

USF School of Physical Therapy & Rehabilitation Sciences

Performance Improvement Plan to Address NPTE First-Time Pass Rates

August 2, 2022



USF Health
Morsani College of Medicine
School of Physical Therapy
& Rehabilitation Sciences

EXECUTIVE SUMMARY

In 2021, the USF Doctor of Physical Therapy (DPT) student performance on the National Physical Therapy Exam (NPTE) resulted in a first-time pass rate that fell one percentage point below the national average (Table 1). Consequently, this has impacted the three-year average that is reported in the Annual Accountability Plan submitted to the State University System of Florida's Board of Governors (Table 2). USF DPT students have consistently performed at or above national averages for first time licensure pass rates, except for 2021. Despite this performance, we are encouraged to see that in 2021 USF DPT students' mean scale score exceeded the national average (669.2 versus 666.7) for the first time since 2017. It is important to note that our accrediting body, the Commission on Accreditation in Physical Therapy Education (CAPTE) expects ultimate pass rates (not first time) to be at least 85%, averaged over two years and that our ultimate pass rates have exceeded national averages for 5 of the past 6 years (Table 2). However, given the negative trend and our commitment to excellence, we have performed a root cause analysis and have established an ongoing plan to address this deficit.

Table 1. First Time NPTE Pass Rates

	2016	2017	2018*	2019	2020	2021
First Time Pass Rate USF (mean score)	95% (696.8)	98% (681.1)	91% (656.9)	91% (652.1)	91% (658.7)	87% (669.2)
First Time Pass Rate US (mean score)	93% (679.7)	93% (678.5)	91% (671.7)	91% (669.7)	91% (673.7)	88% (666.4)
Ultimate Pass Rate USF	100%	100%	100%	97.6%	100%	100%
Ultimate Pass Rate US	99.2%	99.3%	99.1%	99.4%	98.8%	96.9%
* New NPTE blueprint						

Table 2. Three-Year NPTE First-Time Pass Rates

MULTI-YEAR	2015-17	2016-18	2017-19	2018-20	2019-21	2020-22	2021-23	2022-24	2023-25	2024-26
PHYSICAL THERAPY	95	94	93	90	89	93	93	93	93	93
US Average	92	92	92	91	90

Source: USF 2022 Annual Accountability Plan

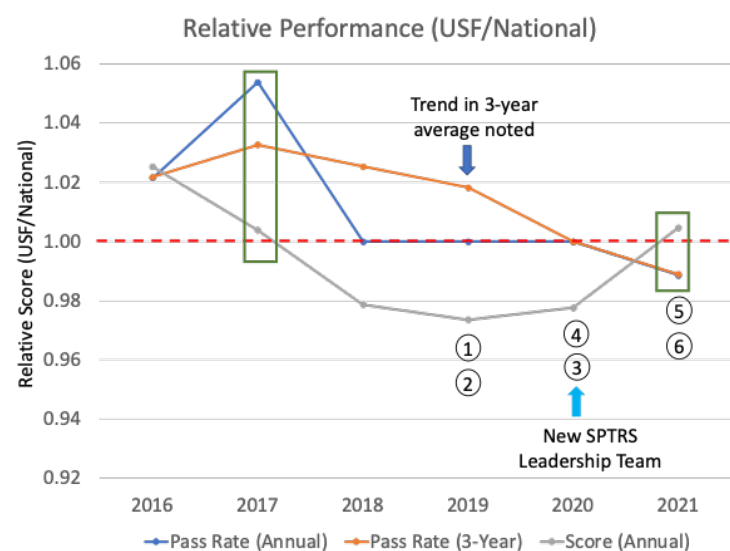
CHALLENGES

As part of our root-cause analysis, we have recognized several challenges. It takes time to implement curricular change and culture, however a new school director started in 2020 and has begun to address these issues. In addition, a three-year running average is used to assess DPT program performance, rather than a one-year average, which permits a single score to have an impact over multiple years. In addition, due to a small class size, the performance of a single student has a significant impact on the overall pass rate. For example, this past year, two students missed a passing score of 600 with a 599. Had both students passed, the first-time pass rate for USF Physical Therapy would have been 91%, which would have been well above the national average. Furthermore, the COVID-19 pandemic had a significant impact on national first-time pass rates (falling below 90%) and USF student performance followed this national trend. This effect of the pandemic is likely responsible in the observed drop in both the national and USF annual and three-year rolling averages.

