Addis Ababa University

College of Health Sciences

School of Public Health

Girl's Preference for Human Papilloma Virus Vaccination in secondary schools in Addis Ababa, Ethiopia, 2017: Discrete Choice Experiment

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DECLARATION

I, the undersigned, declare that this is my original work has never been presented in this or any other university and that all the material used for the thesis have been duly acknowledged.

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Place: **Addis Ababa University**

This thesis has been submitted for examination with my approval as a University advisor.

Alemayehu Desalegne (MPH, PhD candidate)

Signature----------

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Acronyms

DCE- Discrete Choice Experiment

DNA- Deoxyribonucleic Acid

ERC- Ethical Review Committee

ETB - Ethiopian Birr

GAVI- Global Alliance for Vaccines and Immunization

HPV- Human Papilloma Virus

IARC - International Agency for Research on Cancer

WHO- World Health Organization

WTP- Willingness to Pay

Abstract

Background: There are three HPV vaccines that are safe and effective for protecting HPV infection. These are: bivalent which protect from HPV type 16 and 18, quadrivalent for HPV type 6, 11, 16 and 18, and nonavalent for HPV type 6, 11, 16, 18, 31, 33, 45, 52 and 58. About 7,000 new cervical cancer cases are diagnosed annually in Ethiopia. It is the second cause of cancer related death in women aged 15 to 44 year. Even thouge Ethiopia undergo a pilot for HPV vaccine implementation at two sites in Oromia Region, Jimma zone, Gomma woreda and Tigray Region Ahiferom Woreda with support of GAVI, there is no data that show a finding regarding the current status of receiver's attitude, acceptance, and mainly girls' preference for HPV vaccine.

Objective: The aims of this study was to rank the contribution of the attributes for HPV vaccination; and to measure the willingness-to-pay, the trade-offs, and choices of girls between risk and benefits of the vaccination.

Methods: The study was done by using discrete choice experiment (DCE). The data was collected from Februray to March 2017 among 4 different secondary schools in Addis Ababa. A total of 336 girls aged 15-18 year were included in the study. The vaccination program attributes considered in the choice experiment were: degree of protection against cervical cancer, duration of protection, age at vaccination, number of doses, risk of developing serious side effects, price of vaccine, and way of delivery. Each choice set of all determined options were put in to mixed logit model to determine the sign of the coefficient of each attributes. Trade-offs and WTP also determined.

Results: From all participants, only six of them had been vaccinated for HPV. Doctors recommendation (34.9 %), mass-media campaign (81%) and positive familys' opinion (80 %) were factors encouraging respondents to get the vaccination. Girls were willing to trade-off 5 % of protection against cervical cancer in order to get HPV vaccination which had protective duration of 25 years instead of 8 years. On average the respondents were willing to pay 153 ETB for an improvement in protection against cervical cancer from 70 % to 98 %.

Conclusion: There was significant variationeof preference among girls for all HPV vaccine attributes. Degree of protection, number doses, and the risk of serious side effect were the three most important attributes which guide the choice of girls, while cost of the vaccine had been the least important factor. We found high level of tradd-offs level of protection against number of doses, seriouse side effects and place of delivery.

1. Introduction

1.1 Background

Cervical cancer is a preventable disease, but worldwide it is one of the leading causes of cancer related death among women. It is the third most common type of cancer among women, and was responsible for about 250,000 deaths in a year 2005; of which, approximately 80% of which occurred in developing countries [1]. By the year 2008, cancer of the cervix accounted for 21% of the total newly diagnosed cancers in African females. It was the most frequently diagnosed cancer and the leading cause of cancer related death (i.e. that causes about 31,500 cases and 21,600 deaths) among women in Eastern Africa, accounting for about 25 % of the total new cancer cases and deaths [2].

