Collaborations between Transylvania Public Health, academic institutions, and local industry leaders to develop attainable guidelines for the 2021 camp season in Transylvania County, N.C.

By

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A Master's Paper submitted to the faculty of the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Master of Public Health in the Public Health Leadership Program

Chapel Hill

Spring 2021

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4/13/2021

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4/12/2021 Date

# Contents

ABSTRACT 1 -
BACKGROUND AND INTRODUCTION 3 -
METHODS 6 -
RESULTS 11 -
DISCUSSION 20 -
LIMITATIONS 26 -
RECOMMENDATIONS BASED ON FINDINGS 28 -
REFERENCES31 -
APPENDIX A: SAMPLE REOPENING PLAN 33 -
APPENDIX B: LESSONS LEARNED AND IMPLICATIONS 39 -

Collaborations between Transylvania Public Health, academic institutions, and local industry leaders to develop attainable guidelines for the 2021 camp season in Transylvania County, N.C.

#### **Abstract:**

The 2020 pandemic brought about a paradigm shift in the way summer camp operators approach their yearly preparations. While in years past the training of camp leaders and operators focused largely on animal bites, insect infestation, communicable diseases, and food preparation, the COVID-19 pandemic required a pivot in the approach to training and educating camp operators. Transylvania Public Health (TPH) has a history of collaboration between its health department and summer camp operators. In the Spring of 2020, TPH addressed pressing and emergent issues related to COVID-19 and communicable diseases transmission and spread in congregate living settings. One-on-one guidance and teleconferencing sessions were provided to assist camps leadership in developing guidelines for a safe camp season and/or determining whether to maintain operations in the summer of 2020. While a great majority of Transylvania County camps opted to cancel their 2020 season, it is now paramount to collaborate with those who decided to remain in operations, to analyze successes and failures, and share best practices, in preparation for the 2021 camp season. Due to the lack of income in 2020, the upcoming 2021 season could be a make-or-break year for some of the camps. A mixed method approach was utilized to better understand camp needs and inform a set of guidelines. The methods utilized were two surveys of camp operators, site visits, and individual interviews. The approach was collaborative in order to develop of set of guidelines for a safe return to operations. These guidelines provided to Transylvania County's camp operators include steps designed to mitigate and control the transmission and spread of the COVID-19 disease so as to limit potential outbreaks during the 2021 summer camp season. Specifically, general considerations given to

pre-arrival, arrival and drop-off procedures, general camp operations (including activities, household definitions, quarantine quarters, meal-times and group-activities) and overall sanitation procedures will be made available and tailored to each camp's specific format and needs. Reopening sample plans, various quarantine and isolation measures, and specific testing options were proposed and worked into a sample reopening plan that can be edited to serve each camp's specific needs.

# **Background and Introduction**

According to a recent report on the Today show, an estimated twenty million children and young adults attend camp each year (The Today Show, 2020). The camp industry is a four-billion-dollar industry and employs close to 30,000 people (Industry Research Report, 2020). However, of the 1,489 camps surveyed by the American Camps Association, only a third of those camps (486) chose to operate on-site during the summer of 2020 (American Camps Association, 2020). Consequently, the projected economic revenue loss generated by the pandemic could be tallied and estimated to be upwards of two and a half billion dollars. As the pandemic continues to reshape what Americans once considered normal activities, it is paramount to develop guidelines that allow the camp industry to consider new – if not normal – operations.

A report published in the Center for Disease Control and Prevention (CDC) *Morbidity* and *Mortality Weekly Report* (MMWR) in August 2020 states that non-pharmaceutical interventions (NPIs) are extremely important in mitigating the spread of communicable diseases such as COVID-19 (Blaidsell et al., 2020). Likewise, preliminary results from the 2020 season also indicate that failure to use these measures appropriately can result in devastating results. For example, in the July MMWR report, the CDC explains that failure to implement proper NPIs in a Georgia camp resulted in a 136-case outbreak (Szablewski et al, 2020). In contrast Blaidsell (2020) outlines the successes of four camps in Maine where adherence to NPIs – pre-arrival quarantine, pre and post arrival testing and symptom screening, cohorting, use of face coverings, physical distancing, enhanced hygiene measures, cleaning and disinfecting and maximal outdoor programming – resulted in a profitable camp season for these programs Several such interventions are listed on both the Center for Disease Control and Prevention

website and the American Camp Association Field Guide for Camps (CDC, 2021 and American Camp Association, 2021). These general recommendations and best practices will not be discussed herein, as their implementation is part of a more general NPI set of guidelines employed widely. Moreover, Markel and co-authors (2007) report that a strong correlation exists between early, sustained and layered NPIs and mitigation of pandemic consequences on populations. However, few best-practices are currently available to assist summer camp operators in combatting the spread of the Coronavirus and preparing for a successful 2021 season (Blaidsell et al., 2020). Researchers have suggested that general guidelines provided by the World Health Organization (WHO) to prevent the spread of diseases across geographical boundaries may be applicable at the community level (Bell et al., 2006). Further, it is also important to learn from failed approaches, such as those documented by Szablewski and colleagues (2020), in order to avoid disastrous pitfalls. Recent publications have also reported on the uniqueness of the clinical presentation of COVID-19 in children (Hoang et al., 2020). It is therefore vital to include these findings and gather evidence-based information, in order to provide model practices that can be implemented and disseminated in preparation for the 2021 summer camp season.

Transylvania County, known as the Land of Waterfalls (Transylvania County, n.d.), is a rural county located in Western North Carolina. Because of its natural beauty and focus on open-air activities, Transylvania is a premier destination for outdoors-related camps and youth activities. According to the American Camp Association Find-a-Camp functionality, the county is the host of nearly one-fifth of all North Carolina camps (American Camp Association, n.d.). Over the years, Transylvania Public Health (TPH) has forged strong relationships with camp operators, to offer training seminars in preparation for local summer camp programs. In the

Spring of 2020, only a fraction of these camps chose to remain in operations. While very few weathered their reduced summer sessions rather successfully, some were forced to stop operations and reevaluate, as the number of COVID-19 confirmed cases increased while in session.

