

Improved Patient Outcomes in Juvenile Idiopathic Arthritis (JIA) by Utilizing and Documenting the Clinical Juvenile Arthritis Disease Activity Score as part of the Treat to Target Initiative.

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INTRODUCTION

- Juvenile Idiopathic Arthritis (JIA) when left untreated or poorly controlled, can lead to long-term damage and physical disability.
- Achieving rapid clinically inactive disease early on in the disease course improves outcomes and results in better long-term control of JIA.
- With JIA, there is not one known lab value or number that states if the patient's disease is active versus inactive.
- A "treat to target" approach is implemented by utilizing the clinical Juvenile Arthritis Disease Activity Score (cJADAS), which is a validated instrument having set cut offs for disease activity (Figure 5).
- The cJADAS ranges from 0-30 and is calculated by adding together three components: Provider global assessment (0-10), parent global assessment (0-10), and active joint count (0-10).

SMART AIM

Improve patient outcomes by collecting and documenting the cJADAS on all our JIA patients in structured data fields within the clinical note (figure 3), to a goal of >80% reliability by June 2020.

METHODS

- Intervention occurred January 2019 to June 2020 at Children's of Alabama's pediatric rheumatology clinic
- Eligible patients with JIA were identified using diagnostic billing codes or structured data fields within the electronic health record.
- The implementation science methodologies and frameworks applied were failure modes effect analysis (FMEA), key driver diagrams, and Plan-Do-Study-Act (PDSA) cycles.
- Performance was measured, using run chart and Pareto analysis, at baseline and then weekly to determine failures and areas for improvement with individual provider performance posted in the rheumatology office.
- The primary outcome measure included the cJADAS documented into the clinical note and tracked over time, noting pre/post telehealth implementation.

