

The Impact of COVID-19 on Physical Therapy Clinical Education Experiences in Florida

Stephanie M. Svoboda, PT, DPT, EdS, MS, Jason Kostrna, PhD, CMPC, and Patrick Pabian, PT, DPT, PhD

Introduction. Full-time clinical education experiences (CEEs) constitute a significant component of entry-level physical therapy education. COVID-19 challenged clinical education throughout the country by affecting the availability of CEEs.

Review of Literature. Research suggested that the number of clinical education spots available would stay the same. By contrast, the number of students enrolling in physical therapist (PT) and physical therapist assistant (PTA) education programs continues to rise. In response to the COVID-19 pandemic, students and faculty expressed concerns about the lack of student readiness and the availability of CEEs. The purpose of this study was to examine prepandemic factors that influenced the number of CEE slots available in Florida and the impact that the COVID-19 pandemic had on slot availability. Furthermore, researchers sought to identify factors that prevented a return to prepandemic levels of CEE spot offerings and recognize solutions to overcome those

barriers. Finally, the researchers aimed to pinpoint suggestions to enhance collaborations between the clinical sites and physical therapy education programs.

Subjects. Forty-eight site coordinators of clinical education (SCCEs) from various settings and regions in Florida completed the survey.

Methods. An online survey was distributed to Florida SCCEs to ascertain their perceptions on how COVID-19 influenced clinical education. The researchers used descriptive and inferential statistics to analyze the data.

Results. Clinical instructor (CI) volunteerism was the primary determinant of CEE spots available before the COVID-19 pandemic. The number of CEE spots was reduced for both PT and PTA education programs during the COVID-19 pandemic. Although the PTA slots returned to their baseline from 2019, the PT placements remained significantly lower in 2021. Social distancing and CI availability had the most considerable impact on CEE offerings. Site coordinators of clinical education also suggested that the greatest supports needed from the academic institutions were educating students on COVID-19 prevention and providing personal protective equipment (PPE) to students for their CEEs. This article also offers suggested incentives that academic sites can provide their clinical partners, such as in-services earning continuing education units, to enhance their participation in clinical education.

Discussion and Conclusion. All clinical education stakeholders must collaborate to provide students with the required clinical educational opportunities. Academic sites should continue to provide support, training, and incentives to CIs to enhance participation from clinical education sites. Educational programs must add content about COVID-19 to their curriculum and consider providing students with PPE during their rotations to restore the number of CEEs post-COVID-19 pandemic.

Key Words: COVID-19, Clinical education, Site coordinators.

INTRODUCTION

Full-time clinical education experiences (CEE) constitute a significant component of entry-level physical therapy education in the United States. According to recent aggregate data from the Commission on Accreditation in Physical Therapy Education (CAPTE), credit hours from full-time CEEs constitute 20% of physical therapist (PT) education programs¹ and 25% of physical therapist assistant (PTA) education programs.² Commission on Accreditation in Physical Therapy Education requires students to be exposed to the “management of patients/clients with diseases and conditions representative of those commonly seen in practice across the lifespan and continuum of care in a range of practice settings.”^{3,4} Before the Coronavirus Disease 2019 (COVID-19) pandemic, CAPTE required full-time PT CEEs to consist of a minimum of 35 hours per week for 30 weeks³ and PTA CEEs to consist of a total of 520 hours.⁴

The impact of COVID-19 challenged clinical education throughout the country, affecting both physical therapy education programs and health care sites. The pandemic occurred at a time of noteworthy growth in PT and PTA education programs. According to CAPTE, there has been a 12.2% increase in the number of PT education programs¹ and an 11.8% increase in PTA education programs² in the country over the past 6 years. Aggregate data from CAPTE reported that there were approximately 34,202 PT students in the country enrolled in accredited PT education programs in 2019.¹ There were 29,078 enrolled PT students in 2015,⁵ which is an increase of 19.8%. The growth in PT student enrollment has been particularly dramatic in Florida. Between 2015 and 2020, the number of PT students has increased from 1923 to 2529, representing a 31.5% increase.⁶ This dramatic rise in student enrollment stressed PT and PTA education programs’ ability to provide CEEs.

Stephanie M. Svoboda is the site coordinator of Clinical Education at the Nicklaus Children’s Hospital, 13400 SW 120th Street, Miami, FL, 33186 (ssvoboda@fiu.edu). Please address all correspondence to Stephanie M. Svoboda.

Jason Kostrna is the assistant professor and kinesiology graduate program leader in the Department of Teaching and Learning at the Florida International University, Miami, FL.

Patrick Pabian is the department chair and program director in the Department of Physical Therapy at the University of Kentucky, Lexington, KY.

The authors declare no conflicts of interest.

Published Online First: June 1, 2023.