Lesson learned from camps that remained in operations in the summer of 2020 can be useful to reshape camps' reopening guidelines in 2021. The past twelve months have also introduced new technology and scientific advances in the field of testing and diagnostic that were not available last summer. In collaboration with its industry partners and local academic institutions, TPH has made great strides in clarifying and defining approaches that will be useful to summer camp operators in the region and possibly nationally. The purpose of this project was to gather existing evidence and utilize the data collected to prepare pandemic-adequate training documents and aids for the Summer 2021 camp season.

#### **Methods:**

This study used a cross-sectional mixed-method approach to gather and analyze information related to safe camp operations that minimize the transmission and spread of the COVID-19 disease. The study participants were informed about the project in writing, by the Transylvania County Health Director. A total of 21 camp operators and directors were selected based on their intension to continue or resume operations in the summer of 2021. Camps that indicated they would not be open in the summer of 2021 were excluded from the study. Data were gathered and analyzed over a four-months period between December 2020 and March 2021.

# Community Partnership

Health departments are often viewed as regulatory and punitive entities by camp operators and industry leaders. While in many instances the health department is responsible for enforcing public health codes, it is also vital that it establishes a spirit of partnership and collaboration. Transylvania Public Health has a long history of collaboration based on mutual trust and respect. In recent years, TPH has been a leader in showcasing successful partnerships between local health departments and summer camps leadership. Evidence of these partnerships can be found throughout TPH's Camp and Health Safety guide, published annually, and used as part of TPH's in-person one-day seminar with camp operators. In 2020, in response to the pandemic, TPH shifted its focus and organized tailored one-one-one teleconferencing trainings, to assist camp operators in individualized preparations for their camp season. Additionally, TPH has also forged strong ties with local academic institutions. These relationships have been instrumental in providing TPH additional guidance and support and in concentrating current

efforts while the health department focuses on COVID-19-related response, testing and vaccinations.

This project is a showcase of the dynamic partnership that exists between Transylvania Public Health, local camp operators – who are also members of the America Camp Association and the North Carolina Youth Camp Association – and the faculty and students of the University of North Carolina (UNC) Gillings School of Global Public Health – Asheville program. The trust established by TPH with its camp operators was central to the introduction of the UNC public health student who conducted part of this research (hereafter referred to as the student-researcher). A summary of the approach is outlined in Table 1.

Table 1: Overall approach

Month	Task	Output
Sept-Oct	Meet with TPH leadership and identify study goals and outcome.	Proposal submitted to UNC Faculty and TPH leadership.
Nov-Feb	Phase 1: Introduce student-researcher to community partners and TPH staff  Phase 2: Study available data from 2020 season, conduct literature search, make initial connections with camp operators.  Phase 3: Conduct interviews, site visits and schedule follow-up appointments.	<ul> <li>Survey of camp operators' availability and desire for collaboration.</li> <li>Site visits report and actionable steps.</li> <li>Survey results.</li> <li>Return to operations plan.</li> <li>Schedule of 1-on-1 teleconferencing appointments.</li> </ul>
March-May	Phase 4: Conduct scheduled 1-on-1 meetings, assist operators in making and finalizing plans, hold annual training.	Annual training materials reflecting guidelines, lessons learned and SOPs for camp operations during a pandemic.

<u>Table 1</u>: Overall approach for collaboration and partnership between TPH, UNC student-researcher and Transylvania County camp operators.

# Literature and best-practices review

While the current body of literature regarding best-practices related to the COVID-19 response is continuing to expand, communicable diseases have been studied extensively. Consequently, guidelines related to the control of infectious diseases spread and transmission in congregate living have been published and widely shared. Additionally, preliminary results from the 2020 camp season have been made available and several trainings, seminars and guidelines exist, and have been produced by the Center for Disease Control and Prevention (CDC) and the American Camps Association (ACA). Several consecutive searches were conducted, using the University of North Carolina, Chapel Hill Library database. A wide search, using the query "pandemic and summer camps" yielded a total of 15,411 titles. Refining this search using "COVID and summer camps and reopening" decreased the number of results to 3,001. A final search using the query "COVID and summer camps and reopening and guidelines and congregate living" yielded 46 results which were further analyzed. An example of the results generated by this review is presented in Table 2 for reference. Several of the guidelines published since the summer of 2020 to specifically address the COVID-19 pandemic have also been incorporated in the recommendations made herein.

Table 2: Example of compiled results from literature search

Reference	Camp example	Summary/abstract	Take away points	Interesting points
Sleep Away Camps Offer COVID-Free Bubbles For Remote Learning Morning Edition; Washington,		Hosted 300 campers no covid cases "If anyone in a cabin came down with symptoms that might be COVID, the entire cabin was quarantined while the suspected case was tested for the virus. But the quarantine	· -	
D.C. Washington, D.C.: NPR. (Sep 8, 2020)	Camp Robin Hood		between bunks week 1, 6) retest after week 1, 7) offering similar platform for campers whose school is staying virtual in the fall	school/camp experience with children safely quarantined in a "bubble" they benefit from social interactions after school work is done
Summer Camps Successfully Prevented and Mitigated COVID-19 Transmission, Says New CDC Study. https://www.acacamps.org/news-publications/press-release/summer-camps-successfully-prevented-mitigated-covid-19-transmission-says-new-cdc-study		Each of the NPIs provides a limited layer of protection, but when implemented collectively in a consistent and diligent manner by a camp's entire community—campers, staff members, and camp parents/guardians—they create a culture of compliance that can prevent and mitigate		
	4 camps in ME		compliance breeds success when facing a pandemic	
Field Guide for Camps https://acacamps.app.box.com/s/7gkh9buu3ntssx2v38gajg4 294631lae	Overall Guidelines	this is the American Camp Association field guide - it provides and compiles a list of procedures for camp operators to glean from in order to prepare reopening guidelines	can be used to develop a set of guidelines and/or handb	good handbook starting point
Go online or cancel?	Overan Guidenties	an order to prepare reopening guidennes	can be used to develop a set of guidelines and of hando	good nandoook starting politit
https://www.cnn.com/2020/05/07/health/summer-camps-	a survey of various camps during the 2020 season	explores different approaches to holding camp in summer 2020	provides options	may be helpful but does not provide enough details
Though kids are just returning to school, it's already time	a camp in SoCal reopening in	explains how camps are approaching	•	
to start planning summer camp	2021	reopening in the summer of 2021		
Pandemic Influenza A in Residential Summer Camps- Maine, 2009	Camp in Maine	looks at effect of epidemic in a camp		

Table 2: an example of the data output generated during the literature review preparation phase of the project.