Figure 1: Frequency of cJADAS component completion

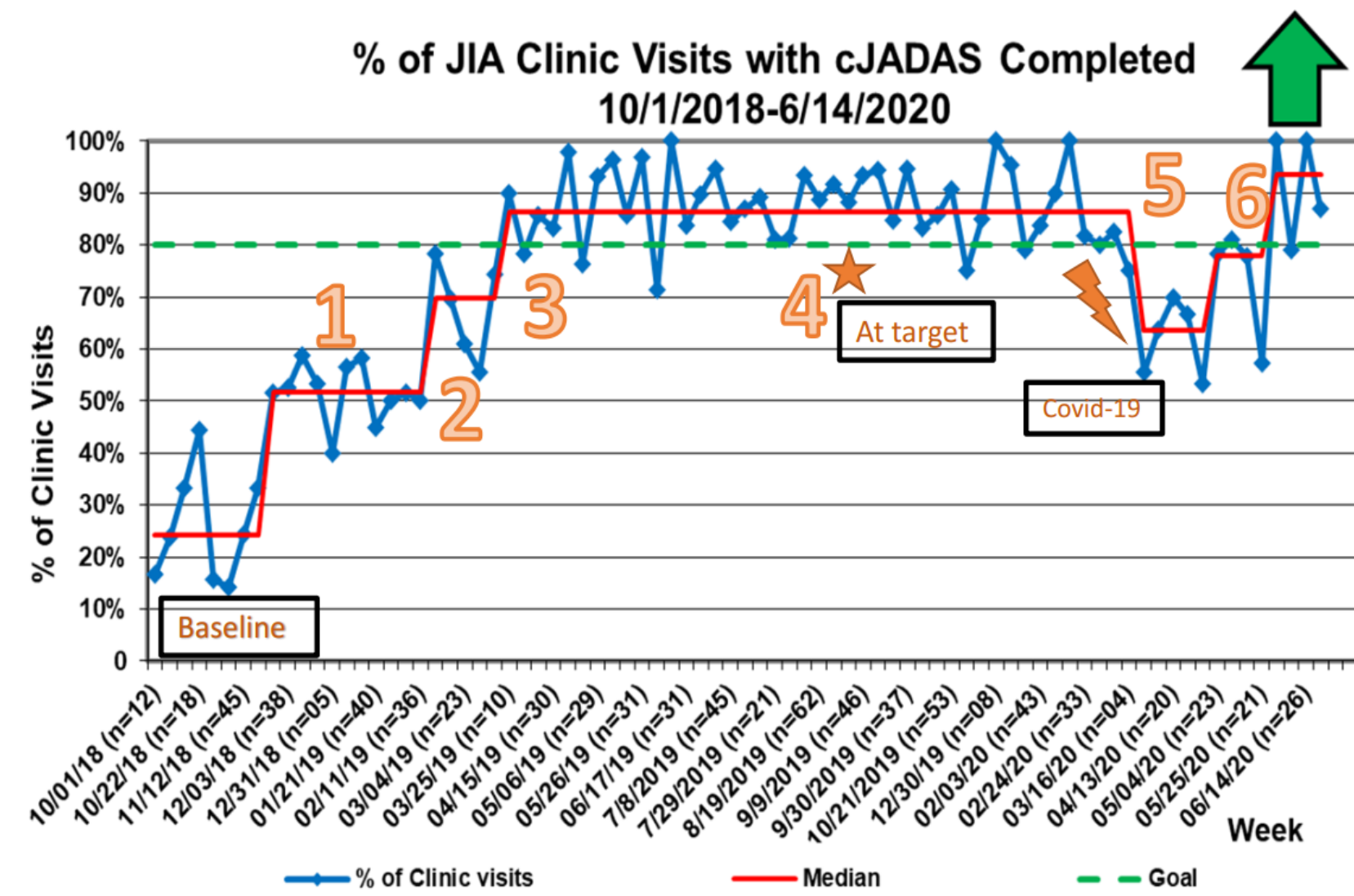


Figure 3: Snapshot of cJADAS in rheumatology I-connect note

Treat to Target	
Treatment target set with family at this visit? <input type="radio"/> yes <input checked="" type="radio"/> no	Target Date Set (Previous Value)
Target date set on: <input type="text" value="MM/DD/YYYY"/>	Target Date (Previous Value)
The target is <input type="radio"/> inactive disease <input type="radio"/> low disease activity	Target (Previous Value)
At this visit the disease activity is <input type="radio"/> at target <input type="radio"/> not at target	Disease Activity (Previous Value)
Did you make a disease management change at this visit? <input type="radio"/> yes <input type="radio"/> no	Disease Management Change (Previous Value)
Was a shared decision making aid used? <input type="radio"/> yes <input type="radio"/> no	Decision Making Aid (Previous Value)
Self-management support provided at this visit? <input type="radio"/> yes <input type="radio"/> no	Self-management support (Previous Value)

Figure 5: cJADAS scores

Disease activity state	Oligoarthritis		Polyarthritis	
	JADAS 10	cJADAS 10	JADAS 10	cJADAS 10
Inactive Disease	≤1.5	≤1	≤2.7	≤2.5
Low Disease Activity	1.5-4	1-4	2.7-6	2.5-15
Moderate Disease Activity	4.1-12	4.1-10	6.1-17	5.1-16
High Disease Activity	>12	>10	>17	>16