In sub-Saharan Africa, the occurrence of new cases of cervical cancer is still high. As compared to high-income countries, the rate is about 15 times higher in low-income countries. The incidence rates in Uganda, Mali and Zimbabwe appear to be on the rise [3]. It is amongst one of the top cause of death among South African women, which claims more than 3,000 lives each year [4].

Cervical cancer ranks as the second most frequent cancer among women of Ethiopia — only next to breast cancer [5, 6]. According to Human Papilloma Virus (HPV) and related diseases report of 2016, about 7,000 new cervical cancer cases had been diagnosed, and 4,732 deaths were estimated annually in Ethiopia. Age standardize incidence rate and death rate of cervical cancer in Ethiopia is 18.8 % and 14 % respectively.

Human papilloma virus (HPV) is a necessary cause for cervical cancer. The major transmission route for human papilloma virus (HPV) is through sexual intercourse. International Agency for Research on Cancer (IARC) identify the major 12 high-risk HPV types that cause cancers in humans, this include types 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58 and 59. Among those, HPV types 16 and 18 have greater impact, accounts for about 70 % of cervical cancer cases worldwide [7]. Most HPV infections are short-lived and naturally removed by body defense system [8].

The primary prevention for cervical cancer is to avoid transmision of HPV types. Among those methods vaccination is the one. There are three HPV vaccines that are safe and effective for protecting HPV infection. These are, bivalent for protection from HPV type 16 and 18, quadrivalent for HPV type 6, 11, 16 and 18 and nonavalent for HPV type 6, 11, 16, 18, 31, 33, 45, 52 and 58 [9, 10]. Currently, two HPV vaccines are licensed and marketed. The quadrivalent

vaccine is manufactured by Merck & Co, and known by its' brand names Gardasil® or Silgard®; first licensed in 2006. The second is bivalent vaccine which is manufactured by GlaxoSmithKline, it is known as Cervarix® which is licensed in 2007. In 2008, both vaccines have been licensed in several countries for use in females [11]. Gilrls of age 9-13 years are the current target for HPV vaccination in Ethiopia by considering delivery method of school based, health facility based and outreach approachs [12].

Secondary prevention works on detecting and treating precancerous lesions of the cervix before they progress to cancer. To do this screening is the major method. Screening aims to test the largest possible proportion of women at risk and to ensure appropriate follow-up for those who have a positive or abnormal test results [12].

Surgery, chemotherapy and radiation therapy are the common teritiary treatment packages for cervical cancer patients once the invasive carcinoma has developed. However, as a primary preventive strategy, Ethiopia has a plan to start an HPV vaccination along side new candidates in the coming five years (2016-2020): such as measles second dose, 3rd phase Meningitis A, and Yellow Fever. In a discussion with the Ministry of Health, the investigators learnt that a pilot project for HPV vaccination had been launched with collaboration of GAVI in 2015 and it is recommednded as "order priority two".

1.2Statement of the problem

Human papilloma virus has been associated with large incidence of cervical cancer by being the necessary cause. To protect womens from illness and deaths that are related to cervical cancer, HPV immunization is a better option – particularly in resource-limited settings; in which, alternative prevention approaches such as cytology screening or deoxyribonucleic acid (DNA) test are either difficult to access and or might not be economically feasible [13].

In Ethiopia, the available treatment option for patients diagnosed with cervical cancer is focus on chemotherapy and radiation therapy—having only one center at Tikur Anbesa Specialized Hospital. It is given to the patient once they acquire the infection and after complicated stages have been reached. From totally served patients at the center, women were about 73 %, and cervical cancer is the most common disease comprising over one-third of all female patients treated [14].

From totally conducted cervical cancer researches in Africa, the majority (54.6 %) of them has gave emphasis on secondary prevention (screening). Dispite the recent improvement, the number

of publications that aims on primary prevention as main "agenda" are only about 23.4 %, particularly on HPV vaccination [15]. Similarly, except few studies regarding cervical cancer pattern, patient side cost, knowledge, attitude and practice regarding cervical cancer screening, the evidence available for informing HPV program is very limited in Ethiopia [16, 14, 17, 18].

