
The Best Medicine: How Wolters Kluwer Provides Medical Information Your Teams Can Trust

A portfolio of leading clinical decision support
solutions for improving quality of care



Wolters Kluwer



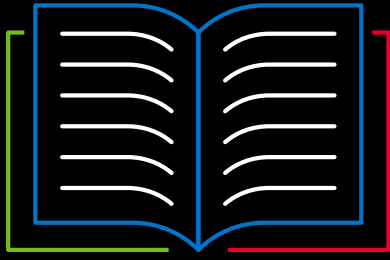


Table of contents

The health care system today	3
Why clinical decision support tools matter	5
Align care decisions for better patient outcomes	10
Streamline workflows and improve physician satisfaction	12
Elevate patient experiences	14
The Wolters Kluwer Clinical Effectiveness portfolio	
– UpToDate®	17
– Lexicomp®	19
– Emmi®	21
– Medi-Span®	23



Anywhere from five to eight patient management decisions per physician, per day, go unanswered due to lack of consistent and reliable access to a trusted source of comprehensive medical information.³

The health care system today

One in three adults globally suffers from multiple chronic health conditions such as heart disease, diabetes, stroke or cancer.¹

This growing complexity in patient care needs has spurred an explosion of medical research. As a result, the amount of available medical information doubles once every 73 days²—a rate equivalent to five times a year, every year.

For physicians, clinicians and care teams, this exponential growth of clinical research adds additional challenges to clinical decision-making.

On average, physicians have between 15 and 20 patient questions a day. Unfortunately, due to lack of consistent, reliable access to a trusted source of comprehensive medical information, up to 60% of these go unanswered. That means anywhere from five to eight patient management decisions are impacted, per physician, per day.³

¹ Hajat C, Stein E. The global burden of multiple chronic conditions: a narrative review. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6214883/#>

² Peter Densen, MD "Challenges and Opportunities Facing Medical Education", Trans Am Clin Climatol Assoc. 2011; 122: 48–58. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3116346>

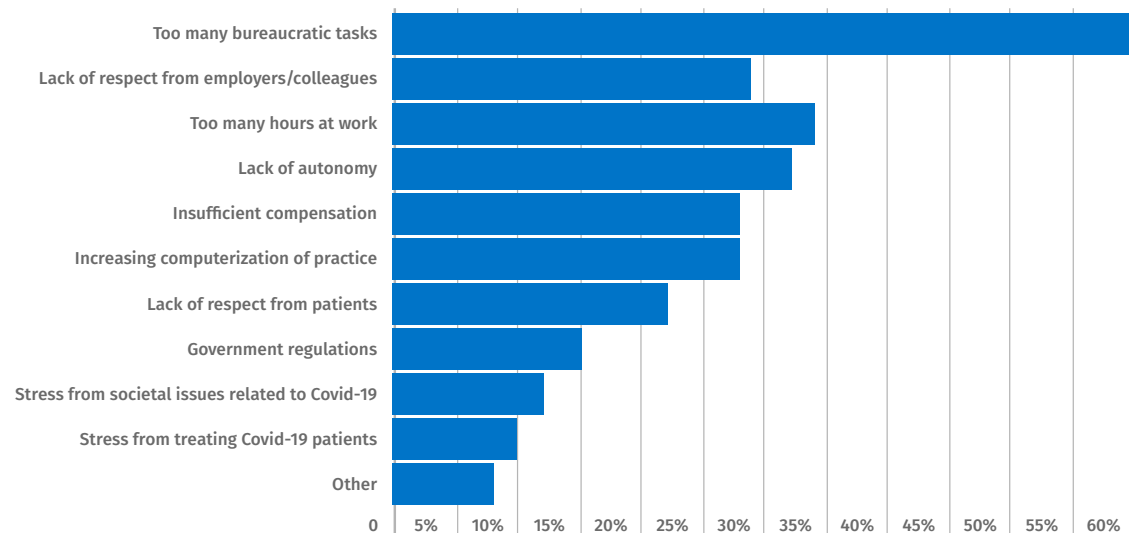
³ Covell, DG. Ann Intern Med 1985; 103:596; Green, ML. AM J Med 2002; 109:218; Osherooff, JA. Ann Intern Med 1991:575; Ely, JW. J Am Med Inform Assoc 2005; 12:217; Gorman, PN. Med Decis Making 1995; 15:113., Patient-Care Questions that Physicians Are Unable to Answer July/August 2017, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2244897>



The number of practitioners along a patient journey has increased. Individual decisions made by physicians, clinicians, pharmacists and even patients themselves all contribute to variability of care.

