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 healthcare system today

Five to eight patient management questions go unanswered each day, in part due to lack or unreliable access to trusted evidence-based medical information.[3]

One in three adults worldwide suffers from multiple chronic 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 days[2] — a rate equivalent to five times a year, every year.

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

Clinicians frequently raise questions about patient care in their practice, and roughly half of the questions are never pursued.

Time constraints or limited access to reliable, applicable evidence-based information are the top root causes.[4]

Unfortunately, due to a lack of consistent, reliable access to a trusted source of comprehensive medical information, up to 60% of clinician questions go unanswered. Anywhere from five to eight patient-management decisions are impacted, per clinician, 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; Osheroff, 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 2007, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2244897

[4] Del Fiol G, Workman TE, Gorman PN. Systematic review: the relationship between clinical experience and quality of health care. *JAMA Intern Med.* 2014 May;174(5):710-8. doi: 10.1001/*jamainternmed*.2014.368.
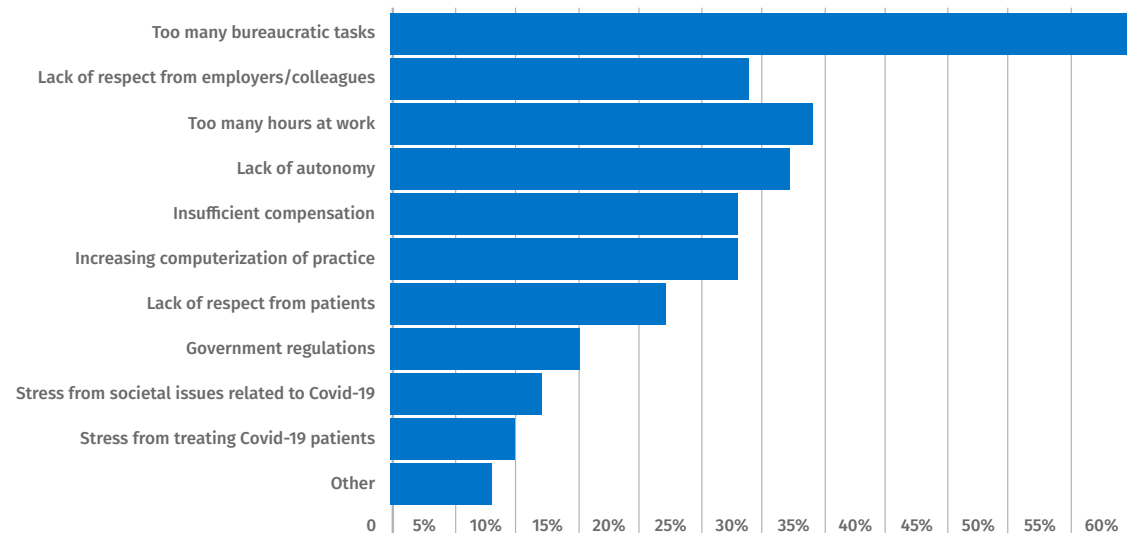
The number of practitioners along the patient journey has increased. Individual decisions made by clinicians and even patients themselves all contribute to variability of care.

The impact to healthcare is staggering. Globally, medication errors cost the healthcare industry $42 billion annually.[4] To put this in perspective, a 2018 study estimated that 237 million medication errors occur in the NHS in England every year, causing hundreds of avoidable Adverse Drug Reactions (ADRs) and deaths.

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

Too many bureaucratic tasks
Lack of respect from employers/colleagues
Too many hours at work
Lack of autonomy
Insufficient compensation
Increasing computerization of practice
Lack of respect from patients
Government regulations
Stress from societal issues related to Covid-19
Stress from treating Covid-19 patients
Other