#### Surveys, interviews, and site visits

Relationships with camp operators that result in trust and success must be cultivated using mutual respect. In order to establish trust, it was imperative for the student-researcher to communicate her respect of the various camp operators' time and own expertise in the running of their respective programs. In an effort to create an initial rapport and establish trust between the respondents and the student-researcher, a short-survey was created (see Camp operators initial survey). The initial polling was designed to communicate the student-researcher's respect for each of the camp operators' time and determine the best possible mode of communications going forward. Of the 21 camps interviewed, the student-researcher received 20 responses. When applicable, the student-researcher made herself available to meet in person, took a tour of the various facilities, and learned from camp operators. Site visits were conducted with three different camps. A telephone interview was also conducted with a fourth entity. Each interview (site visit or phone) was representative of a specific camp format. As a result of the information gathered during the site-visits and interviews, a second, more developed survey was sent out to

camp operators (see follow-up survey). Finally, based on requests, the student-researcher, in collaboration and partnership with TPH leadership and key personnel, coordinated specific teleconferencing meetings to assist camp operators in their tailored and individualized preparations. These preparations included the development of a written reopening plan, the discussion of various testing approaches, and the implementation of a training session with all camp operators.

#### Results

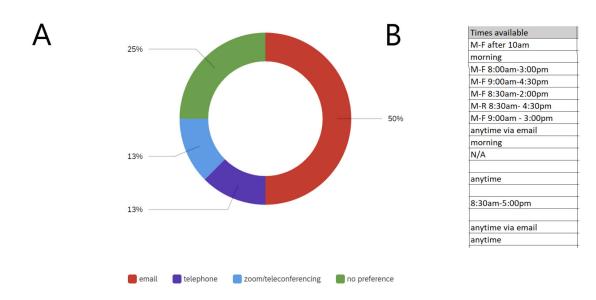
# Camp operators initial survey

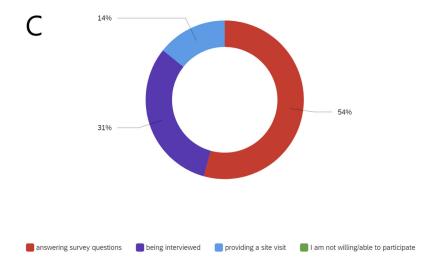
The Camp operators initial survey was designed to obtain information about camp operators' availability and gauge the depth at which each operator wanted to be involved in the project (n=21). The responses to three of the four questions asked are shown in figure 1. The following three questions provide an idea of the availability and interest of each operator.

- What is your preferred mode of communication? (figure 1A)
- What is your availability? (figure 1B)
- To what level would you be willing to participate in this project? (figure 1C)

The initial survey indicated that while most of the camp operators were willing to participate in the project to some degree, availability, mode of communication, and level of participation and involvement was not uniform.

Figure 1: Camp operator availability survey a nswers





**Figure 1**: initial survey results – Panel A, results to the question related to camp operators preferred mode of communication. Panel B, results indicating the various availability of camp operators. Panel C, results of camp operators' preferred level of involvement in the project.

### Site visits and phone interviews preliminary findings

Overall, the various programs offered in Transylvania County were found to fall under one of four categories, summarized in Table 3. These visits were useful in developing specific interventions related to pandemic-associated preparedness for the 2021 camp season. Table 3 also summarizes the overall profile of the camp formats that need to be addressed and indicates how the site visits were used to formulate more refined questions for the follow-up camp operator survey. Figure 2 also shows a photograph taken during a site visit to illustrate the various needs of specialty camps.

Table 3: Site visits and interview summary of results

Camp format	Interventions needed	Follow up survey questions generated
1. Day camp	-Definition of cohortsDevelopment of outdoors, socially-distant activitiesDevelopment of alternative inclement-weather activitiesDefinition of parameters and engineering controls used for indoors activities.	<ul> <li>Do you have a written reopening plan that includes pandemic protocols?</li> <li>Would you like a Zoom appointment with TPH staff to discuss your plans?</li> <li>Are you open to forming a coalition/consortium with other camp operators in the WNC Region in order to conduct testing on day 1 and day 6 of all campers, staffer, etc. to control virus spread?</li> <li>Are you open to working with case investigators and contact tracers deployed to your camp/region during the camp season?</li> </ul>
Classic "away-camp" format – cabins and congregate living.	-Definition of householdDevelopment of a written reopening campSpecific guidelines related to dining hallSpecific guidelines related to bathrooms/bathhouses.	<ul> <li>All questions seen in 1: Day camp</li> <li>Will ask you staff to arrive two weeks prior to the first camp session and as ask them to self-quarantine and not leave the camp grounds?</li> <li>Will you campus be on lockdown or will employees be allowed on and off campus during sessions?</li> <li>Will you require proof of negative test before arrival?</li> <li>Do you have a camp nurse/medical staff member/contracted medical service?</li> <li>Is your staff (service, counselors, etc.) there for the whole season or will you have transient staff members (i.e. only for a certain session).</li> <li>Do you have the capability of quarantining households (as defined by you in previous question) together and away from other camper/staff households during a session?</li> <li>The CDC and State have guidelines for quarantine of household members. – If a camper were to test positive while at camp, how would you define that camper's household? (i.e. the cabin, two adjoining cabins, other?)</li> </ul>
3. Wilderness Adventures	-Definition of household based on wilderness sleeping arrangementsSpecific guidelines related to common hygiene issuesGuidelines to separate short-term (4-6 days) cohorts from long-term campers (2 weeks or more)	<ul> <li>All questions seen in 1: Day camp</li> <li>All questions seen in 2: Classic "away camp"</li> <li>How many campers/sessions do you plan on hosting?</li> <li>How many sessions do you plan on holding?</li> </ul>
4. College-prep and specialized programs	-Clarification of special programs and community events (concerts, showcases, etc.).     -Identification of various countries of origin of participants.	<ul> <li>All questions seen in 1: Day camp</li> <li>All questions seen in 2: Classic "away camp"</li> <li>All question seen in 3: Wilderness Adventures.</li> </ul>

**Table 3**: Summary of overall camp profiles, various preliminary interventions identified, and follow up questions crafted after site-visits and interviews.

