



***BHCG Community Event:  
Oncology Insight: Combining Artificial Intelligence and Clinical  
Expertise to Revolutionize Cancer Care***

**Sponsored by the Business Health Care Group (BHCG)**

**Presentations by:**

***Lewis Levy, MD***  
**Best Doctors**

***Matt Leveque***  
**UnitedHealthcare**

***Jeffrey Lenert, MD***  
**Watson Healthcare**  
**Transformations**

***Brenda Budaitis***  
**UnitedHealthcare**

***Scottie Girouard***  
**Connecture**

**May 9, 2017, 8:30 – 11:00 AM**  
**BMO Institute for Learning**

**Executive Summary**

Representatives from employers, providers, brokers and other stakeholders gathered on May 9 at the BMO Institute for Learning for a highly informative community event featuring Dr. Lewis Levy of BHCG's informed decision making vendor, Best Doctors, and Dr. Jeffrey Lenert of IBM Watson Health who gave the details of their new collaboration, Oncology Insight With Watson, a program that seeks to revolutionize cancer care by combining artificial intelligence and clinical expertise. Attendees also heard presentations from UnitedHealthcare's Matt Leveque (Advocate4Me overview) and Brenda Budaitis (clinical team overview). BHCG member employer representative Scottie Girouard of Connecture also recounted her experience with the Advocate4Me program. The following are key takeaways from the event.

## Dr. Lewis Levy, Best Doctors

- Twenty-six percent of diagnoses are found to be incorrect; misdiagnoses account for one-third of all wasted health care costs and are the third leading cause of death; most Americans will encounter one diagnostic error in their lifetimes.
- Best Doctors combines data analytics and top clinical talent across a global network to identify and solve complex, critical and costly health care problems.
- Why Best Doctors?
  - More decision-making is being shifted to the consumer with 24 percent of Americans enrolled in high deductible health plans.
  - There are many barriers to effective care: provider time constraints (15 minutes or less with each patient); system complexity and lack of interoperability; and changing and increasing medical knowledge (doubles every 3.5 years).
  - Best Doctors has a proven track record impacting quality care for targeted high impact conditions.
- How does Best Doctors work?
  - The program offers expert second opinions, critical care support, answers treatment-related questions, finds the right specialists, provides treatment decision support and a personal medical record summary and repeats the pathology.
  - Analytics are used to identify who would benefit from a Best Doctors intervention.
  - An expert second opinion process is conducted.
  - The process highlights the best expertise for the patient's question, regardless of geography.
  - Integration with existing health benefit vendors increases referrals to improve outcomes.
  - Best Doctors employs BHCG engagement strategies through partnering with employers to create a custom plan for each population to effectively promote and educate members.
- What are the results? Forty-five percent of cases have a diagnosis change; 75 percent have a treatment change; and an average of \$36,000 of costs are avoided per case (some critical care cases may save over \$100,000).
- Cancer costs Americans \$125 billion a year and is increasing – the timing is really right for the Oncology Insight program.
- Watson is a system that can deal with large amounts of data through natural language processing and machine learning to gain insights to find the best possible treatment.
- Oncology Insight uses the same procedure as the Best Doctors program but takes an additional step and puts the clinical summary into IBM Watson and adds cognitive computing to use big data as an oncology care game changer.
  - Top clinicians review the Watson analysis for accuracy and to make sure it is contextualized to the individual patient.
- IBM chose to partner with Best Doctors to develop Oncology Insight for three reasons:
  - Clinical quality to ensure the accuracy of the data on the front end

- Top level expertise to make sure the recommendations are appropriate to the patient
  - Technological background to be able to integrate Watson technology
- Oncology Insight offers a suite of services baked into the Best Doctors expert medical review process.
- The program has gone live with the entire IBM U.S. employee population and many of Best Doctors clients are bringing it online for 2017 and 2018.

**Dr. Jeffrey Lenert, Watson Healthcare Transformations**

- IBM Healthcare understands there is a lot of information out there (e.g., over 100,000 clinical trials, 12 terabytes of personal health information, 424 million published articles) and it's difficult to find what you are looking for.
- Genomics are becoming increasingly important in health care to treat an individual's specific mutation – the number of tumors that have genomic information about them is expanding.
- Even with the vast amount of data, 45 percent of the time treatment decisions are not based on the evidence.
- Analytics and big data are shifting oncology care to a data-driven model instead of trial and error.
- We are in an era of cognitive computing – computing in the ways humans understand, reason, learn and interact with information and continue to learn.
- The Watson Jeopardy challenge was the public's first exposure to Watson's cognitive computing capability.
- In 2012 IBM started looking at utilizing Watson in colon and breast cancer treatment in partnership with Memorial Sloan Kettering Cancer Center.
- Watson Health was formed in 2015 and has 7,000 members and 10,000 clients and partners.
- IBM Watson Health's solution is differentiated in the market by its health care cloud, extensive content it has, the ability to add cognitive capability and its collaboration with partners and acquisition entities to develop solutions.
- Watson is creating a new partnership between people and technology that enhances, scales and accelerates human expertise – defined as “augmented intelligence.”
- The IBM Watson/Best Doctors partnership offers three solutions for cancer care
  - Watson for Oncology – additional reassurance from insights from large amounts of data
  - Clinical trials matching – navigation assistance with clinical trial matching tool that matches case specifics with entry criteria of ongoing trials
  - Genomics – discovery of treatable mutations within tumor cells to provide recommendations for targeted therapies based upon the tumor's unique genetics
- IBM Watson technology uses natural language processing and machine learning to reveal insights from large amounts of data to support physicians.

