19 regulations and guidelines controlling the activities of the collegiate recreation departments investigated were not examined in this study, the reopening plans analyzed referenced these external bodies. CDC (2019a) guidelines and state mandates were integral to creating reopening plans, showing that larger entities than individual universities influenced policy development. At the institutional level, Student Health, University Life, and Disability Support Services were identified as collaborators and partners. However, there was ambiguity regarding stakeholder involvement at the implementation level since the affected stakeholders were often implied rather than explicitly stated. Throughout the pandemic, epidemiologists have generated evidence-based recommendations related to public health practices which, in turn, have been utilized by policy makers to guide policy formation (Oremus et al., 2021). However, collegiate recreation professionals are not trained in disease transmission, making it difficult to directly identify who should be taking what actions as the pandemic unfolded.

The COVID-19 pandemic is an unusual risk management situation based on risk assessment. Broadly, risk is conceptualized as the consequences of an activity, with the probability of an activity occurring considered risk assessment (Aven, 2010, 2016). Therefore, risk management procedures are commonly developed for incidents with some predictability and a relatively distinct endpoint (e.g., fire hazards, chemical spills, injuries). COVID-19 posed challenges for policy development because it functions differently than a singular, predictable incident. The pandemic is an expansive situation that evolves as medical professionals learn more about the virus and develop new methods of identification, treatment, and prevention (Merchant & Lurie, 2020; WHO, 2020b). As such, collegiate recreation professionals created risk management policies in an uncertain environment and had to constantly integrate updated information. Therefore, a traditional risk management framework might not be appropriate for managing and reacting to this type of extended occurrence with an undefined conclusion. Instead, such scenarios may benefit from utilizing a decision-making model as opposed to a risk management framework. For example, Hansson and Aven (2014) developed a model that approaches risk analysis by tracing the flow of information from science to practice. In this model, disciplinary experts generate fact-based evidence that accumulates as the knowledge base – which may fluctuate – to inform risk evaluation. Decision-makers review their risk evaluation in relation to this knowledge base to reach a decision that is grounded by evidence and social, ethical, or moral values (Hansson & Aven, 2014).

Across the four reopening plans, risk management policies were structured in phases, possibly the result of local, state/province, and federal reopening guidelines using phased approaches to reduce viral transmission while restoring economic activity following lockdowns (Rivers et al., 2020). Based on how collegiate recreation departments handled their reopening, these considerations appeared to trickle down from the highest levels of government to influence individual entities, much like Rasmussen’s (1997) framework of risk management. While adopting a phased approach was common (Han et al., 2020), the phases lacked explicit definitions and consistency across universities. The policy differences across reopening plans, in addition to ambiguity among external stakeholder involvement, likely presented challenges to developing consistent phases.

A unique aspect of developing COVID-19 reopening plans is the role of human agency, both in terms of staff (creating and enforcing policy content) and patrons (adhering to policy content). Hochrainer-Stigler et al. (2020) described how the complexity of risk management models change as they become more dependent on human decisions which are naturally accompanied by free will. Although staff determined their operations based on local, state/province, and federal guidelines, they had agency in applying these guidelines to their specific population and infrastructure through policy creation.
and enforcement. Therefore, staff beliefs and free will likely influenced the content within policy documents – accounting for some difference across reopening plans – as well as their enforcement of policy – impacting the effectiveness of the reopening plans.

Plans focused on aspects of reopening that collegiate recreation staff could easily monitor and enforce, for example, sanitizing and cleaning procedures or managing points of entry to maintain capacity restrictions. Additionally, the guidelines almost exclusively focused on reopening and managing recreation facilities, with limited consideration for programming. One potential reason for this is that reopening facility protocols could be benchmarked across the broader fitness industry, while collegiate recreation programming is specific to the university. For example, the recreation programming needs of R-V Institution were likely considerably different than the other institutions in the sample due to their institutional characteristics (i.e., community college with fewer recreation programs available; see Table 1). Therefore, departments may have attended to developing new facility protocols – which could be informed by other institutions and industries – before deciding on programming adjustments.