# Figure 2: A photograph taken during a site visit to illustrate specific needs of some specialty camps.



**Figure 2**: camps all have various needs that can be illustrated by this photograph showing the concert hall used every summer by Brevard Music Center to showcase its campers' accomplishments.

#### Follow-up survey and interventions

As mentioned above, the various site-visits and phone interviews were extremely useful in continuing to develop ties with camp operators, as well as in determining the types of interventions that may need to be included in this year's training materials. To date, 11 respondents provided feedback. The results of the survey are summarized in figures 3 through 5. Responses are categorized based on three criteria: 1) overall reopening plans (figure 3), 2) logistics related to staff (figure 4), and 3) logistics related to testing and quarantining (figure 5).

Figure 3 displays the results of the survey related to reopening plans. From those surveyed, 100% of the respondents indicated that they plan on resuming camp operations in the summer of 2021 (see exclusion criteria). A little over a third of the respondents (36.4%) have a written plan for reopening, and almost 30% indicated that this is something they would likely need assistance to prepare. All camps have access to a camp nurse and/or medical staff, and all camps have indicated that they have an idea of what they would consider to be a household, based on the current CDC criteria.

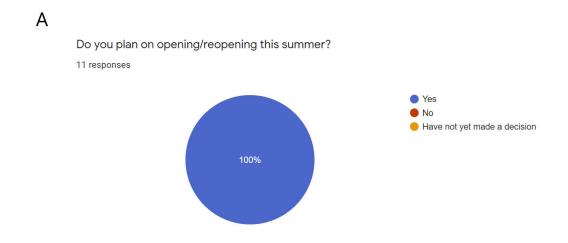
Figure 4 summarizes the results of the survey related to the staff criteria. Based on the information provided by the respondents, a variety of scenarios need to be taken into account, to address needs. Those scenarios will be based on whether staff will be sequestered or free to go on and off campus during the multiple camp sessions.

Specifically, the results presented indicate that interventions must be tailored to control disease spread and transmission as staff members arrive and leave between sessions, and as they are allowed to go on and off campus during sessions. Indeed, in less than 30% of the cases, staff members will be present during the entire camp season; 73% of the respondents indicated that they will have a mixture of personnel that either will be serving during the entire camp season or

that will only be reporting to work for some but not all sessions. Likewise, personnel will also be allowed on and off campus in about 70% of the cases and only nine percent of the camps indicate their intention to sequester their personnel for the entire camp season. The hesitation in making other decisions relating to staff sequestering and movement on and off campus is reflected in the desire of camp operators to have a one-on-one meeting with the TPH team.

Based on the various plans to reopen and the preliminary expectations for staff and camp personnel, additional questions were designed to address potential virus transmission and spread during each camp session. Figure 5 summarizes these findings. From the information gathered, the survey indicates that while some procedures are in place to address COVID-19 spread during camp sessions, guidance should be provided as to how best to mitigate the effects of the pandemic and prevent further spread of the virus in congregate settings such as summer camps.

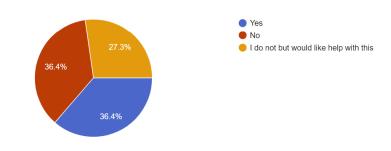
Figure 3: Responses to reopening plans questions:





Do you have a written reopening plan that includes pandemic protocols? – If yes, please submit to TPH (attention Elaine Russell, Health Director) for review.

11 responses



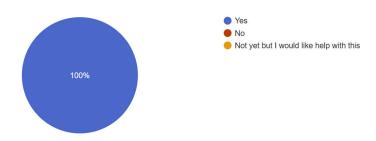
# C

Household size/definition	Number of respondents
Cabin	6
Adjoining cabins	3
Camp site	1
Unsure	1

# D

Do you have a camp nurse/medical staff member/contracted medical service?

11 responses



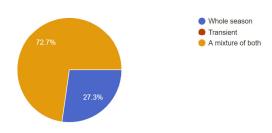
**Figure 3**: Survey results associated with reopening plans. Various questions were designed as a result of the initial site-visits and phone interview to address identified needs-gaps and format-specific intervention for camps in Transylvania County.

# Figure 4: Responses to staff-specific questions:

# Α

Is your staff (service, counselors, etc.) there for the whole season or will you have transient staff members (i.e. only for a certain session).

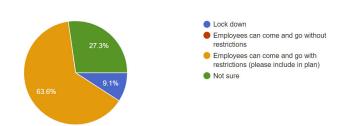
11 responses



В

Will you campus be on lockdown or will employees be allowed on and off campus during sessions?

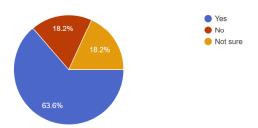
11 responses



C

Will ask you staff to arrive two weeks prior to the first camp session and as ask them to self-quarantine and not leave the camp grounds?

11 responses

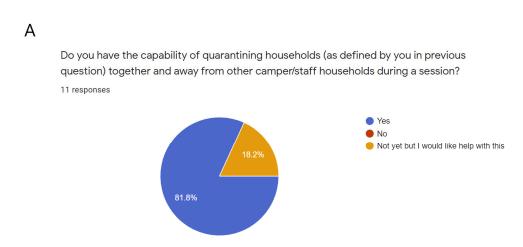


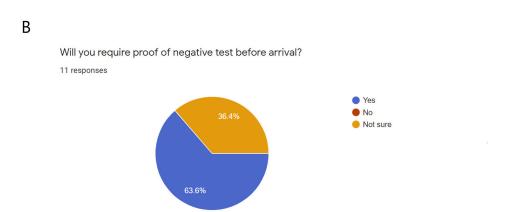


**Figure 4**: responses related to summer camp staff and personnel. Based on best-practices identified during an interview with a successful 2020 camp, questions were designed to addressed camp personnel-specific behavior and plans for possible isolation of staff during sessions.

From a public health point of view, it is encouraging to see that most camps (82%) are prepared and have the capability of providing a space to safely quarantine households in the event of a confirmed case. However, guidance may need to be provided to operators regarding proof of negative test before arrival, possible formation of a coalition for testing purposes, and collaboration with Carolina Contact Tracing Collaborative (CCTC) and TPH in order to address specific contact tracing and case investigation needs during the camp season.

Figure 5: Responses to protocol-specific questions:





Are you open to forming a coalition/consortium with other camp operators in the WNC Region in order to conduct testing on day 1 and day 6 of all campers, staffer, etc. to control virus spread?