MITIGATION STRATEGIES

As shown in Figure 1, the USF DPT program initiated a plan to improve student performance, including more rigorous admissions processes, curricular revision, and enhanced test preparation. Evidence for the success of these strategies includes an improvement in mean NPTE scores. We expect first-time pass rates to follow.

Figure 1. Improvement Plan Timeline



1. PEAT Practice exam requirement started.
2. GRE requirement started with evaluation of Class of 2022.
3. Provided additional NPTE test preparation resources (TrueLearn Physical Therapy and Scorebuilders BaseCamp).
4. Comprehensive curriculum revision initiated.
5. Focus on lowest quartile of PEAT scorers started after NPTE mean score improves for Class of 2021 but first-time pass rate does not increase.
6. Faculty completed NPTE item writing workshop (question writing, better understanding of exam content).

Improved Admissions Screening Processes

In 2019, a new admissions process was implemented with the addition of a GRE requirement for the **graduating Class of 2022**. Scores in GRE verbal and quantitative sections (GRE_V, GRE_Q) have been identified as reliable measures for assessing and projecting a physical therapy candidate's academic potential during the admission screening process.¹ Thus, one of our strategies for improving outcomes is evaluating student scores in this examination. Our matriculant GPAs and GRE scores remain well above the national average for students admitted to DPT programs (Table 3). It is important to note that our *U.S. News & World Report's* National Ranking increased from 79 to 49 this past year, which should continue to attract more qualified applicants.

USF School of Physical Therapy & Rehabilitation Sciences

Performance Improvement Plan to Address NPTE First-Time Pass Rates

August 2, 2022



USF Health

Morsani College of Medicine
School of Physical Therapy
& Rehabilitation Sciences

Year	2017	2018	2019	2020	2020 National Average	2021	2021 National Average	2022	2023	2024
GPA Overall	3.64	3.69	3.7	3.76	3.57	3.77	3.43	3.73	3.72	3.73
GPA Science	3.47	3.58	3.56	3.65	3.41	3.66	3.4	3.64	3.62	3.63
GRE_Q	41	51	37	39	48	49	46	49	48	52
GRE_V	41	47	40	47	54	61	54	61	58	55
GRE_W	45	56	50	54	58	62	58	63	60	63
% with GRE	75	78	80	71		65		100	100	100
	*GRE-Not Required, student self-report						*GRE-Required			

Curricular Revisions

The NPTE includes clinically focused questions from the cardiovascular & pulmonary (CVP), musculoskeletal, nervous, integumentary, and other systems. Prior to our curriculum revision, our students were spending approximately 25% of their total credit hours on basic science content, which was more than double that of peer institutions, while we had less focus on physical therapy clinical practice. The NPTE emphasizes physical therapy diagnostic examination, evaluation, differential diagnosis, prognosis, and interventions. We pursued and received CAPTE approval for a comprehensive curricular revision in April 2020 and implemented this revision in the Fall 2020, which first impacted the **graduating Class of 2023**. (Appendix. Curricular Plan.) This revision focused on increasing student preparation in each of the clinical and content areas with a focus on identified weaknesses (e.g., Cardiovascular and Pulmonary; Foundations for Evaluation, Differential Diagnosis, & Prognosis) from past NPTE performance. As part of the revision, the DPT program adopted the top 10 textbooks identified by the Federation of State Boards of Physical Therapy (FSBPT) that are referenced during the development of NPTE items. In addition, our remediation policies were strengthened while our minimum passing scores were increased from 70 to 75% for each course throughout the curriculum.

Enhanced NPTE Preparation

In 2019, we initiated a practice exam ([Practice Exam & Assessment Tool \(PEAT\)](https://www.fsbpt.org/Secondary-Pages/Educators/Prepare-Candidates-for-NPTE/Practice-Exam-Assessment-Tool-PEAT)): <https://www.fsbpt.org/Secondary-Pages/Educators/Prepare-Candidates-for-NPTE/Practice-Exam-Assessment-Tool-PEAT>) and providing additional test-preparation resources (e.g., Scorebuilders Basecamp: <https://basecamp-sb.com>). The PEAT is a timed, computer-based, multiple-choice practice exam developed by the FSBPT for NPTE candidates. Many PEAT questions are retired NPTE items, and it is a strong predictor of students' NPTE performance (Figure 2). Data show that 99.3% of students who pass the PEAT with a score of 600 or higher go on to pass the NPTE.

