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UPMC’s antimicrobial control program saves the hospital about $4.2 million annually in infection-related costs. Most of the savings, he said, results from a decreased length of stay in the intensive care unit (ICU) by patients whose treatment follows the antimicrobial-use guidelines.

Prescribing in the trenches. Fishman noted that decisions about drug therapy in the hospital are often made by those with the least amount of experience treating patients.

“At our hospital,” he said, “it’s the interns making the decisions. And as of last week, they’re essentially medical students, because they just started their residencies and they’re being thrust with the responsibility of making antibiotic decisions with limited knowledge” of how to best treat patients.

About half of all U.S. patients receive antimicrobial therapy during their hospital stay, Fishman said. Ideally, he added, clinicians will tailor a patient’s antimicrobial therapy on the basis of microbiological data obtained from individual patients. Unfortunately, he said, “we know they don’t tailor therapy.”

“The clinical pharmacists that I work with actually go out every day and review charts of people that are started on broad-spectrum therapy,” Fishman said. “They communicate directly with physicians to let them know about culture results and talk to them about decreasing therapy” when appropriate.

The VA experience. At the Veterans Affairs (VA) Medical Center in Pittsburgh, Pennsylvania, Victor L. Yu, chief of the infectious disease section, said physicians have voluntarily changed their antimicrobial prescribing habits, resulting in a dramatic drop in resistant microorganisms at the medical center’s ICU.

“We’re in the midst of an epidemic of Clostridium difficile colitis nationally, but not at the Pittsburgh VA,” Yu said. “We have not seen a case of Acinetobacter or Stenotrophomonas maltophilia for six months.” He said that Candida glabrata infections have also vanished, and there are fewer methicillin-resistant Staphylococcus aureus infections.

Yu credits the demise of problematic pathogens to the influence of a study that was conducted at the medical center’s ICU and published in 2000.

As the study was underway, “the doctors themselves, the ones who order excessive antibiotics, suddenly realized that maybe what they had been doing all these years was wrong,” Yu told NFID conference attendees. “They curtailed their prescribing habits because of the realization that their practice not only lacked a detectable benefit but was causing measurable harm” to patients.

What physicians had been doing, Yu said, is prescribing empirical therapy for clinically suspected but unconfirmed pulmonary infections in ICU patients. In the majority of cases, Yu said, patients had pulmonary edema but no infection. “They don’t want their patients to die,” Yu said about the hospital’s physicians. “It’s their unwillingness to risk missing a treatable infection” that results in overprescribing and subsequent antimicrobial resistance.

Persuasion, not restriction. Yu said that instead of telling physicians not to prescribe antimicrobials, the hospital devised a three-day antimicrobial regimen and compared it with physicians’ usual practices, which Yu described as “blast[ing] everybody with every conceivable antibiotic” regardless of whether an infection exists.

In the study, ICU patients with a clinical pulmonary infection score (CPIS) of 6 or less, indicating a low likelihood of pneumonia, were randomized to the usual practice group or the experimental therapy—400 mg of ciprofloxacin intravenously every eight hours for three days.

At the end of three days, patients in the monotherapy group were evaluated and ciprofloxacin was discontinued if the CPIS score remained at 6 or less and microbiological test results indicated no pathogen was present. Patients in the usual therapy group continued to receive therapy at their physician’s discretion.

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New drugs and dosage forms

Follitropin alfa injection (Gonal-f RFF Pen, Serono): A disposable, prefilled drug delivery system was added to the product line. The ready-to-use syringes are designed to deliver at least 300, 450, or 900 IU from a series of injections; single-use disposable needles are supplied with each syringe. RFF pens are to be stored at 2–8 °C; patients may keep the pens at 20–25 °C for up to one month or at 2–8 or 20–25 °C for up to 28 days after the first injection.

Ibuprofen oral suspension (Children’s Elisure IB, Taro): The spill-resistant berry-flavored formulation is indicated for the relief of minor aches and pains due to the common cold, influenza, sore throat, headache, and toothache and for the reduction of fever in children.

Use of the product is contraindicated in patients with a feeding tube or those who have had an allergic reaction to any pain reliever or fever reducer.

The recommended dose of the product is based on the patient’s age and weight: a chart on the package indicates the dose, in teaspoonsfuls, for children ages 2–11 years and 24–95 pounds. A dose may be repeated in six to eight hours, if needed. Children’s Elisure IB is available in packages with a teaspoon designed for measuring doses of the suspension.

Polyethylene glycol 3350, sodium chloride, sodium bicarbonate, and potassium chloride for oral solution and bisacodyl delayed-release tablets (Half-Lytely and Bisacodyl Tablets Bowel Prep Kit, Braintree): The kit is indicated for bowel cleansing before colonoscopy.

Use of the product is contraindicated in patients with ileus, gastrointestinal obstruction, gastric retention, bowel perforation, toxic colitis, toxic megacolon, or a hypersensitivity to any of the ingredients.

The recommended dosage is four bisacodyl tablets swallowed whole with water at noon followed at least six hours later by the rapid drinking of 8 oz of the oral solution every 10 minutes until gone. The clear, colorless oral solution is prepared by filling the container to the 2-L mark with water, capping the bottle, and shaking to dissolve ingredients. Half-Lytely and Bisacodyl Tablets Bowel Prep Kit will be available in packages containing four bisacodyl tablets and a 2-L disposable bottle of regular-, cherry-, lemon–lime-, or orange-flavored powder for reconstitution.