Thought Leaders' Corner

There are several important roles that analytics can play in population health management to address the opioid crisis. One of the most significant is to use predictive analytics to determine which patients have a higher likelihood of developing an opioid dependency. We also know that the clinical and financial risk increases several-fold in patients who have both an addiction issue plus a chronic condition.

To address these issues, you need more than just clinical or medical/prescription claims data. You also need to add socioeconomic, psychographic, and other behavioral data to create patient personas that represent different cohorts of patients grouped by similar characteristics. We know from our data that patients who have specific conditions such as low back/knee pain, and may be eligible for surgery, will be prescribed pain medications. These medications can be habit-forming, increasing the likelihood for dependency. We have seen data where pain medication is prescribed for certain dental procedures, which again leads to dependencies. This risk is present in all type types of people and is not dependent on any economic status.

Another use for analytics is to uncover drug-seeking behavior by patients. It is nearly impossible to manually keep tabs on how many physicians patients see, how many prescriptions they fill, and where those physicians and pharmacies are located. By analyzing claims data from health payers or PBMs using population health analytics, however, payers or providers can use machine learning to establish patterns and develop algorithms that result in the creation of risk scores. These scores can then be displayed in dashboards that may look like Doppler radar on the weather forecasts we see before any major storm. For example, it may not be unusual for a cancer patient to have 10 different physicians, but it's most likely any prescriptions written by those physicians will be filled within a few miles of the patient's home or the physician's office. By adding geospatial data, the analytics can point out unusual patterns on a map, such as several prescriptions being filled 50 miles away from the patient's home on a regular basis. That is a likely indicator of patient drug-seeking behavior. By using the data to understand their patient populations, healthcare organizations can establish what is usual and customary, and then flag the outliers for further investigation.

Finally, population health analytics can be used to prioritize patient issues based on risk factors so opioid abuse can be addressed more precisely. Take the case of two patients who (unbeknownst to the provider) either have an opioid addiction or are on opioid withdrawal medications. Patient A also has eye impairment while Patient B is a diabetic. If the baseline for the cost of caring for a patient is 1, analytics will show that Patient A will typically have a risk factor of 1.5 times the norm while Patient B will have a risk factor of five times. Since patient B is likely to cost considerably more to treat under a risk-based arrangement such as an ACO, the provider stands to lose significant revenue, and outcomes are likely to be affected. Healthcare organizations that use analytics to uncover patients who have these addictions, or who are on withdrawal medications, will know they need to address the addiction first, removing it as a barrier to treating other conditions. That will make patients more receptive to managing conditions such as diabetes, helping to lower the total cost of care.

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Our current opioid crisis is largely due to the long-term overprescribing of pain killers and to poisons being introduced into the supply of heroin (fentanyl, carfentanil, and their analogues) resulting in tens of thousands of needless deaths. This crisis requires unprecedented coordination among behavioral health providers, public health programs/statisticians, law enforcement interdiction, prevention programs, and hospitals/emergency services. The coordination should use harm reduction as its unifying theme. A harm reduction strategy seeks to minimize the harms related to drug use for the addicted individual, family members, the community and society. Such an approach avoids jail and prison whenever possible, substituting a wide array of services including evidenced based medications such as methadone and buprenorphine, needle exchange programs, and an understanding that while abstinence is a worthy goal, it is often not achieved quickly and relapse is commonplace. However, harm reduction is not soft on drug traffickers or major dealers. To reduce harm they must be identified, stopped and sanctioned. Harm reduction has been used successfully by many European countries. It's time we changed our more punitive, less humane approach with one that emphasizes coordination, individual dignity and scientific evidence.

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