

QUALITY IMPROVEMENT INITIATIVE TO INCREASE ANTENATAL VACCINATIONS IN SINGAPORE IN A SINGAPORE HOSPITAL

INTRODUCTION

Antenatal influenza and Tdap vaccinations are established effective measure in reducing both maternal and neonatal complications and morbidities from such infections. However, the local uptake of antenatal vaccinations still remains suboptimal (9.8% in 2017) in Singapore hence an quality improvement project has been conducted to increase antenatal vaccine uptake in the country's largest hospital specializing in healthcare for women and children.

METHOD

This project included all pregnant ladies who had delivered in KK Women's and Children's Hospital during the period January 2020 to September 2021.

A survey was conducted among patients and healthcare staff prior to the quality improvement project to assess factors influencing pregnant women's decisions regarding antenatal vaccines and we have identified lack of patient's education and physicians not routinely recommending vaccines to patients as leading barriers hence proposed interventions were aimed to improve these. Interventions were implemented in staged phases i.e. patient education leaflets and posters were made readily available and accessible to patients in various parts of the hospital, and active reminders were given to physicians to routinely recommend vaccines.

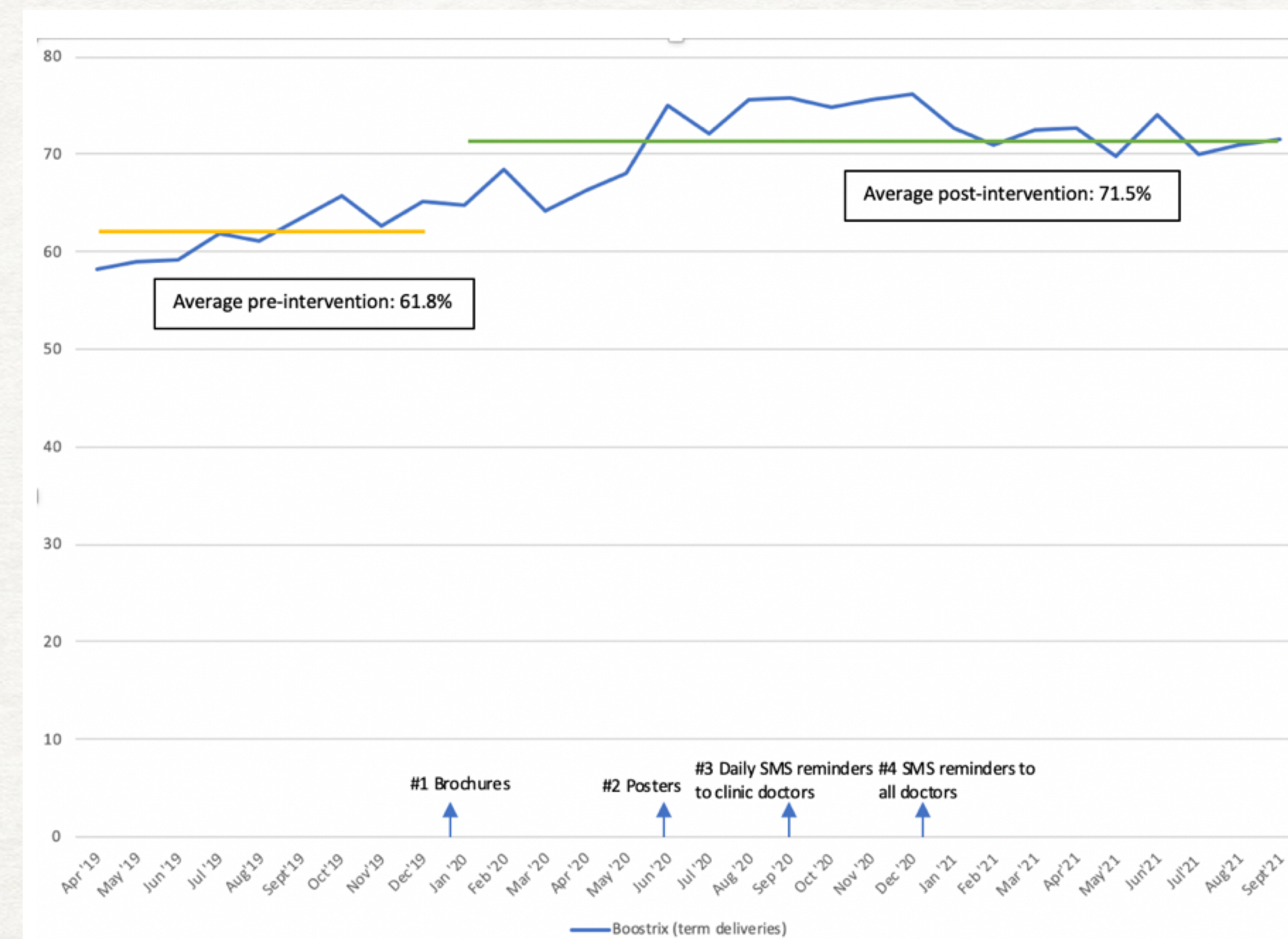


Figure 1: Percentage of patients who delivered in each month who had received the boostrix vaccine antenatally as well as highlighting the time point of each QI intervention

RESULTS

We compared the uptake rates for both vaccines prior to (5962 patients who delivered at term between April to December 2019,) and after interventions were introduced (17852 patients who delivered at term between January 2020 to September 2021;), and had seen significant improvement of uptake for both vaccines. Antenatal Tdap vaccination rates increased from 61.8% to 71.5%, p-value = 0.000068 , p < 0.05. Although there was initially a reduction in uptake for influenza vaccines due to COVID global pandemic and reported influenza vaccine-related deaths in South Korea, eventually, we have seen an overall increase uptake of influenza vaccine from 26.2% to 39.5%, p-value 0.0463, p value < 0.05.

