

RESOURCE FROM:

**CONDUCTING FORMATIVE RESEARCH FOR HPV VACCINATION PROGRAM PLANNING:  
PRACTICAL EXPERIENCE FROM PATH**

PUBLICATION TITLE

# An Ecological Framework

PUBLISHER

PATH

PUBLICATION DATE

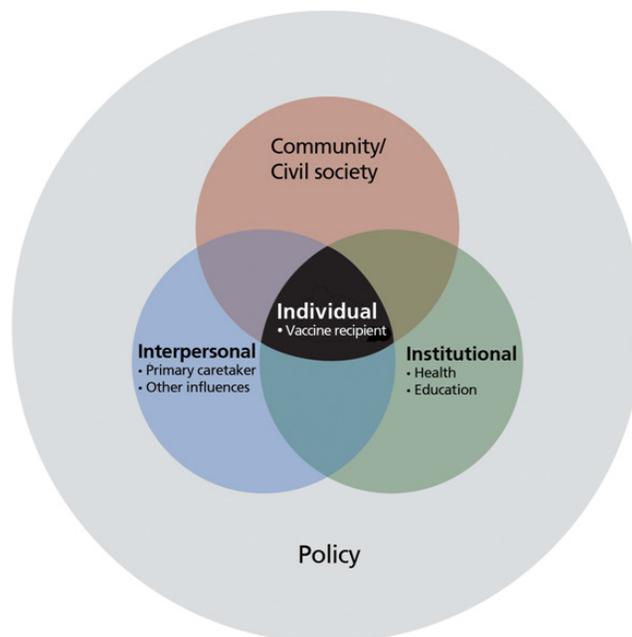
2012

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## An Ecological Framework

An ecological framework<sup>a</sup> recognizes that individual health behaviors are influenced at different levels within a complex environment.<sup>1</sup> This type of framework is commonly used in health program planning, as it illustrates these different levels as embedded health planning systems which are interrelated and not mutually exclusive. The ecological framework adapted for HPV vaccine introduction consists of five levels of influence. These should form the basic units of analysis and will define the key target groups to be included in the formative research. The important attributes and rationale defined at each level will shape the topics and research questions to be explored in the study. The outcomes of interest within each level are behaviors (individual or collective decision-making) that would either support a girl receiving the HPV vaccine or foster institutional decisions that would result in successful HPV vaccine delivery. Each level is discussed in more detail below.



### Individual level

The individual level centers on the vaccine recipient, a young adolescent female 10 to 14 years old. The formative research should explore the extent to which a girl has decision-making authority for vaccination, or whether the locus of decision-making resides elsewhere, such as with one or both parents, others in the family, extended household members (see interpersonal level below), or institutionally (the assumption being that teachers and health workers can be very influential on a girl's decision). The formative assessment seeks to better understand any relevant developmental factors that might influence whether a girl assents or dissents.<sup>2</sup>

<sup>a</sup> A full elaboration of this framework and its approach can be found in: Bingham A, Janmohamed A, Bartolini R, et al. An Approach to Formative Research in HPV Vaccine Introduction Planning in Low-Resource Settings. *The Open Vaccine Journal*. 2009;2:1–16.

**Interpersonal level**

This level emphasizes important interpersonal relationships that may influence whether a girl receives a vaccine. Interpersonal-level influencers can provide critical positive support that contributes to the decision for a girl to receive the HPV vaccine. The nuclear family, extended household, work groups, or friendship networks may influence or even dictate a young girl's patterned behavior.<sup>3,4</sup>

**Community/civil society level**

This level refers to the civil society organizations, religious institutions, broader societal networks, local media outlets, or geographically bound units such as towns or cities that vaccine recipients, households, and other key authority figures are connected to and may influence health decision-making for a girl. These societal networks recognize and share norms, regulations, and standards and draw upon these standards when making health-related decisions. The media is an important normative influence at this level.

**Institutional level**

Individuals in the health and school institutions/systems (especially if school-based vaccination is conducted) would play a key role in facilitating access to HPV vaccine and can have considerable influence in shaping normative values related to vaccine acceptance, as well as institutional capacity for individual participation in HPV vaccination programs. It is therefore important to understand whether cervical cancer is viewed by these individuals as a priority health issue and whether they see themselves playing a role in HPV vaccination and the prevention of cervical cancer. In addition, the health system must have the capacity (human, financial, and cold chain) to support introduction of the vaccine.

**Public policy level**

This level includes national policymakers and organizations, agencies, and entities that influence them. These individuals have the capacity to create policies favorable for HPV vaccination introduction activities or demonstrate financial commitment for HPV vaccine introduction. Health policymakers who need to endorse HPV vaccine introduction may include legislators, ministry of health officials (including heads of epidemiology, gynecology, maternal and child health, cancer control, and immunization), and key officials in finance and planning ministries. Leaders of medical and health professional associations, cancer and health institutes, heads of nongovernmental organizations, and women's health advocates are also important units of analysis at this level. This level covers a broad range of public policy factors that directly affect access to, availability, delivery, and affordability of the vaccine.<sup>5</sup>

## References

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5. DeRoeck D. The importance of engaging policy-makers at the outset to guide research on and introduction of vaccines: the use of policy-maker surveys. *Journal of Health, Population and Nutrition*. 2004;22(3):322–330.