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BAPTIST HEALTH SOUTH FLORIDA

A Nurse Driven Acute Stroke Alert Process Improves Treatment Times and Treatment Rates

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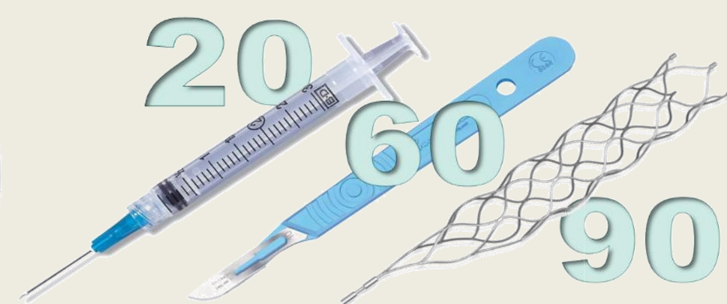
INTRODUCTION

The importance of stroke treatment time has gained sufficient popularity because it is now well-known that "Time is Brain". Treatment rates, however, lag behind in national importance even though more lives can be saved by treating more often.

Our TJC Comprehensive Stroke Center (CSC) has a nurse-led stroke alert process that focuses on multiple, rapid, simultaneous steps to reduce IV alteplase initiation time (door to needle, D2N). The Baptist Emergency Stroke Team (BEST) responders are highly-trained and skilled stroke nurses that assess, coordinate, and initiate parallel processes to ensure the best possible times. When we identified this new process our treatment rate was lower than the national rate for certified CSCs, the BEST responders used a stepwise process to develop their own interventions to improve treatment rate.

METHODS

First, the BEST responders started tracking our monthly treatment rates. Next, they set a goal for improvement, and then brainstormed how to influence the treatment decision-making process. The BEST responders initiated a monthly process improvement meeting that focused on the importance of making treatment decisions based on disability rather than an NIH Stroke Scale score. The team scripted and rehearsed critical conversations to have with providers that advocated specifically for treating disability. The team adopted the motto, "Treat Disability, Not Numbers" and used that as a call to arms.