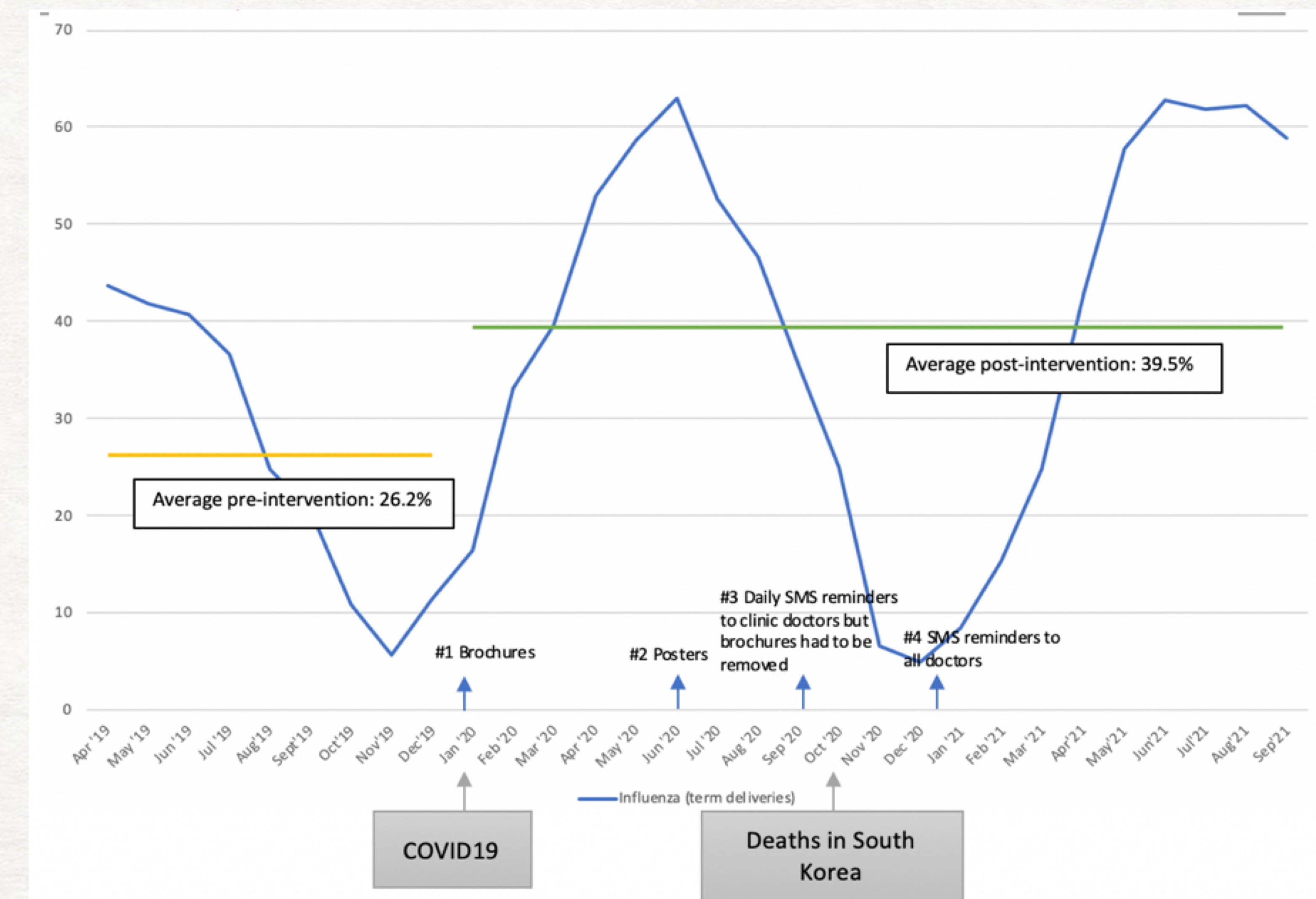


Figure 2: Percentage of patients who delivered each month and had received the influenza vaccine as well as the time point of each QI interventions and external events affecting the uptake of influenza vaccine.

CONCLUSION

This project determined the rate of antenatal vaccines uptake and also showed that increasing patients' education and routine healthcare professional's recommendation are effective strategies to improve vaccination uptake. In future, we can look at other avenues that focus on these to ensure sustainability in improving uptake, and also apply similar methods in other hospitals based in metropolitan cities similar to that of Singapore.