Push-Button Medicine

If you can monitor your symptoms electronically, why go to the doctor?

By JEFFREY RESSNER

Monday, Aug. 09, 2004

Valeta Young, 81, a retiree from Lodi, Calif., suffers from congestive heart failure and requires almost constant monitoring. But she doesn't have to drive anywhere to get it. Twice a day she steps onto a special electronic scale, answers a few yes or no questions via push buttons on a small attached monitor and presses a button that sends the information to a nurse's station in San Antonio, Texas. "It's almost a direct link to my doctor," says Young, who describes herself as computer illiterate but says she has no problems using the equipment.

Young is not the only patient who is dealing with her doctor from a distance. Remote monitoring is a rapidly growing field in medical technology, with more than 25 firms competing to measure remotely — and transmit by phone, Internet or through the airwaves — everything from patients' heart rates to how often they cough.

Prompted both by the rise in health-care costs and the increasing computerization of health-care equipment, doctors are using remote monitoring to track a widening variety of chronic diseases. In March, St. Francis University in Pittsburgh, Pa., partnered with a company called BodyMedia on a study in which rural diabetes patients use wireless glucose meters and armband sensors to monitor their disease. And last fall, Yahoo began offering subscribers the ability to chart their asthma conditions online, using a PDA-size respiratory monitor that measures lung functions in real time and e-mails the data directly to doctors.

Such home monitoring, says Dr. George Dailey, a physician at the Scripps Clinic in San Diego, "could someday replace less productive ways that patients track changes in their heart rate, blood sugar, lipid levels, kidney functions and even vision."

Dr. Timothy Moore, executive vice president of Alere Medical, which produces the smart scales that Young and more than 10,000 other patients are using, says that almost any vital sign could, in theory, be monitored from home. But, he warns, that might not always make good medical sense. He advises against performing electrocardiograms remotely, for example, and although he acknowledges that remote monitoring of blood-sugar levels and diabetic ulcers on the skin may have real value, he points out that there are no truly independent studies that establish the value of home testing for diabetes or asthma.

Such studies are needed because the technology is still in its infancy and medical experts are divided about its value. But on one thing they all agree: you should never rely on any remote testing system without clearing it with your doctor.
Title: Push-Button Medicine

Before you read the article, discuss the title and the meaning of the following words:

<table>
<thead>
<tr>
<th>to monitor</th>
<th>symptoms</th>
<th>remote</th>
<th>illiterate</th>
<th>chronic</th>
</tr>
</thead>
</table>

Now read the text and select the best answer for each of the questions below.

1. Why does Valeta Young need to be under medical supervision? Because
   a) she is elderly.
   b) she doesn’t drive.
   c) she has a heart condition.
   d) All of the above.

2. How many times a day does Valeta send information to the medical center?
   a) One.
   b) Two.
   c) Three.
   d) Four.

3. Did Valeta Young need intensive computer training to operate the system?
   a) Yes.
   b) No.
   c) We don’t know.
   d) She is scheduled to receive training shortly.

4. Which sentence is TRUE?
   a) The system is only used to monitor a patient’s weight.
   b) This area of technology is expanding quickly.
   c) The system is only used to monitor patients who have a heart condition.
   d) There is a competition to decide the best service provider.

5. Who undertook a survey of diabetic patients living in the countryside?
   a) St Francis University
   b) The BodyMedia Company
   c) Yahoo
   d) Both a) and b)
6. Which type of patients use the system to monitor their glucose levels?
   a) Diabetic patients.
   b) Heart attack victims.
   c) Patients in the Pittsburgh area.
   d) Yahoo subscribers.

7. When did remote monitoring replace visits to a GP in San Diego?
   a) Last year.
   b) A decade ago.
   c) Very recently.
   d) It hasn’t.

8. Why are studies of home testing for diabetes and asthma considered unreliable?
   a) A visual survey cannot be undertaken.
   b) The surveys were not undertaken by impartial observers.
   c) The medical requirements have not been met.
   d) The equipment is not of a sufficiently high standard.

9. Remote monitoring requires further investigation because …
   a) … the technology is in the early stages of development and many doctors are not yet convinced it is useful.
   b) … the results need to be checked by a GP.
   c) … too many conditions cannot be diagnosed in this way.
   d) … independent research is needed for asthmatics and diabetics.

10. Which of the sentences below is correct?
    a) The article supports remote monitoring.
    b) The article is against remote monitoring.
    c) The article gives a fairly balanced view of the advantages and disadvantages of remote monitoring,
    d) The article recommends remote monitoring for patients with a heart condition like Valeta Young,

Now check your answers.
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ANSWERS

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</tr>
<tr>
<td>illiterate</td>
<td>not able to read or write</td>
</tr>
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