A TOUGH TONIC

The new head of the US Food and Drug Administration has inherited an agency battered by crises. **Meredith Wadman** asks whether Peggy Hamburg can concoct a cure.

When Margaret 'Peggy' Hamburg was appointed health commissioner of New York City in 1992, the 36-year-old physician and former researcher took a job that few people wanted. A tuberculosis epidemic was roaring out of control in the city, facilitated by rising rates of HIV/AIDS. Rodents plagued city streets and a demoralized health department was facing draconian cuts in its budget as the city government fought a ballooning deficit. Hamburg's predecessor had abruptly resigned early in his tenure, after antagonizing the city's vocal HIV/AIDS community.

Within three years Hamburg had turned the department around. She rescued it from proposed cuts that would have crippled its public-health lab and its immunization and school-health programmes. She won extra money for rodent control. She launched a needle-exchange programme to combat AIDS and she reversed the tuberculosis epidemic, with a 21% drop in new cases¹ over the course of a programme the United Nations later cited as exemplary.

Hamburg, who became commissioner of the US Food and Drug Administration (FDA) in May, is now hoping to repeat that success at a beleaguered federal agency that has endured a string of recent crises (see 'Peggy Hamburg's FDA fixes'). Looking back on her experiences in New York, she says: "We took what was a faltering agency and restored it to its former position as the premier health department in the country. I do feel that that has a lot of relevance to the FDA now."

The parallels are striking. The FDA, once globally revered as the gold standard in regulation of food and medical-product safety, has lapsed repeatedly in recent years under a string of different leaders and a long stretch without any permanent chief. In 2004, the anti-inflammatory drug Vioxx (rofecoxib) was taken off the market after five years of sales because of cardiovascular side effects that may have caused tens of thousands of deaths in the United States alone².

The agency's scientific capabilities eroded to the point that its own science board declared two years ago that "not only can the agency not lead, it cannot even keep up with the advances in science"³. The FDA's centre in charge of medical-device approvals had also been rocked

Peggy Hamburg has a difficult job on her hands in restoring public faith in the FDA.

by charges that top regulators there overrode centre scientists and approved devices that put the public at risk — charges first aired by the centre's own scientists and given further credence in January in a report from the Government Accountability Office. And a series of food-poisoning outbreaks — including *Salmonella*-tainted peanut butter — have led to persistent questions about the agency's ability to ensure the safety of the country's food⁴.

Although its \$2.7-billion budget for 2010 lags far behind those of its sister agencies in the Department of Health and Human Services, the FDA is charged with policing the safety of goods that account for about one-quarter of the US consumer economy, from pacemakers to toothpaste. And its mandates keep growing. In 2007, the agency received new powers to police the safety of drugs already on the market, and in June, a new law brought tobacco products under its jurisdiction.

Increasing the budget of the 11,000-person agency "is critical", Hamburg says. "Not only

are we trying to rebuild important core functions, we are also adding on some new responsibilities and gaining new authorities."

Hamburg has made it clear that she plans to step up enforcement to catch both fraudulent operations that prey on consumers and above-board companies that fail to comply with required manufacturing standards. The FDA set a tough tone starting in May by clamping down on websites that were marketing products fraudulently claiming to diagnose, prevent or treat pandemic H1N1 influenza.

Persuasive policy-maker

The qualities that Hamburg brings to the job, say her supporters, include an ability to analyse complex issues and to persuade — rather than browbeat — others to accept her point of view. "Pounding on the desk is not her style," says David Dinkins who, as mayor of New York in the early 1990s, was persuaded by Hamburg to back a controversial needle-exchange programme to combat the spread of

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HIV/AIDS. "She would reason with you. She would set forth a rationale. It just made sense. She seemed to me to always make sense."

Perhaps most importantly for scientists at the agency, Hamburg, although steeped in public health, has an innate familiarity with scientific culture. She grew up on the Stanford University campus in Palo Alto, California, where her parents were both on the medical-school faculty. As a 15-year-old, she spent a semester in Africa with primatologist Jane Goodall, and before entering medical school she worked in a neuropharmacology lab at the National Institute of Mental Health in Bethesda, Maryland. Later, as a resident in internal medicine, she worked in the lab of neuroscientist Paul Greengard at the Rockefeller University in New York. In 1989 and 1990, she was deputy director of the National Institute of Allergy and Infectious Diseases in Bethesda, where she focused on infectious-disease research and policy.

