Rheumatoid Arthritis: Primary care Initiative for improved Diagnosis and outcomes

RAPID

RAPID – Application of Medical Claims Data for Outcomes Measurement: A Patient-Centric Approach

Partnering Organizations: Curatio CME Institute & Penn State College of Medicine

Goals

This goal of the RAPID CME initiative is to improve the long-term health outcomes of patients with rheumatoid arthritis (RA) by teaching PCPs how to recognize the early symptoms of RA, how to work with a rheumatologist to coordinate the management and ongoing monitoring of patients with established RA.

Learning Objectives

- Correctly identify patients who have probable early RA and should be referred to a rheumatologist
- Employ "squeeze test" to assist with diagnosis of RA
- Evaluate patients by using functional assessment questions when RA is suspected
- Order appropriate laboratory tests when RA is suspected
- Describe the early aggressive nature of joint damage in patients with RA
- Distinguish between the mechanisms of action of biologic and nonbiologic DMARDs, as well as between different classes of DMARDs, and how DMARDs can effectively treat RA
- Order proper vaccinations for patients starting DMARD therapy
- Correctly manage infections in patients taking DMARD therapy
- Assess and aggressively reduce
- CVD risk in RA patients

Educational Design

RAPID Initiative Goals:

- Expand Awareness to Targeted Audiences – In the prior year, awareness/knowledge gains were greatest among NPs and PAs. Thus, RAPID expanded awareness-building opportunities to include more NPs and PAs;
- Enhance Competence - Content, instruction, and interactive nature of CME activities will not only convey new knowledge, but will introduce, reinforce, recommend implementation of specific evidence-based RA diagnosis, treatment, and monitoring strategies and team treatment approaches;
- Provide Additional Practical Tools - Pocket Reference Guide; Hands-on Diagnostic Skills Workshops with Patient/Patient Advocate…CME Activities Implemented: Pri-Med Symposia (2); Diagnosis Skills Workshops; Online enduring distributed via Medscape; Pocket Reference Guide; Monograph Series (2)
- Measure Performance Change Using Medical Claims Data

Design:

- Examination of a national-scope administrative health care (medical) claims database representing the activity of 870,000 US clinicians was used to identify clinicians who underperformed in diagnosing rheumatoid arthritis (RA; defined as a high concentration of high-risk patients, fewer than 15 RA diagnoses in 2008, and the fewest number of patients co-managed with a specialist). We targeted this group of clinicians for participation in RAPID programs by specifically recommending the activities to them (eg, by e-mail and direct-mail). For the analysis, the group of underperforming clinicians who later participated in RAPID was designated as "targeted" learners. "Nontargeted" learners participated in the activity because of professional interest, but without prior outreach.

Execution

Use administrative medical claims data to:

- Evaluate activities for effectiveness
- Establish control groups for the largest learner subpopulations (internal medicine vs general/family practice)
- Analyze the variances between the way different subpopulations (internal medicine vs general/family practice) perform after participation in similar CME activities
- Compare long-term trends for these subpopulations of learners

The proportion of RA diagnoses per patient population made by RAPID initiative clinicians in the full year prior to participation in the RAPID initiative (2008) was compared with the proportion of RA diagnoses made after participation in the initiative (during 2011). Therefore, the postactivity RA diagnoses counted in the analysis were determined ≥2 years after participation in the RAPID program.

The same performance comparisons between 2008 and 2011 were made among highly matched control groups of nonparticipants, with approximately 40 nonparticipant controls for every participating clinician.

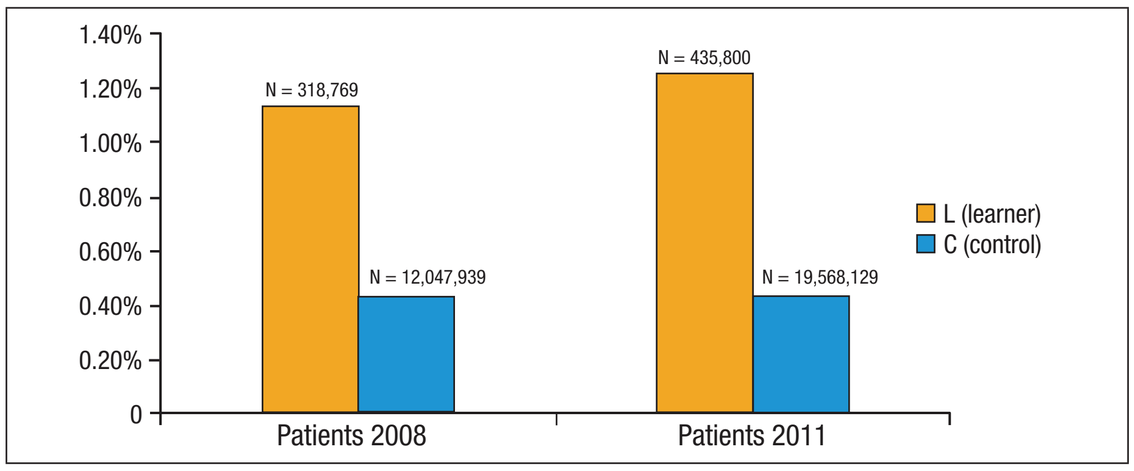
Within this overall analysis population, changes in RA diagnoses were also compared between internists (IM) and general/family practitioners (GP/FP).

The performance of participants who prescribed biologic therapies was compared with the performance of participants who did not prescribe biologic therapies.