11 responses

9.1%

No
Not sure

Are you open to working with case investigators and contact tracers deployed to your camp/region during the camp season?

11 responses

Yes
No
No Not sure

D

**Figure 5**: survey results addressing specific protocols to address the spread and transmission of COVID-19. During the initial site visits and interview process, information about and access to testing was identified as a specific issue camp operators wanted to address. Questions were crafted in the follow-up survey to determine how best to design interventions that would address these concerns.

#### Discussion

While the CDC offers recommendations and suggestions to camp operators and youth program coordinators, it emphasizes the needs to consult with local health departments and public health officials as a primary source of information (CDC, 2021). TPH, a leader in community partnership and a pioneer in this area, has forged several robust relationships with camp leadership in Transylvania County. In a desire to stay ahead and provide sound, clear, and vetted guidelines, TPH and its partners are modeling the successful use of best practices for the communication and dissemination of guidelines. These procedures can be used and replicated by other health departments for the safest possible reopening of its summer camps. A set of guidelines, lessons-learned and best practices developed as a result of this project, will be included in this year's Camp Health and Safety Guide, used during TPH's one-day training session in late Spring (format TBD – see Appendix A for a sample camp reopening plan). The guidelines include suggestions related to procedures for campers and staff before arrival to camp, specifics about arrival (including on-site testing and drop-off protocols for campers), some general camp operations standard operating procedures (sleeping arrangements, meals, sanitation, activities, etc), and guidance for staff and counselors.

# Format-specific procedures.

Our findings indicate that general suggestions and recommendations typically address the classic "away-camp" format. While a great majority of camps may adhere to, and fit within these guidelines, our project indicated that several camps may need more refined guidelines and support to address their specific requirements. For example, one camp surveyed offers collegelike sessions, where a mixture of minor and adult attendees will interact. Moreover, regular

open-to-the-public sessions are typically planned throughout this summer program format. Consequently, practices outlined in the CDC and ACA recommendations such as cohorting, scheduling mostly outdoor activities, and reducing possible exposure by limiting attendees' geographical provenance are near impossible in this instance (CDC, 2021 and ACA 2021). Consulting early with camp operators who follow similar formats was instrumental in identifying community partners who could assist TPH and the student-researcher in developing campspecific guidelines for this camp format. Efforts are currently underway for the studentresearcher to connect with partners at Brevard College and Mountain Area Health Education Centers (MAHEC), to review and suggest guidelines that will address specific needs related to this camp format. These guidelines will be included in TPH's 2021 Camp Health and Safety Guide. Likewise, this approach also identified the need to address wilderness-experience camp formats. In this instance, particular needs to be addressed are related to 1) interactions between multiple cohorts and counselors of various stay-lengths (some will be rotating for four to six days, while others will stay for 21 days), and 2) specific showcase events scheduled during the programs (team building exercises, program certifications, cohort graduations). To address these needs a thorough literature search and proof-of-concept study is taking place and will be discussed in detail with TPH leadership for further evaluation.

#### Collaboration for the development of reopening plans

The benefits of this collaborative approach have come to light during the initial site-visits and interview. In spending time listening to the various camp operators, it became apparent that the most useful application of this collaboration was in assisting operators to develop a concrete, applicable, and feasible reopening plan. Consequently, questions addressing this need were

incorporated in the follow-up survey administered in mid-January. While some of the partner-camps were able to submit an initial plan, most have expressed the need to either refine or develop a document that could be used and implemented. As previously discussed, many camp operators and leaders expressed the desire to use a more tailored approach to the reopening process. Most expressed concern over following general guidelines offered in national sites and public health databases. To date, only two camps have produced a drafted plan; four camp operators/directors have requested help in the drafting of a document, and six more have requested a teleconferencing meeting with the TPH leadership and the student-researcher to discuss their specific needs. This information was not only helpful in identifying specific needs gaps in available recommendations, but also in focusing the efforts in our collaborative approach. Appendix A shows a sample reopening plan developed as a results of collaborations with various camp operators.

# Testing and quarantining

Not surprisingly, many of the discussions that have taken place since the follow-up surveys have focused on the matter of testing, quarantining and vaccine efforts. While several operators chose to remain closed in the summer of 2020 because of a lack of availability and/or dependence on test, the current landscape is vastly different. One of the advantages of this collaboration between TPH, camp operators, and the UNC public health student-researcher was the opportunity to obtain data early in the winter, and to consider possible offerings. As the discussion started to shift from more general considerations (lodging, cabin size, position of bunks, planning of activities) to more specific (staff freedom of movement, testing, quarantining), the need to discuss testing options became increasingly apparent. Thanks to

partnerships between TPH, MAHEC and the CCTC, as well as a strong knowledge of current state mandates for testing, the team has formulated options it will present to the camp operators regarding this concern. As the State of North Carolina has begun to task its local health departments with COVID-19 vaccine trial and distribution, the focus has somewhat shifted away from testing, contact tracing and case investigation. Likewise, current partners, otherwise preoccupied with tracing and investigating, are now focusing on providing logistical staffing support to local health departments in the region (personal knowledge). Consequently, camp operators interested in requiring testing for their attendees and employees must determine whether other resources may be available, and whether testing may be a cost-effective approach to maintaining adequate safeguard and surveillance. In order to continue addressing this concern, survey questions were included to determine the specific need (volume and frequency) for testing. From the 11 respondents to date, it was determined that a possible 1,122 campers are expected per camp session (see table 4). Taking into account the number of anticipated sessions, a minimum of 4,720 campers may required to be tested upon arrival (day one). Considering the current quarantining guidelines, it is plausible to propose scenarios in which asymptomatic campers may be tested on days one and six, before ending quarantine on day seven (CDC, 2021). This could allow campers to expand their movements across cohorts and permit more choices in activities to camp with sessions lasting more than 10-days. While the current calculations are only based on a (conservative) estimate, and do not take into account additional complexity layers associated with staggered arrivals, it is conceivable to propose a coalition that would provide camps access to testing on a regular and ongoing basis, in order to assist them in mitigating the consequences of a possible outbreak in congregate settings.

