

Background

- To reduce the risk of hepatitis B transmission among patients receiving dialysis, the Centers for Disease Control recommends isolating patients with hepatitis B during dialysis and disinfecting machines after treatment.
- For each patient, hepatitis B susceptibility status can be defined as: immune, non-immune/susceptible, infected, or unknown.
 - Knowledge of a patient's hepatitis B status is critical to determining the appropriate treatment protocol.

Objective

- To reduce the number of dialysis treatments performed on patients with unknown hepatitis B status through the development and implementation of an initiative to improve surveillance efforts among patients treated by DaVita UCLA Hospital Services
 - DaVita Hospital Services, UCLA provides inpatient dialysis services to UCLA Ronald Regan, UCLA Santa Monica, and Saint John's Health Center, performing approximately 1600 treatments monthly.
 - As of Jan 2018, >7% of treatments were performed on patients with unknown hepatitis B status. The goal of the initiative was to achieve <5% of treatments with hepatitis B status unknown.

Approach

- The hepatitis B surveillance initiative included the following elements:
 - The Hospital Services team collaborated with hospital infection control and IT teams to develop an algorithm that would populate required laboratory tests into the physician's dialysis orders at the time of entry into the electronic health record (Figure 1).
 - Auto-generated weekly reports identifying patients with unknown hepatitis B status were provided to the Hospital Services Administrator and Charge Nurse. The reports additionally contained alerts for laboratory tests that were due (Figure 2).
 - The care team were encouraged to use a centralized portal to access outpatient laboratory data for those patients who also dialyzed in a DaVita clinic in the outpatient setting.
 - Nurses were educated on correct documentation; processes were implemented to follow up on lab results 2 hours after samples were obtained.

Figure 1: Required Laboratory Orders Algorithm

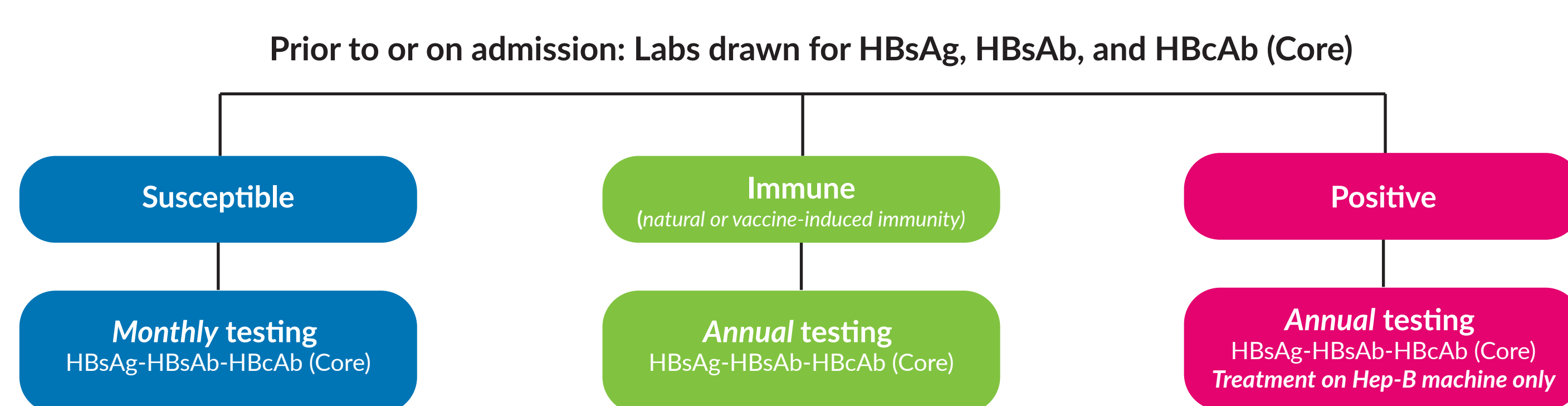
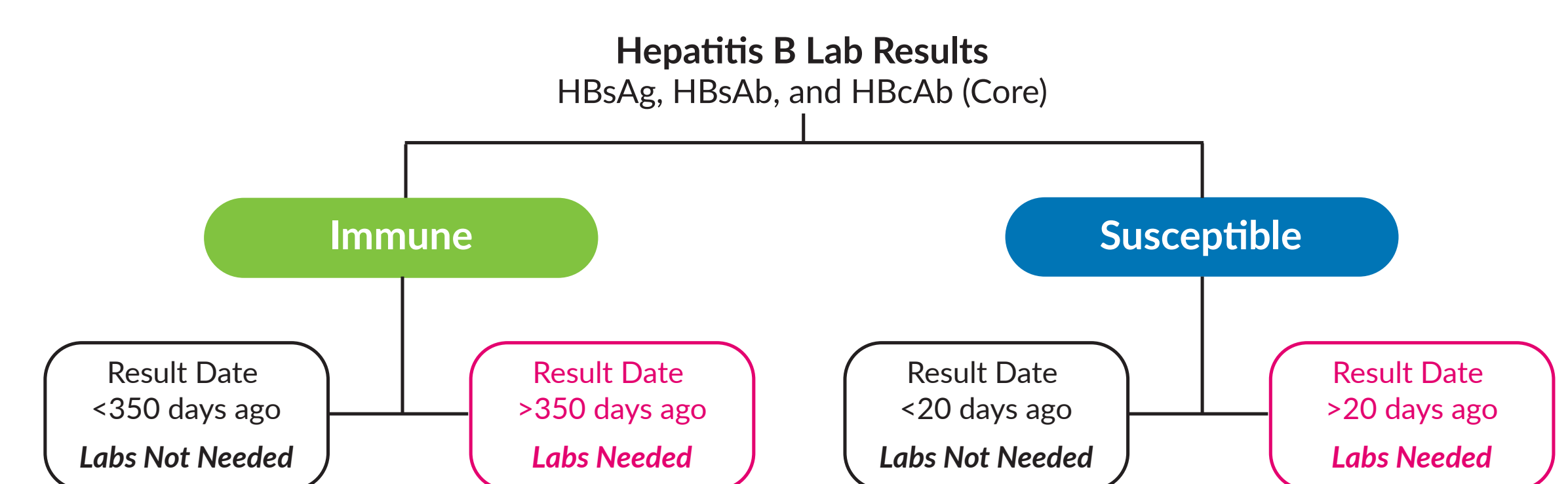