Perception and acceptance of the existing HPV vaccine could be affected by its perceived benefits and problems. But regardless of some side effects, peoples might be willing to undertake immunization for HPV infection in order to reduce illness costs [9]. In general, any public health programme should consider 'demand side factors' to facilitate acceptance and utilization. Some African countries like Ghana, Kenya, Malawi, Niger, Sierra Leone, and Zimbabwe applied HPV vaccination programme [19], but the programme in none of the contries had been informed by the preference of girls (or atleast any formal report or publication were not found supporting the antithesis).

Even though Ethiopia is undergoing piloting for HPV vaccine implementation at two major sites in Oromia Region, Jimma zone, Gomma woreda and Tigray Region Ahiferom Woreda with the support of GAVI, there is no data that documents the encountered problems, receiver's knowledge, attitude and acceptance and also parents' or girl's preference for HPV vaccine. However, before implementing large-scale vaccination program this evidence gaps should have been addressed. Therefore, the aim of this study was to assess preference of 15 -18 years-old school-girl's about HPV vaccine using a discrete choice experiment (DCE).

1.3 Significance of the study

The output of this study can be used as baseline information for future studies by giving an overview about the new HPV vaccine program characteristics (which is described as attributes) and its effect on the preference of school-girls. Policy makers can use the results in order to design an effective prevention and control strategies for cervical cancer.

2 Literature review

2.1 What is DCE?

Discrete choice experiments (DCEs) is a quantitative method for valuing different features that influence ones' choice toward agiven programme or product. It has recently emerged as a very attractive method for health researchers and policy makers since it provides quantitative information on various vacinnation characteristics that can influence vaccination choices of clients. Beside this DCE can provide the trade-offs between these factors, clients' willingness to pay and the probability of take-up of determined vaccination programme. To performe this study some key steps should be followed [20, 21]. This are

- Problem identification
- Identification of attributes and assign levels for each of them
- Experimental design:- allocating the level of the attributes to each alternative within the choice sets
- Development and administration of the survey (data collection)
- Data input and
- Analysis and interpretation

2.2 Risk factors for cervical cancer

The evidence that Human Papilloma Virus as a nessary cause of cervical cancer is well-established [22]. Most women in low-income setting get HPV infection in their lifetime. While most women get rid of HPV infection naturally, in some of the cases, the infection continues and can cause a cancer—cervical cancer [23]. Risk factors for HPV infection include multiple sexual partners, early marriage, young age at first pregnancy, multi-gravidity (large total number of pregnancies), short interval between pregnancies, and starting to have sex at an early age. Unfortunately, most of these risk factors are highly prevalent in Ethiopia [24].

In addition to having HPV, other risk factors for cervical cancer include smoking, having human immunodeficiency virus (HIV), and compromised immune system, using birth control pills for a long time (five or more years). Given that HPV infection is the main cause of cervical cancer, risk factors for HPV infection also increased the probability for the development of cervical cancer [25].

2.3 HPV vaccine effectiveness

By the year 2008, two HPV vaccines have been approved for use in many countries. Scientific test results show that both vaccines are safe and very effective when given to females with no past history of infection by vaccine-related HPV types in preventing infection [26].

HPV vaccines are highly effective for reducing the risk infection for women who are vulnerable to HPV types covered by the vaccine. Clinical trials done on young women with no evidence of previous infection showed that, both vaccines (bivalent and quadrivalent) are over 99 % effective on protecting pre-cancerous lesions related with HPV types 16 or 18 [27]. The quadrivalent vaccine had an effectiveness of more than 96% in preventing high-grade, precancerous lesions of the cervix, vagina and vulva and genital warts arising from HPV types 6, 11, 16 or 18. The bivalent vaccine has an effectiveness of more than 90% in preventing high-grade cervical lesions arising from HPV types 16 and 18 [28].

