The Value Proposition of Digital Medicine

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Challenge
Patients with mental illness often rely on antipsychotic medications to improve their symptoms, but realizing the full benefit of these therapies depends on patient adherence. Not all physicians regularly ask patients about their adherence to their antipsychotics, and among those who do, patient self-reports are not always reliable. New technologies, however, enable providers to have real-time monitoring of patient adherence to treatments. The value proposition of these drugs that digitally track patient adherence to medication was undefined and untested.

Response
Precision Health Economics (PHE) collaborated with a manufacturer of a treatment that digitally tracks medication adherence to quantify the value that reliable information on drug adherence provides to physicians, insurers, and patients.

Results
PHE developed a model based on healthcare provider surveys and real-world utilization data to demonstrate how accurate patient adherence information improved provider decision-making. The model showed that better treatment decisions saved payers up to $9107 annually, depending on the type of provider and patient. PHE also employed group-based trajectory modeling to show how patient adherence data could be used to reliably predict future patient behavior and better adjust treatment decisions accordingly.

Note: Larger positive numbers indicate more cost saving; negative numbers indicate less cost saving (ie, costs increased).

PDAI=patient drug adherence information; USD=U.S. dollars.
Impact

PHE’s research was vetted and published in 3 journal articles. The results of the research demonstrated that digital medicine tracking technologies provide economic value to payers and patients in addition to improving treatment decisions by providers. At the time the research was conducted, digital medicine technology was not FDA approved, but since this research, Abilify MyCite (aripiprazole tablets with sensor) has been approved by the FDA for treatment of schizophrenia, bipolar I disorder, and depression.

PHE’s research supported the value proposition of digital medicines, even before their launch to market.

Publications

- Estimating the value of new technologies that provide more accurate drug adherence information to providers to their patients with schizophrenia. Journal of Managed Care & Specialty Pharmacy.
- Access to credible information on schizophrenia patients’ medication adherence by prescribers can change their treatment strategies: evidence from an online survey of providers. Patient Preference and Adherence.
- Patterns of adherence to oral antipsychotics among patients with schizophrenia. Journal of Managed Care & Specialty Pharmacy.

Associated Services

- Quantifying unique sources of value
- Advanced models and microsimulation
- Surveys, focus groups, and interviews
- Real-world data analytics

For more information about Precision Health Economics, please contact us at info@precisionhealtheconomics.com, or visit precisionhealtheconomics.com.