

Cone Health Cancer Center: Using ClinicalPath to help improve patient outcomes and reduce the cost of care¹





After the adoption of Elsevier's ClinicalPath, this comprehensive cancer center saw marked improvement in patient survival rates and contribution margins.

Hospitals across the country implement a variety of information technology (IT) solutions with the hope of improving patient outcomes while managing skyrocketing healthcare costs. Far too often, however, it's not clear what benefits, if any, such solutions bring. When Cone Health Cancer Center deployed Elsevier's ClinicalPath (formerly Via Oncology), an evidence-based clinical decision support tool directly embedded into the clinical workflow, they wanted to ensure that its implementation and use would provide both clinical and business benefit.

Cone Health is a private, not-for-profit integrated healthcare network in North Carolina, comprising five hospitals and several ambulatory care centers, outpatient surgery centers, physician practices, a retirement community and urgent care centers. The healthcare network is also home to the Cone Health Cancer Center, which provides comprehensive cancer care spanning six cancer centers with more than 30 cancer specialists across the Cone Health Network.

The Cone Health Cancer Center prides itself on providing state-of-the-art treatments and interventions for a variety of cancers in a compassionate community-hospital setting. Executive leadership at Cone Health recognizes the importance of supporting its clinicians with the tools needed to make consistent, well-informed decisions for high-quality care. Among the Cone Health executive leadership is Monica Schmidt, MPH, PhD, Executive Director of Health Economics and Health Equity Analytics. Dr. Schmidt and her team focus on research that informs both clinical and financial strategies in healthcare.

“We are very interested in reducing unwarranted care variation in healthcare to help improve patient outcomes while also managing costs,” Dr. Schmidt said. “Certainly, you will see variation in treatment where it is warranted because the patient prefers a certain path forward for their own reasons — but there’s also variation in treatment that’s unwarranted. That’s when a physician defaults to a previous way of treatment or may not realize better results could be obtained with a different approach. That may not lead to the best outcomes for our patients.”

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Monica Schmidt, MPH, PhD

Executive Director of Health Economics and Health Equity Analytics, Cone Health

Reducing care variation

Implementing clinical decision support tools can help physicians standardize care by providing recommendations for treatment based on the latest evidence. Previous internal analysis at Cone Health demonstrated that the adoption of order sets reduced care variation. Their findings indicated that when providers had the same prescribed evidence-based choices for treatment decision-making, they could better direct patients through an optimized continuum of care. Based on those results, Cone Health implemented order sets at its cancer care facilities as well.

To further explore the effectiveness of reducing care variation with thoughtfully implemented tools, in 2016, Cone Health decided to deploy Elsevier’s ClinicalPath. They wanted to see if these pathways could help oncologists make consistent, evidence-based decisions for cancer care treatment.

“We wanted to look at whether the ClinicalPath product, like the order sets we had previously implemented, could reduce care variation, improve patient outcomes in terms of short-term survival and reduce the cost of care,” Dr. Schmidt said. “We hypothesized that giving our providers this kind of evidence-based guidance directly in the clinical workflow would result in achieving all three goals.”

Clinical and financial success

To measure whether ClinicalPath could help reduce care variation, Cone Health Cancer Center looked at both costs and outcomes for more than 6,700 patients who were treated between 2017 and 2022. Of those initial patients, the researchers compared 1,810 diagnosed and staged cases of cancer for which providers followed the ClinicalPath treatment recommendations during treatment against 4,095 cases for which the recommendations were either not used or not followed through to completion. Of those cases, 509 were matched across both experimental conditions by the year the cancer was diagnosed, site of the cancer, clinical stage, goal of treatment and other disease co-morbidities in order to control for outside variables that might skew the results.

The research team documented patient survival rates at 3, 6 and 12 months, as well as the variable direct costs of care for the patients in the study. The group also measured the contribution margin, or the amount of revenue available after both variable and fixed costs of care were covered by recouped payments.

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The analysis was compiled in an abstract that was submitted to and accepted by the American Society of Clinical Oncology (ASCO) for presentation at their 2023 annual conference.