Analysis

- Analyses included 784 RAPID-participating clinicians of whom 256 diagnosed at least 1 patient with RA in 2008.
- The number of clinicians making at least 1 diagnosis of RA increased after RAPID participation.
- Overall, there was a 47% increase in the number of RAPID providers who had at least 1 patient diagnosed with RA: 256 (2008), 376 (2011).
- 11% statistically significant increase ($P \leq 0.001$) in the proportion of RA diagnoses by all RAPID participants following participation in the initiative
  - No change in the proportion of RA diagnoses by the control group over this same period
- Targeted participants had an increase in RA Dx rate whereas the non-targeted participants (who Dx'd at almost 3x greater rate of controls) had a decrease in the proportion of RA Dx post-activity
- As a group, IMs performed better than their GP/FP counterparts in diagnosing RA
- Improved performance of 376/784 CME participants resulted in 1,837 new Dx's of RA

Proportion of Patients with RA Diagnosis for All RAPID Participants



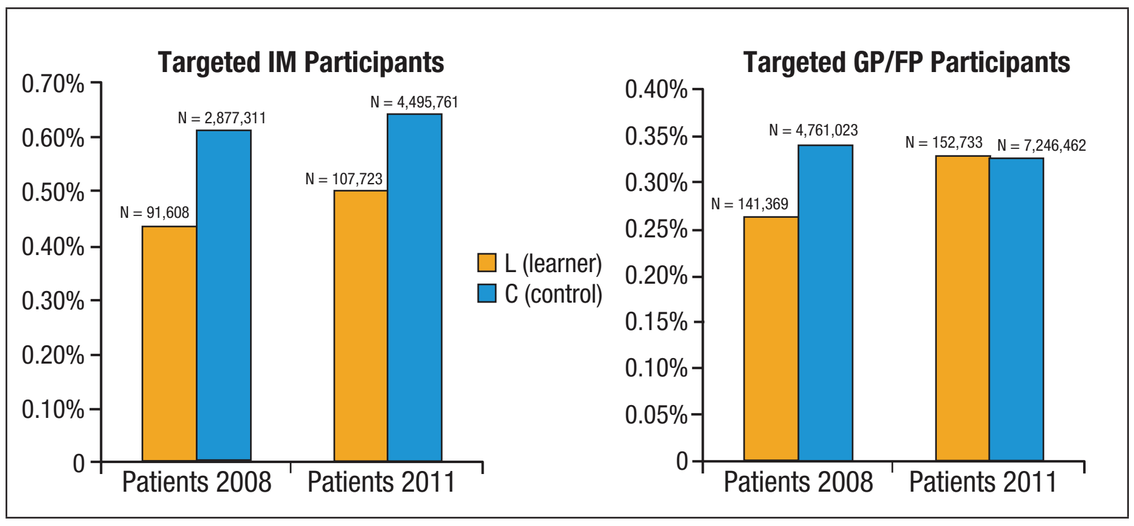
11% statistically significant increase ($P \leq 0.001$) in the proportion of RA diagnoses by all RAPID participants following participation

Sub-Analysis

Comparison of IMs and GP/FPs

- As a group, IMs performed better than GP/FPs in diagnosing RA. This held true when comparing targeted, nontargeted, and control IMs with the corresponding subgroups of GP/FPs.
- Nontargeted IMs who took the RAPID course had the greatest proportion of RA diagnoses among their patients in the year before they took the course.
  - Targeted GP/FPs had the lowest proportion of pre-RAPID RA diagnoses.
- Comparing the performance of targeted IMs vs nontargeted IMs, it was found that the targeted group (n = 169) had a significant increase in RA diagnoses (16%; $P \leq .05$) post-RAPID participation, whereas the nontargeted group (n = 109) had a significant decrease (–43%) in RA diagnoses post-RAPID participation.
  - Thus, the targeted IMs had an increase in the RA diagnosis rate (# RA diagnoses per patient population), whereas the nontargeted IMs (who diagnosed RA at almost 3 times the rate of their controls before RAPID) decreased the proportion of RA diagnoses postactivity.
- The targeted GP/FPs, the group with the lowest proportion of RA diagnoses preactivity, also had the largest increase in the proportion of RA diagnoses postactivity (24%; $P \leq .001$).

Proportion of Patients with RA Diagnosis: Comparison of Targeted IM and GP/FP Participants



Comparison of biologic prescribers with clinicians who do not prescribe biologic therapy

- In an effort to answer why some physicians reacted differently to the education, restrictive criteria were used with the medical claims database analysis to identify differences between the learners who were comfortable prescribing biologics and those who were not.
- Biologic prescribers were defined as clinicians who had written prescriptions within last 14 months for at least 1 of these appropriate RA therapies: abatacept, adalimumab, certolizumab pegol, etanercept, infliximab, tocilizumab.
- Comparing biologic prescribers with nonprescribers, clinicians who prescribe biologic therapies for any illness diagnosed RA at much higher rates in the year preceding the activity (up to 10-fold higher)

Conclusions

- The use of medical claims data for identifying and targeting underperforming medical practitioners for specific CME activities was beneficial compared to standard methods.
- Targeted underperforming clinicians, as identified in the medical claims database analysis, improved their diagnostic performance at higher rates than non-targeted CME participants
- Use of the medical claims data allowed us to correlate participation in CME activities with improved diagnostic performance up to 2 years post-activity

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