

# Grassroots HPV Vaccine Education in Phnom Penh, Cambodia: A Personal Reflection

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## The Experience

In March 2023, I embarked on a field study in Phnom Penh, Cambodia's capital. The study's primary objective was to enhance awareness about the HPV vaccine among school-aged girls and to assess how this awareness affects their willingness to be vaccinated. This initiative was especially pertinent given the Cambodian government's plan to introduce a school-based vaccination program targeting nine-year-old girls within the year's end, which started from October 2023.<sup>1</sup> However, my interactions with a local pediatrician in Cambodia highlighted a significant gap in public awareness of the HPV vaccine. Indeed, a pilot vaccination program was trialed in primary schools in two provinces in 2017; a recent study indicates that a substantial number of girls, 61% and 72%, respectively, in the two surveyed provinces, were unaware of the health implications associated with HPV infections.<sup>2</sup> These figures underscore a serious knowledge gap in the crucial role the HPV vaccine plays in preventing HPV infection and its related health complications.

The situation in Cambodia mirrors my experiences in Japan, where the HPV vaccine has recently become more accessible after a hiatus in government endorsement from 2013 to 2022.<sup>3</sup> I finally got a catch-up vaccination at the age of 21 in 2022. As there were suspected serious reports of adverse events following HPV vaccination in Japan in 2013, when I was at the target age of routine vaccination, the whole country including me, was in distrust of the vaccine. I have strongly wished I had been informed of HPV vaccine with reliable information early on in my decision to get vaccinated. Since then, I have been engaged in research and awareness efforts regarding the HPV vaccine issue in Japan.<sup>3-7</sup> Therefore, in Cambodia, I felt a sense of the need to address this issue considering my own experience.

For the field study, I coordinated with a local pediatrician to schedule meetings with primary school principals, whose school

he routinely visits to deliver health promotion classes, aiming to conduct awareness classes for the schoolgirls, while simultaneously evaluating the girls' and teachers' understanding of the HPV vaccine. I visited two primary schools for my study: Koh Dach Primary School (KDPS) and Children's Basic Education School of Salvation Centre Cambodia (SCC-CBE School), based on our connections and their accessibility. The former is a public school on Silk Island, a 10-minute-ferry-ride from central Phnom Penh, and the latter is a small English-teaching private school. First, I disseminated a questionnaire in the Khmer language, referring to the pilot study,<sup>2</sup> among the teachers to gauge their knowledge of the HPV vaccine and their willingness to recommend it to students. I also assembled the schoolgirls in a classroom, distributing a similar questionnaire to assess their understanding and potential acceptance of the HPV vaccine. (*Figure 1* and *Figure 2*) Written informed consent was obtained before the survey. Overall, seven teachers and 43 girls (age 10-14) at KDPS, and three teachers and two girls (age 10-16) at SCC-CBE School participated in the study. The results revealed a concerning fact: more than half of the teachers had never heard of HPV or HPV vaccine. Furthermore, the students demonstrated limited knowledge of HPV or the vaccine to the extent that they struggled to comprehend the questionnaire. While our results corroborate the findings of a previous report regarding specific knowledge gaps,<sup>2</sup> they also extend the understanding of this issue by revealing even the lack of awareness prevalent among both teachers and students, highlighting the unique contributions of this initiative.

Of note, the ultimate decision regarding whether to get vaccination should be left to the individual. Educating Cambodian girls about the HPV vaccine and elevating their understanding can facilitate positive health decisions based on comprehensive and well-informed grounds.<sup>8</sup> Therefore, I delivered a 15-minute lecture to the girls, employing a handwritten poster in the Khmer

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**Figure 1. Students Answering a Questionnaire in Koh Dach Primary School.**



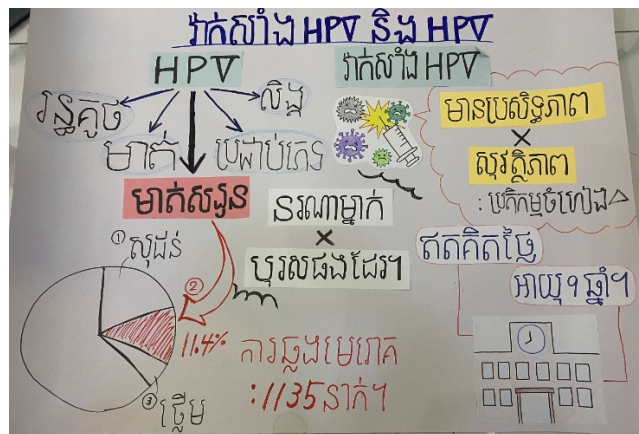
**Figure 2. Students Answering a Questionnaire in Children’s Basic Education School of Salvation Centre Cambodia.**



language (Figure 3). The presentation delineated four key points: firstly, HPV is a virus causing a myriad of cancers; secondly, cervical cancer is estimated to be the second most common cancer among Cambodian women;<sup>9</sup> thirdly, there exists an approved and effective vaccine to prevent HPV infection; and lastly, this vaccine is to be introduced in schools by mid-2023. Post-lecture, the students completed another questionnaire, enabling me to examine shifts in their understanding and intentions to get vaccinated. Though the questionnaire responses indicated that only a few students gained a comprehensive understanding of HPV and its vaccine, it was encouraging to note an increase in the number of students expressing an intention to get vaccinated.