Received September 7, 2022, and accepted April 13, 2023.

Supplemental digital content is available for this article. Direct URL citations appear in the printed text and are provided in the HTML and PDF versions of this article on the journal’s Web site (www.aptaeducation.org).

Copyright © 2023 Academy of Physical Therapy Education, APTA

DOI: 10.1097/JTE.0000000000000286

Florida experienced the first cases of COVID-19 in March 2020. As a result, physical therapy facilities throughout the state closed or decreased staffing, and many facilities suspended their student programs indefinitely, drastically reducing the already limited number of CEEs. In response to this novel situation, on March 13, 2020, CAPTE issued a temporary waiver of 2 weeks or 80 hours of clinical education requirements from students' final terminal experience while continuing to require that students reach entry-level competence within the completed hours. Students were expected to complete the types and number of CEEs as required by their programs. The CAPTE updated their statement on March 16, 2020, to clarify that students in their final year or 12 months of their program do not need to complete their outstanding hours if the student 1) met the breadth and depth of required experiences, 2) achieved entry-level competence in all areas measured by the program's assessment instrument during one of their CEEs, and 3) PT students completed at least 28 full-time weeks and PTA students completed at least 440 hours of clinical education. The CAPTE has since published 5 additional guidance documents, the most recent being August 5, 2022. The document reiterated that the United States is still facing a Public Health Emergency (PHE) and that all previous guidance regarding CEE hours remains in effect. However, this guidance is only temporary, and the CAPTE will advise when the waiver is no longer valid.⁷

The Florida Physical Therapy Association (FPTA) formed a Clinical Education Task Force to critically evaluate the best ways to help students continue their clinical education with minimal interruptions. The FPTA's Task Force consisted of representatives from each group of clinical education stakeholders (PT education program department chairs, directors of clinical education [DCEs], site coordinators of clinical education [SCCEs], and FPTA board members). This study was developed and conducted by SCCE members of the Task Force. To better understand the effects of the COVID-19 pandemic, this study examined the existing factors influencing CEEs in Florida prepandemic. Our primary aim of this study was to understand the impact that the COVID-19 pandemic had on the number of PT and PTA clinical slots in Florida from prepandemic to 2021, as reported by Florida SCCEs. The study also sought to identify factors associated with sites that were unable to return to prepandemic levels of clinical education support. Finally, the researchers aimed to identify strategies to overcome pandemic-related barriers and to understand how academic sites can

collaborate more with clinical sites, regardless of the pandemic, to increase the number of CEEs.

REVIEW OF LITERATURE

Recent research reported on the influence of the COVID-19 pandemic on physical therapy education from the point of view of students and faculty. Research found that pandemic-related restrictions had a deleterious impact on the educational environment. Students reported technological limitations, lack of peer contact, and overall academic rigor as barriers to learning. Students and faculty also expressed concerns about a lack of training and feedback regarding psychomotor skills,⁸⁻¹¹ which could directly affect their success in their clinical rotations. Third-year students were particularly anxious about the uncertainty of completing their CEE to fulfill their graduation requirements.⁹ The concern for timely completion of clinical education and graduation was also reported by faculty.¹⁰ A case report demonstrated the successful use of telehealth as a unique physical therapy CEE during the pandemic.¹¹ Researchers from other allied health professions, such as occupational therapy and speech-language pathology, also published responses to the COVID-19 pandemic indicating similar disruptions to the educational environment.¹²⁻¹⁵ However, there are no published reports of the effects of the COVID-19 pandemic specifically on physical therapy CEEs.

The SCCE coordinates with DCEs and supervises physical therapy students and CIs at the site.^{16,17} Therefore, SCCEs are uniquely capable of providing insight into the effects of the COVID-19 pandemic on physical therapy CEEs. Prepandemic, Recker-Hughes et al¹⁸ examined perspectives from SCCEs on clinical education by surveying 287 facilities. The survey of Recker-Hughes et al provided insight to the academic community on how clinical sites implemented clinical education and factors that affected the delivery of CEEs, such as CI availability, perspectives of students, productivity, and the like. The top 3 reasons sites had a physical therapy student program were contributions to staff professional development, fulfilling a professional obligation, and fulfilling the facility's mission. Challenges to sustaining a student program included inadequate therapy staffing, insufficient time for program administration, and low availability of experienced therapists to serve as clinical instructors (CI). Most respondents reported that supervising a student had a neutral effect on both clinician productivity (66%) and quality of care (63%). Thirty-two percent of respondents said that having students increases quality, and only 0.7% reported a decrease in quality. Twenty

percent reported a reduction in productivity, whereas 11% reported an increase in productivity. Hospital settings were 2 times more likely to experience a decline in productivity. Providing incentives and support to clinical sites and CIs were perceived as rarely done, never done, and unknown by most respondents; however, directors were very interested in implementing these supports. More than 90% of respondents reported interest in discounted or free continuing education, continuing education credits, and discounted or free CI credentialing courses.¹⁸