Figure 2: Run chart during telehealth implementation

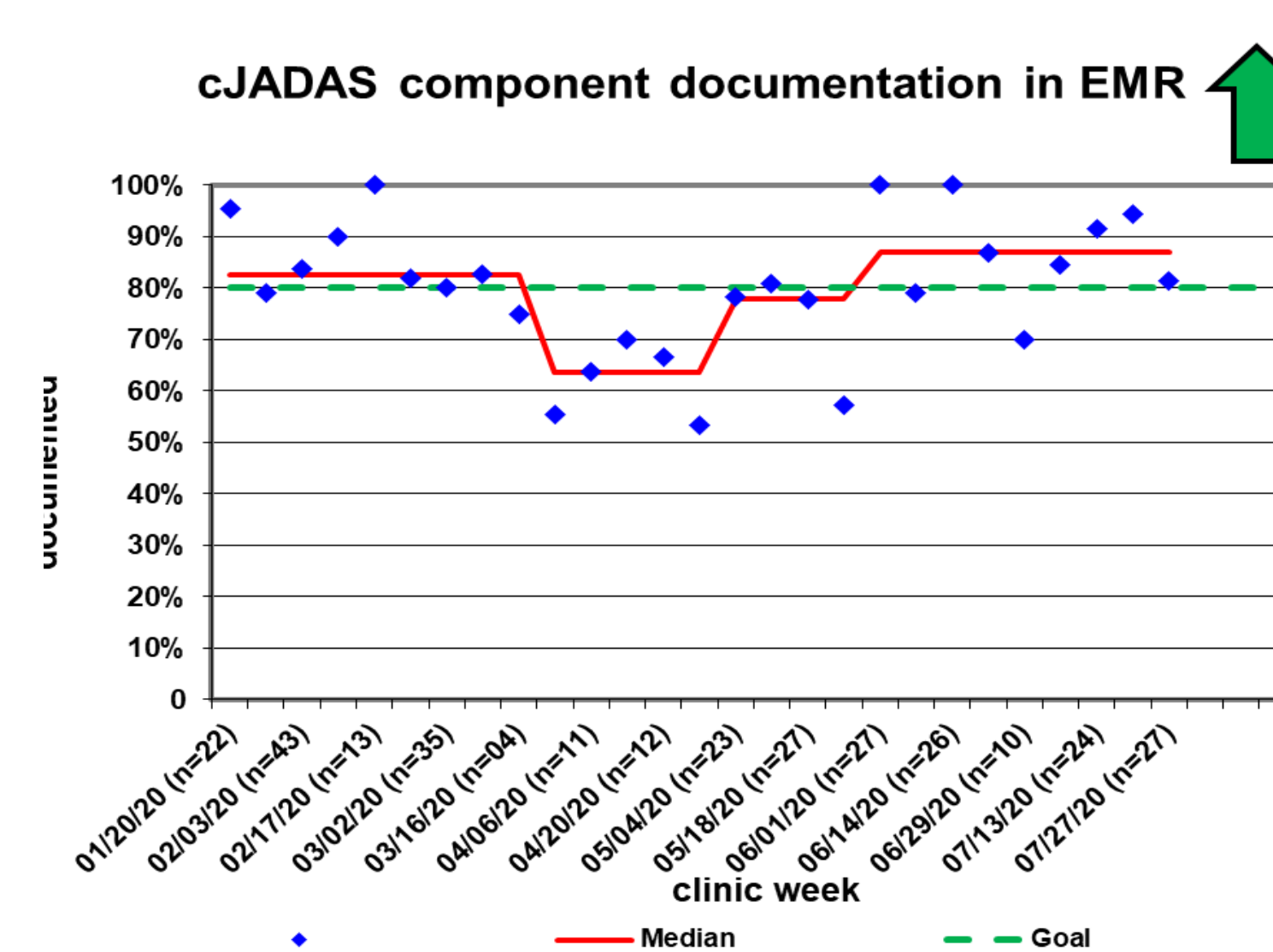


Figure 4: cJADAS patient/parent global form

Thinking about all the ways that your child's rheumatic illness affects your child, please tell us how your child is doing. Please ask children who are 8 years old or older to help answer this question.

0 1 2 3 4 5 6 7 8 9 10

VERY WELL (thumbs up icon) VERY POORLY (thumbs down icon)

Please circle one number.

Filling out this form helps your doctor decide how your child is doing today.

If your child has oligoarticular or polyarticular Juvenile Idiopathic Arthritis (JIA),

Your doctor will use this number to calculate the cJADAS. cJADAS stands for "clinical Juvenile Arthritis Disease Activity Score"

Active Joints (max 10) + Physician Global (0 -10) + Patient Global (0 -10) = cJADAS (30 or less)

The cJADAS is one way to measure how active your child's arthritis is and can be used to follow disease activity over time. It can be part of the discussion about treatment options, although usually will not be the only factor. Our goal for children with JIA is Inactive Disease.



RESULTS

- Baseline performance for documenting the cJADAS was 17% reliability.
- We had our first division meeting regarding the cJADAS in January 2019 (45%).
- The first training session for "Treat to Target" was in March 2019.
- A performance "scoreboard" posted in the office was started in April 2019.
- From March 2019 to early March 2020, we maintained our median cJADAS completion score above our goal rate of 80%.
- Due to COVID-19, telehealth visits were implemented in late March 2020 that required clinic process changes and resulted in a decrease in documentation (56%).
- In May 2020, a new target goal regarding telehealth cJADAS documentation was discussed (81%) (Figure 2).
- The majority of failures were due to forms not completed and the change in visit structure from in-person to telehealth.

CONCLUSION

- Using Quality Improvement tools with a dedicated and motivated multidisciplinary team led to effective changes in the documentation of cJADAS components in the EMR.
- Through standardization of cJADAS component collection and documentation, as well as re-implementing PDSA cycles due to increase of telehealth visits versus in-person visits, we achieved our goal of >80% reliability.

NEXT STEPS

- We are currently pursuing additional interventions to target patient outcomes and goals, such as reviewing the cJADAS at each visit with the family and assessing if they are at target.

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