

TEACHING PEDIATRIC PHYSICAL DIAGNOSIS IN A VIRTUAL SETTING

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Need for Innovation

- Safety concerns during the COVID-19 pandemic limited medical students' ability to rotate in clinical settings
- Research suggests students feel the least prepared for the pediatrics clerkship due to lack of exposure to pediatric patients in the pre-clerkship environment^{1,2}
- Our institution's pediatric physical diagnosis curriculum depends on in-person patient contact that is untenable during the pandemic

Objectives

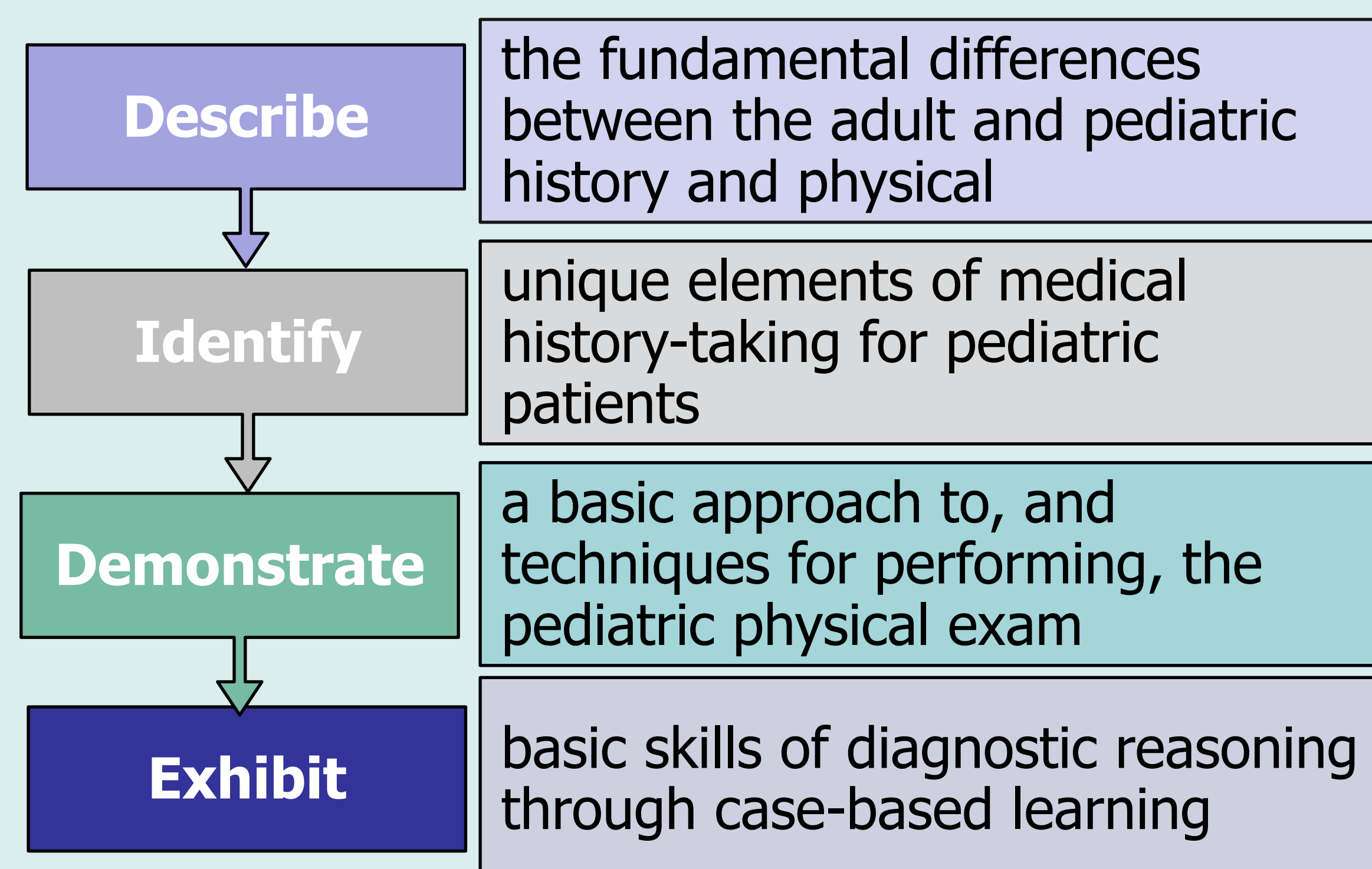
1. Develop a virtual pediatric physical diagnosis curriculum which successfully:
 - Increases pre-clerkship student comfort with the pediatric history and physical
 - Teaches the differences between the pediatric and the adult H&P
 - Fosters interest in pediatric medicine
2. Compare the efficacy of our 2020 virtual curriculum against the 2019 traditional in-person curriculum in the following metrics:
 - Perceived educational value of the session among learners
 - Learners' comprehension of material

