

# Improving the Percentage of Hemodialysis Patients Consenting to Hepatitis B Vaccination

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## Background

It is estimated that approximately two billion people worldwide have evidence of past or present infection with hepatitis B virus (HBV), and 248 million individuals are chronic carriers (ie, positive for hepatitis B surface antigen). In the U.S., the incidence of acute HBV decreased by 81% from 1990 to 2006. Between 2006 and 2013 the incidence of HBV infection remained stable at 1 case per 100,000 persons, with an estimated 19,764 newly infected patients in 2013. Rates were highest in adults, particularly males aged 25 to 44 years.

Hepatitis B infection is an important issue in hemodialysis patients. Duration of hemodialysis of more than two years was found to be a risk factor for hepatitis B transmission. Previous research found that 4% of HD patients have occult hepatitis B infection and 2.3% were HBV-DNA positive. In several studies, the response rate to HBV vaccine in hemodialysis patients was found to be 40% to 90%. We reviewed hepatitis B labs and vaccination records of all ECU HD patients who were educated about vaccination by our dialysis nursing staff. Of 139 patients: none were actively infected with hepatitis B, 128 responded to vaccination, four did not respond and refused re-vaccination, and 7 refused vaccination.

## Aims

This project was conducted to increase our dialysis unit's hepatitis B vaccination rate by implementing a physician-led patient education protocol.

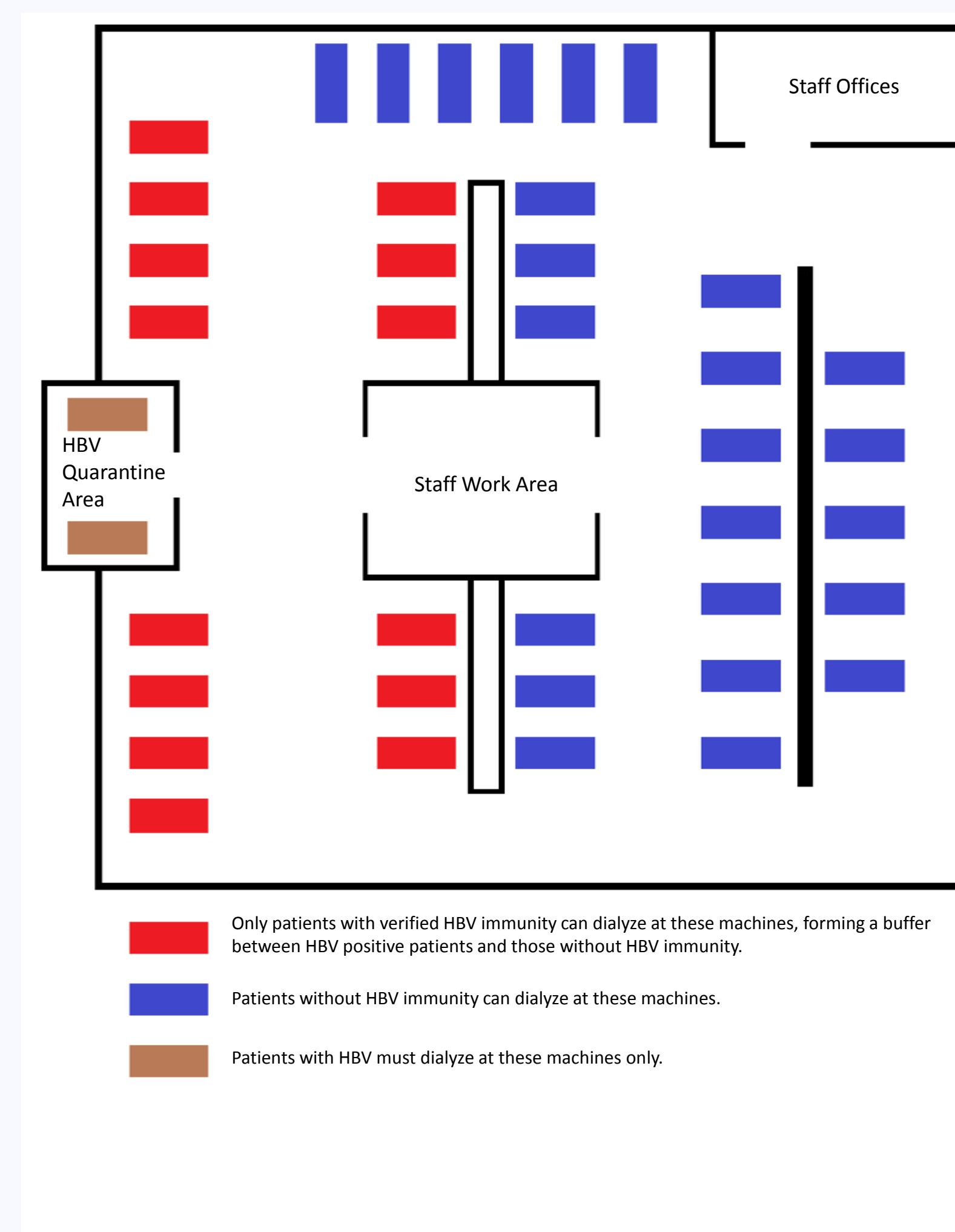
## Design

- A second year nephrology fellow contacted the refusing patients face-to-face or by phone.
- Of the 7 non-vaccinated patients, five were contacted by phone and two in person.
- All four non-responders were contacted by phone.
- Education was provided which covered: the risk of hepatitis B transmission in people on dialysis, vaccine availability, and pros and cons of vaccination.
- The physician connected with the patients by sharing his personal decision to receive the hepatitis B vaccination