According record of WHO, by applying full dose of bivalent and quadrivalent vaccines serum antibodies get their highest level rapidly once the third dose is given and remain stable for at least 5 years afterward. For the bivalent vaccine, immunogenicity and efficacy of a 3-dose against infection and cervical lesions related with HPV-16/18 have been confirmed up to 8.4 and 9.4 years respectively [6].

Regarding the timing of immunization, study done in Kenya showed that, HPV vaccines are ineffective if they are given for target population once HPV viral infection has happened or after they become vulnerable to one of transmission ways. So, immunization toward HPV does not avoid the need for cervical cancer screening [9].

2.4 Factors affecting utilization of HPV vaccine

In US parents need to keep their children protected from the dangerous effects of HPV infection. But the beliefs that only sexually active teenagers should get the immunization may lead the family to fail or interruption the immunization process [29].

Finding from systematic review shows that financial concerns and parental attitudes and concerns are the major obstacles in the process of the HPV vaccination. Parents frequently described wanting adequate information before immunizing their children. Their intention to use vaccines for their child also affected by worrying about the vaccine's effect on sexual behavior of their daughter, social influences and vaccine cost [29].

From the total mothers participated in study done in Korea, most of them didn't vaccinate their daughter (90%) mainly because of worries over adverse side effects (60.7%) and high vaccination cost (35.9%) which is difficult to be covered by parents having lo income [30]. But according to GAVI, the estimated introduction costs for national scale-up of HPV vaccinations in low income countries range from US $3.13 to US $5.15 per fully immunized girl and US $4.23 to US $5.81 for operational costs per fully immunized girl [19].

Study done on Kenyan mothers find out some hindering factors for vaccinating their daughters. Among this, lack of information about HPV vaccine and the time and place of vaccination account for 54.6% of mothers who wanted the vaccine but failed to have it. For those mothers who had their daughter immunized the reason is lack of time [31].

Another study done in Southwest Nigeria find out there was lack of knowledge between the students showed that there is lack of appropriate education and this affect their awareness of individual risk of cervical cancer and HPV infection and the severity of its outcome. From the study participants, most (78.9%) lacked respectable information about HPV vaccinations maybe because of the vaccines were presented into the country in recent years [32].

Regarding the way of delivery, great HPV vaccination coverage was attained by school-based programmes (82.6% in Peru and 88.9% in Uganda). In Vietnam, it is increased from 83.0% to 96.1% between 2008 and 2010. In India, where a combination of school- and health-center based delivery was used, the coverage ranged from 77.2% to 87.8%, depending on the type of geographical area (i.e. urban, rural or tribal) [28].

A study also report shows parents and public bests have showed their readiness to facilitate their daughters to be immunized; besides teenagers were ready to get vaccine for HPV. However, they asked questions regarding HPV infection, how it get transmitted, approaches to be safe, and also about HPV vaccine and unwanted outcomes related to it, prior to be immunized [32].

2.5 Uptake of HPV vaccination

The estimated uptake of the HPV immunization programme with 70 % protection against cervical cancer, at age 12, 1/30 risk of mild side effect, 1/150,000 risk of serious side effect and protection duration of 6 years is approximately 77 % in Netherland [33]. Another study showed an expected uptake of 63.3 %, based on parents' preference with regard to HPV vaccination programme at the age of 12 years, 1/150,000 risk of serious side effects, 6-year duration of protection and a 70%

degree of protection. An evidence also indicates that increasing the time interval of protection from 6 years to lifetime indicate rise in the likelihood of uptake [34].

Study done in Netherlands after 3 years of implementation of the HPV vaccination program shows that respondents were willing to trade-off 7 % of the degree of protection to have a 10 % less risk of mild side effects [35].