The study results from Recker-Hughes et al¹⁸ denote that a multifaceted system is needed to support clinical education, which was likely placed under immense pressure during the COVID-19 pandemic. The study also indicated that most clinical sites anticipated maintaining the same number of student spots over the next 5 years. Therefore, this study is warranted to explore the impact of COVID-19 on the number of clinical slot offerings and identify factors and opportunities to restore CEE slots. Despite the importance of CEEs and SCCEs, no research has been published on SCCEs' views of how the COVID-19 pandemic has influenced CEEs or objectively examined the changes in slot assignments and its recovery from the early pandemic.

This study addresses this lack of research by examining the trends that occurred in slot assignments in one state during the pandemic. The researchers also examined the factors affecting slot availability during the COVID-19 pandemic, as reported by SCCEs. The uniqueness of the present investigation is evidenced in several regards. First, there is a lack of research into the effects of COVID-19 on the physical therapy clinical education process. In general, the examination of the CEE from the perspective of the SCCE is quite limited. Finally, the limited research in these areas has predominately been performed in the Northeast United States. Thus, this study provided important information regarding the CEE and how the pandemic affected the CEE from the viewpoint of the SCCE in a geographic region previously underreported in the literature.

SUBJECTS

The research team compiled a list of SCCEs throughout Florida. The list was assembled by requesting the electronic mailing addresses from the DCEs at both a Florida Consortium of Clinical Education meeting and a Task Force meeting. The research team emailed the survey to 676 email addresses, with 569 emails successfully delivered. The survey was started 86 times, but 28 were not completed, and 9 individuals were not current Florida SCCEs, so their responses were not included in the data

analysis. Therefore, 49 Florida SCCEs completed the survey; 1 individual's data were removed because answers were consistently outliers. This study was approved for exemption by Florida International University's IRB.

METHODS

Procedure

Participants were recruited by emails sent to SCCEs from the compiled contact list at the beginning of November 2020. Information about the purpose of the study and the hyperlink to the Qualtrics survey was provided in the body of the email. Two reminder emails were sent 2 and 4 weeks after the first invitation. The survey was closed in January 2021.

Instrument Development

Two SCCE members of the Task Force developed the survey used for this study (Appendix, Supplemental Digital Content 1, <http://links.lww.com/JOPTE/A224>). Researchers designed questions based on discussions during Task Force meetings and reviewing similar published research.^{18–20} The researchers also analyzed the *Reference Manual for SCCE*²¹ and the *Physical Therapist Student Evaluation: Clinical Experience and Clinical Instruction*²² tools to inform question design. The survey was shared with the Task Force, and members provided feedback. All input was considered, and changes to the survey were made. The revised version of the survey was sent to a small group of SCCEs for feedback regarding content, usability, and errors to ensure content and face validity. The final survey was modified to incorporate this additional feedback.

The survey was divided into 3 sections. Section one collected demographic information about the SCCEs, their roles as SCCEs, and their sites. Section 2 collected information about past students at sites. Section 3 collected data regarding the impact of COVID-19 on clinical sites' ability to host students and what SCCEs believe that academic sites can do to enhance the possibility of sites continuing to host students.

Data Analysis

The data were downloaded from the Qualtrics software to an SPSS file. Descriptive statistics (frequencies, means, ranges) were calculated for each question. To examine the number of clinical site placement changes over time, a repeated-measures analysis of variance (ANOVA) was conducted. Due to a violation of Mauchley's test of sphericity for PTA

Table 1. Characteristics of SCCEs and Their Facilities (N = 48)

	% (N)
Gender	
Female	77.1% (37)
Male	22.9% (11)
Professional role	
Physical therapist	91.7% (44)
Physical therapist assistant	4.2% (2)
Other	4.2% (2)
Years in clinical practice—physical therapist (n = 44)	
Mean	21.83 (± 10.8) y
Range	3–44 y
Years as SCCE (n = 48)	
Mean	7.13 (± 5.7) y
Range	0.5–24 y
Coordinate student programs outside of physical therapy	
Yes	47.9% (23)
No	52.1% (25)
No. of locations that you oversee	
One	35.4% (17)
Greater than one	64.6% (31)
If greater than one, how many? (n = 17)	6.9 (± 9.5)
Range	2–36
Do you serve as a clinical instructor?	
Yes	64.6% (31)
No	20.8% (10)
I fill in if the assigned CI is not available.	14.6% (7)
FPTA district	
Southeast	31.3% (15)
East central	22.9% (11)
Northern	14.6% (7)
West central	14.6% (7)
Southwest	14.6% (7)
Northwest	2.1% (1)
Type of facility (select all that apply)	
Ambulatory care/outpatient hospital	52.1% (25)

