Public-Private Cooperation

Stanford T. Shulman, MD

This month’s issue of *Pediatric Annals* highlights Sports Medicine, and was organized by Cynthia R. LaBella, MD, of Lurie Children’s Hospital of Chicago and Northwestern University Feinberg School of Medicine. The topics covered include: an editorial overview of Sports Medicine by LaBella; “Knee Injuries in the Young Athlete” by Craig Finlayson, MD; “Pediatric Ankle Sprains and Their Imitators” by Mark E. Halstead, MD; “Common Overuse Injuries in the Young Athlete” by K. Brooke Pengel, MD, FAAP, CAQSM; “Concussion Risk Factors and Strategies for Prevention” by Hamish A. Kerr, MD, MSc, FAAP, CAQSM; and “Can I Play?” by Claire M. A. LeBlanc, MD, FAAP, and Larry C. Lands, MD, PhD.

For me, one aspect of sports that has been below the radar was highlighted recently—estimates of more than 80,000 homeless teenage athletes in America.1 This is a subset of the current estimated 1.2 million homeless students in US public elementary, middle, and high schools—with homelessness defined as “lack of a fixed, regular and adequate nighttime residence.” This is really shocking! These numbers have increased by a staggering 58% since the beginning of the 2008 recession, reflecting the large numbers of children and teens who are living at or below the poverty line.

Changing gears, I want to discuss an important emerging concept related to antibiotic and vaccine development. We know that it is extremely costly to develop and test for safety and efficacy of any drug, but perhaps even more so for new antibiotics and new vaccines. The cost of such testing can approach or exceed $1 billion dollars before a drug or vaccine can be brought to the market. Pharmaceutical companies, like any corporation with shareholders, have to be cognizant of the potential market and future revenues as they make strategic decisions. There have been eloquent calls for the critical need for a public (governmental)-private (pharmaceutical) partnership for vaccine and antibiotic development so that we will have effective new vaccines and effective new agents against multiresistant organisms.2

The fact is that a new potent antibiotic will be used sparingly and judiciously to avoid development of resistance. So how can a company make the huge investment needed to complete clinical trials? How can it recoup its expenses? There needs to be some kind of sharing of the drug development costs from government or other not-for-profit sources to encourage development. This is a model that has worked well for the defense industry in developing better missiles and weapons, so it could work here as well.

Fresh in the news as I write this column is the revelation that about a decade ago a vaccine developed to protect against Ebola had been shown to be 100% effective in monkeys. Developed by the Public Health Agency of Canada and researchers at the University of Texas Medical Branch at Galveston (led by Dr. Thomas W. Geisbert), there were plans to proceed to testing of the vaccine in humans and eventual licensure. But this never happened because there was no apparent big money market for the vaccine. Clearly, the countries where an Ebola vaccine would be most needed could not afford it. So this vaccine (and another in development) sat on the shelf for many years.3 What a missed opportunity, we can say in perfect hindsight. Clearly, there needs to be a better and
more robust partnership between public and private entities beyond the initial stage of research development because of the huge expense of safety and efficacy testing.

**THIS MONTH’S STAMPS**

Two pretty spectacular 2014 souvenir sheets from Mali celebrate Lord Joseph Lister (1827-1912), who pioneered antisepsis—one of the greatest early medical and surgical advances. Shown on the sheet with three separate stamps (500F, 1800F, and 500F) is a phenol sprayer or atomizer (left), a patient with an attached atomizing device (top right), and an early bottle of Listerine, an oral antiseptic introduced in 1879 in St. Louis named after Lister, which is still available today. The other sheet (with only an 1800F stamp) portrays a complicated atomizer as well as a surgical patient with an antiseptic being sprayed on the patient’s wound. Note that none of the four in the operating room is wearing gloves, masks, or gowns as this precedes the introduction of asepsis.

Lister was an Edinburgh-trained surgeon who was distressed by the high morbidity and mortality rates associated with postoperative infections, including sepsis, tetanus, gangrene, and erysipelas, despite his meticulous surgical technique in the 1860s. He was one of the first to recognize the importance of Pasteur’s discovery of the association of bacteria and putrefaction. Experimenting with carbolic acid for chemical antisepsis, before the concept of aseptic surgery, he revolutionized surgery and has been considered England’s greatest surgeon. He published his classic papers in 1865 and 1867.

**REFERENCES**