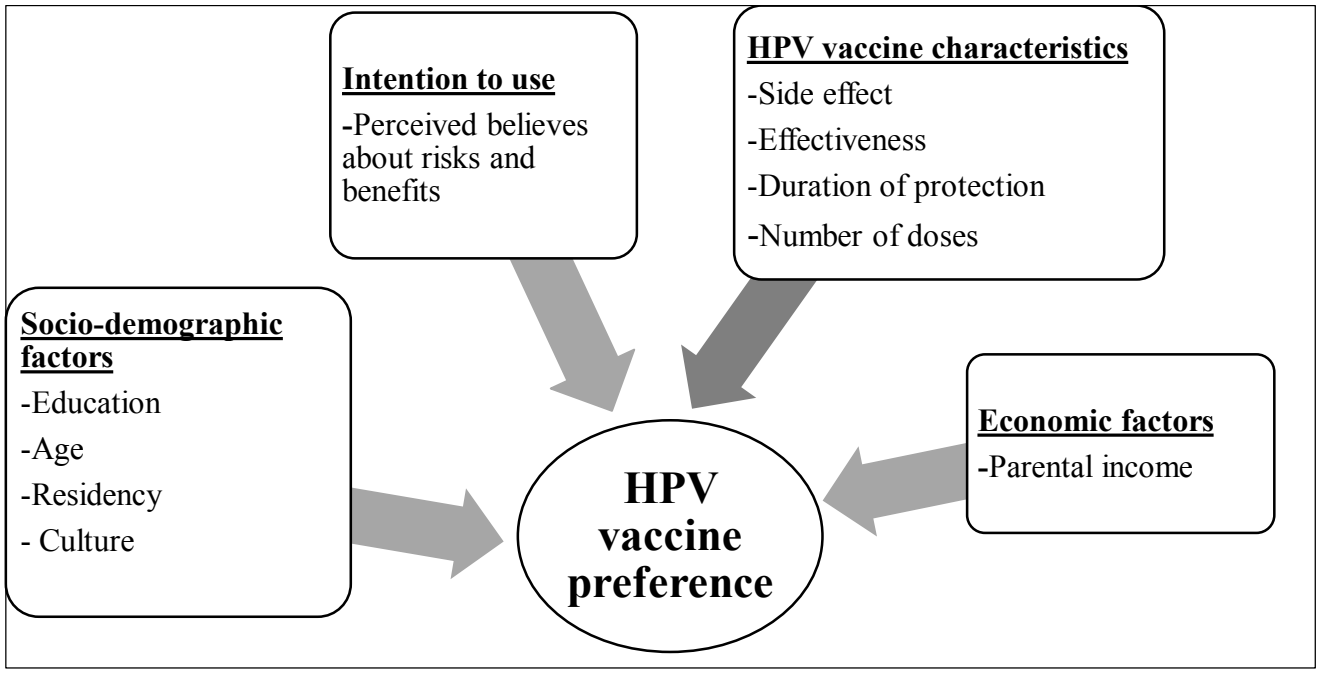

Figure 2-1 Conceptual framework from different literatures

3. Objective

3.1 General objective

- The aims of this study was to rank the contribution of the attributes for HPV vaccination; and to measure the willingness-to-pay, the trade-offs, and choices of school-girls' between risk and benefits of the vaccination, in Addis Ababa 2017.

3.2 Specific objectives

- To evaluate preferences of girls for the seven features of HPV vaccines attributes.
- To assess girl's trade-off between risks and benefits of HPV vaccination programme.
- To determine girls' willingness to pay.
- To assess knowledge and attitude level of students about cervical cancer.

4. Methodology

4.1 Study area and period

This study was conducted among selected secondary school in Addis Ababa –the capital city. The city encompasses 10 sub-cities, and each sub-city is divided into "Woredas", which are the smallest administrative units of the city. Its geographic location, combined with its political and socio-economic status have made it a favorable to hundreds of thousands of people coming from all corners of the country in search of employment opportunities and services. As the city is the center of the country in many socio-economic aspects of peoples' life and due to the expectations that better health services are available in Addis Ababa than in other regional centers, health facilities in Addis Ababa provide service to significant number of population in the surrounding areas outside the city and other regional states.