Instructional Format

- Live virtual small-group sessions via Zoom
- Learners: 5-6 pre-clerkship medical students
- Instructors: one MS4 after completion of a Peds AI & one Peds faculty member

Curriculum

Learning Objectives



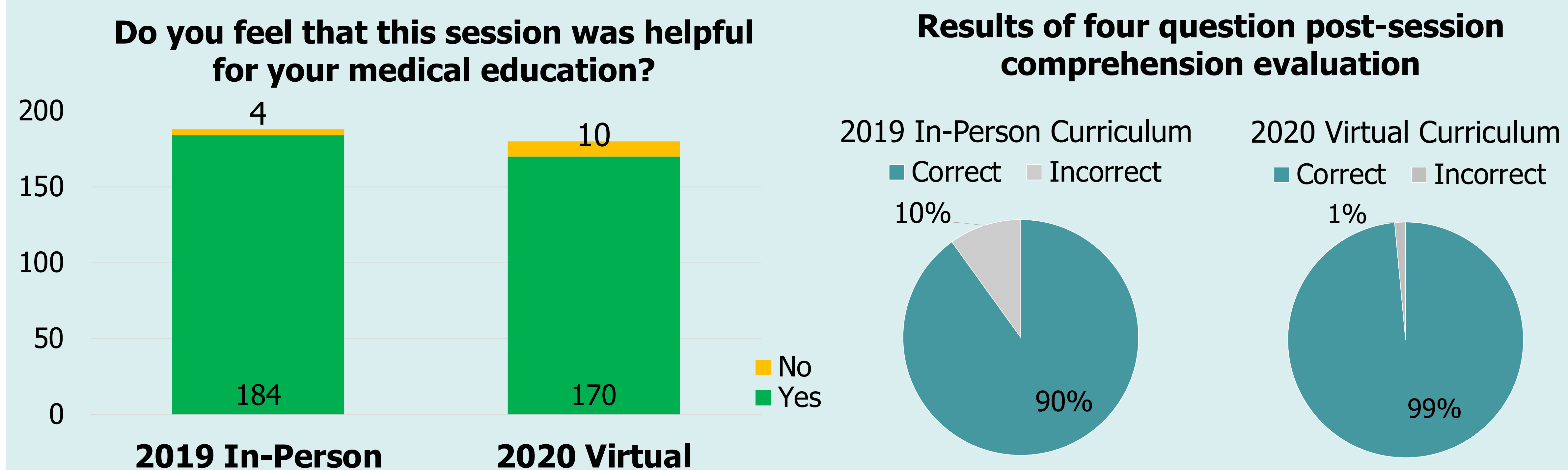
Materials

- PowerPoint didactics on comfort maneuvers and rapport building
- Resident-created video demonstrating history taking and exam techniques on children of different ages
- Pediatric vignettes with a focus on early clinical reasoning