Table 1. Characteristics of SCCEs and Their Facilities (N = 48) continued

	% (N)
Acute care/inpatient hospital	33.3% (16)
Acute inpatient rehabilitation	31.3% (15)
Outpatient private practice	10.4% (5)
Skilled nursing facility	6.3% (3)
Corporate outpatient centers (ex: CORA, select)	6.3% (3)
Federal/state/county health	2.1% (1)
Home health care	2.1% (1)
School system	2.1% (1)
Wellness/prevention program	2.1% (1)
Patient population served at site(s) (select all that apply)	
Birth–12 y	37.5% (18)
13–21 y	83.3% (40)
22–45 y	85.4% (41)
46–65 y	87.5% (42)
66–85 y	87.5% (42)
86 y or greater	83.3% (40)

Abbreviations: CI = clinical instructor; FPTA = Florida Physical Therapy Association; SCCE = site coordinators of clinical education.

Greenhouse–Geisser F statistic was evaluated to determine statistical significance. Bonferroni's corrected post hoc analyses examined pairwise (year to year) comparisons. Due to a violation of the homogeneity assumption, a 2-way repeated-measures ANOVA was not possible, and thus, comparisons of the effects based on PT versus PTA were examined by nonparametric assessment. Categorical data were analyzed through chi-square statistics.

RESULTS

Subjects

A small portion (8.44%) of potential respondents completed the survey. Table 1 provides the characteristics of the SCCEs and their sites. Most SCCEs were female (77.1%) and physical therapists (91.7%). Responses included representation from all FPTA districts, from all types of facilities, and from facilities that served patients at all stages of the life span.

Participants had a mean of 21.83 (± 10.8) years of experience as physical therapists and a mean of 7.13 (± 5.7) years of experience as SCCEs. Most participants also served as CIs (64.6%), and 47.9% coordinated student programs in addition to physical therapy, with occupational therapy and speech-language pathology being the most common. Some SCCEs coordinated student programs for multiple locations (35.4%). For SCCEs overseeing multiple locations, the average number of sites they were responsible for was 6.9 (± 9.5).

Factors Influencing Clinical Education Experiences Slots Prepandemic

The most significant determiner of the number of CEE spots offered to schools was the number of CIs that signed up to serve (75.7%). Serving as a CI was not mandatory at 48.6% of sites, but 40.5% of sites recommended it for promotion within the company. The 2 most reported eligibility criteria for serving as a CI were willingness to be a CI (94.6%) and years of experience as a PT (83.8%). Most SCCEs rated students' preparedness for CEEs positively, with 18.9% indicating that students were extremely prepared and 45.9% indicating that they were somewhat prepared. However, approximately 32% of the respondents felt that academic institutions could better prepare students for CEEs by providing more hands-on training related to the tasks they will encounter in that particular setting.

Site coordinators of clinical educations' perceptions of the advantages and disadvantages of hosting students at their sites are recorded in Table 2. Respondents reported that having students increased clinician productivity (physical therapy student [SPTs] 29.2%, physical therapist assistant student [SPTAs] 18.8%), whereas others reported that hosting students decreased productivity (SPTs 39.6%, SPTAs 35.4%). Frequently reported advantages of hosting students included recruitment for future employees (77.1% SPT, 52.1% SPTA) and helping licensed PT/PTAs stay current on new evidence or techniques (75.0% SPT, 50.0% SPTA). Commonly reported disadvantages included students utilize space (50.0% SPT, 45.8% SPTA), students utilize resources (SPTs 31.3%, SPTAs 29.2%), and clinicians not having downtime when they served as CIs (43.8% SPT, 33.3% SPTA). The suggested optimal number of weeks for a CEE was reported to be 10.22 (± 1.64) weeks for SPTs and 7.43 (± 3.30) weeks for SPTAs.

Effect of COVID-19 on the Number of Clinical Education Experiences

In 2019, before the COVID-19 pandemic, each site hosted an average of 15.49 (± 18.33 ; range 2–85) PT students and 4.59 (± 3.92 ;

Table 2. Advantages and Disadvantages of Students at Clinical Sites (N = 48; Select All That Apply)

Advantages	DPT % (N)	PTA % (N)
Recruitment for future employees	77.1 (37)	52.1 (25)
Students help licensed PT/PTAs stay current on new evidence or techniques	75.0 (36)	50.0 (24)
Increased clinician productivity	29.2 (14)	18.8 (9)
Other	18.8 (9)	18.8 (9)
There are no advantages to accepting DPT students at our site(s)	4.2 (2)	18.8 (9)