According to 2008/9 report there were 1197 secondary education facilities in Ethiopia of which 153 are located in Addis Ababa [36]. The selected secondary schools are Millinium high school, Dilachin high school, Nazreth and Enat high school from Kolfe keraniyo, Addis ketema, Arada and Gulele sub-cities respectively. The study was conducted from February - March 2017.

4.2 Study design

The study was done by using discrete choice experiment (DCE). It considers that a health intervention, like immunization programme, can be described by its features. DCEs provide many benefits in the health sector mainly by offering rich data sources that are helpful for financial estimation and decision making if it is properly designed, applied, evaluated and understood. It includes requesting participants to make discrete selections from the given alternatives [37].

4.3 Selection of attributes

The major selected attributes from related literatures [33, 34], preliminary qualitative assessment, pilot interview and consulation with experct opinion with Ministry of Health staffs; and respective levels are presented in (Table 4-1).

Table 4-0.1. Attributes and levels for HPV vaccination.

S.No	Name of attribute	Level
1	Degree of protection against cervical cancer (%)	70% 98%
2	Duration of protection(yr.)	8 Years 25 Years
3	Age at vaccination	9 Year 26 Year
4	Number of doses	2 Doses 3 Doses
5	Risk of developing serious side effects	1/750,000 1/30,000
6	Price($)	4.5$ 9.2$
7	Way of delivery	At health care facility At school

4.4 Source population

The source population of the study was all adolescent girls attending secondary schools found in Addis Ababa.

4.5 Study population

The study population was adolescent girls in Millinium, Dilachin, Nazreth and Enat secondary schools within the age range of 15-18 years-old.

4.6 Sample size determination

To find out the required data with reasonable level of precision, representative sample of 336 girls with age group of 15 to 18 year were randomly selected from all grade level of the selected four schools. The number of participants was determined by the assumption of DCE. In order to get an estimate with a reliable model, the number of respondents should be more than 20 per each determined attributes. Since the study used seven attributes in the study it shall have at least 140 respondents. Taking in to account a sub-optimal response rate and some two way interactions between attributes, this study aimed at having at least 280 questionnaires completed [37].

4.7 Sampling technique

- From 10 sub cities of Addis Ababa, four of them (Kolfe keranio, Gullele, Arada and Addis ketema) were selected by lottery methods.
- From each sample sub cities, secondary schools were selected by simple random sampling from the all listed schools.
- Proportional allocation of the sample to the size of the school, in terms of number of student, was used to get study participants from each school.

