The Washington Post

HEALTH & SCIENCE

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TUESDAY, NOVEMBER 27, 2012

EZ

BIOLOGY

Going ape

Don't blame bills or bad marriages for midlife crises: They happen in the jungle, too. **E4**

EATING WELL

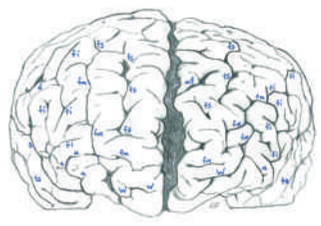
There's the beef

The evolutionary case for a carnivorous diet. **E4**

HEALTH SCAN

Don't tweet and run

Still, social media may help runners improve training routines. **E3**



ONE OF A KIND

Einstein's brain

New photographs of the famed physicist's brain offer anatomical clues to the source of his genius. **E6**

Out of the hospital and into an abyss

'Everything was left to us, the ill patient and his wife'

BY BETH ANN SWAN
Health Affairs

At 9:45 p.m. on Tuesday, April 26, 2011, the phone rang in our home in suburban Philadelphia. It was a colleague of my husband, Eric, who was on a business trip in Chicago.

Eric, he told me, wouldn't be flying home that evening.

Had he missed the plane? I asked. Not exactly, he answered. Eric was in the emergency department of a community hospital near O'Hare. He had collapsed while boarding his flight.

Eric, who was 53 and formerly healthy, had suffered a brain-stem stroke that had caused Wallenberg's syndrome: The stroke had blocked an artery on the right side of his neck, depriving part of his brain of the blood it needed.

Eric was far from home, hospitalized with a serious stroke. My thoughts were racing. Thank goodness he wasn't alone, thank goodness the stroke happened before the plane took off, thank goodness I'm a registered nurse with lots of friends and resources, I told myself.

In an instant, my family was thrown into the world of medical "care coordination" and "transition management." From the moment Eric fell ill, the goal was to get him hospitalized in Philadelphia — and, of course, eventually home and well again. But when this saga began,

COORDINATE CONTINUED ON **E5**

New fetal test creates dilemma for some women

Alternative to amniocentesis is less invasive, but insurers are divided about covering it

BY RITA RUBIN
Kaiser Health News

When Ramona Burton became pregnant with her second child this year, the 37-year-old Upper Marlboro woman knew that her age put her baby at an elevated risk for Down syndrome, even though screening with ultrasound and standard blood tests raised no warning flags.

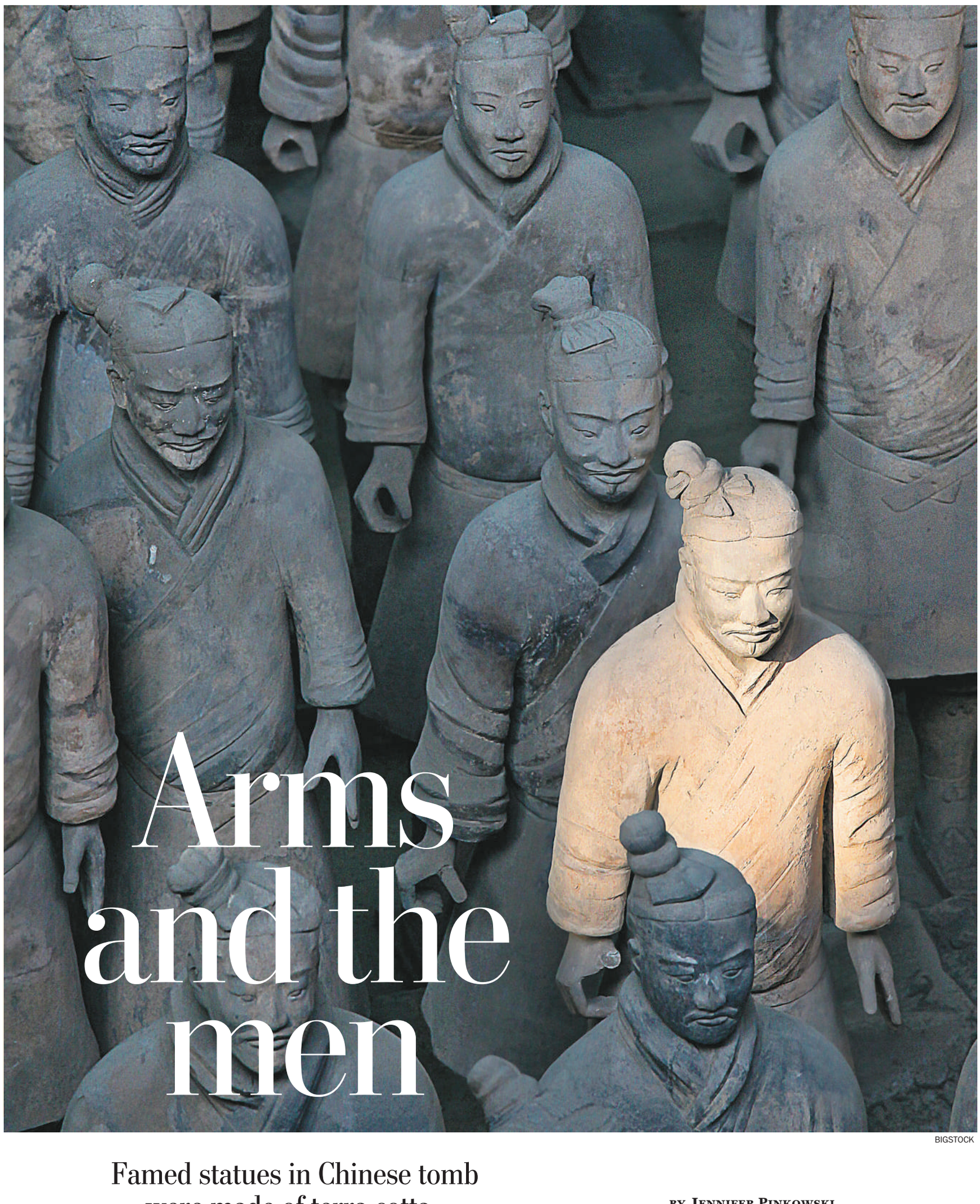
Burton and her husband didn't want to risk amniocentesis, the gold standard for prenatal diagnosis, because it carries a small chance of miscarriage. So when her doctor offered an alternative — a new test that requires only a sample of the mother's blood — they leapt at it. In less than two weeks, they got the news: no Down syndrome. The baby, a boy, is due next month.

