



Advancing High Performance Health

AMGA Foundation

Best Practices in Managing Patients with Rheumatoid Arthritis

Cornerstone Health Care, P.A.

Collecting and Measuring RA Data





Organizational Profile

Cornerstone Health Care opened in 1995 in High Point, North Carolina, as a multidisciplinary group of 42 physicians in 15 practices. Today, with more than 375 physicians and advanced practice providers in more than 90 practices, Cornerstone has become one of the fastest growing physician-owned groups in the Southeast. Cornerstone currently has one full-time rheumatologist that provides care for more than 1,000 patients annually.

Project Summary

On August 14, 2014, Cornerstone joined the AMGA RA Collaborative. At the inception of this project, Cornerstone had 1.5 rheumatologists and was seeing on average 3,800 RA visits. In February 2015, the medical group's full-time rheumatologist left Cornerstone. In order to meet the increased demand, Cornerstone's part-time rheumatologist began seeing rheumatology patients full-time.

As a result of its collaboration with AMGA, Cornerstone has implemented several new quality improvement projects. It now collects and measures data relating to the number of its RA patients that are on DMARDs therapy.

It has also implemented a tool to capture and record data on the progression of the disease and the effectiveness of treatment. The tool that was chosen originally was the RAPID 3, but through the learning process CDAI was discovered to be more reliable. Additionally, it minimized patient biases stemming from other illnesses not related to RA.

In yet another improvement, Cornerstone added an RA immunization vaccination protocol to the infusion center's protocol. This ensures that all vaccinations are given in a timely manner before the infusion process is started.

Lastly, it implemented a scribe program within its RA clinic. The Certified Medical Assistant is in the room at the time of each visit, scribing for the provider. With this model, the provider is focused 100% on the patient and is able to perform accurate joint counts that result in a more detailed note at the end of the visit. The goals of the scribe program include a decrease in provider time dedicated to clerical functions, enabling an increased number of patients seen. As a result of this new workflow, Cornerstone expects its patient satisfaction scores to improve.

Program Goals and Measures of Success

Through this Collaborative, Cornerstone aimed to reduce the number of incorrect RA diagnoses within its health system, review and correct RA diagnoses in its EMR, properly prescribe and manage the use of DMARDs, and implement a method to evaluate and trend the effects of its treatment efforts. Cornerstone set patient goals that are designed to provide a safe and enjoyable patient experience in addition to relief of his or her pain.

To measure these goals, Cornerstone created a quarterly report generated by its clinical data team. This report captures the percentage of patients with a diagnosis of RA and currently on DMARDs therapy. This report also captures two other measures: a Disease Activity Assessment and a Functional Status Assessment. In addition, another report amalgamates all Cornerstone patients with a diagnosis of RA. This report is reviewed by the provider and his or her staff to identify any patients that have an incorrect RA diagnosis on the problem list in the EMR. A similar report will be used to determine if informed education provided to the referring primary care providers makes an impact in reducing incorrect RA diagnoses. The last measurement will be Cornerstone's patient satisfaction scores monitored by its third party vendor, Press Ganey.

At the start of the campaign, while only measuring DMARDs therapy, Cornerstone's baseline percentage was 64.9%. In its latest data for 2015 Q3, it saw scores increase to 94.0%. In Q2, Cornerstone started tracking disease activity and functional status. Its Disease Activity Assessment went from a baseline of 16.9% to 32.6% in Q3. Functional Status Assessment scores went from a baseline of 50.8% to 62.5% in Q3.

Population Identification

Primarily, Cornerstone patients are identified by using RA diagnosis codes in the patient's problem list of the EMR. The codes provided by the Collaborative were specifically used for standardization purposes and allow for consistent data reporting of measures.

Cornerstone also utilizes data from the Humedica database to identify its patient population. Cornerstone does not currently submit data to an RA registry, but is part of an ongoing process improvement plan.

Intervention

The interventions implemented as a result of this Collaborative were the creation of the RAPID 3 assessment then sequentially the CDAI assessment in the EMR. The CDAI was more effective in minimizing false positives from other ailments like chronic back pain and fibromyalgia. The scribe program was initiated as a tool for staff development. This increased and developed staff knowledge of RA. It also provided a more efficient workflow and a more accurate record of the visit. From the patient perspective, it has allowed for the provider to be more attentive. Lastly, the immunization and vaccinations protocol for RA patients was added to the infusion clinic standing protocols. This allowed for technicians to administer any needed immunizations prior to the start of any infusion regimen.

Leadership Involvement & Support

In an effort to standardize processes and reduce variation, the leadership at Cornerstone created a Quality Committee. This group develops and approves care guides for use by the primary care providers within the organization. These care guides serve as an algorithm that primary care providers can use to help make more accurate referrals to the RA specialist,

decide on the necessary labs and tests, and ultimately reduce cost, improving the overall quality of the referral to the specialty. The Quality Committee is currently developing care guides for each of the major disease types. Though not complete, RA will have its own care guide developed. Work has already been completed on the Osteoporosis Care Guide.

