
MediCompass[®] Connect

Using Real-Time Data to turn Personal Health Records into Proactive Health Management Tools

*Low-cost, high-value telehealth empowers
health plan members and their care teams*



An iMetrikus, Inc. White Paper

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How Reliable is Your Members' Personal Health Record Data?

The consumer self-reporting Personal Health Record (PHR) is here to stay. With the introduction of data and portability standards, more and more organizations are adding PHRs to their health management initiatives for achieving safer, more effective patient care. Prior to the advent of PHRs, such an up-to-date, holistic view of a member's health, accessible across the care team, was unavailable.

PHR program efforts, however, are only as good as the data they capture and present. Consider the following scenario.

Elizabeth, a sixty year old diabetic, uses a blood glucose monitor to test her blood sugar. She is enrolled in a program that provides her with a PHR. Elizabeth is comfortable with technology and generally has no problem entering data into her PHR. Those days though, when she's not feeling well, she doesn't enter the correct blood glucose readings to her PHR or worse, simply doesn't enter any data at all. Other times she feels fine, but makes a mistake reading her meter.

When her healthcare providers review her PHR, they respond based on the unreliable data and potentially create a series of missteps—everything from doing nothing by believing the data is okay, to telling her to make an inappropriate adjustment to her medications, to an unnecessary clinic visit (with its associated co-pay and filed claim). Any of these could happen because Elizabeth made a mistake entering her self-reported glucose readings into the PHR. A mistake the clinic will have to correct, costing more money.

In all of the above scenarios, every positive benefit of implementing a PHR strategy—reduced costs and more effective care—are lost. It is difficult for the healthcare team to provide the appropriate care when the information they see in the PHR is suspect. They may not even be aware that the data is suspect if it falls erroneously within normal ranges and are then helpless to assist the member in averting a potential adverse health event or crisis.

Member-entered data, or for that matter, any manually-entered data regardless of its source, can be suspect. Everyone makes mistakes. Unreliable health data can lead to incorrect diagnosis or treatments, essentially countering the intended benefits of a PHR.

The preferred method for providing objective data is the automated uploading of test results and biometric information from personal health monitoring devices directly to the PHR. While remote monitoring devices, such as glucose meters, pedometers, spirometers, and blood pressure cuffs, measure and store a wealth of member biometric information, they present significant practical and economical challenges to transferring this data to the PHR. This is true primarily because of the plethora of devices and manufacturers in the market; all utilizing their own proprietary data upload technologies.

Difficulties in Harnessing the Power of Telehealth

In 2005, the FDA stated there were at least 25 different over-the-counter blood glucose meters on the market¹. Twenty-five different meters, each with its own protocol and hardware interface. And that's just glucose meters. Now add to that all of the other biometric monitoring devices—blood pressure cuffs, spirometers, digital scales, pedometers—and the results are staggering.

Many of these devices store the data and allow the user to upload the results to a computer. However, to perform the upload, it often requires a special cable and software that has to be purchased through the manufacturer. Think of the irritation and inconvenience of buying and keeping track of separate cables and software for people using multiple devices.

Another challenge: Where will the member upload the data? Simply transferring it to home personal computer is not the same as populating a PHR. Information locked in the member's PC is no closer to making its way to a PHR than if it were still in the device.

A Low-Cost, Broad-based Telehealth Solution

iMetrikus[®], a pioneering leader in personal health management and remote monitoring, developed the MediCompass[®] product suite to solve the challenges of providing objective data to members and clinical care teams long before there were PHRs. The suite is designed to capture data for the management of:

- Asthma
- Diabetes
- Hypertension
- Weight Management

The telehealth component of the suite, MediCompass Connect, is comprised of hardware and software that interfaces to over 50 personal health monitoring devices. Member data is transferred from the devices to a database through the MetrikLink[®], iMetrikus' award-winning universal connectivity device.



The MetrikLink, powered by batteries or an AC adapter, is small, portable and low-cost. Its interface is simple: one button and four status Light Emitting Diodes (LEDs).

The MetrikLink has two methods for uploading data: 1) an internal modem that transmits through a standard telephone line or 2) a USB or serial cable connected to an Internet-enabled computer. Biometric devices are then connected to the MetrikLink by a device-specific adapter or infrared (IrDA) port.

