

Cambridge English for
Nursing

MEDICAL TECHNOLOGY

UNIT 10**Robotics in healthcare**

a Click on the link below and discuss the following questions in pairs.

<http://www.theallineed.com/science/05050905.htm>

- 1 What type of treatment is this?
- 2 Why do you think the patient might benefit from this treatment?
- 3 Are you familiar with the use of robotics in a healthcare environment?
- 4 Have you worked with robotics in a nursing situation before?

b Read the article and answer the following questions.

- 1 Why is Mike undertaking rehab?
- 2 What is Mike's current health condition?
- 3 What was the role of the robot?
- 4 How has his physical condition improved through rehab?
- 5 How does the patient score points in the video game?
- 6 Is this considered mainstream therapy?

Robots Aid Stroke Victims

By SETH BORENSTEIN
ASSOCIATED PRESS

After more than two and a half years of physical therapy and electronic stimulation, stroke victim Mike Marin still couldn't open a door with his left hand. Now, thanks to a robot, Marin can open a door and his atrophied left arm isn't completely useless anymore.

Marin is at the forefront of what may seem an unlikely use for robots: providing the caring human touch. For three months in rehab at a suburb north of New York, an unnamed and unlikely looking robot guided his arm repeatedly through an ordinary video game. Where normal therapy failed, the constant robot-guided repetitions worked. 'I still got a long way to go,' said the New York City computer network specialist who had a stroke two days before his 40th birthday. 'The robot really put a lot of muscle tone back in my arm.'

Marin, who worked with a robot at the Burke Rehabilitation Hospital in White Plains, NY, is one of about 300 stroke patients in experimental studies with a robot that's a cross between an exercise machine and video game. And many of these patients, who wouldn't normally get better, showed significant improvement, said Dr. Christopher Bever, chief of neurology at the Veterans Administration Medical Center in Baltimore where one of the studies was conducted.

The patients' scores on the video game-based on their ability to guide the joystick and grasp and release it properly without the robot's help—have improved about ten percent, said MIT roboticist, Hermano Igo Krebs. 'We're able to show consistently better outcome with therapy using robots rather than conventional standard care,' said his MIT colleague, Neville Hogan.

Share your knowledge

Discuss the following questions in class or with a colleague and compare your experience.

What do you think the future of robotics is in rehabilitation?

In what other healthcare areas do you think robots could be incorporated?

How could this impact on the future of healthcare?