Hamburg is proud of her time in the research world. She says she was "irritated" by media coverage opining that her public-health background — including four years as a top health adviser during the Clinton administration — made her a more natural fit to lead the Centers for Disease Control and Prevention. "As though that was my only background," she says. "People should recognize that I actually began my career in medicine doing some bench research." She says that the results of research inform her policy decisions, noting that she pushed for the needle-exchange programme in New York because of evidence that needle exchange reduced the rate of HIV transmission.

At the FDA, however, that kind of science-driven stance has not yet become evident in one contentious area: an emergency contraceptive called Plan B remains unavailable as over-the-counter medication to girls younger than 17 years old, even though FDA scientists in 2004 called it safe and effective for women of all ages and a federal judge urged the agency to revisit the issue in March.

In June, dozens of groups, including the American Academy of Pediatrics and the American College of Obstetricians and Gynecologists, wrote to Hamburg asking her to lift existing restrictions and make Plan B available without a prescription to younger girls. They have received no response.

"We are disappointed at the lack of action," says Kirsten Moore, president and chief executive of the Reproductive Health Technology Project, a non-profit organization based in Washington DC that organized the letter. Judy Leon, an agency spokeswoman, says that

PEGGY HAMBURG'S FDA FIXES

Issue	Solution
Lax monitoring of drugs on the market	Hamburg must implement a 2007 law that requires the FDA to set up a database of 100 million patients by 1 July 2012 as a platform for active surveillance of emerging drug safety risks.
Small budget, sprawling mandate	Hamburg will face an uphill battle pushing for increasing funding in times of ballooning federal deficits.
Food-safety inspectors outstripped and enforcement teeth lacking	Legislation currently under consideration would require the FDA to inspect food plants much more frequently. The agency would gain new authority to force food recalls.
Erosion of scientific expertise within the FDA staff	Hamburg has added a 'regulatory science' piece to the agency's 2011 budget request. She pledges to foster exchange programmes with external scientists and other educational opportunities to keep agency scientists up to date on research.

because there are ongoing legal challenges to the FDA concerning Plan B, the agency could not comment.

Despite the expectation that Hamburg will favour tighter regulation, industry reviews of her performance have been positive. "It is obvious that she brings clear vision and dedication to the job," says Ken Johnson, senior vice-president at the Pharmaceutical Research and Manufactur-

ers of America in Washington DC, a lobby group for the country's pharmaceutical manufacturers.

Tevi Troy, a visiting senior fellow at the right-leaning Hudson Institute in Wash-

ington DC who was deputy secretary at the Department of Health and Human Services in the George W. Bush administration, calls Hamburg "the right kind of person" for the job. Troy is especially pleased with her background in biological security: in New York City, she instituted the first health-system-based anti-bioterror programme in the nation, and from 2001 until her appointment as FDA commissioner she was vice-president for biological

programmes at the Nuclear Threat Initiative.

Still, says Troy, he has been made "nervous" by the abrupt departure in August of Dan Schultz from his position as chief of the FDA's device centre. He sees it as "a signal that anyone who even gets a reputation as being willing to listen to industry concerns may have trouble going forward" in a Hamburg-run FDA.

Yet some inside the agency assert that Hamburg has done nothing to change what they call a long-standing bias at the FDA in favour of the drug and device industries. "We have had multiple examples since the change in administration where the work of [FDA scientists charged with monitoring the safety of marketed drugs] was basically filed in the wastebasket," says one scientist who did not wish to be named because of job-security fears.

Hamburg has spent much of her short tenure dealing with the H1N1 pandemic; her agency is responsible for licensing vaccines and overseeing their quality after production. The demands of responding to H1N1 make clear just how much Hamburg's success at the agency will hinge on how well she balances unforeseen crises with her overall goal of reinvigorating the agency. She will be helped, say her supporters, by an almost preternatural ability to remain calm under pressure. Two years ago, Hamburg was in New York to give a speech on biological security when her husband called to say that their house in Washington DC was on fire. "Everyone is okay, but three fire trucks just pulled up," he said. She went ahead and gave the speech, without mentioning that her house was burning.

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2. Graham, D. J. et al. *Lancet* **365**, 475–481 (2005).
3. Wasman, M. *Nature* **450**, 1143 (2007).
4. Yeager, A. *Nature* **457**, 770–771 (2009).

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— David Dinkins

The FDA is based in Silver Spring, Maryland.