The free will of patrons also added a confounding element to reopening protocols. Throughout the pandemic, mandating actions has been contentious as it relates to individual freedoms and decision-making. Collegiate recreation staff were ultimately dependent on patrons adhering to mask mandates, social distancing, and hygiene protocols, and this compliance was driven by individual beliefs about the efficacy of certain restrictions (Scerri & Grech, 2020). This was most obvious in sections that detailed mask mandates which were quite brief and often vague. Presumably, this reflects the politicization of masks and how they are symbolic of constitutional rights and freedom of choice (Al-Ramahi et al., 2021). Mask wearing was not a previously established social norm in North America and has received a mixed public reception due to evolving guidelines and the political landscape (Scerri & Grech, 2020). Thus, the language for some reopening policies framed actions, such as wearing masks, as guidelines rather than mandates. Similarly, social distancing is a new expectation that imposed significant lifestyle changes, with a variety of internal and external motivators that predict adherence to social distancing recommendations (e.g., achieving personal protection, distrust in pandemic messaging; Coroiu et al., 2020). Reopening policies generally encouraged social distancing by changing floor plan layouts and foot traffic patterns, but the effectiveness of these strategies was still reliant on patron beliefs and free will. The dichotomy in the specificity of some policies (e.g., sanitizing procedures vs. mask wearing) showed where collegiate recreation professionals were navigating human behavior and agency while trying to establish control in an environment that was continually shifting.

Finally, the findings showed that cooperation and communication are a necessity when mitigating risk. Risk communication is the real-time exchange of knowledge and opinions between experts and people facing health threats, which enables individuals to make informed decisions (WHO, 2021). Several stakeholders, such as management, staff, and patrons, needed to be consistently informed of the latest guidelines to effectively implement them. Collegiate recreation staff are positioned to be the conduit for two-way exchanges of information discussed by Rasmussen’s (1997) risk management framework. In this case, bidirectional communication was necessary to receive updated research and recommendations from infectious disease experts which were then integrated into policies and transmitted to staff and patrons. Subsequently, recreation staff needed to be aware of patrons’ risk perceptions as reopening policies were being revised and updated. Collegiate recreation staff disseminated information on their premises through signs and infographics, but also noted the importance of reaching a broader audience. Since risk communication is imperative (Abrams & Greenhawt, 2020), it is necessary to identify additional resources that will aid communication efforts for the remainder of the COVID-19 pandemic and future risk management incidents.
Implications

Policies and protocols implemented during the COVID-19 pandemic may dissipate in the future, but there are lessons and implications from the pandemic that will continue to impact collegiate recreation. Based on the findings, the areas of focus for institutions should be strategies related to decision-making, dissemination of information, staff training, risk mitigation, and policy enforcement. The following implications outline how collegiate recreation practitioners could enhance these strategic areas within their departments.

The overwhelming amount of information related to COVID-19 (WHO, 2020c) may have made it difficult for stakeholders involved in developing and implementing risk management policies to make decisions related to the reopening of collegiate recreation centers. Decision makers may have experienced paralysis by analysis, as many recreation professionals lack training in disease mitigation yet were called upon to implement institutional, organizational, and government guidelines. Navigating COVID-19 may lead institutions to clarify decision making processes in the wake of crises. Institutions should seek to create more streamlined searches for credible information instead of the wide net cast for information during the COVID-19 pandemic. Based upon Rasmussen’s (1997) framework, collegiate recreation professionals should look to leaders within their institution and professional association for guidance, relying upon these stakeholders to interpret and implement public policy at the state/province, federal, and global levels. Decision makers should evaluate the information obtained against their departmental values to help clarify direction when making difficult decisions (Hansson & Aven, 2014).

University leadership faced a challenging task in communicating with a multitude of departments across campus. By creating a cohesive communication strategy, leadership would more effectively communicate not only with their staff, but other constituents including students, parents, and community partners. Abrams and Greenhawt (2020) suggested a strategy for effective communication across management, staff, and patrons would include social media. Real-time, accurate information can be the difference between life and death during a pandemic. Abrams and Greenhawt outlined the importance of reducing risk through these channels in their example of Chernobyl - lack of information and improper risk communication were noted as major factors in increasing the devastation caused by the disaster. Social media is a platform that could provide universities the outlet for disseminating quick, consistent, and accurate information widely to their campus partners.

Upon review of the reopening documents, all four institutions primarily focused on reopening facilities without detailing a plan to restart programming. The reopening policies briefly mentioned activities - such as intramural sports and outdoor trips - in later phases but did not offer substantive information on how those programs would be restarted. As any programming implemented required steps to prevent the spread of COVID-19, such as sanitization, physical distancing, and personal hygiene (CDC, 2020a), it would be prudent to further develop programming policies. There may be more emphasis on restarting programming in future reopening discussions to increase engagement options and promote physical and mental health for patrons while the pandemic endures (Maher et al., 2021). Those talks should include how to offer limited or modified programming while accounting for capacity numbers, cleaning requirements, and other health and safety factors similar to those discussed for facility reopening. It is important to establish explicit programming policies to inform risk management actions, and also allow for stakeholder input and accountability across the department.