Disadvantages	DPT % (N)	PTA % (N)
Students utilize physical space	50.0 (24)	45.8 (22)
Clinicians do not have downtime	43.8 (21)	33.3 (16)
Decreased clinician productivity	39.6 (19)	35.4 (17)
Students utilize resources (PPE)	31.3 (15)	29.2 (14)
There are no disadvantages to accepting DPT students at our site(s)	20.8 (10)	27.1 (13)
Other	18.8 (9)	18.8 (9)
Increased administrative costs	10.4 (5)	10.4 (5)

Abbreviations: PT = physical therapist; PTA = physical therapist assistant.

range 1–20) PTA students. In 2020, sites hosted 9.45 (± 11.58 ; range 0–51) PT students and 2.62 (± 3.10 ; range 0–14) PTA students. Site coordinators of clinical educations identified that in 2021, they would host 12.68 (± 16.92 ; range 0–85) PT students and 3.88 (± 3.57 ; range 0–20) PTA students (Table 3).

A statistically significant change over time from the years 2019 through 2021 for both PT ($F_{2,92} = 16.14$; $P < .001$; $\eta_p^2 = 0.26$) and PTA ($F_{1.58, 51.98} = 13.09$; $P < .001$; $\eta_p^2 = 0.28$) site availability was found by repeated-measures ANOVA. The Bonferroni's adjusted post hoc test revealed statistically significant pairwise differences ($P < .001$) for both PT and PTA slots between 2019 and 2020. During this period, PT placements decreased by an average of 6.04 (95% CI 3.02–9.06), and PTA placements decreased by an average of 1.97 (95% CI 0.85–3.10). From 2020 to 2021, there was a statistically significant increase in both PT

($P < .01$) and PTA ($P < .001$). Physical therapist placements increased by 3.23 (95% CI 0.79–5.68), and PTA placements increased by 1.23 placements (95% CI 0.58–1.95; $P < .001$). Upon examining the total change from 2019 to 2021, it was found that there was a statistically significant difference in PT placements ($P = .02$), with 2021 being an average of 2.81 placements lower (95% CI 0.38–5.24) compared with 2019. In comparison, there was no significant difference ($P = .33$) in placements for PTA slots from 2019 to 2021, with an average decrease of 0.71 placements in 2021 (95% CI –0.38 to 1.79).

Pandemic Factors Limiting Access to Prepandemic Levels of Support

In total, 24 of the 47 sites (51.1%) supporting PT students returned to the prior level of clinical education support as measured by placements in 2021 compared with 2019. By contrast, 23 of

Table 3. Number of Student Placements

	2019	2020	2021
PT ($n = 37^a$)	15.49 (± 18.33) Range: 2–85	9.45 (± 11.58) Range: 0–51	12.68 (± 16.92) Range: 0–85
PTA ($n = 34^a$)	4.59 (± 3.92) Range: 1–20	2.62 (± 3.10) Range: 0–14	3.88 (± 3.57) Range: 0–20

Abbreviations: PT = physical therapist; PTA = physical therapist assistant.

^aSites that did not host PT or PTA students in 2019 were not included in the analysis.

34 (67.6%) clinical sites that accepted PTA students returned to 2019 levels. Upon calculating an odds ratio to determine differences in the rate of return to 2019 levels, researchers found that PTA students were 2.00 times more likely than PT students to return to the prior level of clinical education placements (95% CI 0.80–5.02). The most frequently reported barriers to hosting students during COVID-19 included changes in the number of CIs available (56.3%) and constraints of adhering to social distancing guidelines (54.2%) (Table 4).

Further analysis was conducted for sites that could not return to the previous level of student placements. Of the sites whose PT placements did not return to 2019 levels, 15 of 23 sites (65.2%) reported a limiting factor of constraints adhering to social distancing. In comparison, 11 out of 24 sites (45.8%) that returned to 2019 levels of PT placements reported constraints in adhering to social distancing as a limiting factor. Although there was a descriptive difference, a chi-square test did not indicate a statistical significance for this relationship ($P = .15$). Among the PTA sites whose placements did not return to 2019

levels, constraints adhering to social distancing were reported as a limiting factor by 8 of 11 sites (72.7%) compared with 11 out of 23 sites (47.8%) where PTA placements returned to 2019 levels. A chi-square did not reveal a statistically significant difference in this relationship ($P = .16$). Regarding availability of PPE, 6 of 11 (45.4%) PTA sites where PTA placements did not return to 2019 levels reported that PPE availability was a significant concern. However, this value was not significantly higher ($P = .08$) than sites that did return to 2019 levels, which was 4 out of 23 (17.4%). In comparison, the discrepancy in concern for PPE availability between PT sites that returned to 2019 levels of placements (5 of 24, 20.8%) and those that did not (6 of 23, 26.1%) was far less ($P = .67$).

