Immunization Administration Training for African Pharmacists and Student Pharmacists

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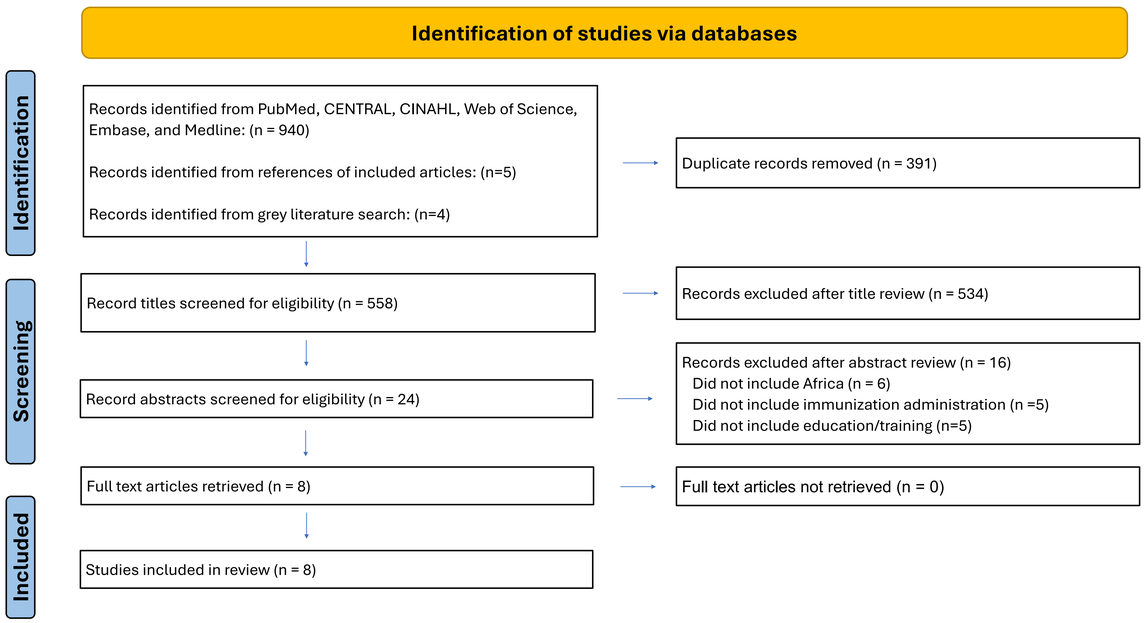
Introduction: Recent calls to action have encouraged African pharmacists to become trained to immunize with the goals of developing a strong vaccination workforce, addressing a shortage of vaccinators, and improving vaccination access.[1-5] In most African countries, the role of the pharmacist in administering immunizations is limited.[6] In Ethiopia and Senegal, pharmacists are involved in the vaccination process as educators and advocates since immunization administration is not included in their scope of practice.[7] In the Democratic Republic of Congo, pharmacy-based immunization services are offered but other types of healthcare providers, commonly nurses, must be present to administer the immunizations.[7,8,9]

In addition to having limited opportunities for pharmacists to be involved in immunizing, many African countries also have the lowest global vaccination rates and highest need to expand immunization access. An estimated 12.7 million children in Africa have missed routine vaccinations[10] and approximately 500,000 die annually from vaccine-preventable diseases.[11] The United Nations Children's Fund estimates that 8.7 million children in Africa are considered zero-dose children, meaning they have not received any doses of any vaccine.[10]

Objective: The objective of this research is to describe published literature regarding immunization administration training for pharmacists and student pharmacists in Africa.

Methods: A systematic literature review was conducted utilizing methods from the Cochrane Handbook for Systematic Reviews and the Preferred Reporting Items for Systematic Reviews and Meta-Analyzes (PRISMA) reporting guidelines. Literature databases searched included PubMed, Cochrane Central Register of Controlled Trials (CENTRAL), Cumulative Index to Nursing and Allied Health Literature (CINAHL), Web of Science, Embase, and Medline.