Collegiate recreation professionals consider many elements of risk management when managing both facilities and programming (e.g., emergency response, injury prevention), but until the COVID-19 pandemic, those conversations rarely centered around airborne disease transmission and mitigation. Going forward, recreation centers may take different approaches to ensure they are prepared to mitigate future diseases. Recreation centers may partner with public health professionals to hold staff trainings related to disease mitigation. Targeted staff
training can equip recreation professionals to consider airborne pathogens when determining how to circulate air throughout the facility, how much space to allot for an activity, how to properly space workout equipment and/or student participants, or what personal hygiene policies to enforce.

Finally, practitioners should review their strategies for navigating the enforcement of policies with staff and patrons. From the beginning of the COVID-19 outbreak there were public opinion differences on appropriate protocols - such as mask wearing and social distancing - to reduce the spread of the virus (Scerri & Grech, 2020). University officials should provide consistent and clear messages to patrons about why their policies are important, or where their policies are aligned to policy guidance, legislation, or executive orders, such as state-wide mask mandates. Proper signage at facilities, weekly emails, website and social media updates are all tools that can be used to communicate these messages and referenced by staff to help enforce evolving policies. It is also suggested that universities implement de-escalation training with staff to help mitigate confrontations over policies. As described in Jacobson (2021), effective training and policies can help reduce staff’s feelings of being overwhelmed and unprepared. Staff can approach patrons in an open, supportive, calm way to help reduce a potential conflict. Included in this training should be the appropriate process for staff to de-escalate an incident such as calling a supervisor, calling the manager, or calling the police as a final resort to assist. Another mechanism to enforce COVID-19 policies is to include policy adherence within the student code of conduct, with violation grounds for revocation of student privileges (e.g., access to recreation facilities, programs, and services) or possible suspension.

Limitations and Future Recommendations

While the study provides new insight into how collegiate recreation departments reopened during the COVID-19 pandemic, the findings should be interpreted with the limitations in mind. As the case study was limited to the reopening plans of four collegiate recreation departments across North America, the findings cannot be transferred to other contexts. Though document analysis can be used as a stand-alone method for case study research (Bowen, 2009), we were limited to one policy document per institution. Further, the documents analyzed do not account for policy changes after June of 2020. Future research may consider examining a broader cross-section of collegiate recreation departments, collecting policy documents longitudinally, analyzing the federal and state/province guidelines informing collegiate recreation policies, and combining document analysis with other qualitative research methods - such as interviewing collegiate recreation professionals responsible for policy formation and implementation - to assess risk management strategies throughout the COVID-19 pandemic.

To extend this line of inquiry, researchers may explore the bidirectional interactions across stakeholders at each level of Rasmussen’s (1997) framework to better understand the process of how decisions made at higher levels filter down into the actions taken at lower levels, with insight subsequently transferred back up the hierarchy. The dissemination and implementation of policies could also be explored to identify any breakdowns in the system that may expose collegiate recreation departments to liability. Another consideration is which risk management policies will discontinue and which will remain after the COVID-19 pandemic has dissipated. Future research can capture this new normal to establish best practice in risk management post-COVID-19.

References

Abrams, E. M., & Greenhawt, M. (2020). Rick communication during COVID-19. The Journal of Allergy and Clinical Immunology: In Practice, 8(6), 1791–1794. https://doi.org/10.1016/j.jaip.2020.04.012

Al-Ramahi, M., Elnoshokaty, A., El-Gayar, O., Nasralah, T., & Wahbeh, A. (2021). Public discourse against masks in the COVID-19 era: infodemiology study of twitter data. JMIR Public Health and Surveillance, 7(4), e26780. https://doi.org/10.2196/26780
American College Health Association (ACHA) (2020a). Spring 2020 reference group executive summary. https://www.acha.org/documents/ncha/NCHA-III_Spring_2020_Reference_Group_Executive_Summary.pdf

American College Health Association (ACHA) (2020b). The impact of COVID-19 on college student well-being. https://www.acha.org/documents/ncha/Healthy_Minds_NCHA_COVID_Survey_Report_FINAL.pdf

Aven, T. (2010). On how to define, understand and describe risk. Reliability Engineering & System Safety, 95(6), 623–631. https://doi.org/10.1016/j.ress.2010.01.011

Aven, T. (2016). Risk assessment and risk management: review of recent advances on their foundation. European Journal of Operational Research, 253(1), 1–13. https://doi.org/10.1016/j.ejor.2015.12.023

Barkley, J. E., Lepp, A., Glickman, E., Farnell, G., Beiting, J., Wiet, R., & Dowdell, B. (2020). The acute effects of the COVID-19 pandemic on physical activity and sedentary behavior in university students and employees. International Journal of Exercise Science, 13(5), 1326–1339.

