

Best Practice Advisory to Improve Adherence to Hepatitis B Vaccination Guidelines in Undergraduate Nursing Students

Cheryl K. Nelson, MSN, RN., FNP-BC, WHNP-BC, William Rocks, EdD, Bryan Hansen, PhD, RN, APRN-CNS, ACNS-BC & Vinciya Pandian PHD, MBA, MSN, RN, ACNP-BC, FAAN



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Background

- 862,000 people have chronic Hepatitis B infections in the United States, 15-25% will die prematurely from liver cirrhosis or cancer
- Healthcare costs resulting from complications related to Hepatitis B infections estimated \$1 billion annually
- Only 35% of adults 19-49 years of age report having 3-doses of hepatitis B vaccination
- Despite being at-risk of occupational exposure, 64% of healthcare workers have the recommended hepatitis B vaccinations and anti-HB titer
- Healthcare students are at a greater risk of exposure than licensed healthcare workers; students have an 18% higher risk of needle-stick injuries
- Many undergraduate healthcare students are not vaccinated as recommended for Hepatitis B
- Most frequently cited barriers to hepatitis B vaccination are provider's lack of clarity about the recommended guidelines, and patient's financial barriers

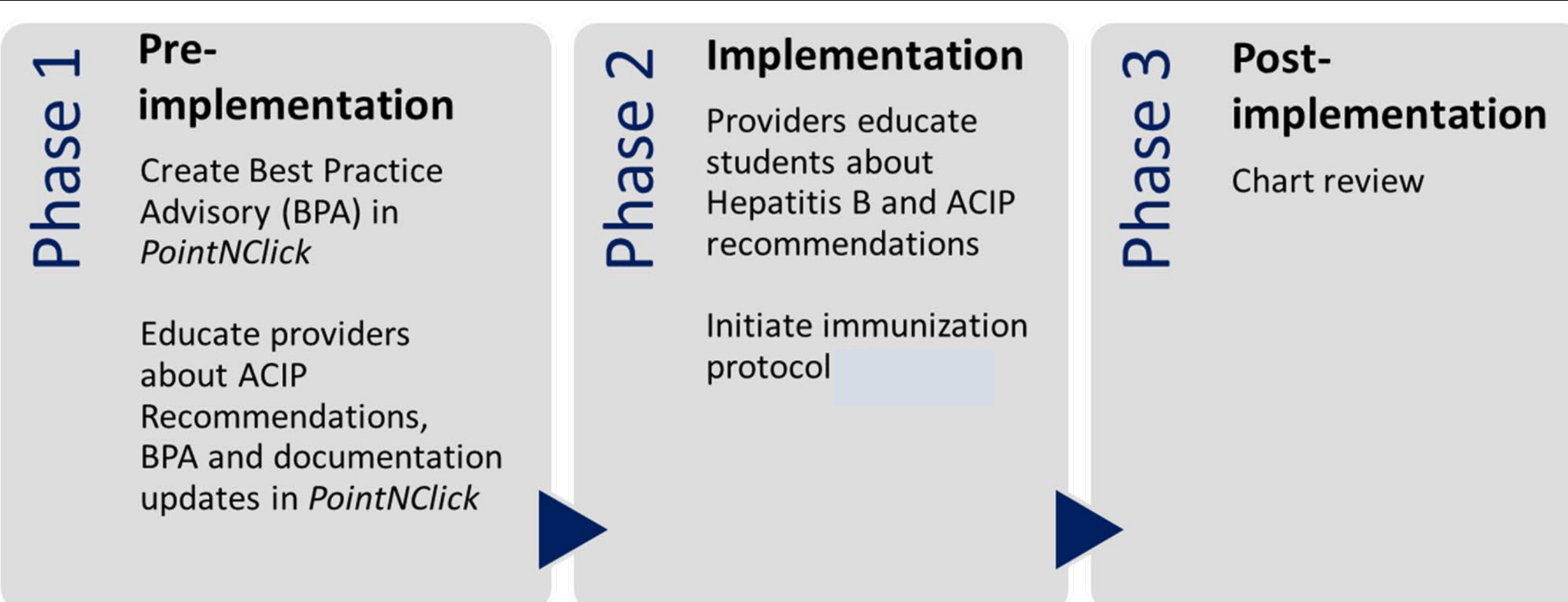
Purpose and Aims

Purpose: To increase the rate of documented Hepatitis B immunization and anti-HB titers among undergraduate nursing students through provider/staff education and Best Practice Advisory

Aim 1: Determine if provider education and a best practice advisory (BPA) increases the rate of documented Hepatitis B status

Aim 2: Evaluate if initiating Hepatitis B immunization protocol, and providing access to Hepatitis B vaccination/ titers will increase the rate of positive anti-HB titers