- Oncology Insight combines Watson technology with the knowledge of the world's leading oncologists to provide clinicians with evidence-based treatment recommendations.
- How does Watson for Oncology work? Extracts key attributes from the Best Doctors patient summary > uses attributes to find treatment options > searches evidence data to find supporting evidence for each option > uses Watson's algorithms to prioritize treatment options based on the best evidence.
- Watson for Oncology:
  - Evidence-based, personalized treatment plans give clinicians the ability to expand beyond first line therapies.
  - Over the next year, the program hopes to expand to cover 80-85 percent of tumor types and provide surgical and radiation oncology support.
- Clinical Trial Matching:
  - Alleviates time-consuming process of searching across eligibility criteria. Currently, fewer than five percent of adult cancer patients participate in clinical trials.
  - Helps advance the health of communities through scientific discovery by matching clinical trials to more patients with a higher degree of precision.
- Watson for Genomics
  - Eliminates the manually time-consuming process of genome sequence analysis.
  - Allows for identification of driver mutations and their impact on pathways.
  - Identifies drug targets with a list and categorization of drugs.
  - Many leading cancer centers are using Watson to accelerate DNA analysis and develop personalized treatment options – including those that humans had not found.
- The Oncology Insight process includes:
  - Patient with cancer diagnosis contacts Best Doctors with diagnosis/treatment concerns >
  - They are assigned to an oncology clinical team (oncologist reviewing the case, an in-house oncologist, an oncology nurse and a medical records specialist) >
  - An initial intake is performed and the patient signs a medical records release form and Best Doctors collects all the records and imaging and re-reviews the pathology >
  - A physician develops a clinical summary from the patient records that gets fed into the Watson application and a top expert is matched to the case, rendering a report >
  - The expert report is reviewed, cross-referenced and scored in-house >
  - The expert report, clinical summary and medical record are delivered to the member and they are walked through the report on the phone – a similar service can be performed with the treating physician with the patient's permission.
- Oncology Insight's technology roadmap goal is to provide a treatment decision support tool for about 85 percent of cancers, including leukemia and lymphoma.

- The inclusion of Watson technology in the Oncology Insights program engages patients and will drive more members to use Best Doctors.

**Matt Leveque – UnitedHealthcare, Advocate4Me, Green Bay, WI**

- The Advocate4Me customer service model is designed to build personal connections with members.
- The BHCG-dedicated team does not operate on a transactional model that is concerned with average handle time (AHT) as a measure. The focus is on the member making the connection to get the help they need – today, tomorrow and next week.
- A personalized customer service experience is made possible through Intelligent Routing – gaining an understanding of a member’s family situation and history and connecting them to the right Advocate for their needs: Nurse Advocate (RN), Health Advocate (claims and wellness expert) or Benefits Advocate (customer service expert).
- The program’s technology leverages all available member data (e.g., claims, authorizations, etc.) to provide personalized and proactive support and identify health care management opportunities, resources and programs.
- Advocates use multiple channels to reach members in the way they prefer (e.g., chat, email, secure messaging, text, etc.).
- A single point of contact allows members to get help with one phone call.
- What are the results for the BHCG-dedicated team in Green Bay (as of Q4 2016)?
  - 96 percent overall satisfaction
  - 91 percent have a high level of trust in the information received
  - 91 percent have their inquiry resolved on the first call
  - 35 percent of clinical program enrollments are Advocate4Me referrals

**Brenda Budaitis, UnitedHealthcare, BHCG Clinical Team, Lisle, IL**

- When members call to verify benefits, Advocates can enroll them in case management, if appropriate, and educate them about how a nurse can support them.
- When members are anxious about their treatment plans, Clinical Team nurses can provide them with a second opinion resource, educate them on evidenced based medical guidelines and the benefits of the Best Doctors program to explore the best treatment options.
- There is meaningful collaboration between plan members, the Clinical Team and Best Doctors.
- UnitedHealthcare’s member engagement strategy matches needs of members with interactions that support behavior change – from online resources to monthly mailings regarding gaps in care, and nurse and physician engagement.
- The Clinical Team has 120 registered nurses that are clinically experienced and licensed behavioral clinicians to support a member-centric approach that empowers patients, resulting in better health management and cost savings.

**Scottie Girouard, Connecture**

- Connecture went to the market and did a full analysis and determined the BHCG/UnitedHealthcare solution was the best option available.
- Scottie had a personal experience with Advocate4Me while traveling
  - Experienced pain, called Advocate4Me
  - She was connected to a doctor and told to drive straight to the office for care
  - They delivered exactly the service she wanted and needed
  - A week later she received a handwritten note from the Advocate
- Employers are encouraged to leverage the BHCG/UHC partnership that offers collaboration, helping the member experience and providing additional training and continuous education.

Slides from presentations by [Best Doctors-IBM Watson](#) and [UnitedHealthcare](#) representatives are available for review.