

## ■ Letters

lopurinol daily dose was 422 mg (range, 100–600 mg daily) administered for a mean of 4 days (range, 2–17 days), with most patients eventually transitioning to oral allopurinol. The average cost of i.v. allopurinol therapy was \$1,968 per patient (based on our acquisition cost of \$492 per 500-mg vial). If i.v. allopurinol was replaced with a single 3-mg dose of rasburicase, the expected cost of therapy would be \$1,071.62 (based on our acquisition cost of \$535.81 per 1.5-mg vial). I.V. allopurinol is available only in single-use vials; therefore, the potential cost of drug waste can be considerable if partial vials are discarded. Accounting for partial vial waste, we extrapolated a potential savings of \$42,265 over 24 months in favor of a one-time low dose of i.v. rasburicase over i.v. allopurinol therapy.

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## Strategies to improve impact of volunteer pharmacists in sub-Saharan Africa

International volunteering in the developing world is gaining popularity among pharmacists and student pharmacists.<sup>1,2</sup> Programs have been undertaken in various settings in different geographic regions, including sub-Saharan Africa. Common volunteer duties include participation in dispensary renovations, clinical skill development programs, human resource relief, public health initiatives, and short-term medical mission trips and the provision of medical supplies to underserved populations. Volunteers also work within pharmacy and medical schools to improve education programming, augment existing staffing, and facilitate local staff development.

While these initiatives can result in benefits to local communities, it is possible for well-intended placements to be ineffective or exert harm.<sup>3-5</sup> Pharmacists need to be cautious when undertaking and developing such projects and should be aware of common challenges affecting the

communities in which they will serve. We outline here some key strategies that pharmacists and pharmacy students can use to increase their effectiveness in producing positive sustainable results through international volunteer initiatives.

First, do your homework. Needs assessments of the specific area of service are essential for the success of any volunteer program. This knowledge will allow volunteers to develop specific, targeted interventions in a culturally appropriate manner. Issues affecting sub-Saharan Africa are often considered applicable to the entire region. However, it is common for cities or communities within the same country or state to have entirely different challenges and needs. For these reasons, volunteers (or volunteer organizations) should conduct timely situation analyses of targeted communities to ensure that actions and interventions are directed appropriately and maintain cultural sensitivity.

Second, set and communicate realistic expectations. Realistic expectations are critical for success of the program and for satisfaction of all parties involved. When considering expectations for a particular project, volunteers should perform self-assessments and match these to the needs assessment of the local organization. Factors to consider include the volunteer's professional training (and how it compares with that of local colleagues), challenges facing the organization, challenges facing the volunteer (e.g., language, cultural and religious beliefs), time period in the country, and other skills and abilities that may be useful for volunteer placement. The expectations should be communicated to all parties to ensure transparency and to allow for the identification of discrepancies when considering the host organization's own expectations of the volunteer.<sup>4</sup>

Third, create sustainability. Focusing on education and training rather than on direct patient care activities can lead to sustainability through knowledge trans-

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fer.<sup>5</sup> A volunteer who spends two weeks working in a rural clinic performing clinical duties may provide short-term relief for clinic staff, but this effect will be lost once the volunteer leaves. However, if the volunteer instead works with local staff on education and training initiatives focusing on innovations (e.g., clinical skills, documentation systems, clinical pathways), the local staff have an immense opportunity to learn new skills that can be further developed and sustained. Health promotion presentations and the creation of resource materials are also effective ways to ensure sustainability.

In addition, the creation of lasting relationships and avenues for continued collaboration contributes to highly effective and sustainable initiatives. While these effects greatly depend on the nature of the volunteer program, volunteers may create awareness for ongoing projects, collaborate with hosts on future projects, provide consultation on new initiatives, or help train or orient future volunteers. Information technology has made communication more accessible and has enabled the maintenance of collaborative relationships. Many times, the work done after a volunteer's departure has the most significant impact on a project's effectiveness.

Fourth, build trusting relationships. It is very important to embrace local culture and develop relationships with local colleagues. Volunteers should capitalize on opportunities to attend various ceremonies, events, and informal gatherings to help build trust and to better understand the culture and context within which they are working. These situations provide valuable opportunities for volunteers and their hosts to interact with and learn from each other by sharing experiences, ideas, and beliefs. These informal networking events provide additional opportunities for collaboration, project development, and knowledge translation. International volunteers should realize that they make an impact (good or bad) not only by the work they do but by the

way they interact with their hosts and local surroundings.

These strategies will help international volunteer pharmacists contribute to positive, sustainable results in the developing world.

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## Including emergency departments in hospitals' bar-code-assisted medication administration system

**A**SHP's Pharmacy Practice Model Initiative is a call to action for health systems to change their practice model while promoting safety and efficiency; this may be accomplished by adopting health information technology.<sup>1</sup> Bar-code-assisted medication administration (BCMA) is a technology supported by ASHP to be used for every hospitalized patient and for every medication. BCMA significantly reduces medication administration errors by providing nurses with appropriate warnings during medication scanning before administration.<sup>2</sup> An ASHP survey found that approximately 24% of hospitals used BCMA in 2007, an increase from the 9.4% found in 2005.<sup>3</sup> While the adoption of BCMA is increasing across hospitals, the literature advocating its use is limited to inpatient units.

Emergency departments (EDs) are patient care areas that are prone to medication errors. For this reason, we recom-

mend that EDs be considered in any roll-out of BCMA. Studies have shown that the medication administration error rate in EDs is approximately 7%, with 40% of medication errors reaching patients.<sup>4,5</sup> The results of these studies suggest that BCMA could reduce ED medication errors, yet this technology is noticeably absent from the ED.

Workflow constraints, the lack of an electronic medical record, safety culture concerns, and a lack of published data on BCMA in EDs are key reasons for the paucity of BCMA implementation in this setting. In order for a BCMA system to work, it must compare the medication to an electronic order. A 2006 survey revealed that only 1.7% of U.S. hospitals had a fully functional information system and 53.5% of EDs had no information system at all.<sup>6</sup> In an ED, medications are prescribed via oral orders during emergency situations. Patient wristbanding may be different in EDs; the con-