**Table 4: Preliminary estimates of testing needs** 

Camp Identifier	Number of	Length of	Number of	Total
	Campers/session	Session	sessions	
0001	200	2-4 weeks	3	600
0002	225	10 days-6	4	900
		weeks		
0003	Unknown	4-22 days	Unknown	
0004	140	2-4 weeks	4	560
0005	Unknown	2-5 weeks	5	
0006	Unknown	2-5 weeks	5	
0007	124	1-3 weeks	4	496
0008	265	1-4 weeks	4	1,060
0009	Unknown	2-4 weeks	Unknown	
0010	18	2-3 weeks	3	54
0011	150	1-4 weeks	7	1,050
Total	1,122			4,720

**Table 4**: preliminary estimates of testing needs based on 11 respondents responses to questions related to estimated numbers of campers that will register for the 2021 summer camp sessions.

# Vaccine eligibility consideration

Recent concerns about eligibility of summer camp staff to receive the COVID-19 vaccine have surfaced. Because sleepover camps are being held within the guidelines of CDC congregate living, it is conceivable that camp staff and leadership may be considered to be prioritized for vaccine distribution. While concerns over the safety of campers have been expressed as a primary focus of camp operators, all camp leaders are also extremely worried about the safety of their employees. Understanding that COVID-19 vaccination is still currently considered an experimental pharmaceutical intervention and cannot be required, camp leaders are nonetheless interested in identifying their prioritization within the current vaccine deployment and distribution plan. Discussions around vaccine prioritization are ongoing within the TPH team, and answers to address these camp operators' concerns will be forthcoming as soon as the North Carolina Department of Health and Human Services (NC DHHS) and local

health departments have clarified that understanding. However, with the increased rate of vaccine distribution, it is possible that this issue may no longer be of concern by May 2021.

#### Limitations

The current findings are subject to some limitations. First, it is understood that the existing landscape is continuously evolving. Therefore, responses obtained on surveys and questionnaires may be provided based on very limited understanding of parameters, and within the constraints of ever-changing (almost daily) data and information. Considering the rapidly changing environment associated with the current pandemic, and the unforeseen limitations imposed because of it, it is possible that the interview process may be either incomplete, misunderstood, or simply obsolete by the time to data is interpreted. Nonetheless, the strengths of this project, specifically the early implementation of the study, and the many community partnerships, are making a rapid and evolving response to concerns manageable and possible.

Second, while concerns about testing availability were the focus of the 2020 camp season, and the primary limitation to maintaining operations, the current issues about testing are mainly related to affordability of service. Consequently, TPH must adopt a multi-layered approach to mitigating the spread of COVID-19, that can be implemented even if testing is not available or affordable. In consultation with various local experts and community partners, notably at MAHEC, the student-researcher is developing a set of possible testing options that may be viable options for local camp operators. Notably, the possibility of pool testing of cohorts and cabins may be a viable, cost-saving option. Pool testing is currently under review and some school districts have initiated pilot programs to test its viability in specific settings (Metro West Daily News, 2021). From a congregate living applicability, it is reasonable to consider this approach, especially if a camp has chosen to use a cohort format for campers. Current discussions will take into account the possibility of using this approach during the 2021 camp season.

Lastly, it is possible that changes in NC DHHS guidelines, North Carolina Governor Cooper's executive orders, and/or TPH prioritization of public health interventions may greatly affect the current approaches to summer camp reopening plans and practices. While this limitation is not altogether an impossibility, it is unlikely that decisions to close-down North Carolina camps would render this project and its results unusable. Whether the decision to resume operations is made this summer or in coming years, its applicability remain timely. Consequently, while adaptations, adjustments and clarification may continue to be needed between February and May of this year, the discussion points and guidelines provided as a result of this project will continue to be applicable in the future.

# **Recommendations based on findings:**

Considering the preliminary results to this project, the following recommendations are proposed:

- Develop of a camp-specific reopening plan: camp operators should take into consideration current CDC and ACA guidelines and develop a reopening plan to focusses on:
  - a. Addressing infrastructure currently available within each facility and camp
     location to mitigate COVID-19 spread and congregate living outbreaks special
     consideration should be given to:
    - i. The definition of a household in the event quarantining is required.
    - ii. Location of a quarantine section on facility grounds.
    - iii. Organization of meals (times, distribution, and packaging), in order to reduce the possibility of spread in larger group settings.
    - iv. Logistics associated with the placement of bunk beds, and the use of bathrooms and/or bathhouses and shared spaces.
    - v. Adherence to all NPIs outlined in Blaisdell (2020).
  - b. Addressing various pre-arrival and camp-specific protocols:
    - i. Camp formats and sessions/cohorts overlaps several camp operators have indicated that some of their offerings and sessions may overlap, thereby increasing the risk for exposure and virus spread. Providing a clear and written plan explaining how sessions will run and which may overlap will help TPH design guidelines that will specifically address interventions to mitigate possible disease outbreak in these situations.

- ii. Staff arrival and quarantining guidelines either before or upon arrival.
- iii. Pre-arrival testing requirements for all campers.
- iv. In-session testing requirements.
- v. Adherence to the cohorting model.
- vi. Description of all activities.
- 2. Explore of a local, regional or state collaboration or coalition to obtain special testing rates or large-group testing discounts. TPH has indicated that it cannot absorb the cost, nor does it have the staff availability necessary to maintain regular and ongoing testing of the various cohorts of campers expected during the 2021 camp season.
  Consequently, it is advisable that camp operators begin exploring available options for the access to, and administering of COVID-19 testing upon arrival (day one) and five days after arrival (day six) of new campers or staff members. Together with a cohort approach and a more synchronized organization of sessions, this intervention may be helpful in mitigating COVID-19 rate of infection. In this context, exploring the possibility of participating in a pilot study of pool testing may both reduce the overall cost of testing for camps, and assist camp operators in controlling and reducing possible camp-associated outbreaks. During the scheduled Zoom meetings in early spring, TPH leadership and the student-researcher will present these ideas to the various camp operators and offer suggestions for next-steps.
- Schedule one-on-one meetings to review individual plans and make additional recommendations. This project confirmed the need for more tailored approach to camp

operator training, that takes into account individual formats, sessions, and needs.

Consequently, it is advisable that TPH continues holding one-on-one teleconferencing sessions to address questions and concerns individual camps leadership may like addressed in their early preparatory steps.