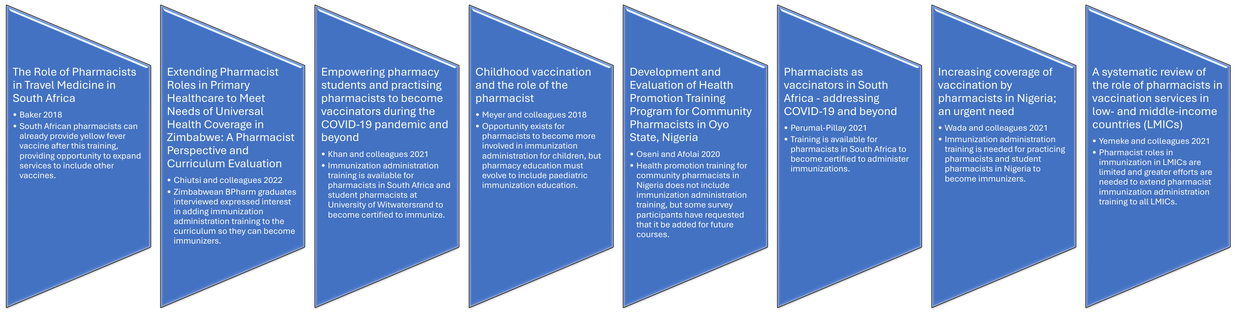
Figure 1. PRISMA Flow Diagram for Inclusion of Studies in Evaluation of Immunization Administration Training for Pharmacists in Africa.



Abbreviations used: CENTRAL: Cochrane Central Register of Controlled Trials; CINAHL: Cumulative Index to Nursing and Allied Health Literature.

Results: Nine-hundred and forty articles were identified from six databases and grey literature. After eligibility criteria were applied, a total of eight studies from seven African countries were included, representing Democratic Republic of Congo, Ethiopia, Nigeria, Senegal, South Africa, Uganda, and Zimbabwe. Only three studies described immunization administration training programs for pharmacists and one described training for student pharmacists. Studies identified that the limited educational opportunities may be related to the content covered in a Bachelor of Pharmacy (BPharm) degree, which is the most commonly available degree in the pharmacy field in Africa. However, several studies identified that there is potential in addressing vaccination gaps in low- and lower-middle-income countries through training pharmacists to immunize.

Figure 2. Articles included in systematic review.



Key Takeaways:

- Evidence of immunization administration training available to practicing pharmacists and student pharmacists in Africa in the literature is limited. The small number of studies identified in this literature review highlights opportunity to expand immunization training access to meet the calls to action for pharmacists to become trained to immunize.[1-5,12,13]
- The dearth of articles published about pharmacist immunization training in Africa may be due to pharmacist faculty and research workload during the pandemic. Training may be occurring, but researchers and trainers have not yet evaluated programs or published the results.
- Limited access to immunization administration training for African pharmacists may be in part due to limited access to pharmacy education in general. According to the International Pharmaceutical Federation World List of Pharmacy Schools[14], there are 81 schools of pharmacy in Africa serving a population of nearly 1.5 billion people.[15] For context, the United States, with a population of 340 million, has 140 fully accredited schools of pharmacy.[16,17]
- Regulatory restrictions provide yet another challenge to widespread implementation of pharmacists as immunizers in many African countries. However, substantial evidence exists from other nations demonstrating the positive impact vaccinating pharmacists can have on communities. If pharmacy advocates can demonstrate that pharmacists are well-trained to immunize and build on the success seen in other countries, that may provide a convincing argument to regulators that pharmacists are capable of safely administering immunizations.

Conclusions: There are many barriers that must be addressed before pharmacists in Africa can safely and effectively administer immunizations, but the overwhelming public health need suggests the effort would be worthwhile. Lack of access to vaccinations can result in loss of life, illness, reduced education, and have widespread social and economic impacts. Despite the challenges, involving pharmacists in the immunizing workforce in Africa could have far-reaching benefits.

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