## Interdisciplinary Patient Education

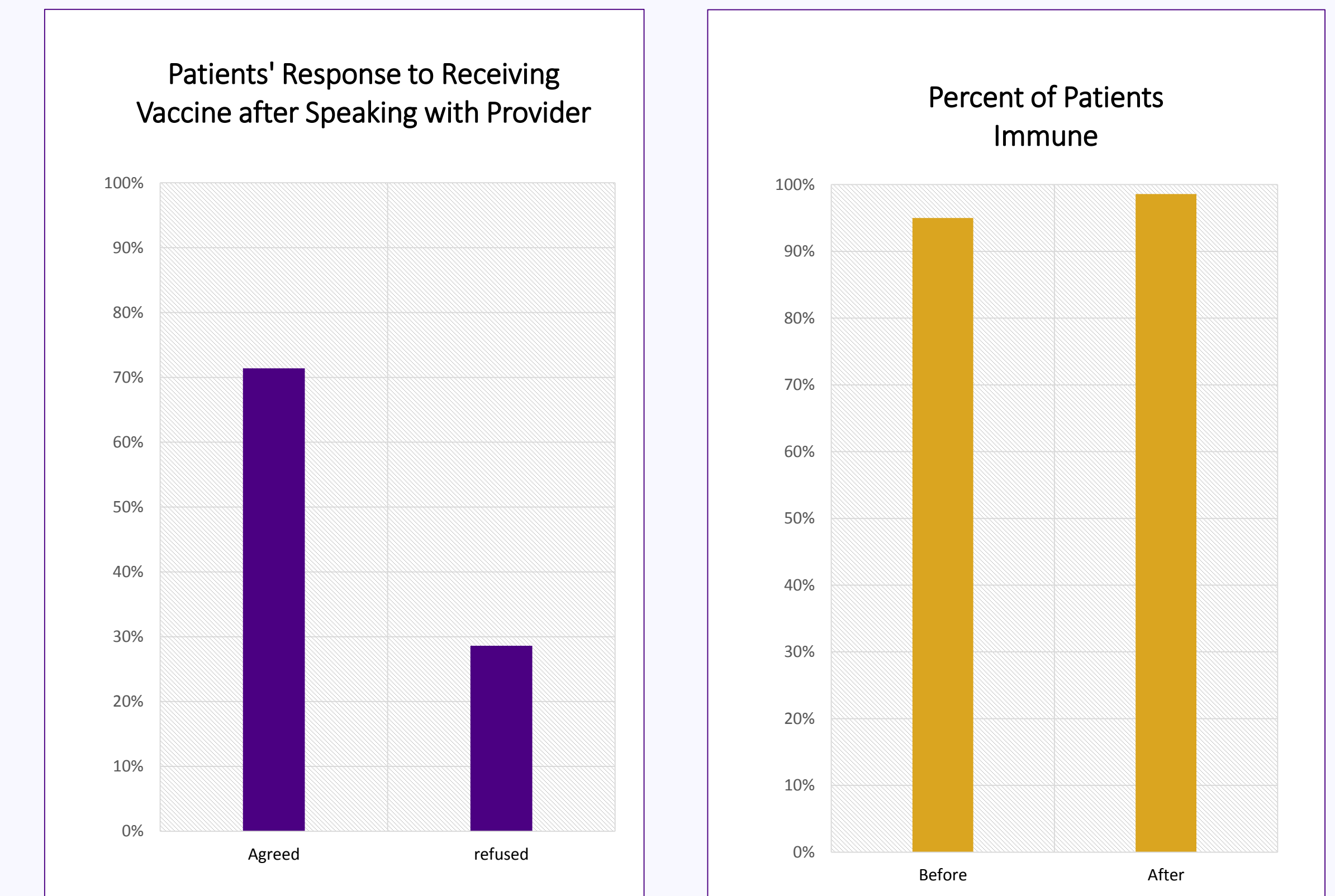


## Dialysis Unit With HBV Quarantine Area



### Unit Protocol for HBV

- Patients with HBV immunity are tested every year for immunity
- Patients who refused HBV vaccine or are not HBV immune are tested every month for HBV
- Patients who lose immunity are moved out of the buffer zone, which can disrupt workflow and dialysis schedules



## Results

- Five out of 7 (71.4%) patients agreed to be vaccinated.
- Two of the five patients contacted by phone refused vaccination, while all patients contacted in person agreed to receive the vaccination.
- All four (100%) non-responders agreed to be revaccinated when educated by the physician.
- Physician-led education increased the percentage of consenting or immune HD patients from 95% to 98.6%.

## Conclusions

- Physician-led education increased the hepatitis B vaccination rate at ECU dialysis.
- Minimal time was needed to educate about vaccination and could occur during routine monthly rounds.
- An increase in hepatitis B vaccination rates and therefore immunity improves the safety of the individual HD patient, as well as the safety of the dialysis unit as a whole.
- We believe the approach of physician led education will also improve influenza and pneumonia vaccination rates.

### REFERENCES:

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