0 5% 10% 15% 20% 25% 30% 35% 40% 45% 50% 55% 60%

4 Elliott, R., Camacho, E., Campbell, F., Jankovic, D., Martyn St James, M., Kaltenthaler, E., Wong, R., Sculpher, M. and Faria, R. (2018) Prevalence and economic burden of medication errors in the NHS in England. Rapid evidence synthesis and economic analysis of the prevalence and burden of medication error in the UK (PDF, 2.3MB). Policy Research Unit in Economic Evaluation of Health and Care Interventions. Universities of Sheffield and York. https://eepru.sites.sheffield.ac.uk/projects/prevalence-and-economic-burden-of-medication-errors-in-the-nhs-in-england Accessed 9/9/2022
5 Medscape 2022 Physician Burnout & Depression report
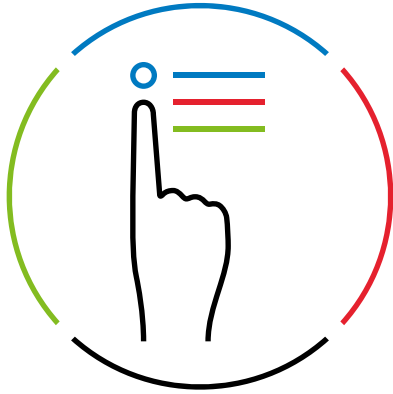
Why cinical decision support tools matter

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

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

The need for healthcare organizations 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, clinicians 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.

However simply adding another tool isn't enough.

Additional tools often obstruct 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 with an easy-to-use interface

✚ Foster consistency of information across the continuum of care

Information is the best medicine

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.

The Wolters Kluwer portfolio delivers aligned information to care teams, with an editorial team committed to consistent content across three core solutions: UpToDate®, UpToDate® Lexidrug™, and Medi-Span®.

Unlike other tools that only aggregate medical data, these solutions provide morethan just easy access to data. They bridge the gap in clinical and technology excellence.

UpToDate
Global leader for clinical decision support

Lexidrug
Referential drug therapy information that improves decision making

Medi-Span
APIs and expert services for medication decision support

Our global editorial network is composed of over 7,400 medical experts and over 200 pharmacists, all leaders in their fields, all committed to providing the latest medical information across the Wolters Kluwer suite of solutions. All information must clear a rigorous editorial process that includes peer review by multiple physician editors. 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,
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 the latest accurate, research-based 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 can use 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 consistent, 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, *General Practitioner*
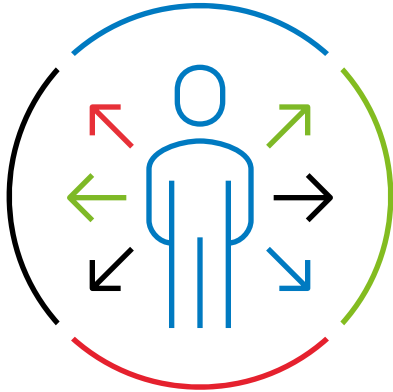
Streamline clinician workflows

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 Electronic Health Record (EHR) systems with minimal IT intervention, meaning clinicians can get the lifesaving answers they need right away.

By making clinicians' jobs easier, these solutions help 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."

Dr. Heidi Twedt,
Former CMIO at Sanford Health, USA

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 over 30 years of history providing evidence-based content and guidance.

UpToDate covers 25 medical specialties in over 11,600 clinical topics written to help answer essential questions. Even when the evidence isn't clear, clinicians rely on UpToDate 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.

More than 100 research studies from around the world demonstrate that widespread use of UpToDate is associated with improved outcomes and hospital performance.

UpToDate

Clinicians agree that UpToDate is a must-have solution for helping make the right patient care decisions. According to a 2021 global survey[6] of UpToDate subscribers:

85% in the United Kingdom would recommend UpToDate to a colleague

71% in Germany trust UpToDate as a point-of-care resource

83% in Japan agree UpToDate improves the quality of care provided to patients

97% in Brazil believe UpToDate keeps them current

88% in India agree UpToDate saves time
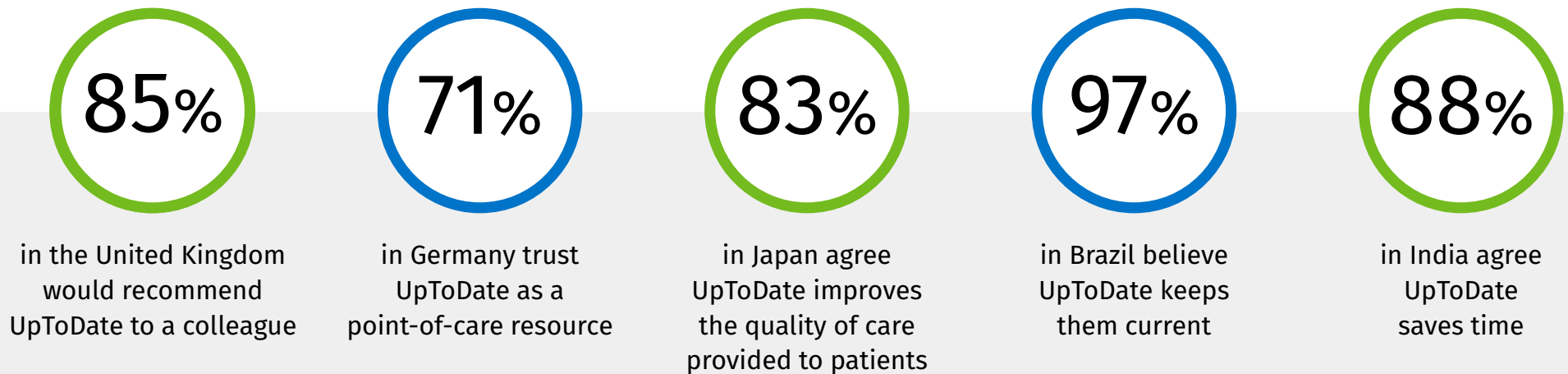
UpToDate Lexidrug

UpToDate® Lexidrug™ referential drug content, empowers 2,500 institutions and 43,000 retail pharmacies to make the best possible medication and therapeutic decisions.

An editorial team of 150+ specialists, many who are clinicians with advanced training, work with 300+ consultants who are leading pharmacists around the world to produce 17 content sets and nine decision support modules and tools.

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]

UpToDate Lexidrug 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, Lexidrug enhances standard drug monographs with a level of detail and clinical insight unmatched by other drug referential solutions.

Lexidrug 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.
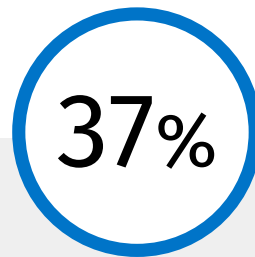
UpToDate Lexidrug

Lexidrug is a high-quality resource. Froedtert and the Medical College of Wisconsin agree. After choosing Lexidrug and pairing it with a Formulink subscription, Froedtert found:
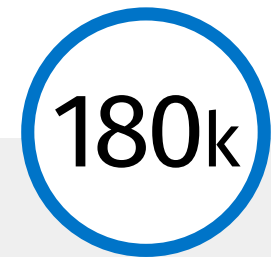
250% increase in formulary usage in the first five months

37% increase in staff satisfaction

40% increase in user ability to find information quickly

180k in cost savings in 10 months

Medi-Span

Medi-Span Clinical APIs and our expert services help organizations provide a sophisticated level of medication screening to their clinicians in the workflow.

Although the data is formatted for machines, it is maintained by the same editorial staff who manages the information published in UpToDate and Lexidrug, 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. With Medi-Span in the workflow, clinicians can consider not only the patient's basic characteristics and medication being prescribed, but also the patient's other medications, diagnosis, available or relevant labs like serum creatinine, drug latency, genomic data, and many other characteristics.

This leads to fewer, more meaningful alerts, enabling clinicians to take a more patient-centered approach to treatment at scale.

A 2021 analysis by the National Cheng Kung University Hospital in Taiwan compared alerts triggered by their existing solution with Medi-Span. They found that:

- Clinicians received 21% fewer alerts, and those alerts captured more severe potential ADEs.

- They improved ADRs prevention, generating an estimated saving of NT$558,000 in a 5-month period, or NT$1,139,200 a year (US$39,200).

- Less ADEs saved an estimated 111 bed days within a 5-month period, equivalent to 266 bed days saved in a year.

Medi-Span

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

34k+
hospitals and healthcare organizations worldwide

17 of 20
of top-grossing Pharmacy Benefits Managers in the US.

70%
of top-grossing EMR vendors

4 of 5
top retail pharmacy chains

18 of 20
of top-grossing health insurance companies

The Wolters Kluwer impact

The right partner with the right information

The Wolters Kluwer suite of solutions 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 the continuum of care.

The outcomes? Improved education and 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]