Bolman, L. G., & Deal, T. P. (2013). Reframing organizations: artistry, choice, and leadership (5th ed.). Jossey-Bass.

Bowen, G. A. (2009). Document analysis as a qualitative research method. Qualitative Research Journal, 9(2), 27–40. https://doi.org/10.3316/QRJ0902027

Bryman, A. (2012). Social research methods (4th ed.). Oxford.

Cassano-Piche, A. L., Vicente, K. J., & Jamieson, G. A. (2009). A test of Rasmussen’s risk management framework in the food safety domain: BSE in the UK. Theoretical Issues in Ergonomics Science, 10(4), 283–304. https://doi.org/10.1080/14639220802059232

Centers for Disease Control and Prevention (CDC) (2020a). Interim guidance for businesses and employers responding to coronavirus disease 2019 (COVID-19). https://www.cdc.gov/coronavirus/2019-ncov/community/guidance-business-response.html

Centers for Disease Control and Prevention (CDC) (2020b). Cleaning and disinfecting your facility. http://www.cdc.gov/coronavirus/2019ncov/community/disinfecting-building-facility.html

Chiu, A. (2020, September 19). The fitness industry is trying to lure gym members back - but experts say its using flawed data. The Washington Post. https://www.washingtonpost.com/lifestyle/wellness/study-gym-safety-covid-2020/2020/09/19/72191b08-f858-11ea-89e3-4b9efa36dc64_story.html

Coroiu, A., Moran, C., Campbell, T., & Geller, A. C. (2020). Barriers and facilitators of adherence to social distancing recommendations during COVID-19 among a large international sample of adults. PloS One, 15(10), e0239795. https://doi.org/10.1371/journal.pone.0239795

Eschner, K. (2020, June 11). COVID-19 has changed how people exercise, but that doesn’t mean gyms are going away. Fortune. https://fortune.com/2020/06/11/coronavirus-gyms-workouts-fitness-apps-reopening/

Han, E., Tan, M. M. J., Turk, E., Sridhar, D., Leung, G. M., Shibuya, K., Asgari, N., Oh, J., Garcia-Basteiro, A. L., Hanefeld, J., Cook, A. R., Hsu, L. Y., Teo, Y. Y., Heymann, D., Clark, H., McKee, M., & Legido-Quigley, H. (2020). Lessons learnt from easing COVID-19 restrictions: an analysis of countries and regions in Asia pacific and Europe. The Lancet, 396(10261), 1525–1534. https://doi.org/10.1016/S0140-6736(20)32007-9

Hansson, S. O., & Aven, T. (2014). Is risk analysis scientific? Risk Analysis, 34(7), 1173–1183. https://doi.org/10.1111/risa.12230

Hiller, J. (2016). Epistemological foundations of objectivist and interpretivist research. In K. M. Murphy & B. L. Wheeler (Eds.), Music therapy research (pp. 99–127). Barcelona Publishers.

Hochrainer-Stigler, S., Colon, C., Boza, G., Brännström, Å., Linnerooth-Bayer, J., Pfugl, G., Poledna, S., Rovenskaya, E., & Dieckmann, U. (2020). Measuring, modeling, and managing systemic risk: the missing aspect of human agency. Journal of Risk Research, 23(10), 1301–1317. https://doi.org/10.1080/13669877.2019.1646312

Impellizzeri, F. M., Franchi, M. V., Sarto, F., Meyer, T., & Coutts, A. (2020). Sharing information is probably more helpful than providing generic training recommendations on return to play after COVID-19 home confinement. Science and Medicine in Football, 4(3), 169–170. https://doi.org/10.1080/24733938.2020.1775436

Jacobson, A. (2021). Facing customers who refuse to wear masks. Risk Management, 68(2), 4–7.

