As the world’s populations grow and age, cancer is on the rise. Unfortunately for most cancer patients, the care they receive is often fragmented, uncoordinated and inefficient. This puts an enormous strain on health systems worldwide as they struggle to meet the increasing demand for cancer treatment services and resources.

Thanks to the great progress that has been made in screening, diagnosing and treating cancer, we have more cancer survivors alive today than ever before. However, the healthcare landscape that most cancer patients and survivors experience is usually fragmented, uncoordinated and inefficient. Fragmented cancer care within healthcare systems, combined with rising cancer incidence and more cancer survivors requiring care has major cost and resource utilization implications today and into the future for health systems throughout the world. The challenge is clear. How can healthcare systems better manage their cancer patient populations from diagnosis through survivorship, provide high quality cancer care, and control costs at the same time?

Cancer incidence is rising, and the economic burden is alarming

Cancer incidence is rising globally, primarily due to population growth and aging. The World Health Organization estimates that the number of new cancer cases will increase by approximately 70% over the next two decades. There were an estimated 14 million new cases of cancer and 8.2 million cancer-related deaths worldwide in 2012, the most recent year for which global figures are available.

Cancer places the greatest economic burden on healthcare systems worldwide compared to other diseases. The total economic cost of cancer globally was estimated to be $895 billion in 2008. In 2016, there will be approximately 1,685,210 new cancer cases diagnosed in the United States, according to the American Cancer Society. At the same time, there are more people surviving cancer than ever before. In the 45 years since the 1971 National Cancer Act was passed into law, the number of cancer survivors in the U.S. alone has increased from 3 million to nearly 12 million, with the majority more than five years beyond diagnosis.
The case for oncology care management
From the point of diagnosis through treatment and into survivorship, cancer is a complex disease characterized by multiple interventions; interaction across primary care and specialty areas; the need to assess, manage and understand enormous amounts of data and information; and the ability to navigate often confusing and disconnected coverage and reimbursement structures. Fractured cancer care often leads to poor utilization of healthcare services, unnecessary procedures and duplication of diagnostic tests, lack of information sharing between primary care and specialist teams, and higher costs. As healthcare services and reimbursement policies transition from volume-based to value-based care, a different approach to managing cancer is obviously required.

In an effort to improve the health of cancer patients and survivors, reduce per capita healthcare costs and improve the efficiency of care delivery, policymakers, payers and healthcare providers are implementing oncology care management programs. Oncology care management is a team-based, patient-centered approach to cancer care that applies primary and specialty care team integration, information technology, scientific evidence, aligned financial incentives and meaningful patient engagement to improve the quality and efficiency of care in a specific patient population.

For example, in February 2015, the U.S. Centers for Medicare & Medicaid Services (CMS) announced the launch of its own oncology care management program, called the oncology care model (OCM). The goal of the OCM is to provide higher quality, better coordinated oncology care at the same or lower cost to Medicare. Through the use of aligned financial incentives, including performance-based payments, the OCM is designed to promote whole practice transformation. There are 195 oncology care practices and 17 payers participating in the OCM, a five-year model that began on July 1, 2016 and runs through June 30, 2021.

The three core principles of oncology care management
There is growing consensus that a high quality cancer care system should consistently deliver care that is evidence-based, patient-centered and coordinated. To meet these goals, there are three commonly accepted principles that constitute effective oncology care management.

In order to be effective, oncology care management should align personnel, data, resources, and technology to provide cancer care that is:

I. Data-driven—enables evidence-based decision support based on data from multiple sources, treatment guidelines and standards of care, patient feedback, and knowledge.

II. Patient-centered—meaningfully engages patients as members of the care team who participate in shared decision making and provides them with the communication and education they need to actively manage their care.

III. Collaborative—encourages context-relevant collaboration between care teams, disciplines and care sites from screening, to diagnosis and through survivorship.

The enormous advances in cancer research, genomics, diagnostics and biopharmaceuticals have led to an explosion of data and information. Big data and personalized medicine represent an exciting opportunity to make further progress in the fight against cancer by providing greater access to clinical evidence, accelerating the translation of clinical research into clinical practice, and facilitating better patient engagement. However, accessing the right evidence and information, and making information actionable for healthcare providers and understandable for cancer patients remains a challenge. Information technology has a crucial role to play in managing vast amounts of data, facilitating the rapid transfer of clinical evidence into clinical practice, enabling better patient engagement, and coordinating care.

Engaging patients as active participants in treatment decision making and managing their own healthcare is critical to providing high quality cancer care. Engaged patients are more satisfied with the care they receive and experience better health outcomes overall. Improving care coordination in cancer cases requires better integration of primary care and specialist services to improve screening, early diagnosis and treatment. More widespread adoption of “patient navigators” to help bridge the gaps between specialists and community, and institutional resources is making a significant contribution to better coordinated cancer care.

The essential role of information technology in enabling oncology care management
Information technology is the “rail system” that connects all aspects of oncology care management, including the three pillars of evidence-based care, patient-centered care, and team collaboration. While it cannot and should not replace the human and organizational interventions necessary to transform cancer care to an oncology care management approach, it is clear information technology (IT) is essential for effective oncology care management initiatives.

To achieve their goals, oncology care management programs require changes in staff recruitment and training, organizational structures, and reimbursement strategies. As cancer treatment centers and oncology departments move toward oncology care management, major advances in data analytics, cloud technologies and interoperability mean that these organizations can now deploy “learning healthcare systems.” These systems are designed to accelerate the transfer of evidence into clinical practice, continuously compile and integrate new evidence from clinical trials and disease registries, and access the most current guidelines and best practices to deliver the best, most up-to-date care personalized to each patient.

In terms of enabling patient-centered care, information technology systems can provide the care team and patients access to medical records and automate patient scheduling and follow-up. These systems can also help manage regular communication with patients and provide up-to-date information about regimen changes, treatments, side effects, aftercare considerations, and next steps. And at every stage of the cancer care continuum, from diagnosis through treatment and survivorship, well-designed information technology systems can connect patients and caregivers to community-based resources.

Enterprise EMR systems: Part of the solution, but not enough to meet the challenges of coordinated cancer care
While enterprise electronic medical record (EMR) systems are an important part of the IT ecosystem and part of the solution to achieve oncology care management goals, EMRs on their own are not designed to address the integration needs between primary and specialist care, or the specific workflow needs unique to caregivers in specialist settings such as oncology departments.

Collaboration in oncology care management between primary care and specialist settings across departments and treatment sites requires an IT strategy that goes beyond traditional EMR systems. Effective decision support requires access to multiple data sources and evidence across public, private and institutional sites, treatment guidelines, care pathways, and best practices. Most stakeholders prefer an IT strategy that combines customized, oncology-specific solutions with an enterprise-wide EMR. Oncology-specific IT solutions help connect all stakeholders in cancer treatment and survivorship planning (including healthcare providers and patients) to patient records, evidence-based decision support resources, and patient-engagement modules.

Varian Medical Systems: Technology that drives oncology care management
Varian Medical Systems has been a global leader in providing software for individual points of care in oncology for many years. Varian’s long history across oncology disciplines enables us to offer oncology care management solutions that span the entire service line and are specifically geared towards the unique needs of oncology. Additionally, we have many years of experience with interoperability between Varian and third-party systems that will allow us to source oncology-relevant data from various institutional, academic, government, and proprietary databases. Varian partners with cancer treatment centers, leading academic institutions, and community oncology practices to provide industry leading expertise, and technology that enables the design and implementation of effective oncology care management.

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References