Transylvania Public Health's rich history of collaboration provides an ideal framework to develop and adapt approaches to community partnerships for the mitigation of COVID-19 infections and community spread. While public health concerns itself with the spread and control of diseases, it must also take into account other determinants of health that will greatly impact the well-being of a given population. Considering the high economic impact summer camps and summer programs have on Transylvania County, it is paramount for TPH to collaborate and continue forging and strengthening relationships to ensure safe and continued summer camp operations in the summer of 2021 and in years to come.

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# Appendix A: Sample Reopening Plan (modified from Camps Kahdalea and Chosatonga's document)

## **General Terms:**

- <u>Household</u>: Defined by the camp operator as the group of people who, if exposed, must quarantine together. Can be a cabin, or a group of cabins sharing adjoining spaces or activities.
- Quarantine: applies to those who have been exposed to a COVID-19 assumed or confirmed case. Current CDC guidelines for quarantine:
  - Must remain in quarantine for 5 days,
  - O If after 5 days of quarantine and asymptomatic, may test; if test is negative, may end quarantine after 7days (i.e return to activities on day 8).
  - Without a test, may end quarantine after 10 days if asymptomatic.
  - Preference remains for 14-day quarantine with daily follow ups and symptoms checks.
- Initial quarantine period: the first 7 days of camp IF camp performs testing after 5 days <a href="mailto:and-all-campers">and</a> all campers in household remain asymptomatic. Otherwise, the first 10 days of camp <a href="mailto:asymptomatic">as long as</a> all campers in household remain asymptomatic.
- <u>Isolation</u>: applies to a COVID-19 assumed of confirmed case. Current CDC guidelines:
  - o Must isolate for 10 days and,
  - O No fever for 24 hours and,
  - Improved symptoms.
- **Exposure**: any contact with a COVID-positive or assumed positive case within 6ft for more than 15 min.

# **Before Arrival:**

- Assessing risks:
  - Parents and guardians should consider a child and a household's risk from COVID-19: <u>here is a CDC document</u> to help.
    - Camp operators will take precautions to create a safer environment
    - Disease-free circumstances cannot be guaranteed.
    - Parents and guardians must be comfortable with the increased risk inherent in summer camp attendance.
  - Parents and guardians should commit to picking up camper within 24 hours of receiving a call from camp.
- Assessing camper's health:
  - Parents and guardians should complete a health monitoring check each day for 7 days <u>prior</u> to arriving at camp. The check will document:
    - Temperature
    - Symptoms

- Exposure
- Prior history with COVID
- Campers must arrive to camp able to show a negative molecular PCR COVID test within the last 72 hours.
  - Campers will need to quarantine for at least 5 days prior to taking the test and remain in quarantine until they arrive at camp.
  - Quarantining includes avoiding public/crowding activities, avoiding congregate settings, and practicing social distancing. Outings should be reduced to a minimum and only for necessary reasons. Family members, should be careful to minimize all unnecessary contact with public spaces and, depending on their exposure levels, should be mindful of their contact with the camper. Campers and family members should be diligent in masking, washing hands, and sanitization.
- Without the health documenting form and the negative COVID test, campers will not be able to be admitted to camp.
- When travelling to camp, families should consider options that allow minimal exposure risk.
  - Driving is preferred unless multiple stops and stays are required.
  - Campers may fly to camp, but must adhered to strict masking and social distancing practices.

# Camp Arrival/Drop off procedures

- Parents and family members must remain in their vehicles during drop-off and pick up.
- Camper arrival and departure times will be staggered by age-group.
- Health document and negative COVID test should be ready to present upon drop-off.
- Campers will be tested with a rapid test upon arrival while in the vehicle. Parents will be directed to a waiting area until test results are obtained.
- Any camper with a positive test result will not be allowed to exit the vehicle and will not be allowed to attend camp.
- Camper temperature will be taken on arrival. Any camper with a temperature above 100.4 will not be allowed to stay. Campers may be allowed to attend camp 1) if they can provide a negative PCR test and 2) once they have been fever free for at least 24 hours.

# **General Camp Operation**

- Decreased capacity—Provide #campers/counselors/cabin here.
- <u>Signage</u> will be posted in key areas throughout camp (e.g., entrances, dining areas, restrooms, cabins, activity stations) to remind people to keep 6' apart when possible, wear masks, and wash hands.
- Households and neighborhoods
  - Each cabin will be considered 1 household. Within their household groups, campers will not have to social distance nor wear a mask.

- A grouping of ~4 cabin buildings will be called a neighborhood. Cabins will be able to attend activities, games, and events with their neighborhoods but will be asked to wear masks, remain in open air environments, and follow social distancing guidelines after the initial quarantine period.
- Strict separation will be maintained between neighborhoods.

# • Initial quarantine period:

- O During the initial quarantine period, households will remain in quarantine.
- Activities and trips will remain within households.
- A COVID-19 test will be given at the end of the initial quarantine period.
   Households with negative tests will be allowed to commence activities in neighborhoods on day 8.
- <u>Daily health monitoring</u> for each camper will take place each morning in the cabin and will involve a temperature and symptoms check. This will be recorded for each camper.
- <u>Color buffs</u>: Each neighborhood will have its own color buff. These will be given to each camper at the start of the session. This will help staff and campers to distinguish different neighborhoods.
- <u>Latecomer</u>: will not allowed in the Summer of 2021 unless considered by the directors to be an acceptable and exceptional circumstance.

# **Staff Considerations:**

### 1. Seasonal Staff (i.e. those who will be on camp property the entire season)

- Before arrival:
  - Staff will be asked to complete their own health check and to quarantine prior to arrival.
  - Staff will be asked to show a negative PCT test taken within 72 hours days upon arrival.
- Staff will be tested upon arrival.
- Staff will remain in their activity groups during clinics and orientation.
- During clinics and orientation staff will remain on camp property or in remote areas necessary for their clinics.
- For the week of orientation all staff will remain at camp and will be tested at the beginning and end of the week.
- Days off:
  - June: seasonal staff are required to remain on camp property for the entirety of the session with special exception for trips (see appendix A: list of exceptions).
  - July: seasonal staff can leave camp and get take-out to be consumed in a remote location (Blue Ridge Parkway or the French Broad River gorge would be suitable locations).
  - Seasonal staff may not enter any buildings off camp property and should avoid all public places.

- Special areas of camp will be set aside for evenings and days off.
- Counselors must remain strictly socially distant from staff outside of their neighborhoods and wear masks with staff outside of their cabin household group.