RESULTS

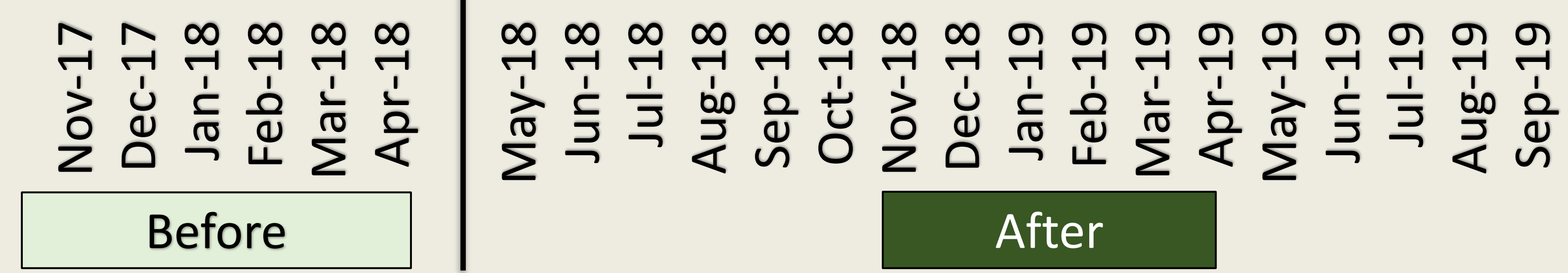


Fig 1: Time periods used to compare BHM nurse-led performance to all TJC CSC

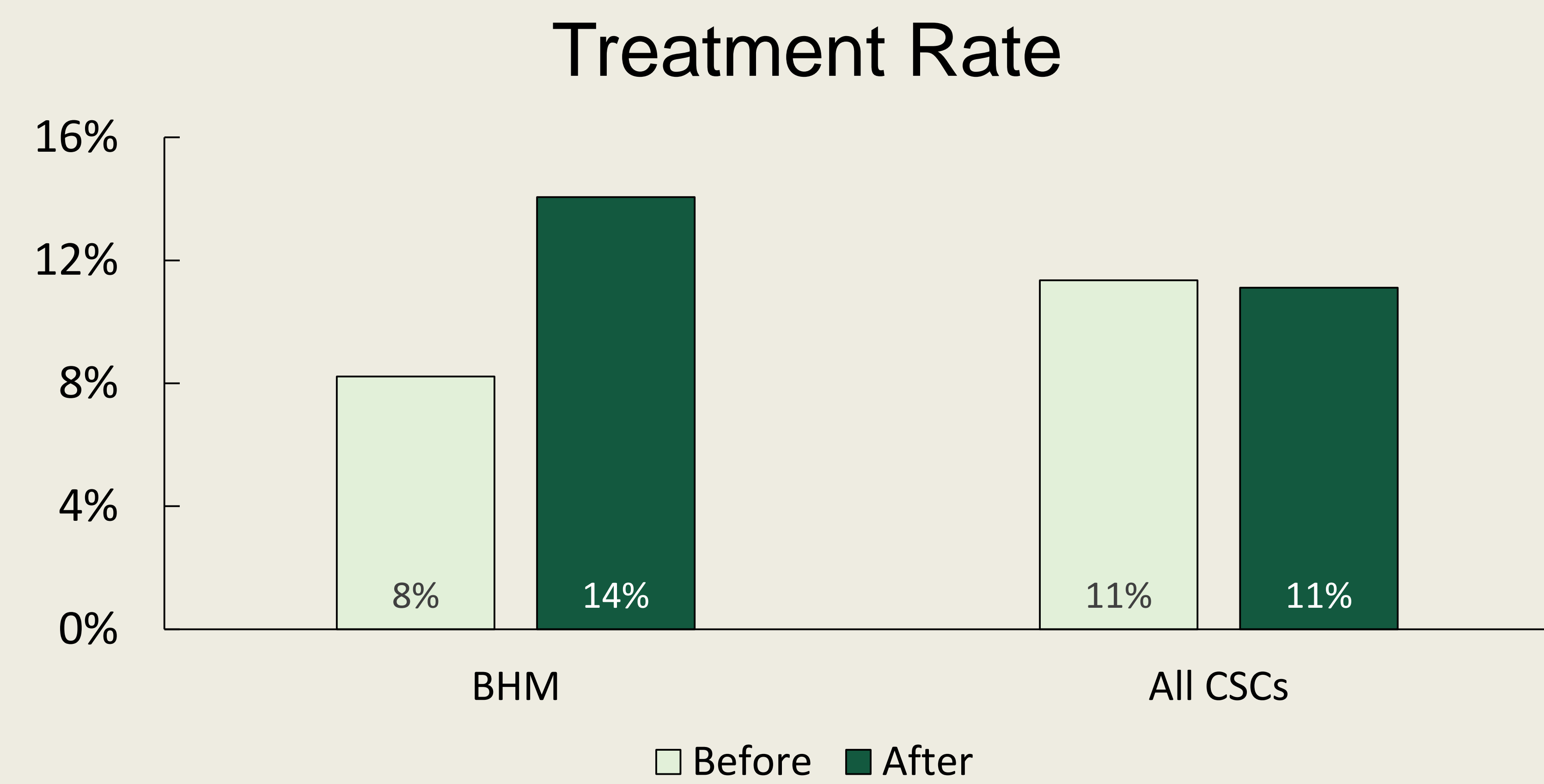


Fig 2: Patient treatment rates before and after implementation of nurse-led improvement initiatives compared to all TJC CSC.