The [ASCO poster session](#) detailed their findings: Researchers found that patients whose care was managed by clinicians referencing ClinicalPath showed improved survival rates. The group of patients documented as on-pathway in ClinicalPath were half as likely to die within 3, 6 or 12 months of when the treatment began compared to cases in which ClinicalPath was not used or not followed through the entire clinical care pathway.

“We hypothesized that we would see improved short-term outcomes for patients,” Dr. Schmidt noted. “And we were pleased that, from the time patients received their first treatment for their cancer, they were more likely to survive all the way through 12 months if their oncologist managed care with decision support from ClinicalPath pathways.”

When researchers looked at care costs, however, they found surprising results. Contrary to their initial hypothesis, according to Dr. Schmidt, the use of ClinicalPath increased the overall cost of care for patients. However, when they looked at contribution margins, they saw that Cone Health was more likely to be reimbursed for prescribing relevant, evidence-based care. That meant the integrated health network was, ultimately, seeing significant financial benefits when ClinicalPath was used as compared to when it wasn't.

As Dr. Schmidt delved into the data, she saw that the higher direct variable costs were due to the drugs or other treatments recommended by the care pathway. However, the same evidence-based guidelines present in the pathway also influence reimbursement by providing reasoning around treatment decisions. She discovered that, on average, contribution margin increased by 74% when oncologists used ClinicalPath to guide treatment.¹ The direct care costs might be higher, but the recouped payments meant that cases guided by ClinicalPath were more profitable for the cancer center.

“Even though we were providing more care at a higher cost, we were seeing higher reimbursements to cover those costs,” she said. “That’s what’s really important when you are looking at a service line to see how profitable it is for your system. And while patient outcomes are most important to us, we also need to manage our costs so we can run a sustainable business and continue to provide care to our patients. And using ClinicalPath to stay on a pathway helped provide benefits — not only allowing us to provide more effective care to our patients, but also to be more profitable as we provided those treatments.”¹





Moving forward

Dr. Timothy Finnegan, MD, Chief of Oncology at Cone Health Cancer Center, said that the center's physician executives were happy with the study's results and were struck by how a solution like ClinicalPath can help improve patient outcomes and reduce overall costs by lowering care variation.

"Using ClinicalPath and collaborating with Elsevier has been a positive experience for both clinicians and patients," Dr. Finnegan said. "Patient-centric focus is of utmost importance."

Now that the study has ended, many of the oncologists at Cone Health have adopted ClinicalPath as a part of their regular care workflow. Physicians appreciate that the orders are embedded directly within the clinical pathway which helps them to treat patients more efficiently and effectively.

In the future, Dr. Schmidt hopes to do a follow-up study to look at how ClinicalPath improves provider efficiency — and whether it can decrease the amount of time it takes to get patients from diagnosis to treatment. She also wants to see if ClinicalPath can assist in reducing physician burnout. In the meantime, the current results are generating a lot of enthusiasm across the cancer center.

References

Schmidt, M. 2023. The impact of using Elsevier ClinicalPath oncology treatment pathways on survival and cost of care. [Poster]. ASCO Annual Conference, 2-6 June, McCormick Place. Available from: <https://meetings.asco.org/abstracts-presentations/221866>

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"Our physician leaders are excited about what ClinicalPath pathways can do for our patients. But they are also excited about the efficiency it gives our clinicians, easing the cognitive burden on busy oncologists so they can design the most effective treatment pathway in a very efficient way," she said. "These results really demonstrate the power of shared decision-making in healthcare."

To discover how ClinicalPath can support patient care and help manage costs, visit elsevier.com/clinicalpath



About ClinicalPath

ClinicalPath (formerly Via Oncology) provides industry-leading oncology pathways used by health systems, academic medical centers, and private practices across the US and globally.

Designed to help reduce variability in care and support optimal patient outcomes, ClinicalPath is delivered at the point of care, using a workflow-embedded decision support tool and advanced EHR integration.

ClinicalPath's treatment recommendations are prioritized based on efficacy, toxicity and cost by a nationwide committee of oncologists.

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