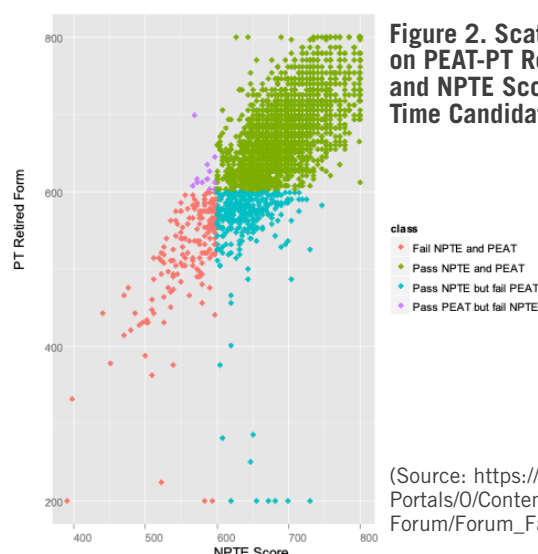


Figure 2. Scatterplot of Scores on PEAT-PT Retired Form and NPTE Scores for 1st Time Candidates

(Source: https://www.fsbpt.org/Portals/0/Content%20Manager/PDFs/Forum/Forum_Fall2014_PCAT.pdf)

USF School of Physical Therapy & Rehabilitation Sciences

Performance Improvement Plan to Address NPTE First-Time Pass Rates

August 2, 2022



USF Health
Morsani College of Medicine
School of Physical Therapy
& Rehabilitation Sciences

These practice exams are given during Spring of Year 2 and Fall of Year 3 (prior to clinical education experiences). If students do not meet a competency threshold score on the practice exam, they must complete a structured remediation to progress in the program. These exams are part of a course to allow for structured remediation and progression. We have raised the threshold each year since its inception in 2019 with a planned threshold of 600 for the Spring of Year 2 for the **graduating Class of 2022**.

Since implementing the PEAT and continually raising the threshold for program progression starting with the graduating Class of 2020, we have seen a steady increase in mean PEAT scores from 531 to 621 between 2020 to 2022 (Figure 3). In addition, the percentage of students scoring < 550 has diminished significantly (Figure 4). We have continued our mandatory licensure review course at the end of our program which provides a structured review and facilitates consolidation and mastery of critical core content. In 2021, we added [TRUELEARN](https://truelearn.com/npte-physical-therapy-exam/) (<https://truelearn.com/npte-physical-therapy-exam/>) a physical therapy exam test bank to our student resources. TRUELEARN has 950+ NPTE practice questions that are mapped to the NPTE-content outline. Students from the Class of 2021 using the TRUELEARN Platform performed above the national average at the 80th percentile. These practice questions will help familiarize students with the exam format, increase their knowledge base and decrease negative factors such as test anxiety.

Figure 3. Mean Scale Scores

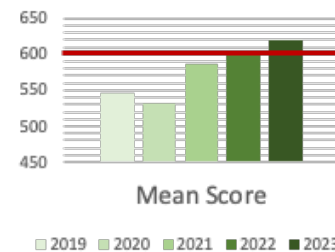
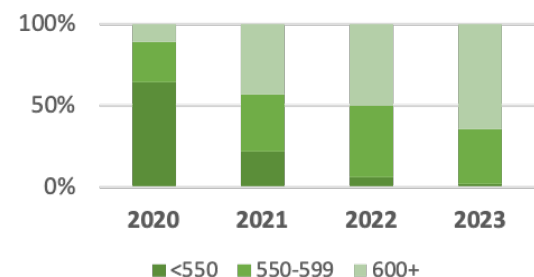


Figure 4. Year 2 DPT PEAT Performance Breakdown



➤ ADDITIONAL STRATEGIES IMPLEMENTED IN 2022

NPTE Preparation

Passing scores for the Class of 2023 Spring PEAT exam were maintained at 600, while expectations for their 3rd year PEAT will be raised to 650. Previous strategies had an impact on mean scores for the graduating Class of 2021, however, upon further reflection, students in the bottom quartile continued to be at risk for failing the NPTE the first time. Therefore, we shifted our strategy to focus on advising to address the performance of those within the bottom quartile. Students in the Class of 2022 who have been identified as at risk for first time NPTE failure were required to re-take the PEAT with a score over 600 and meet with their advisors and complete a structured learning plan. Structured learning plans include test preparation and were required as part of their terminal clinical education experiences. Furthermore, Class of 2022 graduates will be offered additional PEAT practice exams following graduation to assist in their preparation for the October 2022 NPTE.