Methods



Design: Pre-/ Post- intervention

Setting: Community College Wellness Clinic, Allied Health Review visit

Sample Population: Undergraduate nursing students

Pre= Fall 2019 (n=33) & Post= Fall 2020 (38)

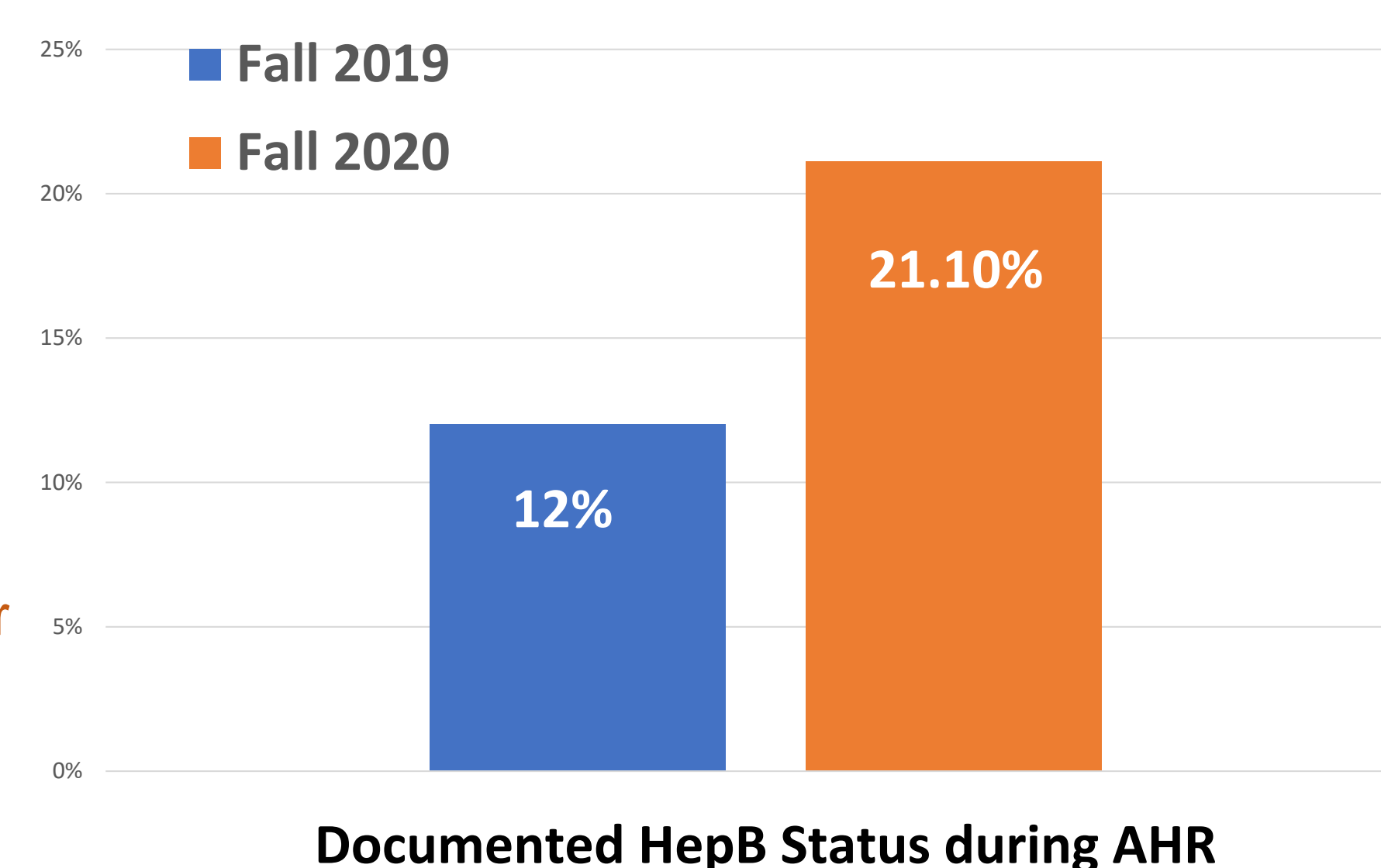
Intervention: Provider Education, BPA; student access to vaccine/ titers

Data Collection: 16-weeks

Results

Aim 1: Provider Education & BPA and documented Hepatitis B status

Advisory Committee on Immunization Practice (2018) recommendations for hepatitis B immunization 3-dose series Hepatitis B vaccination AND anti-HB titer



