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MDGuidelines® | The measure of health | **KAISER PERMANENTE**®

CASE STUDY: KAISER PERMANENTE AND MDGUIDELINES

The Clinical and Financial Efficacy of Evidence-Based Guidelines and Disability Duration Data

On February 17, 2016, at the Integrated Benefits Institute (IBI) Forum in San Francisco, Kaiser Permanente formally presented findings from a multi-year engagement with ReedGroup's MDGuidelines. Among positive clinical outcomes shared by Kaiser Permanente at the Forum, the organization reported savings of $30 million associated with helping patients return to health faster than industry benchmarks.

This case study summarizes Kaiser Permanente's presentation at the IBI Forum, including a discussion of what protocols Kaiser Permanente used to achieve their financial and clinical outcomes, and how the lessons learned by Kaiser Permanente can be applied to other value-based healthcare organizations.

Founded in 1945, Kaiser Permanente is one of the nation's largest not-for-profit health plans, with 177,445 employees serving more than 10 million members. Kaiser Permanente is made up of three separate, but closely cooperating, organizations: Kaiser Foundation Hospitals, Kaiser Foundation Health Plan and Permanente Medical Groups.

This unique organizational model enables Kaiser Permanente to practice a patient-centered, integrated approach to care delivery that is proactive, comprehensive,

Within a year, Kaiser Permanente's NCAL Occupational Health Department outperformed the MDGuidelines normative data set of more than **8 million cases** by **350,121 days** per year

$30 MILLION IN SAVINGS

MDGUIDELINES
PRODUCTIVITY DURATION TABLES
EVIDENCE-BASED TREATMENT GUIDELINES
PREDICTIVE MODELING
EHR INTEGRATION

CONSULTATION
BUSINESS INTELLIGENCE
CLINICAL SUPPORT
UTILIZATION BEST PRACTICES

ANALYTICS
BENCHMARKS
BIG DATA INSIGHTS
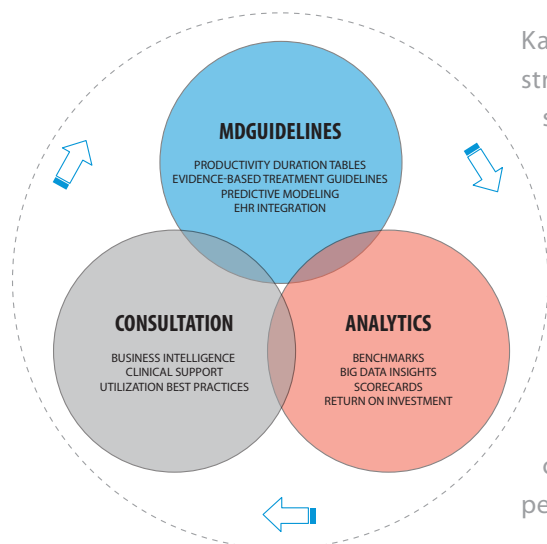SCORECARDS
RETURN ON INVESTMENT

system-wide, team-based, physician-led and data-driven.

In turn, Kaiser Permanente is able to deliver on the promise of integrated healthcare delivery by aligning products and services that improve health and productivity along the full spectrum of well-being.

Kaiser Permanente consistently strives to improve member satisfaction and support commercial health plan customers by reducing the duration as well as the direct and indirect costs associated with disability. This is accomplished through efficient administrative processes, best-in-class clinical tools and detailed performance monitoring.

To support this corporate strategy, in 2008, Kaiser Permanente conducted a needs-assessment survey of its physicians to identify tools and resources that could help physicians return patients to activity safely and efficiently. This physician input eventually led Kaiser Permanente to develop a custom-built electronic disability documentation and communication tool called the Activity Prescription Form (ARx), which was launched in 2011.

To power ARx with evidence-based clinical guidelines and disability duration tables, Kaiser Permanente selected MDGuidelines from ReedGroup, electing to integrate MDGuidelines content directly into the ARx system so that it could be easily accessed by physicians at the point of care.

HELPING PATIENTS RETURN TO PRODUCTIVE LIVES: THE IMPORTANCE OF CLINICAL GUIDELINES

MDGuidelines provided Kaiser Permanente's physicians with access to evidence-based guidelines from the American College of Occupational and Environmental Medicine (ACOEM). These guidelines include clinical content for prevention, diagnosis, prognosis, follow-up and treatment as well as physician-supported patient education.

In addition, MDGuidelines provides disability duration tables that provide estimated physiological healing times. These duration tables are informed by millions of real-world cases, and carefully vetted by ReedGroup's Medical Advisory Board. Considered to be the gold-standard in helping physicians estimate a patient's return to activity, Kaiser Permanente decided to embed these duration tables directly into the ARx physician workflow.

Low Back Pain

Length of Disability

Length of disability will depend on the origin of the back pain and the individual's response to rest or therapy.

Nonspecific treatment, low back pain.   −

JOB CLASS	MINIMUM	OPTIMUM	MAXIMUM
Sedentary	0	1	14
Light	0	3	14
Medium	1	14	56
Heavy	3	28	84
Very Heavy	3	42	91

Kaiser Permanente's launch of ARx with embedded MDGuidelines is widely considered to be the healthcare industry's first large-scale, EHR-based integration of disability duration tables delivered at the point of care.