Overcoming Pandemic Barriers to Clinical Education Experiences and Future Collaboration Postpandemic

Two-thirds of SCCEs suggested that academic institutions could enhance the possibility of hosting students during the pandemic by assuring that their students know the basics of COVID-19 prevention. In addition, 39.4% of SCCEs reported that providing students with PPE would be helpful (Table 4). Table 5 lists suggestions from the SCCEs to facilitate post-pandemic CI and site participation in CEEs. The most common request was for the university partner to provide in-service opportunities for the CIs to earn continuing education units (CEUs; 79.2%). Other leading suggestions included university library access (45.8%), opportunities to contribute as a guest lecturer (45.8%), and university recognition (43.8%).

DISCUSSION

The number of CEE spots was reduced during the COVID-19 pandemic. Although results from this study suggest that spots will increase over time, the overall number of spots for PT students did not return to prepandemic baseline in 2021. In 2021, the number of PT placements was 82% of the 2019 baseline, and PTA placements was 85% of the 2019 baseline. One of the main barriers cited by SCCEs to hosting students was adherence to social distancing guidelines. Therefore, social distancing needs to be taken into consideration by academic sites when requesting sites use the 2 students-to-1 CI model during PHE. Although researchers demonstrated this model to be effective in the past,^{23,24} PHE restrictions may not make it feasible during these challenging times.

Before COVID-19, clinic directors reported that the limited availability of CIs was a challenge to hosting a student program.¹⁸ In this study, SCCEs added to these concerns because they indicated that changes in the

Table 5. Overcoming Barriers: Suggested Incentives That Academic Sites Can Provide Clinical Partners ($N = 48$; Select All That Apply)

	% (N)
Provide CIs with in-services that earn CEUs	79.2 (38)
University/College electronic library access	45.8 (22)
Invitations for CIs to be a guest lecturer at academic institutions	45.8 (22)
Recognition of CIs contributions from the University/College level	45.8 (22)
Vouchers for University/College credits	43.8 (21)
Provide additional training in teaching and mentoring to our clinicians	37.5 (18)
Ability for CIs to collaborate on research projects	33.3 (16)
Financial compensation to the CI	27.1 (13)
Financial compensation to the site	18.8 (9)
There is nothing that can be done	10.4 (5)
Decrease the length of the clinical experience	8.3 (4)

Abbreviations: CEU = continuing education units; CI = clinical instructor.

number of CIs available, either due to fewer CIs or a decrease in CIs' hours, was a barrier to accepting students. APTA's Impact of COVID-19 on the Physical Therapy Profession report further reiterated this decrease in PTs and PTAs' hours.²⁵ As a result, DCEs must be mindful of CI shortages and distancing requirements when assigning students to sites during PHEs.

Site coordinators of clinical education reported prepandemic barriers to hosting students were CIs' lack of available time and decreased productivity. In open-ended questions, several participants wrote that CIs experienced an initial decrease in productivity during the first several weeks of a CEE but that their productivity returns to baseline once the students acclimate to the setting. When implementing the CEE length, balancing the needs of the students with the needs of the sites and CIs is essential to program success. Optimal length affiliations allow students enough time to adjust to unfamiliar environments. Concurrently, CIs will have fewer teaching

Table 4. Barriers and Suggestions to Hosting Students During COVID-19 ($N = 48$; Select All That Apply)

	% (N)
Barriers	
Changes in the number of CIs available	56.3 (27)
Constraints of adhering to social distancing guidelines	54.2 (26)
Management has placed our student program on hold	33.3 (16)
Changes in patient census	31.3 (15)
Limited supply of PPE	22.9 (11)
There are no limiting factors	10.4 (5)
Suggestions	
Assure that students are knowledgeable about the basics of COVID-19 prevention	66.7 (32)
Provide students with PPE	39.6 (19)
Decrease length of clinical experience	14.6 (7)
There is nothing that can be done at this time	10.4 (5)

Abbreviations: CI = clinical instructor; PPE = personal protective equipment.

responsibilities and increased productivity as the student develops competence consistent with entry-level practice. Although other studies have indicated that student programs significantly increased productivity in the acute care setting, these studies were not performed at a time that required additional training and widespread considerations as needed during the COVID-19 pandemic.^{24,26,27} Therefore, this era, both during and immediately post-pandemic, requires additional support systems and training to ensure effectiveness and efficiency in patient care.

These support systems and training include increasing student preparedness, which CIs cited as a key factor in their willingness to serve. Site coordinators of clinical educations reported that students could be more prepared for CEEs by understanding the basics of COVID-19 transmission and prevention and increasing setting-specific training of practical skills. The authors of this article suggest that DCEs must assess the timing of CEEs relative to the students' coursework and laboratory work. For example, many PT education programs focus on musculoskeletal content in the first year of the didactic curriculum. A student might be placed in an orthopedic CEE for their terminal rotation at the end of their third year, which means that the student may not have practiced or been assessed on musculoskeletal techniques and content recently.