Three versions of this test, which can be performed as early as 10 weeks into a pregnancy, have come onto the market since December.

Tens of thousands of women have used them, according to the companies that sell the tests. But they are not subject to regulation by the Food and Drug Administration, and questions have been raised about a technology whose accuracy and role are still being assessed. As a result, no major insurance company has yet agreed to cover the tests, whose list prices range up to $1,900.

New medical technologies often challenge a health-care industry grappling with pressures to control costs. It's not yet clear whether the new tests will cut costs and miscarriages by reducing invasive prenatal diagnostic procedures such as amniocentesis or inflate costs because they're used by women who probably would never have opted for amnio because of miscarriage fears. (The established tests are performed about 200,000 times annually in the United States and

BLOOD TEST CONTINUED ON **E6**



BIGSTOCK

Arms and the men

Famed statues in Chinese tomb were made of terra cotta, but they carried metal weapons crafted in a system of workshops

IMPERIAL LOGISTICS PROJECT

Arrowheads found amid the terra cotta army buried with a Chinese leader 2,200 years ago reveal a surprisingly consistent style and composition indicating that they were made at self-sufficient, autonomous workshops.

BY JENNIFER PINKOWSKI
Special to The Washington Post

The 7,000 soldiers buried with Qin Shi Huang in 210 B.C. were made of clay. But the bronze weapons the terra cotta army carried into the enormous tomb complex near Xi'an in western China were the real things: tens of thousands of swords, axes, spears, lances and crossbows, all as capable of spilling blood as anything Qin's real army wielded when they triumphed, ending centuries of war and uniting China under a single rule for the first time.

What has been a puzzle for scientists is how so many weapons could have been made so skillfully, so uniformly and so quickly. (Qin reigned for only 11 years; construction of his mausoleum complex is thought to have started long before his death.) They now have a likely answer. A new study of 40,000 bronze arrowheads suggests they were produced in self-sufficient, autonomous workshops that produced finished items rather than parts that fed into an assembly line of sorts. Which suggests that something akin to the just-in-time production methods used in industry today may have had a trial run more than two millenniums ago.

"Our initial assumption was that all of these items were mass-produced in large production chains, with the various parts produced in specialized units before they were assembled together. That's how most cars are made — Fordism, or flow-line production," said University College London archaeologist Marcos Martinon-Torres. He is lead author of the new study, published last month in the Journal of Archaeological Method and Theory. "However, our data strongly suggest that production was arranged in much smaller units, several working in parallel, each of them sufficiently autonomous and versatile to produce finished items," or what is sometimes called cellular production, lean production or Toyotism.

TERRA COTTA CONTINUED ON **E4**