While the government decided to introduce routine vaccination by the end of the year and subsequently started the program in October 2023,<sup>1</sup> it became clear that until now, health education, including sexual health, has not been sufficiently implemented in primary schools,<sup>10</sup> and thus, knowledge about HPV has not been

**Figure 3. Handwritten Poster Employed in the Lecture in the Khmer Language.**



provided by teachers sufficiently. Particularly, female sexuality is considered taboo due to conservative Khmer values.<sup>11</sup> Moreover, considering the difficulty of children of the target age group to properly understand the issue, as seen by the result of the post-lecture questionnaire, the intention of teachers and parents is considered to have a significant influence on the vaccination of children. In a previous awareness research conducted in Phnom Penh, only 1% of the teachers correctly answered HPV as the cause of cervical cancer.<sup>12</sup> In contrast, though more than around half of the teachers were unaware of the issue, since this questionnaire was asked an open-ended question, asking “Do you know HPV?”, the result might have been underestimated, meaning not many teachers understand sufficiently about HPV and the relationship with cervical cancer. Therefore, expanding this type of educational intervention to deliver reliable information is necessary, prioritizing teachers and parents as targets.

In fact, it has been reported that teachers with higher levels of knowledge tend to be more willing to recommend vaccinations to their students.<sup>13</sup> On the other hand, though I did not have the opportunity to approach the parents this time, as indicated by the fact that when pilot vaccination was administered, more than half of the girls in the two provinces (54% and 64%, respectively) consulted with their parents about the vaccination,<sup>2</sup> providing parents with reliable information about the vaccine would be of good significance.

Through this experience, I have learned the significance of considering the targets’ cultural contexts and cognitive habits when striving to raise awareness, and this would also be the case in Japan. A world free of cervical cancer can only be achieved through continuous education and awareness initiatives especially at the grassroots level, facilitating informed decision-making.

I would never forget the loveliness of the children I met in Cambodia. Children’s big smiles are a treasure for me and the world, and I will never stop my endeavors.

## Summary – Accelerating Translation

カンボジアの首都プノンペンにおける草の根HPVワクチン啓発：情報に基づいた意思決定に向けて

2023年3月、私はカンボジアの首都プノンペンで、女子生徒を対象にHPVとHPVワクチンに関する啓発授業を実施し、同時に女子生徒と教師のHPVワクチンに関する認知度や接種意向を評価することを目的とした現地調査に赴いた。これは私自身がHPVワクチンキャッチアップ接種世代の当事者であることから現在日本でHPVワクチンに関する研究や発信を行っていることに加え、カンボジア政府が2023年半ばから小学校におけるHPVワクチンの定期接種化を計画していたため、啓発には絶好のタイミングでもあると考えたからだ。

私は2つの小学校を訪問したが、懸念すべきことに、半数以上の教師がHPVやHPVワクチンについて聞いたことがなかったようだった。さらに、生徒たちはHPVやワクチンについての知識が乏しく、アンケート内容を理解するのに苦労していたほどであった。そのワクチンの存在を知らない以上、接種意向についてもほとんどの人が有していなかった。

方で私がHPVやHPVワクチンについて15分間の授業を行った後、同様に行った調査ではワクチン接種の意向を示す生徒が増えたのは心強い事実であった。

今回の結果から、カンボジアでの小学校ではセクシュアル・ヘルスを含む健康教育が十分に実施されてこなかったため、HPVやそのワクチンに関する知識が学校教育で十分に提供されてこなかったことが明らかになった。したがって、信頼できるHPVワクチンに関する情報を提供するためにこのような教育的介入を拡大することが必要であり、教師や保護者の意向が子どものワクチン接種に大きな影響を与えると考えられることから、彼らを優先的にターゲットとする必要があると考えられた。子宮頸がんのない世界は、私がカンボジアで実践したような草の根レベルでの継続的な教育と啓発活動により十分な情報に基づいた意思決定を促進することで初めて達成できる。私はカンボジアで出会った子供たちの笑顔が忘れられず、これからも世界中で子供たちの笑顔を守るためにもこのような挑戦を続けていきたいと強く願う。

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## Author Contributions

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