# 2. Transient Staff (i.e. those who will only be there for a short time and/or those who will live off camp property)

- Will be requested to fill out a brief form indicating their temperatures and symptoms and asserting that they are remaining cautious when away from camp.
- Must remain masked and socially distant at all times when on camp property.

#### **Visitors**

- With the exception of essential visitors, camp will be closed to visitors.
- Essential visitors would include delivery personnel, garbage pickup, medical staff and (indicate others as it fits your camp)
- Staff and campers will keep strict social distance from visitors.
- Visitors will be required to wear masks and social distance from campers and staff.

#### **Health and Sanitation Considerations**

- See Appendix B for a list of daily sanitization procedures.
- \_\_\_\_ Camp cabins will be set aside for COVID quarantine. (insert number based on your camp)
- The infirmary will be generally reserved for illnesses other than COVID.
- Common spaces like the dining hall and bathrooms will be sanitized and disinfected daily after use.
- Activity staff will sanitize their activity areas after each camper neighborhood encounter. Cleaning logs will be kept at each activity.
- Cabin staff will sanitize high touch areas in their cabins a minimum of twice daily, as part of clean-up. Records will be kept on the cleaning chart and graded with daily cabin grades.

# Dining (edit based on your own camp)

- Food, plates, cups, and utensils will be set out in the kitchen for each table by the kitchen staff.
- Counselors will pick up food, plates, cups, and utensils, for their tables.
- Counselors will social distance and wear masks anytime they line up to go through the kitchen aisle.
- Cabins will be called to the handwashing station and then to their tables in the dining hall (or on the covered porch) one at a time. Recommendation would be to rotate cabins so as to only have dining room at ½ capacity. Staggered lunches or lunches held outdoors are recommended and prefered.
- Tables will be socially distanced from one another.

- Cabin households will dine family style.
- Some days the kitchen and/or PDs may allow cabins to pack out picnics for their meals.
- Announcements / songs before or after the meal can be outside the dining hall with cabins and neighborhoods distanced and masked.

#### Vehicle Use

- Use of vehicles will be minimized as much as possible while retaining the integrity of programs.
- During the initial quarantine period, enclosed vehicles will only be shared by members within the same household.
- Vehicles will be sanitized by the trip driver after each use and allowed to air out.
- Campers and staff will be required to wear masks while in a vehicle.
- Weather permitting, vehicles should be driven with windows open.

# **Off-Campus Trips**

- All trips must be examined by the program director to ensure minimal outside exposure.
- Trips will only be taken to remote areas.
- Trips will be taken in cabin households or (post-quarantine) in neighborhood groups.
- Staff must be sure that their trips and trip participants remain socially distant.

# In the Event of a Positive Test and/or Symptoms

- If a camper receives a positive test, show symptoms, or is presumed positive, the camper's parents will be immediately contacted and asked to pick up their camper within 24 hours.
- COVID positive, or presumed positive campers will be isolated with distanced staff supervision.
- Campers who have been exposed to a Covid Positive individual will quarantine
  - Households will quarantine together and will cease any and all activities in their neighborhoods.
  - The neighborhood in which the positive case was involved will cease all neighborhood activities for 7 days.
  - All campers in the neighborhood will be monitored frequently (2x/day) for symptoms.
  - Household members will be tested at the end of a 5 day period from their first time of exposure.
  - Neighborhood activities will resume once direct contacts of cases have tested negative and have remained asymptomatic for 7 days from exposure.

#### **Vaccines**

• Vaccines for staff will be encouraged but not mandatory.

# **RESOURCES**

 $\underline{https://files.nc.gov/covid/documents/guidance/Interim-Guidance-for-Overnight-Camps-PHASE-\underline{2.pdf}$ 

https://www.cdc.gov/coronavirus/2019-ncov/downloads/camp-planning-tool.pdf

https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/summer-camps.html

https://www.acacamps.org/resource-library/coronavirus/camp-business/field-guide-camps

https://www.engageequitably.org/

# Appendix B: Lessons Learned and implications for student-researcher's career goals

Over the last 21 months, the themes of collaboration and stakeholder involvement have continued to remain central to the lessons learned in this program. This culminating experience was no exception. While one may have the preconceived idea that preparing for camp season can have an easy, standardized approach, this experience has taught me that stakeholder consideration is key in offering the best possible assistance to camp operators. From the varied settings in which the camp experience is offered, to considerations of cabin size, dining hall experience, camp songs – and every activity a camper will undertake from the day they are dropped off to the day they are picked up – there is nothing common or standard that can be addressed by a single document or approach. In that sense, the first lesson I learned – or perhaps relearned – was that assumptions should not be made. Indeed, it became clear rather quickly that the multitude of camps offered in Transylvania County had to be studied and understood carefully and relationships needed to be built in order to gain a true understanding of the various needs of my stakeholders.

The ever-changing landscape brought about by the response to the current pandemic has also taught me that I rather enjoy change. The document that may have been prepared and offered to camp operators in lieu of a reopening plan would have been significantly different just two or three months ago. Today, the outlook is vastly different than it was in October, when this project started. With advancements in testing (pooling, waste-water testing, etc.) and developments on the vaccine front, documents have been continuously updated to reflect advances in quasi real-time. While this may be frustrating for some, I have learned that I really enjoy fast-pace, and ever evolving assignments. Together with my previous experience with

Yancey County Emergency Operations Center and my current position as the Regional Vaccine Coordinator for Region 2, this experience has helped me see a possible career in public health crisis/emergency response.

Lastly, I have learned the importance of patience and understanding as mandates are prioritized. For public health workers, especially those serving rural health departments in the midst of a pandemic, time has become a true precious if not priceless commodity. Nonetheless, communication must remain clear, open, and regular. My current employment has allowed me to witness the true dedication – that of indubitable servant-leaders – health department staff members have had for their mandate. Transylvania Public Health (TPH) has a heart for its constituents and considers all social determinants when addressing public heath matters. In this context, this project was no less important to TPH than vaccinating its citizens. However, importance and priority can sometimes be divergent. With the immediate priority being (understandably) on vaccine clinics, it was important for me to remain focused while being patient. As vaccine clinics are starting to see a slow yet steady decline in demand, this culminating experience will also come to fruition. This experience has taught me to keep my focus while understanding how to prioritize equally important tasks.