Leadership approved the implementation of medication dispensers in the majority of Cornerstone's practices. These machines are designed to dispense low-cost or no cost medication to low-income patients. The leadership team is currently working with the vendor to determine which RA medications could be available in the dispensary. The hope is prednisone, methotrexate, and hydroxychloroquine would be available for the low income RA patients. Leadership is currently evaluating whether or not these medications can be added to the formulary.

Lessons Learned and Ongoing Activities

The lessons learned from this project were very important. Data accuracy and scrubbing of the patient registry for RA patients in the EMR was crucial. The need for additional RA education to the primary care providers was essential in helping prevent incorrect diagnoses from being entered into the EMR, only later to be removed. It became apparent there was a need for a more global approach to the treatment of RA, as well as advantages for participating in a national registry. Cornerstone is currently exploring involvement with Fred Wolfe, MD, National Data Bank for Rheumatic Diseases. Lastly, success is dependent on a successful partnership with a pharmacy, not only to find affordable medication for the patient, but to monitor compliance with drugs already prescribed prior to changing medications.

Acronym Legend

CDAI: Clinical Disease Activity Index

DMARD: Disease-Modifying Anti-Rheumatic Drug

HAQ: Health Assessment Questionnaire

MDHAQ: Multi-Dimensional Health Assessment Questionnaire

PQRS: Physician Quality Reporting System

RAPID 3: Routine Assessment of Patient Index Data 3

SDAI: Simple Disease Activity Index

Appendix A

Clinical Disease Activity Index (CDAI)

The CDAI is a useful clinical composite score for following patients with **rheumatoid arthritis**.

$$\text{CDAI} = \text{SJC}(28) + \text{TJC}(28) + \text{PGA} + \text{EGA}$$

- **SJC(28)**: Swollen 28-Joint Count (shoulders, elbows, wrists, MCPs, PIPs including thumb IP, knees)
- **TJC(28)**: Tender 28-Joint Count (shoulders, elbows, wrists, MCPs, PIPs including thumb IP, knees)
- **PGA**: Patient Global disease Activity (patient's self assessment of overall RA disease activity on a scale 1-10 where 10 is maximal activity)
- **EGA**: Evaluator's Global disease Activity (evaluator's assessment of overall RA disease activity on a scale 1-10 where 10 is maximal activity)

Interpretation

- **Remission**: CDAI \leq 2.8
- **Low Disease Activity**: CDAI $>$ 2.8 and \leq 10
- **Moderate Disease Activity**: CDAI $>$ 10 and \leq 22
- **High Disease Activity**: CDAI $>$ 22

A CDAI reduction of 6.5 represents moderate improvement.

Deficiencies

- Does not include the ankles / feet
- Does not include inflammatory markers (although this is what makes it a quick and useful **clinical** tool)

Appendix A

CDAI Access

Select the drop down arrow next to the red heart icon (Vitals)

The screenshot shows a medical software interface for a patient named [R] Chctest, Foot. The patient's MRN is 2005150, DOB is 11/14/1971, and age is 43 years. The interface includes a toolbar with a red heart icon and a dropdown arrow. A dropdown menu is open, listing various flow sheets and assessments. At the bottom of this menu is the option 'CDAI'. To the right, a table displays CDAI data for 15 Oct 2015.

Data Includes: All		15 Oct 2015
Item Name	Select	
Swollen Joint Count	<input type="checkbox"/>	5
Tender Joint Count	<input type="checkbox"/>	3
Patient Global Assessment	<input type="checkbox"/>	14
Evaluator Global Assessment	<input type="checkbox"/>	8
CDAI Score	<input type="checkbox"/>	30
CDAI Result	<input type="checkbox"/>	HDA > 22

CDAI is located at the very bottom of the vitals drop down menu

Appendix A

Data Entry Screen

Chctest, Foot 43 YO F DOB: 14Nov1971 AUDIT 10/15/2015

  **CDAI** 

For:

Status:

Record w/o Ordering

∨ **Results Details**

∧ **Vital Signs Input**

Swollen Joint Count:  

Tender Joint Count:  

Patient Global Assessment:  

Evaluator Global Assessment:  

CDAI Score:  

CDAI Result:  

Appendix A

Flow Chart for Trending Info

[R] Chctest, Foot MRN: 2005150 Sex: F H Phone: (444)444-4444 PCP: Terrell, Grace FYI: [FYI](#)
 Select Patient [i](#) [x](#) [!](#) DOB: 11/14/1971 AKA: FootLoose W Phone: (336)222-2222 Usual Prov: Note: [Select](#)
 Age: 43 Years Allergies: Med & Non Med QBM: **STOP** Security: **Restricted Data** Pri Ins: MO Blue Medicare HMO

