Is travel health a new destination for pharmacy practice and business? An examination of revenue opportunities from pre-travel consultations

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Introduction

Travel medicine is a relatively new field of practice, with the first conference on international travel medicine held in 1988 and the leading organization for health care professionals practising in travel medicine—the International Society of Travel Medicine (ISTM)—founded in 1991.¹ What is even more recent is the venture of pharmacists into this specialty field—largely supported by a scope of practice in a number of provinces authorizing activities such as administering vaccines and initiating prescriptions. Involvement in travel health by pharmacists can cover a broad spectrum, from offering basic services, such as advice on over-the-counter products, through to administering travel vaccinations and performing pre-travel consultations.

Regardless of a pharmacist's level of involvement, research supports a role for pharmacists in providing travel-related care for patients. Whereas an exhaustive review of the literature is outside the scope of this paper, an overview of the evidence and potential roles for pharmacists has been published.² Pharmacist involvement in travel health, often studied in the context of a pharmacist-performed pre-travel consultation with recommendations communicated to a prescriber, has resulted in strong adherence by patients to recommended therapies,^{3,4} high patient satisfaction³⁻⁵ and more cost-effective care than consultations performed by nurses, as a result of less use of unnecessary vaccinations

and medications.⁵ A recently published study of pharmacist-performed pre-travel consultations in Alberta provides further evidence of patient adherence and satisfaction. This was the first published study of pre-travel consultations where the pharmacist had both authorization to administer injections and fully independent prescribing authority. Uniquely, it also assessed patients' health status following completion of their travels, finding that patients largely enjoyed good health abroad and, if any issues arose (most commonly, gastrointestinal), they felt well prepared to address them.⁶

One important perspective that has not yet been addressed is the impact of offering travel health services on the business aspect of community pharmacy practice. The objective of this brief paper is to explore the revenue potential of offering travel health services, based on the therapeutic recommendations provided to the sample of patients visiting the travel health clinic in the Alberta-based study mentioned above.

Methods

The methods of the study of pharmacist-performed pre-travel consultations in Alberta have been described in detail elsewhere,⁶ but will be summarized here. A convenience sample of 103 patients presenting to a pharmacist-managed travel clinic in Alberta were enrolled between April and November 2016. This clinic provides full-service pre-travel services,

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including comprehensive consultations performed by a pharmacist with specialist training and certification in travel health as well as Additional Prescribing Authorization,⁷ and on-site administration of all necessary vaccines. As the clinic does not dispense oral medications, patients requiring prescription drugs for travellers' diarrhea, malaria prophylaxis or altitude illness prophylaxis, among others, are provided with prescriptions that are dispensed at the patient's usual community pharmacy. All adult patients were eligible for enrollment in the study; however, when families or groups with identical travel itineraries presented to the clinic, only one individual from the group participated, to minimize skewing of the data related to destinations and itineraries of travel consultations performed at the clinic.

After providing informed consent to participate, chart reviews of the clinical documentation from participating patient's consultations were performed to extract data on patients' demographics, health status, destination(s) and itinerary details. Orders and advice provided related to vaccines, prescription drugs, nonprescription drugs and nonpharmacologic advice was also extracted. Within 1 week of returning from travel, patients were invited to complete a web-based survey to assess their satisfaction with the service overall, to report any health issues experienced while travelling and how these were addressed, and to self-report their adherence to recommended vaccines and drug therapies and reasons for nonadherence. The study received ethics approval from the Office of Research Ethics at the University of Waterloo.

This secondary analysis will specifically focus on outcomes of interest from the community pharmacy business perspective, related to potential sources of revenue from the provision of travel health services. Data obtained from the chart review of pre-travel recommendations was analyzed to determine the average number of vaccines, prescription drugs, nonprescription drugs and other products commonly stocked by community pharmacies recommended per patient.

Consultation fees charged per patient at the clinic were \$45 for travel to resorts, Mexico and Europe and \$60 for all other destinations. While vaccine administration fees at this clinic are included as part of the consultation fee, a survey of community pharmacists in Ontario

found that the average fee charged for administration of travel vaccines in that province is \$20 per injection, so this value will be applied in this analysis.⁸ Additionally, 2 reports of pharmacy dispensing fees in Ontario and British Columbia were used to determine an average overall fee of \$9.62, which will be assumed for this paper.⁹⁻¹⁰

Results

Among the 103 patients enrolled, the average age was 36 years and 46% ($n = 47$) were male. Asia was the most frequent destination ($n = 75$), followed by Africa ($n = 29$), South America ($n = 29$), Mexico/Caribbean ($n = 27$), Central America ($n = 8$), Europe ($n = 8$) and North America ($n = 2$), with the note that some patients planned travel to more than one destination.

On average, consultations took 27 minutes to complete. A summary of recommendations provided across all patients is provided in Table 1. Recognizing that the complexity of patients choosing to visit a specialized travel clinic may differ from those visiting a community pharmacy, these results are also presented separately for travellers to the Mexico/Caribbean region, as this is likely more representative of encounters taking place in community pharmacies.

These results indicate that the average number of recommended vaccine injections per patient (counting each injection required to complete multiple-dose vaccination series), prescription and nonprescription drugs were slightly fewer for travellers to Mexico/Caribbean vs all destinations; however, recommendations for other nonprescription products were slightly higher (2.81 vs 2.71 products per patient, respectively). Patients were most likely to decline vaccination against rabies and Japanese encephalitis due to the low perceived risk of exposure. Both these vaccines require multiple doses to complete the series (3 doses for rabies prophylaxis and 2 doses for Japanese encephalitis). Removing these vaccines from the analyses reduces the mean (SD) number of recommended vaccines per patient to 2.31 (1.49) for travellers across all destinations and 2.37 (1.29) for travellers to Mexico/Caribbean.