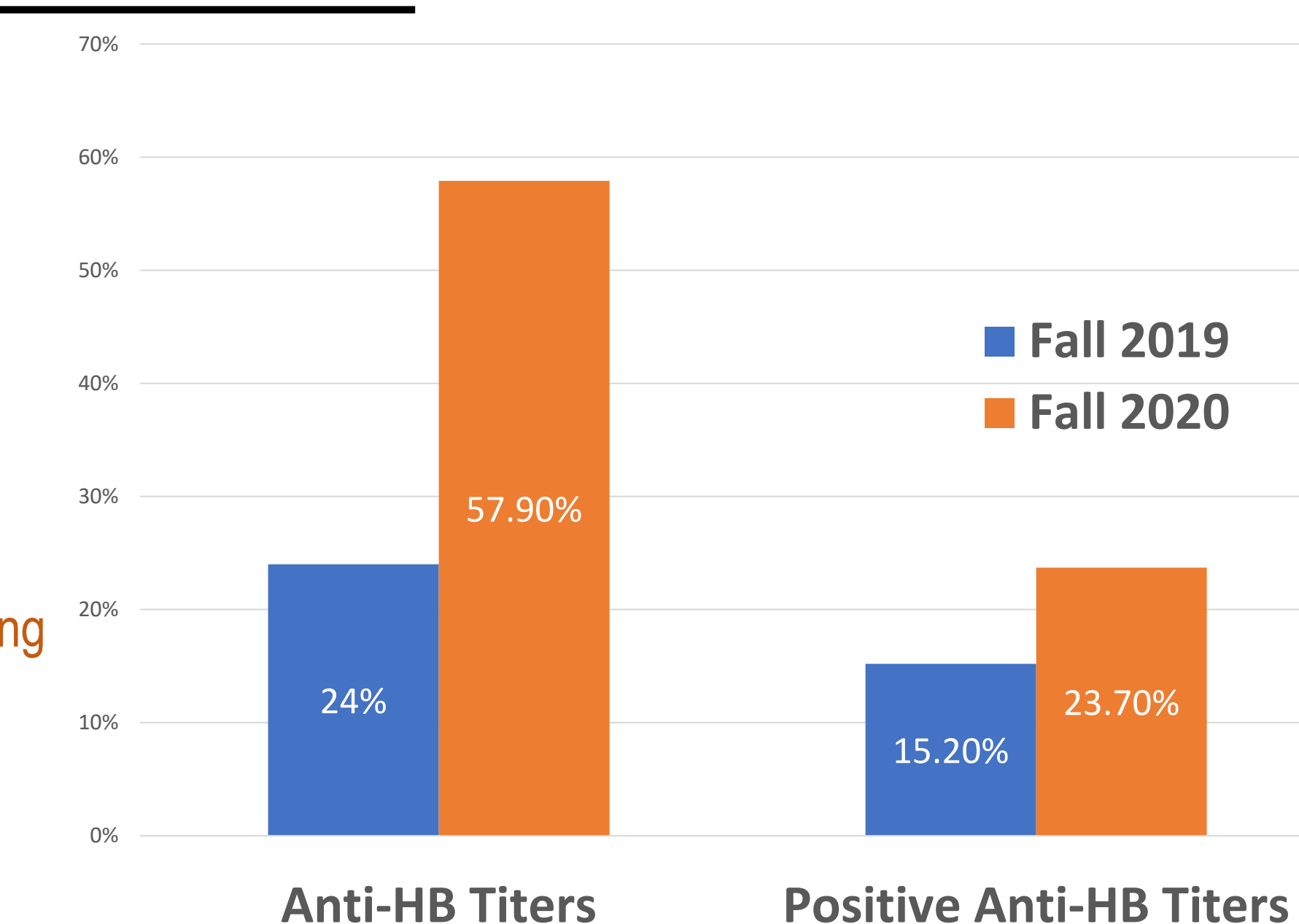
RESULTS:

Fall 2019 = 12% (4)

Fall 2020 = 21.1% (8)

$p = .317$ no statistical significance in hepatitis B status documented after implementing BPA

Aim 2: Provider initiation of Hepatitis B protocol and student access to hepatitis B vaccine/ titers



RESULTS: (Total Titers)

Fall 2019 = 24% (8)

Fall 2020 = 57.9% (22)