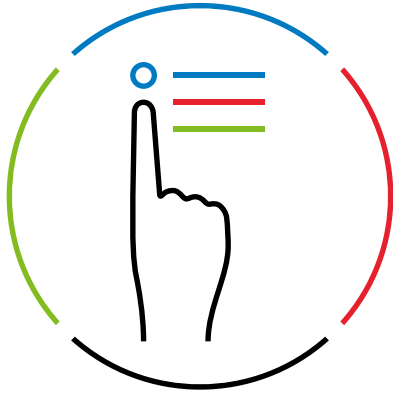
The impact to healthcare is staggering. Medication errors cause at least one death every day, injure 1.3 million people every year in the U.S. alone, and cost the healthcare industry \$42 billion annually.⁴ And patients are not the only ones affected. The rate of practitioner burnout is rising as well.

In a survey of 13,069 physicians across 29 specialties, 47% reported feeling burned out.⁵



⁴ "WHO launches global effort to halve medication-related errors in 5 years", World Health Organization, March 29, 2017, <https://www.who.int/news/item/29-03-2017-who-launches-global-effort-to-halve-medication-related-errors-in-5-years>

⁵ Medscape 2022 Physician Burnout & Depression report



Why clinical decision support tools matter

"Healthcare transformation can reduce unwanted variability and thereby improve quality, consistency, and reduce cost. And that's finally becoming achievable in the real world."

Dr. Peter Bonis,
Chief Medical Officer,
Wolters Kluwer, Health

The need for U.S. healthcare facilities to improve patient care, along with growing pressures to reduce spending and increase technological innovation, make computer-based decision support tools attractive.

With these tools, physicians and care providers can enter data at the point of care, receive information to support diagnosis decisions, and implement consistent treatment plans across the patient journey.

But simply adding in another tool isn't enough.

Indiscriminately adding in more tools often encumbers the workflow, introducing unnecessary work for clinicians and cutting into patient care time.



**For a decision support solution to be valuable,
it must do several key things:**

- ✚ Contain the most accurate, up-to-date information
- ✚ Provide the right information, right when the clinician needs it
- ✚ Simplify the clinician workflow by being easy to use
- ✚ Foster consistency of information across the continuum of care



Information is the best medicine

And Wolters Kluwer is the best choice for information your teams can trust.

Built on a legacy of providing trusted information to clinicians, Wolters Kluwer gives providers the expert, reliable clinical decision support care teams need to deliver exceptional care throughout the patient journey, from diagnosis to treatment to patient engagement.

UpToDate

Global leader for clinical decision support

Lexicomp

Referential drug therapy information that improves decision making

The Wolters Kluwer Clinical Effectiveness portfolio delivers aligned information to care teams, with an editorial team committed to harmonizing content across four core solutions: UpToDate, Lexicomp, Emmi, and Medi-Span.

Unlike other tools that only aggregate medical data, Wolters Kluwer solutions provide more than just easy access to data.

Medi-Span

Drug data embedded into workflow

Emmi

Multimodal and multimedia solution to engage patients in their healthcare



The Wolters Kluwer editorial network is composed of over 7,400 practitioners, all leaders in their fields, all committed to harmonizing the latest medical information across the Wolters Kluwer suite of tools. All information in the system has cleared a rigorous editorial process that includes peer review by multiple physician editors.

Wolters Kluwer's physician editors also provide detailed guidance for care teams to follow, even when the evidence is weak or unclear, following the international GRADE system of graduating evidence and recommendations from weak to strong.

“UpToDate is one of the most useful resources for our physicians — not only for practicing, but also for their clinical case studies, research, or presentations.”

Dr. Toshio Fukuoka, M.D.
Chief Director of the Emergency
and Critical Care Center the Department
of General Medicine, and Director of the
Department of Research and Medical
Education at Kurashiki Central Hospital

Wolters Kluwer
helps...





Align care decisions

Wolters Kluwer is committed to providing accurate, research-based, up-to-date medical information to care teams.

Misinformation can lead to inconsistent care and poor patient outcomes.

Integrated, evidence-based decision support tools can eliminate variability across the patient journey, reduce diagnostic and treatment errors, and lower unnecessary costs.

