

USAMC leadership then evaluates the relative value of a partnership and subsequently develop long-term, shared program goals assuring program ownership, communication and defined outcomes for all parties.

**Outcome & Evaluation:** The partnership assessment process has allowed the USAMC to develop strategic, long-term, institutional relationships based on similar approach and goals in countries of operation and to disengage from potential partnerships that bring excessive risk and minimal value add. As a result, long-term institutional relationships have been evaluated in Angola, Botswana, Colombia, Lesotho, Malawi, Papua New Guinea, Romania, Swaziland, Tanzania and Uganda.

**Going Forward:** The partnership assessment model is a key tool for future global health program start-ups or expansions. Challenges include ensuring that partnerships are long-term focused with sustainable institutions rather than with individuals who may change positions or institutions; alignment and coordination of local and international stakeholders; human resource gaps and; identification of a sustained funding source.

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### Policy and Economic Considerations for the Provision of Global Public Goods: Biomedical Research and Development

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**Background:** The concept of global public goods represents a framework for organizing and financing international cooperation in global health research and development (R&D). Advances in scientific and clinical knowledge produced by biomedical R&D can be considered public goods insofar as they can be used repeatedly (non-rival consumption) and it is difficult or costly to exclude non-payers from gaining access (non-excludable). This paper considers the public good characteristics of biomedical R&D in global health and describes the theoretical and observed factors in the allocation R&D funding by public, private, and philanthropic sources.

**Methods:** We first conducted a literature review on factors theoretically associated with funding for early-stage biomedical research, including the expected correlates of funding levels for basic research, pre-clinical studies, and Phase I – IV clinical trials. To explore possible relationships between theorized drivers of R&D funding and actual funding flows, we analyzed evidence on how public, private, and philanthropic investments are affected by the public good characteristics of four high-burden diseases that disproportionately affect low- and middle-income countries: malaria, tuberculosis, hepatitis C, and soil-transmitted helminthiasis.

**Findings:** Multiple factors influence R&D investment by public, private and philanthropic funders, including disease pathology and epidemiology, the current intervention landscape, policy and regulatory environment, and current and projected market conditions.

Private sector investments are theorized to be primarily determined by opportunities for positive financial returns, while public and philanthropic investments may be motivated by a variety of social returns. We examine the specific funding decision factors identified in the literature for each of the four selected diseases.

**Interpretation:** Factors influencing the allocation of funds for biomedical R&D vary by disease, resulting in uneven funding across diseases. Due to issues of transparency and a lack of systematically collected data regarding R&D investments for diseases in low- and middle-income countries, especially from the private sector, these factors can be difficult to observe and measure. Furthermore, persistent data gaps can affect both aggregate investment and cooperative agreements.

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### Barriers that Nurse Practitioners Face as Primary Care Providers in the United States

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**Program/Project Purpose:** There have long been concerns in the United States about shortages of primary care physicians. Expansion of coverage under the Affordable Care Act, along with increased specialization, and the growing and aging patient populations has increased the demand for care. Concerns about shortage have led to a variety of policy proposals, one of which would enhance the role of nurse practitioners in primary care. Past studies have found no difference in health status or satisfaction between patients treated by physicians and those treated by nurse practitioners. However, the role of nurse practitioners in primary care is still severely limited.

**Structure/Method/Design:** This study explores the barriers preventing nurse practitioners from taking on greater roles as primary care providers in the U.S. Through an online questionnaire and follow-up phone interviews, information was obtained from 39 nurse practitioners in the Lehigh Valley Region.

**Outcome & Evaluation:** The vast majority agreed that their role could and should be expanded, but they cited a number of barriers, including state laws, reimbursement rates, and patient perceptions. Of the 39 nurse practitioners, 30 of them reported that the main barrier they faced was physician opposition, including responses such as: physicians' fear of unqualified nurse practitioners that may overstep their boundaries (48.8%), physicians' need for control (22%), outdated laws (9.8%), the A.M.A. (9.8%), lobbyists (4.9%), and physicians' emphasis on the importance of their occupation (4.9%).

**Going Forward:** In the future, it will be important to expand beyond this small sample into a larger sample across the U.S. to better identify what barriers nurse practitioners face across states, especially because the role of nurse practitioners varies from state to state. Previous studies have shown that nurse practitioners obtain similar health outcomes as physicians, and it will be important,