To help personalize duration estimates, Kaiser Permanente physicians have access to the MDGuidelines predictive model tool. This tool allows physicians to input a patient's demographic data—such as age, gender, activity level, job class, geography and co-existing medical conditions—to refine duration estimates at the individual level, tapping into a database of more than 8 million real-world disability cases.

Once Kaiser Permanente's ARx tool was developed with access to these various components from MDGuidelines, an educational "awareness" program was launched, aimed at providing hands-on access and training to physicians in all Kaiser Permanente regions. To facilitate this effort, Kaiser Permanente designated physician advisors in each region to help coordinate the implementation of ARx/MDGuidelines solution and share best practices across the organization.

PREDICTIVE MODEL

Diagnosis: *

924.01

Age: * 45

Gender: * Male Female

Job Class: * Sedentary Light Medium Heavy Very Heavy

Region (ZIP 1st digit): * 0-1 Northeast 2-3 Southeastern 4-5 Great Lakes 6-7 Central 8-9 Western Outside the US

Co-existing Medical Conditions

Primary: 493 ✕

Secondary: Start typing to find an ICD-9-CM code... ✕

Tertiary: Start typing to find an ICD-9-CM code... ✕

Is this a Worker's Comp case?: Yes

Calculate   Clear

MEASURING PERFORMANCE

After three years of using ARx, Kaiser Permanente patient case data was benchmarked against MDGuidelines' proprietary databases. In addition to comparing data to the MDGuidelines "normative" benchmark, Kaiser Permanente's cases were also compared to the "physiological optimum" benchmark, which identifies the "optimum" recovery timeframe for uncomplicated patient cases to return to full activity.

Among other insights, Kaiser Permanente found that patients' disability durations in its Northern California (NCAL) Occupational Health Department outperformed MDGuidelines' benchmarks by 350,121 days per year, which translates to $30 million in wages, benefits and costs associated with lost productivity. The data analysis also found that an incremental 12,349 days per year (approximately $1 million) could be saved if all modified duty cases returned to full duty within the normative duration.

This finding represents an opportunity for Kaiser Permanente physicians to continue working with the guidelines to help patients efficiently transition back to a state of health.
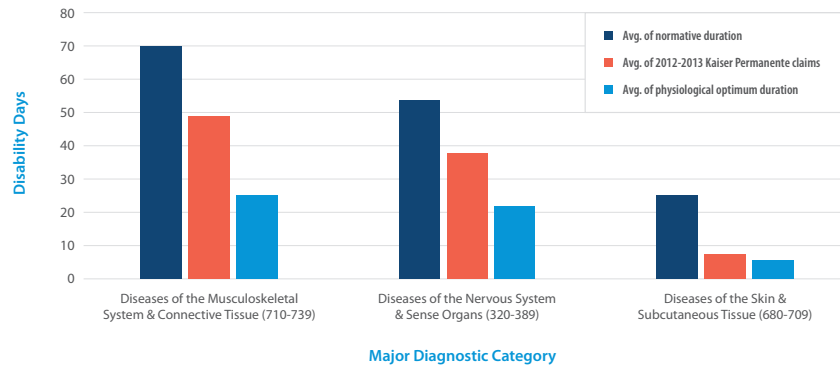
APPLYING LESSONS FROM OCCUPATIONAL HEALTH TO POPULATION HEALTH

Kaiser Permanente's experience with MDGuidelines and the ARx suggests that there are opportunities for other value-based healthcare organizations to leverage their data, clinical expertise and clinical decision support tools to improve patient care—and recognize positive financial outcomes along the way.

Kaiser Permanente's experience shows that promptly and safely returning patients to activity delivers benefits to all stakeholders: the provider, payer, employer and especially the patient. James B. Talmage, M.D., author of AMA Guides to the Evaluation of Work Ability and Return to Work explains, "There is a large and growing body of scientific evidence that return-to-work usually provides significant

Benchmark to Normative & Optimum Durations (select diagnostic categories)

Kaiser Permanente NCAL occupational health cases

Legend:
- Avg. of normative duration
- Avg. of 2012-2013 Kaiser Permanente claims
- Avg. of physiological optimum duration

Y-axis: Disability Days (0, 10, 20, 30, 40, 50, 60, 70, 80)

Diseases of the Musculoskeletal System & Connective Tissue (710-739): normative ≈70, KP claims ≈49, physiological optimum ≈25

Diseases of the Nervous System & Sense Organs (320-389): normative ≈54, KP claims ≈38, physiological optimum ≈22

Diseases of the Skin & Subcutaneous Tissue (680-709): normative ≈25, KP claims ≈8, physiological optimum ≈6

X-axis: **Major Diagnostic Category**

overall health benefit, and staying off work needlessly results in poorer overall health outcomes. Employers, employees (patients), and insurers all benefit from individuals returning to work in usual time periods."

With a growing medical consensus around the importance of using evidence-based content at the point of care, value-based healthcare organizations like Kaiser Permanente are realizing the positive benefits associated with returning patients to activity. ACOs and other risk-bearing healthcare entities are increasingly

relying not just on evidence based medicine, but also on analytics and data-driven measurements to control costs, minimize risk and help guide safe and effective decision making at the point of care.

Decision support tools such as Kaiser Permanente's ARx embedded with MDGuidelines can help healthcare organizations improve outcomes, optimize utilization of services and improve management of patient populations by helping patients return to productivity as quickly and safely as possible.