Faculty Development

Four faculty attended the [Federation of State Board of Physical Therapy's \(FSBPT\) NPTE Workshop](https://www.fsbpt.org/Secondary-Pages/Educators/Educators-Workshops) for Education on January 21-23, 2022 (<https://www.fsbpt.org/Secondary-Pages/Educators/Educators-Workshops>) complementing the "TherapyEd Strategies for Success in PT School" webinar that our DPT students and faculty attended on November 18, 2021 (<https://www.therapyed.com/npte-exam/for-faculty/>). The FSBPT workshop

USF School of Physical Therapy & Rehabilitation Sciences

Performance Improvement Plan to Address NPTE First-Time Pass Rates

August 2, 2022



USF Health
Morsani College of Medicine
School of Physical Therapy
& Rehabilitation Sciences

assists faculty in preparing our students to be successful on the PEAT which is taken in the Spring of their 2nd year and Fall of their 3rd year, and NPTE. The objectives of this workshop were to enable faculty to write better multiple-choice items that follow the same format as the NPTE as well as:

- Statistically analyze their test questions to determine if they are well written
- Understand how the NPTE is developed from content outline through scoring
- Assist in preparing our students for the test administration experience
- Interpret and use our school pass rate reports

The faculty were selected based on their expertise and to ensure coverage of the key areas of the NPTE Blueprint, e.g., Musculoskeletal, Neurologic, Acute Care. These areas include concepts related to pathology, examination, interventions, as well as safety and professional considerations. Additionally, these faculty teach concepts related to the areas in the Foundational Science courses. Based on this workshop, these faculty provided an “in-house” workshop and serve as trainers/mentors for those faculty who did not attend the FSBPT workshop (Aug 3, 2022).

Program Review

In the Fall 2022 the USF Health Office of Faculty and Academic Affairs will carry out a comprehensive assessment of the USF DPT program to: 1) identify any aspect of the program that may be contributing to the noted decrease in student performance on the NPTE, and 2) make specific recommendations that could help reverse the trend. The evaluation will be led by Dr. Javier Cuevas, Associate Vice President of Faculty and Academic Affairs, USF Health, who has previous experience in carrying out this type of academic review.

SUMMARY

Our goal is to meet, and ultimately exceed, the US national average for first time pass rate on the NPTE. For the past five years, the annual first-time licensure pass rates for USF Health's DPT students have been at or above national averages for every year, except for 2021. Despite this lower pass rate, the mean exam score for USF DPT students in 2021 exceeded the national average for the first time since 2017. *It is important to note that our two-year ultimate pass rate has ranged between 98.8 to 100% since 2015, which far exceeds the CAPTE requirement of 85%.* In our pursuit of excellence, starting in 2019 the School of Physical Therapy & Rehabilitative Sciences identified opportunities and initiated a plan to improve student performance, including curricular revision, enhanced test preparation, and more rigorous admissions processes. These changes will not be fully realized until the graduation of the Class of 2022. Students from this class will start taking the NPTE in October 2022. The improvement in *mean* NPTE scores for classes that only **partially** benefitted from these changes (i.e. Classes of 2020 and 2021) serves as evidence for the success of the initial strategies. Furthermore, in 2022, we have provided additional faculty development to focus on tactics to improve our student preparation for the NPTE, particularly students performing poorly in the PEAT practice exam. These efforts will not be fully realized until the graduation of the Class of 2023. While we anticipate that these actions will result in a positive change in the trajectory of performance for our licensure passage rates on the NPTE, it should be noted that data reported in the Accountability Plan reflect a 3-year rolling average. Given the rolling average, combined with the fact that **the implementation of the changes will only be fully in effect for Accountability Plan reporting once our class of 2023 cohort of students graduates**, we anticipate an immediate reversal of the annual first-time pass rates trend with a slower, but persistent, improvement in the 3-year rolling average.

¹ Kume, J., Reddin, V., & Horbacewicz, J. (2019). Predictors of Physical Therapy Academic and NPTE Licensure Performance. *Health Professions Education*, 5(3), 185-193.