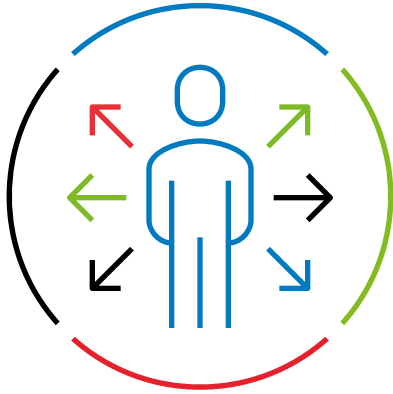
With the full Wolters Kluwer portfolio, everyone within the care continuum is using a resource built for their needs and based in the same trusted source of medical data. Entrusting a partner with deep expertise in clinical decision support also eliminates the information and communication gaps that arise from switching between multiple tools.

The result? Decisions that are harmonized, leading to better patient outcomes.

“UpToDate provides me with the differential diagnoses that can help me spot conditions earlier, and so it reduces the need for unnecessary referrals to hospital and improves management of the condition in primary care. It can also provide advice on medication choices for particular conditions, so that all such options can be exhausted before referring to secondary care. The patient information tools also support better self-management, especially for chronic care patients. I recommend this excellent tool to my colleagues.”

Dr. Eliza Moldovan, GP





Streamline physician workflows

Traditional systems often require constant manual documentation, demanding a large amount of cognitive effort from practitioners, disrupting clinician workflows and cutting into the time practitioners have available for patient care.

Frequent alert notifications also lead to alert fatigue, increasing the risk of users overlooking essential notifications that could impact patients' health. Additionally, using multiple systems across the continuum of care increases the risk of inconsistency, creates inefficiency in the clinician workflow and generates more work for care teams.

Wolters Kluwer's solutions were created by the medical community, for the medical community. Each tool has been designed to be intuitive, easy to use and easy to integrate into EHR systems with minimal IT intervention—meaning clinicians can get the lifesaving answers they need right away.

By making clinicians' jobs easier, Wolters Kluwer helps to reduce the risk of practitioner burnout and improve clinician satisfaction.



“With our vast footprint of hospitals, clinics and senior living facilities across 26 states, reducing variations in care is a critical part of our efforts to improve outcomes and increase patient safety. The interactive pathways in UpToDate Advanced have helped us streamline workflows and harmonize clinical decision-making across care teams and locations.”

Heidi Twedt, MD,
Former CMIO at Sanford Health, USA



Elevate patient experiences

An elevated patient experience is one that is personalized and harmonized across the entire continuum of care.

The care provided to patients should be accurate, consistent and quick. Variability in care can lead to longer in-patient stays, higher readmission rates and lowered confidence in care teams. As participants in their own care, patients deserve to receive the right information the first time—and to receive consistent answers from every provider along the journey, no matter how complex their needs.

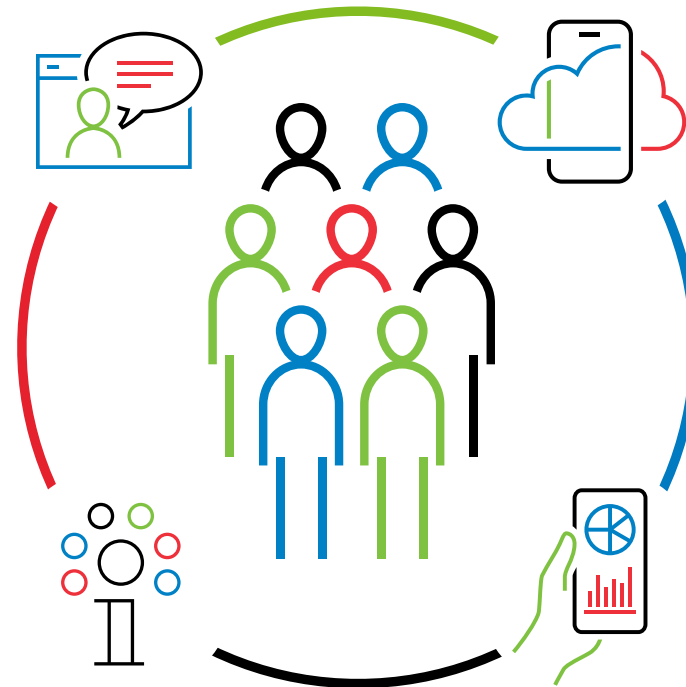
Wolters Kluwer provides clinicians with clear guidance, even for patients with complex medical conditions, like those with high-risk comorbidities, who are pregnant or who are children. Wolters Kluwer also drives effective patient-provider conversations by equipping care teams with the information to answer patient questions quickly, and by providing interactive engagement programs based on vetted editorial content and behavioral science principles, translated in up to 20 languages.