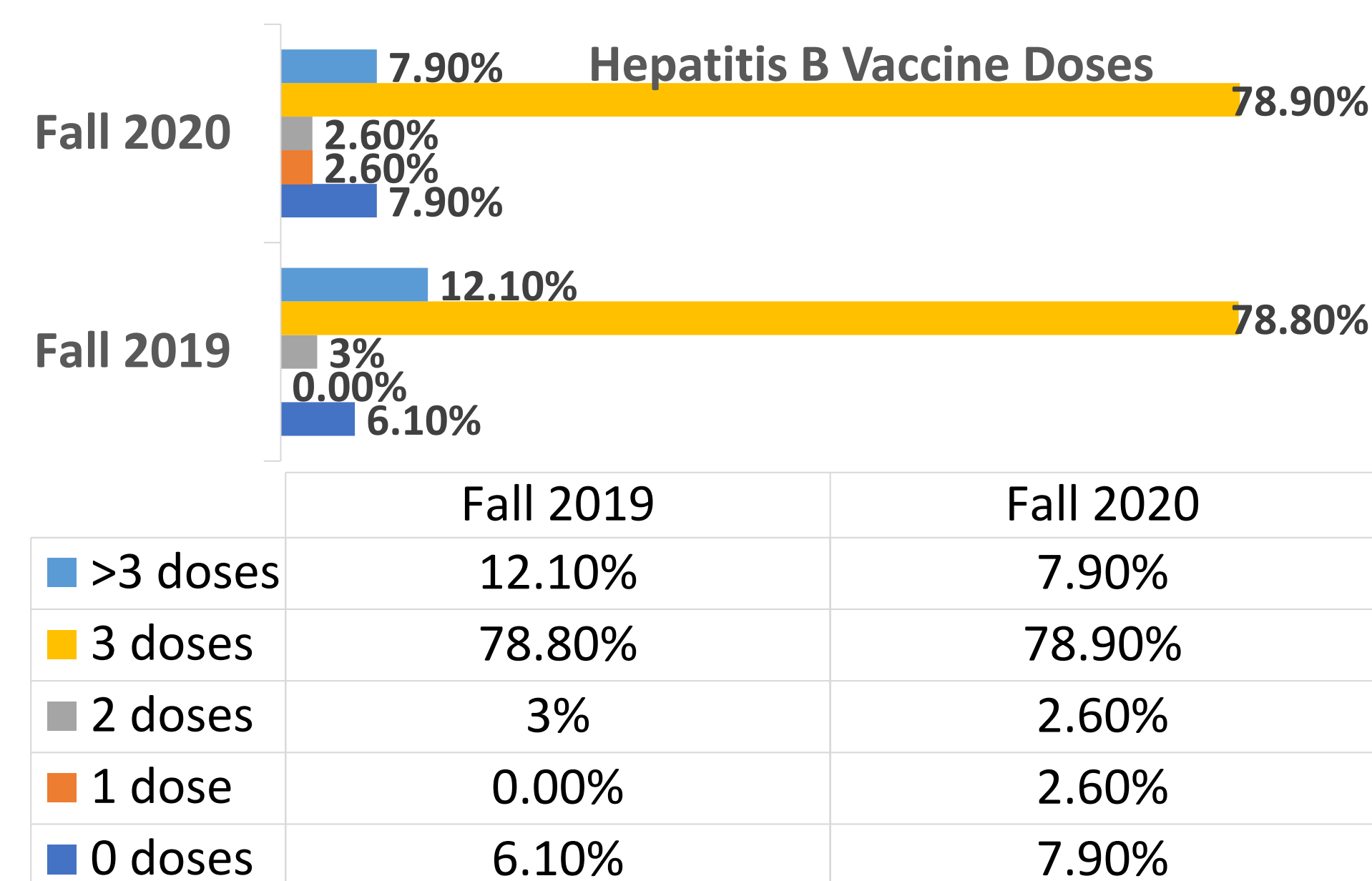
$p = .004$ statistical significance in anti-HB titers obtained after implementing BPA, access to titers

RESULTS: (Positive Titers)

Fall 2019 = 15.2% (5)

Fall 2020 = 23.7% (9)

$p = .367$ no statistical significance in the rate of positive anti-HB titers after interventions



RESULTS:

$p = .367$ no statistical significance in the number of hepatitis vaccine doses after interventions

Sample Demographics

Demographic characteristics	Fall 2019 (n= 33)	Fall 2020 (n= 38)	P value
Age, mean, (SD)	26 (6.6)	25 (8.5)	.120
Sex n(%)			
Male	6 (18.2%)	8 (21.1%)	.762
Female	27 (81.8%)	30 (78.9%)	

Limitations

The COVID-19 pandemic restrictions in place at the college in Fall 2020 impacted student access to vaccination and serology testing.

The 16-week project implementation period did not allow time for students to complete a full 3-dose booster and repeat serology.

Conclusions

This QI project increased awareness and access to hepatitis B vaccination for undergraduate healthcare students.

Educating providers about hepatitis B immunization best practice guidelines and embedding , a best practice advisory in the visit encounter note supports implementation of the ACIP guidelines for hepatitis B immunization.

Student access to hepatitis B vaccination and anti-HB titers through the wellness clinic improves student adherence to best practice immunization guidelines.

References

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