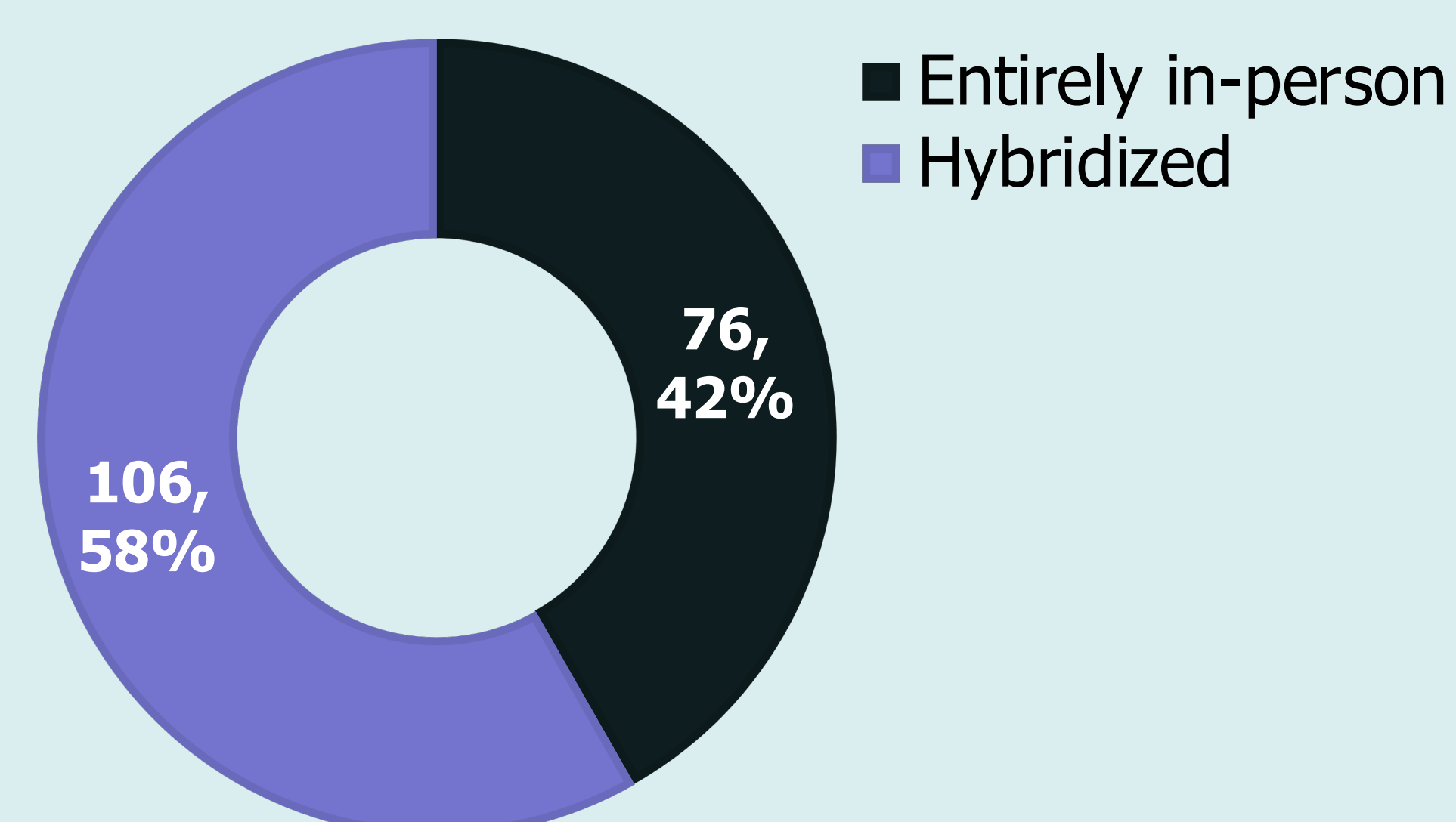
Discussion

1. There was no significant difference between the student satisfaction scores of the 2019 in-person and 2020 virtual curricula
2. Students in the virtual curriculum performed statistically better on the post-test (90% vs 98% correct, $p < 0.01$)
3. A majority of students in the virtual curriculum were in favor of hybridizing future sessions
4. Students' reflections from the 2019 in-person curriculum tended to have more variable responses, many notably themed around patient experience
5. Students' reflections from 2020 were attuned to learning objectives and identified more practical approaches to pediatric H&P

Results



Once we return to in-person learning would you [students] recommend that pediatric PD be taught entirely in-person, or hybridized with a standardized virtual component?



Representative responses: "Briefly reflect on you learned about communicating with and examining a child"

- 2019 In-Person**
 - "We saw some very intense cases ... helped me grow as a student doctor"
 - "I learned the importance of approaching the exam of a child differently depending on their age"
 - "Most struck by our asthma patient...receiving all her inhalers from the ED..."
- 2020 Virtual**
 - "Nuanced differences in communication between adults and children"
 - "Do the quiet parts of the exam first"
 - "Birth history for children under 2 y/o"
 - "Developmental history for children under 5 y/o"

Conclusion

In adapting to meet students' educational needs during the COVID-19 pandemic, we demonstrated the effectiveness of a virtual pediatric physical diagnosis curriculum. We gained insight into effective ways to bridge the pre-clerkship pediatric knowledge gap and virtually inspire excitement about pediatrics.

Next Steps

- Formal thematic analysis of students' reflections after pre-pandemic and pandemic pediatric physical diagnosis curricula
- Hybridization of the curriculum to achieve the benefits of both patient experience and standardized expert sessions

References

- 1) Held, MR, Gibbs, K, Lewin, LO et al. *Med Sci Educator*. 2017. doi:10.1007/s40670-017-0422-4
- 2) Rose, Suzanne. *JAMA*. 2020. Doi:10.1001/jama.2020.5227.