With AI-driven, virtual solutions, physicians can provide personalized engagement at scale, and patients are empowered to decide how, when and where they would like to be engaged during their care journey.

By facilitating individualized, harmonized care for even the most complex of cases, Wolters Kluwer elevates the care experience of every patient.



A male doctor with a stethoscope and a female healthcare professional are looking at a computer screen. The doctor is holding a pen and pointing at the screen. The woman is resting her chin on her hand, looking intently at the screen. A computer monitor and keyboard are visible on the desk.

The Wolters Kluwer Clinical Effectiveness *portfolio*

Our portfolio of solutions is designed to address and support every point across the continuum of care.

UpToDate

UpToDate is a clinical decision support tool with a 25-year history of providing evidence-based content and guidance.

UpToDate covers over 11,600 clinical topics across more than 25 medical specialties. Even when the evidence isn't clear, UpToDate is trusted by clinicians as their go-to clinical decision support solution. Clinicians trust UpToDate to have the answers they need, when they need them—usage data shows that, on average, users are able to search, locate, and review the information they need in approximately one minute.

Researchers at Harvard School of Public Health found that adoption of UpToDate has been associated with:

- **Improved quality across every condition on the Hospital Quality Alliance Metrics**
- **Shorter hospital stays, with 372,000 days saved over just one year**
- **Lower mortality rates, with 11,500 lives saved over three years**

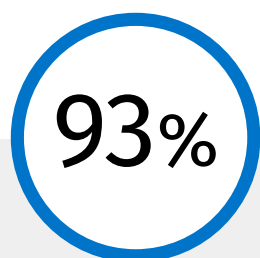


UpToDate

Clinicians agree that UpToDate is a must-have resource for helping make the right patient care decisions. According to a survey⁶ conducted across over 14,000 UpToDate users:



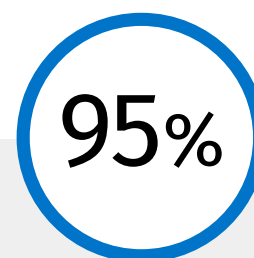
would recommend
UpToDate to a
colleague



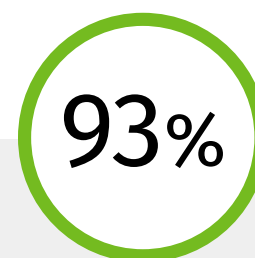
trust UpToDate as
an authoritative
point-of-care resource



say UpToDate
improves the
quality of care
they provide



say UpToDate helps
them stay current



say UpToDate
saves time

Lexicomp

Lexicomp is an expert drug referential solution. Over 2,500 institutions and 43,000 retail pharmacies globally trust Lexicomp to provide the advanced clinical insight and actionable drug dosing they need to develop patient-specific approaches.

Medication errors and improper dosing are common, costly and harmful. One study found that patients with Chronic Renal Insufficiency—one of the most challenging conditions to dose—were given inappropriately high dosages of drugs 25% of the time.⁷

Lexicomp exists because clinicians need a tool that can drive effective drug therapy in complex, specific scenarios. Powered by advanced machine learning and available in 18 languages, Lexicomp enhances standard drug monographs with a level of detail and clinical insight unmatched by other drug referential solutions.

Lexicomp can also be enhanced with FORMULINK, a custom formulary database service that integrates with existing formulary information at the point of care. And with other critical resources like Trissel's IV Compatibility, Briggs' Drugs in Pregnancy and Lactation, and administration and adverse drug reaction content, answers are always only a few clicks away.



⁷ Clarence Yap et al. "Medication dosing errors for patients with renal insufficiency in ambulatory care", Jt Comm J Qual Patient Saf. 2005 Sep.

Lexicomp

Lexicomp is a high-quality resource. Froedtert and the Medical College of Wisconsin agree. After choosing Lexicomp and pairing it with a FORMULINK subscription, Froedtert found:



250%

increase in formulary
usage in the first five
months



37%

increase in staff
satisfaction



40%

increase in user ability to
find information quickly



180k

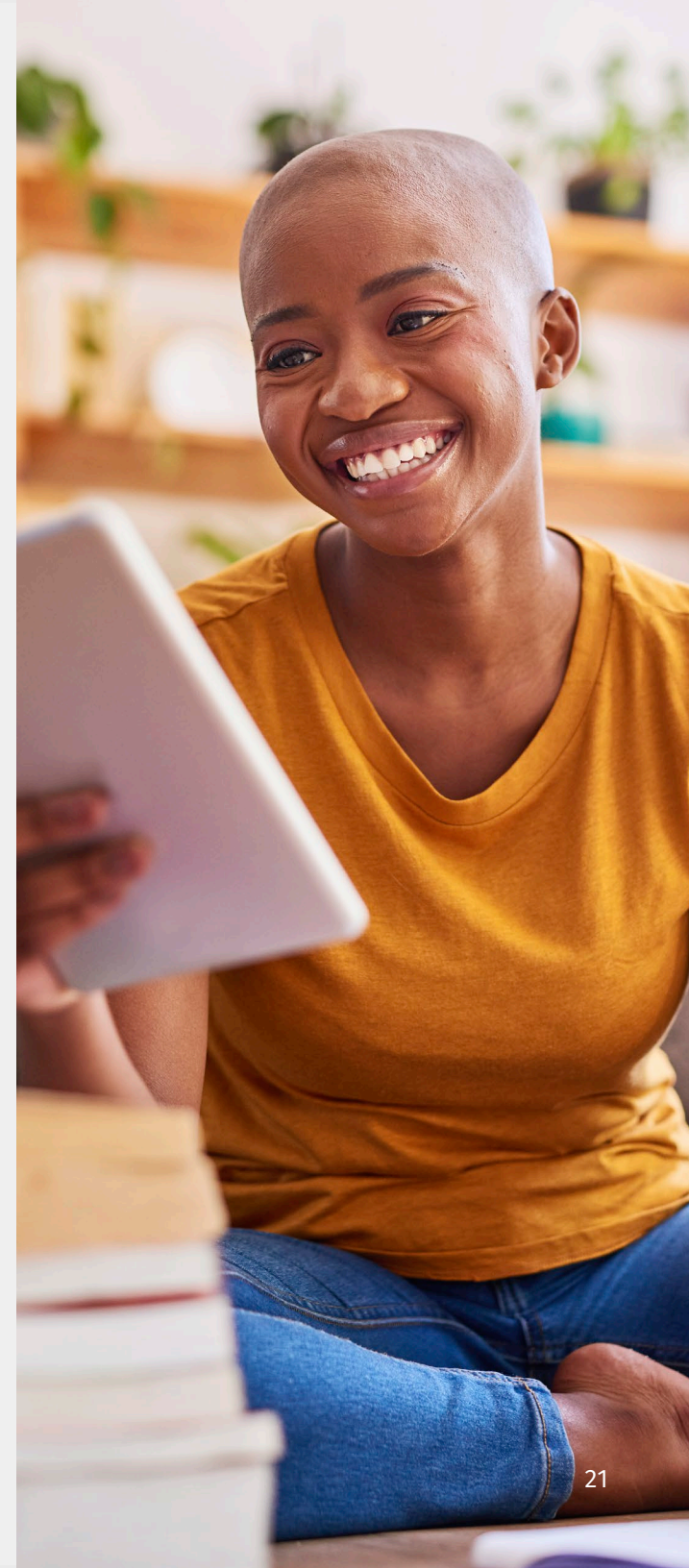
in cost savings
in 10 months

Emmi

Emmi is the AI-driven, end-to-end solution for patient engagement and education.