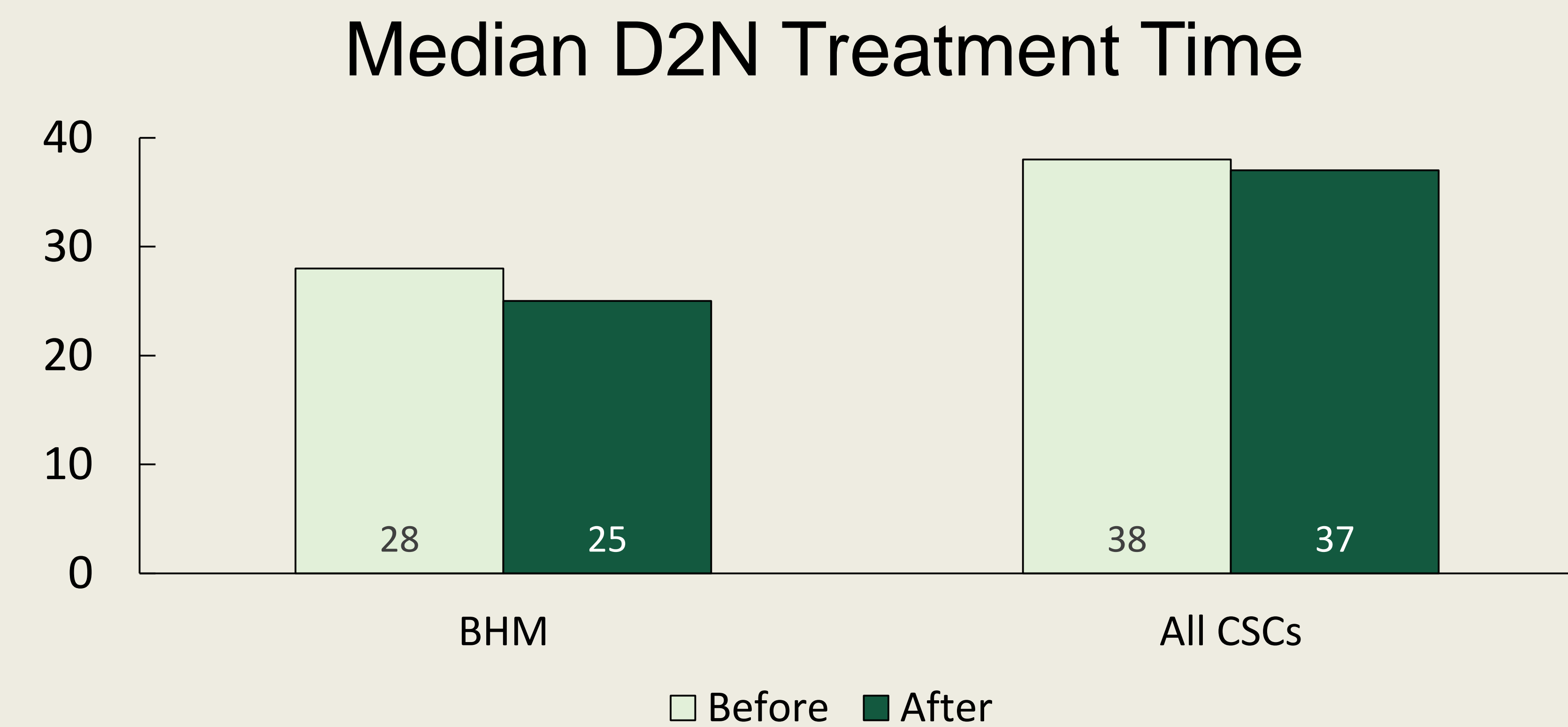
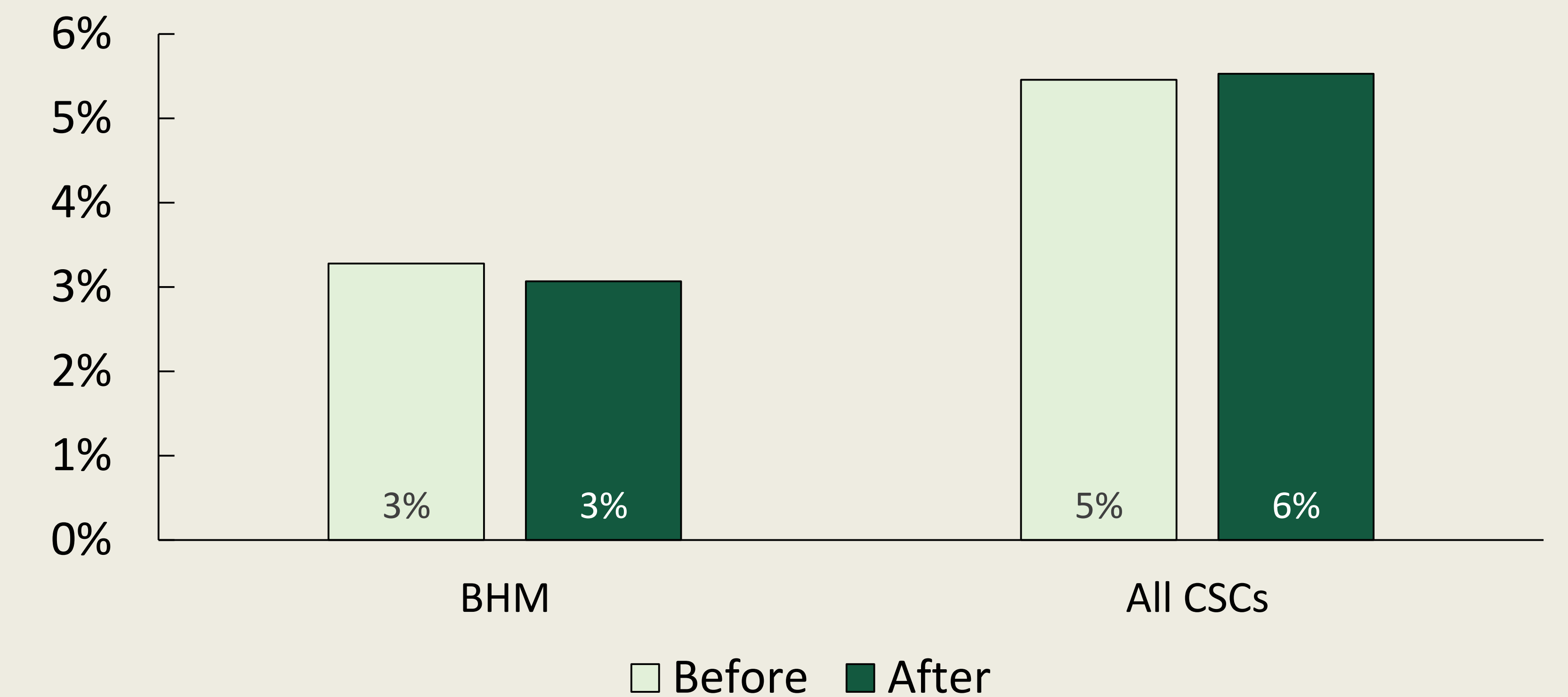


Fig 3: D2N median treatment time before and after implementation of nurse-led initiatives compared to all TJC CSC.

RESULTS



CONCLUSIONS

Our center observed a **6% improvement in treatment rate** (Fig. 2) and a **3 min decrease in median D2N** (Fig 3.) after the BEST responder intervention. In comparison, treatment rate and D2N time at the national level remained the same. Further the nurse-led stroke initiative **increased patient treatment rate by 4% above the national level**. Even with more aggressive treatment rates the **sICH remained consistent at 3%,** meaning that increased treatment rate did not lead to increased hemorrhagic complications. **Nursing initiatives can have a substantially positive effect on increasing the number of patients treated with IV alteplase for acute ischemic stroke.**

FUTURE DIRECTION

Because of the success of this nurse-led initiative, on Nov 2019 this program was expanded to include Endovascular treatment with the goal of improving treatment rates and initiation times (door to groin D2G, and door to device D2D).