Relatedly, almost half of the respondents in this survey and 62% of respondents in the survey of Recker-Hughes et al (2016) of clinical directors reported that inviting CIs as guest lecturers or to work in faculty appointments at the academic institution would increase the chances of sites hosting students. A particular suggestion from the authors of this study to improve student preparedness and involve CIs more in the academic program would be for academic institutions to invite local CIs and SCCEs to assist in laboratory activities designed to refresh hands-on skills specific to upcoming rotations in the weeks before new CEEs. For example, students going to acute care, inpatient rehabilitation, or skilled nursing facilities can practice patient transfers. This integrated academic training could alleviate some of the teaching duties that CIs experience at the beginning of a new rotation and provides students with timely practical education.

As physical therapy clinical education moves forward in a postpandemic world, lessons learned indicate that collaborations between academic and clinical partners are essential. Clinical sites will need continued support through several means to create a culture that is invested in student and CI

success. Academic institutions can provide incentives to the CIs, such as in-services that earn CEUs, access to university resources, opportunities to guest lecture and collaborate in research, financial support for university/college credits, and annual award recognition. These findings echo those found by Recker-Hughes et al,¹⁸ who reported that facilities would be interested in discounted or free continuing education, CEUs, CI credentialing, college courses, library privileges, and faculty appointments.

Limitations

The first limitation of this study is that there is not a master list of all the CE sites and SCCEs in the state. Therefore, the research team compiled the list of SCCEs' emails by asking DCEs to share contact lists. Unfortunately, not all DCEs shared their lists, and SCCEs have high turnover rates, so collecting the email addresses for every SCCE in Florida was impossible. Next, this survey was administered at the end of 2020; therefore, values for 2021 represent a projection of future slots. Finally, this is only a sample of Florida participants, which may not reflect the United States. However, our data were similar to that of other studies,^{18,20} and Florida has the fifth largest number of physical therapy schools in the country.

CONCLUSION

The Florida physical therapy clinical education community continues to deal with the ramifications of the global COVID-19 pandemic. Education programs can continue to utilize CAPTE's temporary decrease in the minimum weeks/hours required for clinical education until the United States Health and Human Services Department declares that the PHE has ended. When the PHE is declared over, CAPTE will permit programs to maintain their CEE modifications for students until their graduation. All clinical education stakeholders must work together to develop students' clinical skills to provide students with quality educational opportunities. There are findings from this study that can be applied immediately to overcome the barriers posed by the pandemic, such as ensuring that all students understand the basics of COVID-19 transmission and prevention and providing students with PPE. Data gathered from this study can also be used to respond to future pandemics or natural disasters. Furthermore, academic sites should continue to provide support and training to CIs to enhance participation from clinical education sites.

FUNDING

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

REFERENCES

1. Commission on Accreditation in Physical Therapy Education. Aggregate program data: 2019-2020 physical therapist education programs fact sheets; 2020. <https://www.captionline.org/globalassets/capte-docs/aggregate-data/2019-2020-aggregate-pt-program-data.pdf>. Accessed August 23, 2022.
2. Commission on Accreditation in Physical Therapy Education. *Aggregate Program Data: 2019-2020 Physical Therapist Assistant Education Programs Fact Sheets*; 2020. <https://www.captionline.org/globalassets/capte-docs/aggregate-data/2019-2020-aggregate-pta-program-data.pdf>. Accessed August 23, 2022.
3. Commission on Accreditation in Physical Therapy Education. *Standards and Required Elements for Accreditation of Physical Therapist Education Programs*; 2020. <https://www.captionline.org/globalassets/capte-docs/capte-pt-standards-required-elements.pdf>. Accessed August 23, 2022.
4. Commission on Accreditation in Physical Therapy Education. *Standards and Required Elements for Accreditation of Physical Therapist Assistant Education Programs*; 2020. <https://www.captionline.org/globalassets/capte-docs/capte-pt-standards-required-elements.pdf>. Accessed August 23, 2022.
5. Commission on Accreditation in Physical Therapy Education. *Aggregate Program Data: 2014-2015 Physical Therapist Education Programs Fact Sheets*; 2016. https://www.captionline.org/globalassets/capte-docs/aggregate-data/archive/pts/captetpagggregatedata_2015.pdf. Accessed August 23, 2022.
6. Commission on Accreditation in Physical Therapy Education. 2015 and 2020 CAPTE data from annual accreditation reports for Florida PTA and PT programs only. Accessed March 25, 2021.
7. Commission on Accreditation in Physical Therapy Education. *COVID-19 Resources*. <https://www.captionline.org/globalassets/capte-docs/whats-new/capteresponsetocovid19.pdf>. Accessed August 23, 2022.
8. Hyland N, Vore ME, Chan C, Katz J, Rivers L, Hewson K. COVID-19 impact on students in physical therapist and physical therapist assistant education programs in New York and New Jersey: Key issues and recommended responses. *J Phys Ther Educ*. 2021;35:279-285.
9. Anderson C, Dutton LL. Physical therapy student stress during the COVID-19 pandemic: A qualitative study. *J Phys Ther Educ*. 2022;36:1-7.
10. Majsak MJ, Hall CA, Kirsch NR, Krencicki DB, Locke E, Hyland N. Physical therapy

