Machine learning and patient communication: A primer for the non-data scientist

Statement of the Problem: With the growth of personalized medicine, we know that a single drug will not be effective to the same degree in everyone, so why do we still believe that the same singular message would have the same effect for everyone? Day after day, the healthcare community struggles to effectively deliver critical messages to patients. In many areas of medicine, we can offer precise tailored and effective therapies, but in our attempts to communicate recommendations to patients, we lack the same specificity.

Methodology & Theoretical Orientation: Our over-arching goal is to improve health related communications and messaging resulting in greater adherence, fewer wasted resources and improved outcomes for patients. A patient communication tool, operating at scale, has been developed to identify individual patient “mind-sets” specific to a medical condition.

Findings: This presentation will describe a case study in colon cancer screening compliance. The investigation focuses on colon cancer screening because it is commonly recommended, has tremendous life-saving potential and each case of colon cancer is estimated to create a financial burden of nearly $250,000.

Conclusion & Significance: The promise of “machine learning” is to gain insights to improve prediction accuracy and increase the probability of the desired outcome. An actionable medical communication methodology will be demonstrated that promotes and encourages healthy behaviors through scientifically-based, patient-centered, tailored messaging based on individual mindsets. Applying basic machine learning principles to communication attendees will learn to better understand the variability of patient motivations specific to decision-making and choice.

Biography
Ken Rotondo is an authority on consumer experience engineering, client/patient communication and empirical messaging insights. He has served on the Advisory Council to the Dean at the Veterinary College; Cornell University as a Past President of the New York State Veterinary Medical Society and represented New York to the AVMA. Currently, he is an annual guest lecturer at the Wharton Business School, RPI Lally School of Business, Villanova, Cornell University and Skidmore College. He serves on the Canadian Bio-Alliance Mentoring Board, the AVMA “Futures Commission” and several not-for-profit boards. As President of Mind Genomics Advisors, he has presented at IBM Watson Conference, IBM THINK, Social Media Week NYC and a variety of medical and professional conferences.

krotondo@mindgenomics.com