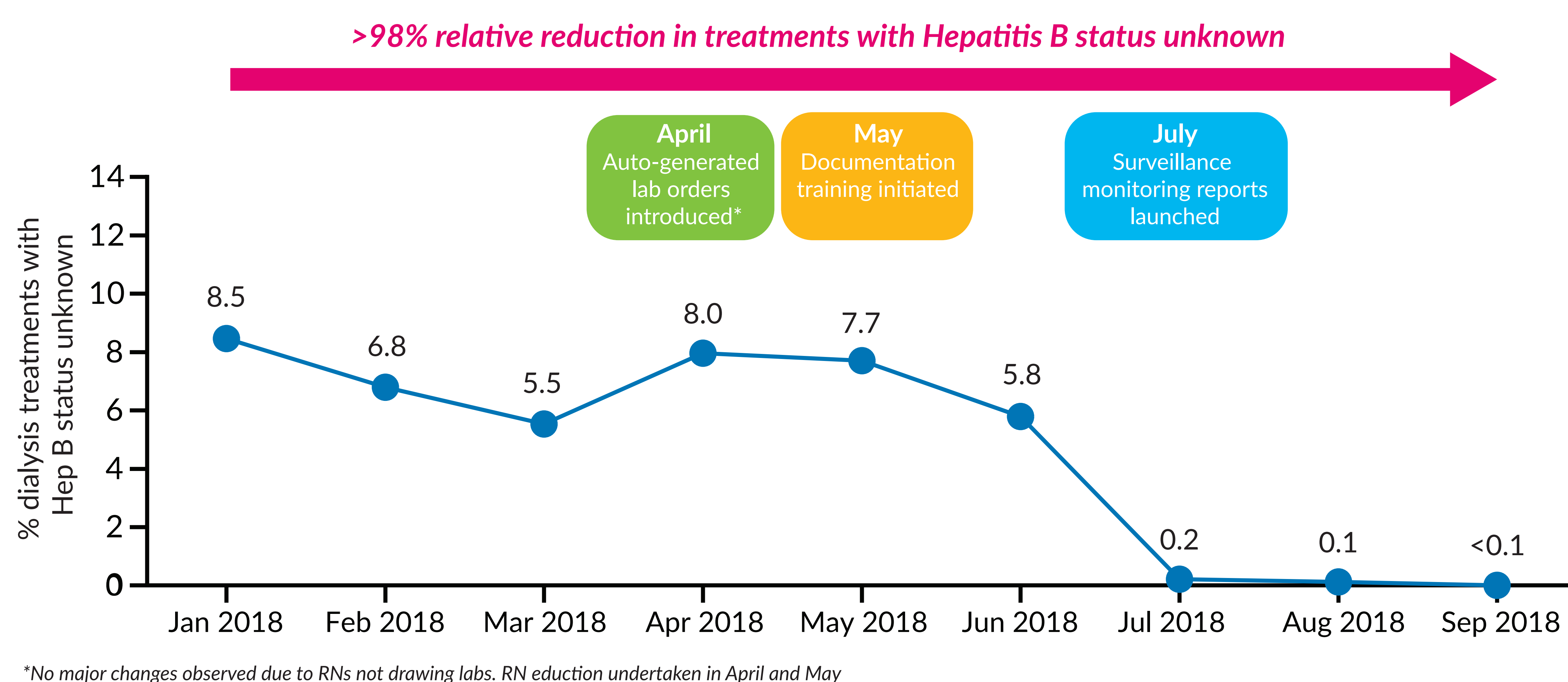
Figure 2: Surveillance Monitoring Report Alerts



Results

- The percentage of inpatient dialysis treatments performed on patients with unknown hepatitis B status was assessed on a monthly basis to determine the impact of the surveillance initiative.
- Monthly reports demonstrated >98% decrease in the percentage of dialysis treatments with patient hepatitis B status unknown over the period following implementation of the surveillance initiative (Figure 3).

Figure 3: Percentage of Inpatient Dialysis Treatments with Patient Hepatitis B Status Unknown



Conclusions

- Through a collaborative surveillance initiative, DaVita Hospital Services Group and UCLA Health were able to dramatically reduce the number of inpatient dialysis treatments performed on patients with unknown hepatitis B status.
- This outcome was achieved using a model based on root-cause analysis measures which can be implemented in any hospital services program to improve patient safety.

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