- education program faculty challenges, concerns, and priorities during the COVID-19 pandemic: Looking back and moving forward. *J Phys Ther Educ*. 2022;36:97-106.
11. Hong SM, Olson-Kellogg BJ, North SE, Davis JL, Staker JL. Telehealth physical therapy as an innovative clinical education model with positive patient impact: A case report in the context of the COVID-19 pandemic. *J Phys Ther Educ*. 2020;34:275-281.
12. Brown T, Robinson L, Gledhill K, et al. Learning in and out of lockdown: A comparison of two groups of undergraduate occupational therapy students' engagement in online-only and blended education approaches during the COVID-19 pandemic. *Aust Occup Ther J*. 2022;69:301-315.
13. Nagdee N, Sebothoma B, Madahana M, Khoza-Shangase K, Moroe N. Simulations as a mode of clinical training in healthcare professions: A scoping review to guide planning in speech-language pathology and audiology during the COVID-19 pandemic and beyond. *S Afr J Commun Disord*. 2022;69:1-13.
14. Salter C, Oates K, Swanson C, Bourke L. Working remotely: Innovative allied health placements in response to COVID-19. *Int J Work-Integrated Learn*. 2020;21:587-600.
15. Hoang H, Jessup B, Obamiro K, et al. Impact of COVID-19 on rural and remote student placements in Australia: A national study. *Aust J Rural Health*. 2022;30:197-207.
16. Jette DU, Nelson L, Palaima M, Wetherbee E. How do we improve quality in clinical education? Examination of structures, processes, and outcomes. *J Phys Ther Educ*. 2014;28:6-12.
17. Recker-Hughes C, Wetherbee E, Buccieri KM, FitzpatrickTimmerberg J, Stolfi AM. Essential characteristics of quality clinical education experiences: Standards to facilitate student learning. *J Phys Ther Educ*. 2014;28:48-55.
18. Recker-Hughes C, Padial C, Becker E, Becker M. Clinical site directors' perspectives on clinical education. *J Phys Ther Educ*. 2016;30:21-27.
19. Silberman N, LaFay V, Zeigler S. Practices of exemplary leaders in clinical education: A qualitative study of director and site coordinator of clinical education perspectives. *J Phys Ther Educ*. 2020;34:59-66.
20. Timmerberg JF, Dungey J, Stolfi AM, Dougherty ME. Defining the role of the center coordinator of clinical education. *J Phys Ther Educ*. 2018;32:38-45.
21. American Physical Therapy Association. *Reference Manual for Site Coordinators of Clinical Education*; 2018. <https://aptaeducation.org/special-interest-group/clinical-education-faculty-sig/pdfs/2018-SCCE-Manual-FINAL.pdf>. Accessed August 23, 2022.
22. American Physical Therapy Association. *Physical Therapist Student Evaluation: Clinical Experience and Clinical Instruction*. 2010. <http://www.apta.org/Educators/Assessments/>. Accessed August 23, 2022.
23. Myers K, Davis A, Thomas S, Bilyeu C. Clinical instructor perceptions of the collaborative clinical education model: Providing solutions for success in physical therapy education. *Internet J Allied Health Sci Pract*. 2019;17.
24. Pabian PS, Dyson J, Levine C. Physical therapist productivity using a collaborative clinical education model within an acute care setting: A longitudinal study. *J Phys Ther Educ*. 2017;31:11-17.
25. American Physical Therapy Association. *Impact of COVID-19 on the Physical Therapy Profession*; 2021. <https://www.apta.org/apta-and-you/news-publications/2021/impact-of-covid-19-on-the-physical-therapy-profession>. Accessed August 23, 2022.
26. Coleman J, Knott K, Jung B. Impact of physical therapy and occupational therapy student placements on supervisor productivity: A scoping review. *Can Med Educ J*. 2021;12:98-110.
27. Apke TL, Whalen M, Buford J. Effects of student physical therapists on clinical instructor productivity across settings in an academic medical center. *Phys Ther Rehabil*. 2020;100:209-216.