Johns Hopkins University Center for Systems Science and Engineering (JHU CSSE) (2020). COVID-19 dashboard. https://www.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6
Liu, C. H., Pinder-Amaker, S., Hahm, H. C., & Chen, J. A. (2020). Priorities for addressing the impact of the COVID-19 pandemic on college student mental health. *Journal of American College Health*. [Advance online publication]. https://doi.org/10.1080/07448481.2020.1803882

Maher, J. P., Hevel, D. J., Reifsteck, E. S., & Drollette, E. S. (2021). Physical activity is positively associated with college students’ positive affect regardless of stressful life events during the COVID-19 pandemic. *Psychology of Sport and Exercise, 52*, 1–5. https://doi.org/10.1016/j.psychsport.2020.101826

Merchant, R. M., & Lurie, N. (2020). Social media and emergency preparedness in response to novel coronavirus. *Journal of the American Medical Association, 323*(20), 2011–2012. https://doi.org/10.1001/jama.2020.4469

National Intramural-Recreational Sports Association (NIRSA) (2020). Reopening considerations: A framework for campus rec: Example reopening plans. https://nirsanova/porfolio-items/reopening-considerations-200619-examples/

O’Brien, T. (2020). Rethink management, operation of college sports in light of the COVID-19 pandemic. *Campus Legal Advisor, 20*(10), 1–6. https://doi.org/10.1002/cala.40252

Ohio Department of Health (2020). Responsible RestartOhio: Gyms, dance instruction studios, and other personal fitness venues. Author.

Oremus, M., Taylor-Wilson, R., Aldrich, M., Bell, K., Gaudio, J., Palevsky, S., Payne, J., Raynes-Greenow, C., Sim, F., Smith, M., Weiss, S., & Zhang, Y. (2021). The role of epidemiologists in SARS-CoV-2 and COVID-19 research. *Public Health, 190*, e3–e4. https://doi.org/10.1016/j.puhe.2020.10.006

Rasmussen, J. (1997). Risk management in a dynamic society: A modelling problem. *Safety Science, 27*(3), 183–213. https://doi.org/10.1016/S0925-7535(97)00052-0

Rivers, C., Martin, E., Watson, C., Schoch-Spana, M., Mullen, L., Krik Sell, T., Gottlieb, S., Lane Warmbord, K., Hosangadi, D., Kobokovich, A., Potter, C., Cicero, A., & Inghelsby, T. (2020). Public health principles for a phased reopening during COVID-19: guidance for governors. Johns Hopkins University. https://www.centerforhealthsecurity.org/our-work/pubs_archive/pubs-pdfs/2020/200417-reopening-guidance-governors.pdf

Scerri, M., & Grech, V. (2020). To wear or not to wear? Adherence to face mask use during the COVID-19 and Spanish influenza pandemics. *Early Human Development, 105253*. [Advance online publication]. https://doi.org/10.1016/j.earlhumdev.2020.105253

Slater, S. J., Christiana, R. W., & Gustaf, J. (2021). Recommendations for keeping parks and green space accessible for mental and physical health during COVID-19 and other pandemics. *Preventing Chronic Disease: Public Health Research, Practice, and Policy, 17*(E59), 1–5. https://doi.org/10.5888/pcd17.200204

Wagner, D. (2021, August 2). The COVID culture war: At what point should personal freedom yield to the common good? *USA Today*. Retrieved from http://www.usatoday.com

Wang, X., Hegde, S., Son, C., Keller, B., Smith, A., & Sasangohar, F. (2020). Investigating mental health of US college students during the COVID-19 pandemic: cross-sectional survey study. *Journal of Medical Internet Research, 22*(9), e22817. https://doi.org/10.2196/22817

Williams, M., & Moser, T. (2019). The art of coding and thematic exploration in qualitative research. *International Management Review, 15*(1), 45.

World Health Organization (WHO) (2020a). *Coronavirus disease 2019 (COVID-19): Situation Report - 51*. https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports

World Health Organization (WHO) (2020b). *Country and technical Guidance - coronavirus disease (COVID-19)*. https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance-publications?publicationtypes=10ac82f5-5000-468d-94f9-e27a46127852

World Health Organization (WHO) (2020). *Novel coronavirus (2019-nCoV): Situation Report - 13*. https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200202-sitrep-13-ncov-v3.pdf

World Health Organization (WHO) (2021). *Risk communication: General information on risk communication*. https://www.who.int/risk-communication/background/en/

Woods, J. A., Hutchinson, N. T., Powers, S. K., Roberts, W. O., Gomez-Cabrera, M. C., Radak, Z., Berkes, I., Boros, A., Boldogh, I., Leeuwenbergh, C., Coelho-Junior, H. J., Marzetti, E., Cheng, Y., Liu, J., Durstine, J. L., Sun, J., & Ji, L. (2020). The COVID-19 pandemic and physical activity. *Sports Medicine and Health Science, 2*(2), 55–64. https://doi.org/10.1016/j.smhs.2020.05.006