Applying the consultation fees used by the clinic and assumed vaccine administration and prescription dispensing fees, base case revenue generation is estimated at \$132.74 per patient for travel across all destinations and \$110.86 for travel to Mexico/Caribbean. It is important

TABLE 1 Summary of recommendations

Recommendation type	All destinations (<i>n</i> = 103)	Mexico/Caribbean only (<i>n</i> = 27)
Total injections (including total duration of vaccination series for multiple-dose regimens)	3.18 (1.97)	2.74 (1.53)
Prescription drugs – Available in brand only (Malarone)	0.32 (0.47)	0.11 (0.31)
Prescription drugs – Available as generic (acetazolamide, azithromycin, ciprofloxacin, chloroquine, dexamethasone, doxycycline, mefloquine)	1.16 (0.46)	1.04 (0.33)
Nonprescription drug products (bismuth subsalicylate, dimenhydrinate, Dukoral, scopolamine patch)	2.05 (0.43)	1.96 (0.44)
Other nonprescription products (insect repellent, oral rehydration solution/powder, sunscreen)	2.71 (0.55)	2.81 (0.47)

Data are the mean (SD) per patient.

to note that additional revenue potential exists from the mark-up applied to prescription drugs or vaccines, nonprescription drugs, and other products sold in pharmacies, such as insect repellent or sunscreen, which are not included in these totals.

Discussion

Community pharmacists and pharmacy technicians often have social discussions with patients on upcoming travel plans, for example, when they request assistance with selecting a sunscreen product in the middle of winter, or when they request an early prescription refill or a refill of a higher quantity than usual because they are going away. Using these social encounters as a segue to a clinical discussion related to an assessment of their travel health needs could present an additional opportunity for patient care and revenue generation. As illustrated by this study, in addition to charging a fee for the pharmacist's time to complete an individualized pre-travel consultation, community pharmacies may also generate revenue from vaccine administration fees, prescription drug mark-ups and dispensing fees and mark-up of nonprescription products, as a result of offering travel health services. For example, pharmacies with a patient population that frequently travels may also benefit from stocking a small inventory of harder-to-find items for travellers, such as permethrin spray for the treatment of clothing and tents or travel medical and first aid kits. It is recommended that basic travel kits should contain

analgesic, antidiarrheal, cough/cold and motion sickness medications, insect repellent and insect bite treatment, antiseptic wipes, soothing cream (e.g., hydrocortisone) for skin irritation, scissors/tweezers, sunscreen, water purification tablets, a digital thermometer and condoms.¹¹ Pre-assembled kits offer convenience and cost-savings for travellers vs buying items separately and are often designed to occupy minimal space in luggage, making them an attractive purchase for travellers, especially those visiting remote areas.

Recent reductions in the prices of some generic drugs across Canada¹² and the proposed national Pharmacare program¹³ may impact the revenues attainable by Canadian community pharmacies from dispensing. Despite remuneration for several nondispensing patient care services across the country,¹⁴ insufficient remuneration for the time and resources required to provide these services remains a concern for some. Furthermore, a high degree of variation exists in fees offered and patient eligibility criteria for these services across provinces and territories.^{15,16} Travel health care, as an uninsured service in the Canadian universal health care system, is one of few health services for which patients are accustomed to paying out-of-pocket. Furthermore, as a largely cash-paid service, pharmacies are also not subject to fee limits mandated by public and private payers and can charge fees for consultations and for the administration of some vaccines based on service costs and market factors. This study found that

a service taking on average 27 minutes to complete can generate revenue of \$110-\$132, which should be sufficient to both offset costs and generate profit. However, readers should recognize that the time required for a specialist-trained pharmacist to perform these consultations may be significantly less than a pharmacist with less experience, so appointments should be scheduled accordingly to ensure sufficient time to perform a high-quality and evidence-based consultation.

Pharmacists and employers must also recognize that travel medicine is a highly nuanced field, requiring individualization for each patient and awareness of changing resistance patterns to antimicrobial agents and disease outbreaks internationally. Simply visiting an online resource to determine vaccination needs for a given country is not sufficient for a pre-travel consultation, as effective consultations must incorporate patient-specific, destination-specific and itinerary-specific factors.¹⁷ Two patients visiting the same country may have vastly different preventive care needs depending on their health status, accommodations, specific sub-regions visited within that country and both planned and potentially spontaneous activities. Furthermore, morbidity and mortality from vaccine-preventable diseases is actually very uncommon among travellers, so consultations must also address management of more common causes of illness and injury, such as management of underlying chronic diseases and personal safety.¹⁸ Pharmacists are

encouraged to complete additional training in travel health to ensure competence and to perform consultations on an appointment basis to ensure sufficient protected time for a comprehensive assessment. Subscriptions to clinical resources specific to travel medicine, such as Travax, TropiMed or TravelCare, may also be a worthwhile investment. Costs associated with additional training or subscriptions to travel-specific clinical resources were not considered in this analysis. Furthermore, as average costs for vaccine administration fees and dispensing fees were applied in this analysis, exact revenue generation per pharmacy may differ based on specific fee amounts.

Conclusion

Future research and knowledge translation efforts will focus on identifying and addressing barriers related to providing this service and developing practice tools and guidance documents to support pharmacists in providing travel health advice and care, and identifying when a referral to a specialized travel health care provider is warranted. While travel health offers revenue generation potential across various levels of pharmacist involvement, community pharmacists should also recognize the specialized knowledge required to provide pre-travel assessments and equip themselves with the knowledge, skills and resources to do so safely and effectively. ■

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