CHC Adult Patient View

Commit Pat Loc Status

Latex Allergy See Advance Directives

Problems	Meds	Allergies	Orders	Results
Active Problems	My Priority			
Name	ICD-10	Managed By		
My Priority				
Health Maintenance/Risks				
Health Maintenance				
Other Problems				
Diabetes mellitus	E11.9			

Chart	HMP	Vitals	Flowsheets	Immun	Education
FlowSheets	CDAI		Rheumatology	Refresh	
Data Includes: All			Select	15 Oct 2015	
Item Name			Select	1	
Swollen Joint Count	<input type="checkbox"/>	5			
Tender Joint Count	<input type="checkbox"/>	3			
Patient Global Assessment	<input type="checkbox"/>	14			
Evaluator Global Assessment	<input type="checkbox"/>	8			
CDAI Score	<input type="checkbox"/>	30			
CDAI Result	<input type="checkbox"/>	HDA > 22			

Appendix B

RAPID 3

ROUTINE ASSESSMENT OF PATIENT INDEX DATA

The RAPID3 includes a subset of core variables found in the Multi-dimensional HAQ (MD-HAQ). Page 1 of the MD-HAQ, shown here, includes an assessment of physical function (section 1), a patient global assessment (PGA) for pain (section 2), and a PGA for global health (section 3). RAPID3 scores are quickly tallied by adding subsets of the MD-HAQ as follows:

1. PLEASE CHECK THE ONE BEST ANSWER FOR YOUR ABILITIES AT THIS TIME:

OVER THE LAST WEEK, WERE YOU ABLE TO:	WITHOUT ANY DIFFICULTY	WITH SOME DIFFICULTY	WITH MUCH DIFFICULTY	UNABLE TO DO
a. Dress yourself, including tying shoelaces and doing buttons?	___ 0	___ 1	___ 2	___ 3
b. Get in and out of bed?	___ 0	___ 1	___ 2	___ 3
c. Lift a full cup or glass to your mouth?	___ 0	___ 1	___ 2	___ 3
d. Walk outdoors on flat ground?	___ 0	___ 1	___ 2	___ 3
e. Wash and dry your entire body?	___ 0	___ 1	___ 2	___ 3
f. Bend down to pick up clothing from the floor?	___ 0	___ 1	___ 2	___ 3
g. Turn regular faucets on and off?	___ 0	___ 1	___ 2	___ 3
h. Get in and out of a car, bus, train, or airplane?	___ 0	___ 1	___ 2	___ 3
i. Walk two miles or three kilometers if you wish?	___ 0	___ 1	___ 2	___ 3
j. Participate in recreational activities and sports as you would like, if you wish?	___ 0	___ 1	___ 2	___ 3
k. Get a good night's sleep?	___ 0	___ 1.1	___ 2.2	___ 3.3
l. Deal with feelings of anxiety or being nervous?	___ 0	___ 1.1	___ 2.2	___ 3.3
m. Deal with feelings of depression or feeling blue?	___ 0	___ 1.1	___ 2.2	___ 3.3

1. a-j FN (0-10):

1=0.3 16=5.3
2=0.7 17=5.7
3=1.0 18=6.0
4=1.3 19=6.3
5=1.7 20=6.7
6=2.0 21=7.0
7=2.3 22=7.3
8=2.7 23=7.7
9=3.0 24=8.0
10=3.3 25=8.3
11=3.7 26=8.7
12=4.0 27=9.0
13=4.3 28=9.3
14=4.7 29=9.7
15=5.0 30=10

2. PN (0-10):

3. PTGE (0-10):

RAPID3 (0-30)

2. HOW MUCH PAIN HAVE YOU HAD BECAUSE OF YOUR CONDITION OVER THE PAST WEEK? PLEASE INDICATE BELOW HOW SEVERE YOUR PAIN HAS BEEN:

NO PAIN
PAIN AS BAD AS IT COULD BE

0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5 7.0 7.5 8.0 8.5 9.0 9.5 10

3. CONSIDERING ALL THE WAYS IN WHICH ILLNESS AND HEALTH CONDITIONS MAY AFFECT YOU AT THIS TIME, PLEASE INDICATE BELOW HOW YOU ARE DOING:

VERY WELL
VERY POORLY

0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5 7.0 7.5 8.0 8.5 9.0 9.5 10

CONVERSION TABLE

Near Remission (NR): 1=0.3; 2=0.7; 3=1.0

Low Severity (LS): 4=1.3; 5=1.7; 6=2.0

Moderate Severity (MS): 7=2.3; 8=2.7; 9=3.0; 10=3.3; 11=3.7; 12=4.0

High Severity (HS): 13=4.3; 14=4.7; 15=5.0; 16=5.3; 17=5.7; 18=6.0; 19=6.3; 20=6.7;

21=7.0; 22=7.3; 23=7.7; 24=8.0; 25=8.3; 26=8.7; 27=9.0; 28=9.3; 29=9.7; 30=10.0

RA Team

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