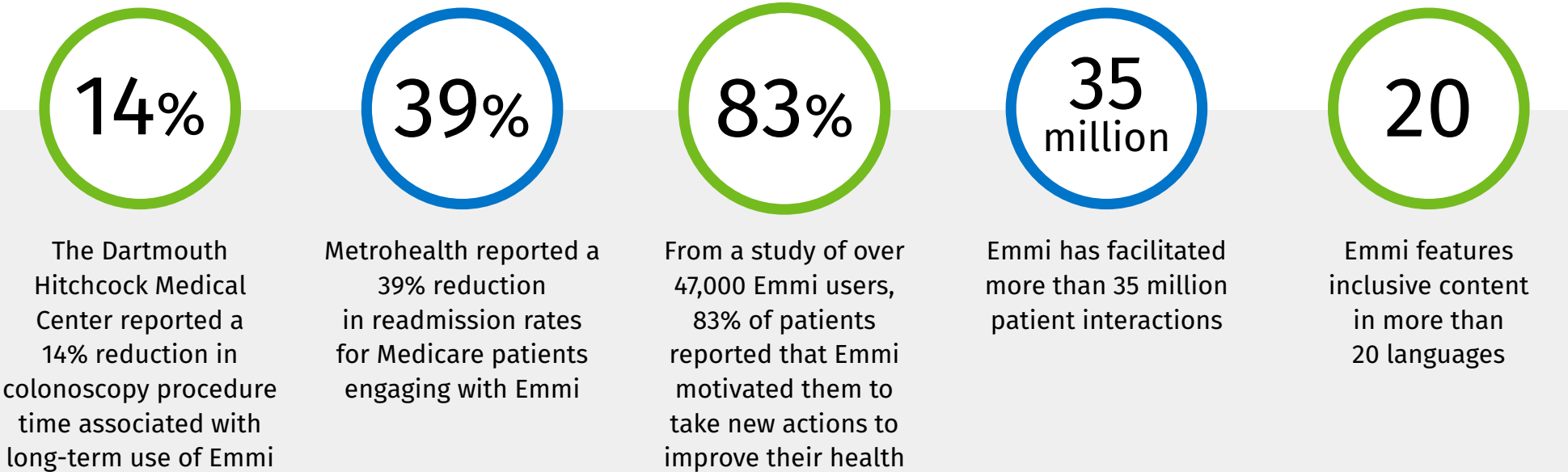
Patient care is a journey, and it looks different for every patient. Emmi supports physicians and clinicians in delivering the patient-focused, personalized care experiences that lead to better patient outcomes. Emmi's virtual solution allows clinicians to extend their reach and scale compassionate care to every patient, through every episode of care, without the time, cost and effort that would otherwise be required.

By giving patients access to hundreds of high-quality, clinical-based materials covering drug information, procedures, discharge instructions and more, Emmi facilitates meaningful conversations with providers and empowers patients to be active participants in their own care.



Emmi

Emmi has a real, measurable impact on patient behavior, satisfaction and health outcomes:



14%

The Dartmouth Hitchcock Medical Center reported a 14% reduction in colonoscopy procedure time associated with long-term use of Emmi

39%

Metrohealth reported a 39% reduction in readmission rates for Medicare patients engaging with Emmi

83%

From a study of over 47,000 Emmi users, 83% of patients reported that Emmi motivated them to take new actions to improve their health

35
million

Emmi has facilitated more than 35 million patient interactions

20

Emmi features inclusive content in more than 20 languages

Medi-Span

Medi-Span is Wolters Kluwer's intelligent embedded drug data solution.

This drug data content integrates into health information systems to support clinicians' medication-related decisions across the continuum of care. Although the data is formatted for machines, it is maintained by the same editorial staff who manage the information contained in Wolters Kluwer's other solutions, meaning that any data being used is consistent throughout the clinician workflow.

Medi-Span is used for multiple applications, including filling prescriptions, managing inventory, dose checking, screening drug interactions,

screening disease conflicts and more. Medi-Span's innovative classification system is built to a level of granularity unmatched by any other industry solution, enabling quicker data activities and increasing patient safety while reducing the likelihood of medication errors.

In the U.S. alone, thousands of hospitals use Medi-Span to support medication order management, thousands of retail pharmacies use Medi-Span to perform millions of checks, and over eight million drug education leaflets are given to patients with their prescriptions using Medi-Span data.



Medi-Span

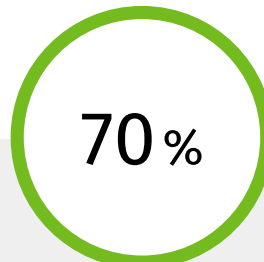
But that's not all — Medi-Span is used by:



hospitals and
healthcare
organizations
worldwide



of top-grossing
PBMs



of top-grossing
EMR vendors



top retail
pharmacy chains



of top-grossing health
insurance companies

The Wolters Kluwer *impact*





The right partner with the right information

The Wolters Kluwer suite of tools empowers medical professionals across the patient journey to make informed, accurate, timely and consistent clinical decisions at the point of care, directly from their workflow, irrespective of the disease and situation.

With a highly skilled editorial team following a rigorous publication procedure and providing graded recommendations to practitioners based on the best available evidence, Wolters Kluwer helps mitigate medical errors and gives medical practitioners immediate access to the most updated clinical and drug information.

Wolters Kluwer's healthcare solutions support better patient outcomes, more efficient workflows for practitioners, and an elevated patient experience across a harmonized continuum of care.

The outcomes? Improved engagement between clinicians and patients, reduced hospital readmission rates, shortened times to carry out medical procedures, and increased patient adherence to care plans.

That's the power of information.

And that's why information is the best medicine.

[accurate + timely + consistent]