With its simple interface, the MetrikLink makes it easy for a member to upload their data and at the same time minimize mistakes.

Enhancing Your PHR Investment through Real-Time Collaboration

MediCompass Connect ensures the realization of PHR benefits of improved care, easy use, and low cost. By uploading data directly to the PHR, it allows an objective, real time view of the member's health.

Healthcare professionals gain access to key indicators to help monitor and track a member's progress over time, noting trends, and proactively intervening to help prevent a crisis. They can prescribe treatment plans, lifestyle adjustments, medications and therapies with confidence, knowing the data is objective, reliable, and up-to-date.

Additionally, the MediCompass platform creates a registry that enables health professionals to efficiently manage patient populations, automatically flagging and alerting them of specific situations requiring their attention or intervention based on the objective telehealth feeds. This can effectively improve outcomes and key performance metrics for their practice.

The member is empowered by the ease of uploading their data, regardless of how they may feel. They can track progress-to-goals and work proactively with their health provider to more effectively manage their health, confident the data in their PHR is accurate.

When providers have continuous access to objective data, they are enabled to better manage the member's health without the member coming into the office. Fewer unnecessary office visits, plus more efficient care management, can add up to real cost savings.

How it Works

To use MediCompass Connect, the member and their MetrikLink are registered in the MediCompass and PHR databases.

When Elizabeth, our member introduced earlier, registers in her PHR, she and her MetrikLink are registered in MediCompass. Along with her MetrikLink, she receives a kit that includes the correct adapter for her glucose meter, a telephone cord, and an instruction manual. Her healthcare provider instructs Elizabeth to upload her glucose measurements once a week.



Elizabeth goes home and records her blood glucose for a week. She then connects her MetrikLink adapter to her glucose meter. She plugs the other end of her adapter into the MetrikLink and then connects the MetrikLink to a telephone wall jack using the kit's telephone cord. If Elizabeth's meter used infrared, she could have used the MetrikLink's

infrared window to communicate with the meter. Alternatively, Elizabeth could have uploaded through the MetrikLink to her internet-enabled computer using either a USB or serial connection.

When everything is connected, Elizabeth presses the MetrikLink button. The MetrikLink performs a power up test, determines the type of adapter and meter connected, and then begins the upload.

The MetrikLink status LEDs glow green sequentially indicating the upload is in progress. When the upload is complete, the LEDs all glow green. Elizabeth and her healthcare providers can now log into Elizabeth's PHR to view the data. The data was uploaded to the PHR directly from the device.

The MetrikLink is automatically updated when iMetrikus adds support for new devices. The update occurs during normal operation, immediately before the upload. Once the update is complete, the upload begins automatically.

Security and Privacy

iMetrikus takes every precaution to ensure all data collected and transmitted through MediCompass Connect is HIPAA compliant and that end-user information remains private and confidential.

iMetrikus uses leased telephone lines for data uploads through a modem bank. The Network Operation Center (NOC) modem telephone numbers are programmed into the MetrikLink and cannot be obtained by the device users without specific knowledge of the internal device protocols. Dial-up connections are authenticated using the unique internal device ID of each MetrikLink.

MediCompass incorporates 128-bit SSL encryption to ensure private and authenticated communication between two parties (customer and Web site). In addition, iMetrikus subscribes to the [HONcode principles](#) of the [Health on the Net Foundation](#) .

MediCompass is listed as a Thawte Secure Site.

Make Your PHR Data Reliable

The PHR promises to lower healthcare costs, improve care, and empower members as they gain more control of their health. However, the PHR is only as good as its data. Anyone who manually enters data in a PHR can make mistakes that can lead to misinformation and missed opportunities when managing care.

MediCompass Connect adds an assurance of quality data to your PHR. It seamlessly uploads data using the MetrikLink from over 50 personal health monitoring devices for the management of:

- Asthma
- Diabetes
- Hypertension
- Weight Management

The MetrikLink's simple user interface minimizes mistakes. Fewer mistakes mean better treatment decisions by both the member and their healthcare providers. This, in turn, can result in improved member care, better outcomes, and lower health care costs.

If you would like to discuss how reliable your PHR data can be, contact iMetrikus at 800.233.4323 for more information.

1 <http://www.fda.gov/diabetes/glucose.html>

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