



the current landscape of

Lifestyle Data in Healthcare

for Clients & Providers

Intro

The steady growth of wearables and health & wellness applications within the consumer market has placed a strong emphasis on understanding lifestyle and all its data.

Despite lifestyle always being a part of the health care conversation, it is now being brought front and center by clients, newly supplied with tons of information.

Although the healthcare industry is slowly adopting this new technology, there is a long way to go to achieve successful integration.

This white paper will address the Who, What, When, Where, Why, and How of lifestyle data within the current healthcare landscape.



what

What is lifestyle data?

Lifestyle data is any data from a wearable device, smartphone, or application that contains information **regarding how you live your life** physically, nutritionally, mentally, socially, emotionally, and physiologically.

Supporting Evidence:

“Self-generated health and lifestyle data covers a broad range of data types from a varied list of data sources. This may include handwritten records of information about sleep, diet or use of medication, as well as encompassing information collected via wearable medical devices such as heart rate, blood sugar and levels of physical activity.”¹

“Smartphones have also been used to track social interaction, sleep, and physical activities, and to provide intelligent feedback promoting better health and well-being.”⁵



who

Who can gather lifestyle data?

Clients can gather their lifestyle data **using wearable devices**, such as an Apple Watch, Fitbit, Oura Ring; **smartphones**, such as an iPhone, Google Pixel, Samsung; **or applications**, such as Noom, Sleep Cycle, Calm.

Providers can gather lifestyle data from their clients **verbally during a clinical visit or through a few select applications**, such as HealthKit, which allow for data sharing.

Supporting Evidence:

“Mobile technology, smartphones, and wearable devices have rapidly expanded the ability to monitor passively other aspects of patient-generated health data, including biometric data passively collected from wearable sensors (e.g., physical activity trackers) and data actively collected by patients (e.g., blood pressure cuffs).”³

“There is also evidence for a shift in patient attitudes, with the 2019 Health Information National Trends Survey showing that 81% of US adults were willing to share wearable data with their clinicians.”⁶

“The availability of sensor and health data collected from the Apple Watch and patient input relies on the application programming interface frameworks available from Apple for iOS and watchOS. HealthKit is the most comprehensive as it implements a central repository for all collected health data related to the user. Developers can write apps that request permission to access the HealthKit data store to record, access, and share user health data.”⁴

Where does lifestyle data live?

Client's lifestyle data lives **within their** personal **wearables, smartphones, and applications.**

Provider's view of their client's lifestyle data lives **within the few select applications** that allow for data sharing or **within the client's electronic health record manually entered** by the provider.

Supporting Evidence:

"Most device manufacturers provide their own independent platforms, very similar to HealthKit for the Apple Watch, for users' data storage. These platforms may be limited in terms of data access and sharing, forming a vendor lock-in that prevents users from being able to migrate their personal health information to other platforms and reducing the research value of the devices."⁴

"Despite increasing availability of apps and electronic patient-reported outcome platforms, their routine implementation and use in clinical practice face many challenges, particularly how to integrate them into existing, diverse clinical care environments using various electronic health record (EHR) systems."³

"Strategies to integrate electronic patient-reported outcomes collection and data into the EHR may facilitate inclusion in routine clinical care and clinical review, but real-world success has been limited thus far."³



where

when

When can lifestyle data be accessed?

Clients can access all their lifestyle data **at any time**.

Providers can access an aggregated form of their client's lifestyle data **when a change occurs** within their data trends, or a pre-defined threshold is triggered.

Supporting Evidence:

"Fitbit Wellness Reports are one such effort – providing a summary, which users can show to their treating clinician, that clearly visualizes week-to-week trends in areas including physical activity, heart rate, and sleep." ⁶

"In these early studies, electronic patient-reported outcomes were used to regularly monitor symptoms between visits with a combination of automated symptom management responses and clinician phone calls triggered for severe symptoms." ³





Why is lifestyle data important?

As a client, lifestyle data is important to understand our choices, track our decisions, and visualize our results.

As a provider, lifestyle data is important to obtain an accurate and comprehensive view of our client's, promote thorough decision-making, and tailor care.

Supporting Evidence:

"These apps correlate sensing information with personal health data and encourage users to be physically active and meet their related goals." ⁵

"Results show that smartphones can be advantageous for optimizing adherence to self-monitoring and to the inclusion of behavioral strategies for evidence-based interventions." ⁵

"This technology may effectively improve patient connection to information, their health, and clinicians." ²

"Wearable activity monitors may provide a more reliable measurement of physical activity because patients tend to overestimate their exercise level when self-reporting, and the ability to objectively measure physical activity could improve the reliability of studies evaluating physical activity." ³

"Qualitative studies suggest that wearables can help to more objectively assess treatment effectiveness, promote adherence to care plans, and may enhance the clinician-patient relationship." ⁶

"As digital health provides a novel model of care through the use of intelligent data, computing, and telecommunications, it holds promise for meeting the challenges of increased mental health demands. It can also enable precision medicine, which provides treatments bespoke to the patient's needs." ⁴



How is lifestyle data being used?

Clients are using lifestyle data **to guide their health and wellness** based on standardized and generalized information.

Providers are using lifestyle data **as an adjunct to the objective information** they obtain in the clinic.

Supporting Evidence:

“A recent study analyzed the content of many popular free apps related to physical activity and compared them against existing guidelines and fitness principles already established by the American College of Sports Medicine (ACSM). Results show that very few are evidence-based and respect the guidelines for aerobic activity, strength/resistance training, and flexibility, set forth by ACSM. Thus, users are advised to select apps with extreme caution.”⁵

“Two systematic reviews found that current smartphone apps available for total knee arthroscopy and total hip arthroscopy have significant variability in their quality and overall poor readability for patients.”²

“There is great potential for use of wearable sensors in oncologic research and potentially future care, but adoption of these technologies has been slow, and common practices for evaluating and sharing these tools are needed.”³

“Despite the rapid growth of wearables as a consumer technology sector and a growing evidence base supporting their use, they have been slow to be adopted by the health system into clinical care.”⁶

conclusion

Lifestyle data is any data regarding how you live.

Currently, clients can generate and view all their lifestyle data at any time using various devices and applications. Although this allows them to better understand their choices and track their decisions, it directs their health & wellness based on generalized suggestions.

Providers on the other hand, continue to be limited in their ability to access and incorporate the lifestyle data of their client's; receiving it from limited sources, in summarized formats, outside their current platforms, and beyond their current workflows.

To truly allow providers the opportunity to obtain a comprehensive view of their clients, support more thorough decision-making, and deliver tailored care, we need to continue to advance the integration of lifestyle data into clinical practice and the healthcare industry.

references

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