the pharmacy and therapeutics committee newsletter.

To continue prescribing PPIs for a patient beyond 16 weeks, the provider needs to submit a completed “request for coverage of PPIs” form and a chart note with the diagnosis. If the provider does not submit this form before the patient receives more than 16 weeks’ supply of PPIs, the pharmacy adjudication software blocks subsequent PPI prescription claims. Once the form and chart notes are received by the plan’s clinical pharmacy services department, the pharmacist reviews all the clinical documentation and logs this information into a database. An approval for continuation or a denial is then issued. Therapeutic denials are determined by a medical director, and a denial letter is sent to the patient and the provider. Future requests for PPIs with new diagnoses for the patient and the provider. Future requests for PPIs with new diagnoses for the patient and the provider. Future requests for PPIs with new diagnoses for the patient and the provider. Future requests for PPIs with new diagnoses for the patient and the provider. Future requests for PPIs with new diagnoses for the patient and the provider.

Initially, over 10,000 patients were identified as having received a PPI for more than six months. At the time of this evaluation, 5,857 patients had been logged into the database. Of those, 5,436 patients received approvals for continuation of therapy with a PPI. There were 231 patients not approved for continuation and 59 patients with limited approval (e.g., 10 days, 14 days, 4 months). Twenty-two patients had terminated health coverage with the plan prior to the program being begun, drug costs still decreased. Prior to the program there were ~10,000 patients receiving PPIs for over six months. Since the program began, the number of patients receiving PPIs for >16 weeks declined by 28%, and there was a 17% cost saving.

Analysis of medical encounters for hospitalizations from May 1, 2002, through June 14, 2004, for patients in the PPI program revealed that, for the patients who were denied continuation of PPI coverage, there were no hospitalizations related to the restriction.

A drug-use-monitoring program reduced prolonged, indiscriminate use of PPIs and drug costs at an HMO.


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**Exact volume in intravenous solution bags**

This letter describes a previously unpublished experience that illustrates the relevance of a recent article on estimating the volume of prefilled infusion bags.1 Twenty years ago at the University of Nebraska College of Pharmacy, Samuel C. Augustine and I used manufactured bags labeled as containing 500 mL of 0.9% sodium chloride injection. Our aim was to prepare 30 bags each containing 496 mL of fluid for a clinical trial in which 4 mL of antibiotic solution was to be added to each 496 mL of 0.9% sodium chloride injection to make admixtures each containing exactly 500 mL of infusion solution. Preliminary measurements showed that the 500-mL bags, all from the same lot, were overfilled by at least 30 mL.

The first step in the volume-adjustment procedure was to cut open five bags, drain them, and dry them with towels. The mean ± S.D. weight of the bags was about 25 ± 0.63 g. With a normal distribution—in which 99.6% of values were within 3 S.D. (about 2 g) of the mean—all bags could be expected to weigh 23–27 g each. Next, five 10.0-mL samples of 0.9% sodium chloride injection from the five sacrificed bags were weighed. It was determined that the mean density of the solution was 1.00 g/mL.

Each filled bag for use in the study was removed from its overwrap, wiped dry with towels, and weighed to the nearest 1 g. The previously determined mean

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empty bag weight was subtracted from the filled bag weight to obtain the weight, or volume, of 0.9% sodium chloride injection in the bag. The targeted volume of 496 mL was subtracted from the volume of fluid in each bag (determined in the previous step), and the excess was removed with a 60-mL syringe. Given the aforementioned variation in bag weight, this procedure produced bags that almost certainly contained 494–498 mL of 0.9% sodium chloride injection.

The routine overfilling of infusion bags necessitates that such steps be taken when their precise fluid volume must be known or adjusted.


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Patent expiration for lansoprazole

In our recent article forecasting drug expenditures for 2004, the patent expiration date listed for lansoprazole was 2005.¹ This estimate was based on a review of several references, including FDA’s Web site.² The manufacturer of lansoprazole, TAP Pharmaceuticals, has since provided us with documentation of patent extension through May 2009. This extension was granted pursuant to the 1984 Drug Price Competition and Patent Term Restoration Act (the Hatch-Waxman Act). We regret publishing the incorrect date, but the error illustrates the complexity of estimating patent expiration. Many patent databases continue to list 2005 as the expiration date for at least certain dimensions of the lansoprazole patent.


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