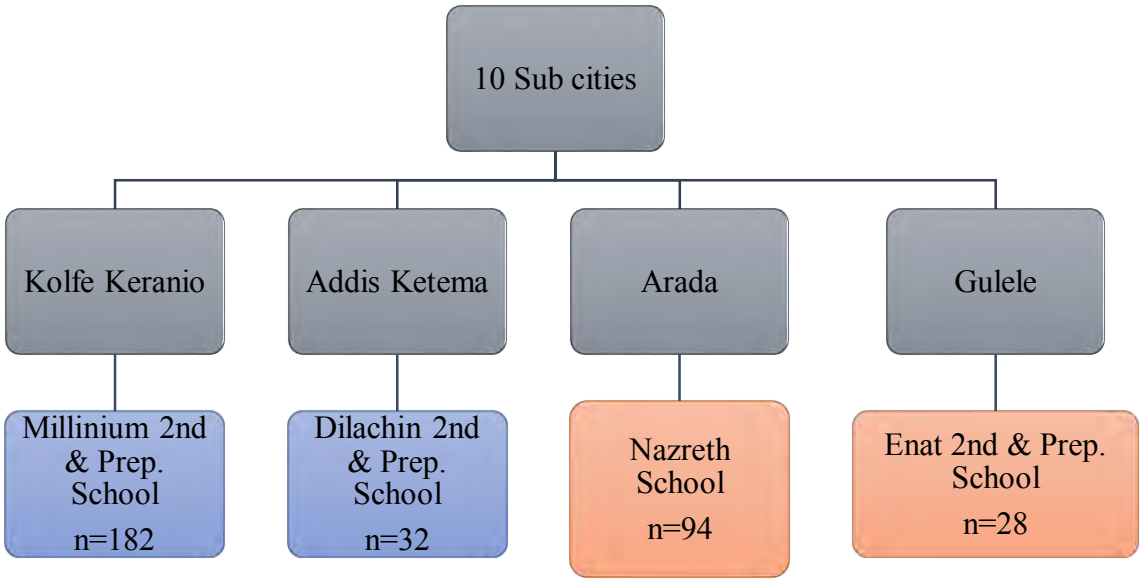

Figure 4-1. Sampling technique to select study participants, DCE on HPV Addis Ababa 2017

4.8 Data collection instrument

Using the selected seven attributes with two level give us a total of 128 (2^7) by using full factorial design. Because presenting all those choice sets is not possible, the final 32 choice sets were generated by applying fractional factorial design using Minitab 17. Each choice sets have two vaccination programmes as an alternative.

To get good response rate, we divide 32 choice sets in to two types of questionnaires. The first one has choice sets 1-16 and the second involving 17-32 (Annex 5, Part-4). In addition to this 5 questions were used to assess participant's socio-demographic characteristics, 11 questions for knowledge and 5 questions for attitude toward cervical cancer were also included. The questionnaire was pre-tested on 5 % non-study participants at Ayertena secondary school to check for any other problems in interpretation (n=17).

Questionnaires were administered to participants by seating them in a class room. There was a brief introduction about the purpose of the study in order to get the expected response from participants. Especially, a full explanation of each attribute and their level was given before presenting the choice tasks to the participants.

4.9 Data analysis procedure

The collected data was coded (i.e all variables are coded as dummy variable), entered and analyzed using the STATA version 14 computer software packages. Each choice sets of all determined options were put in to a mixed logistic regression model to determine the sign of the coefficient of each attributes. Since the proposed vaccination programme do have binary outcome (Y = 1 if profile is chosen and Y = 0 if the profile is not chosen) the model takes the following form [38].

$$V = \beta 0 + \beta 1\ \text{Effectivness} + \beta 2\ \text{Duration} + \beta 3\ \text{Age} + \beta 4\ \text{Dose} + \beta 5\ \text{Risk of serious side effect} + \beta 6\ \text{Price} + \beta 7\ \text{Way of delivery} + \varepsilon$$

Where; V= total utility

$\beta 0$= constant coefficient

$\beta 1$- $\beta 7$ = coefficients of the attributes which indicate preference of each girl toward a given attribute.

ε = random error term

In this study, the base-case is HPV vaccination program which has 70 % protection against cervical cancer, protection duration of 8 years, vaccination at age of 26 years, dose number of 3, a 1/30,000 risk of serious side effect, price of 200 ETB, and way of delivery at health care centers.

To obtain the values of WTP, *nlcom (_b [attributes]/ _b [price])* command on STATA was applied (note that *attibutes* are the remaining six other than the price).

4.10 Data quality management

To ensure the quality of data, great concern was given starting from questionnaire design and data collection procedures. There was training for data collectors. The principal investigator and data collectors have checked the collected data for its completeness before living the study site daily.

4.11 Dissemination of result

The full report of this study was submitted or communicated to Addis Ababa University School of public health. Beside this the finding will be desiminated to Federal Ministry of health, the selected schools, local or international institutions and other concerned bodies.

4.12 Ethical consideration

Ethical clearance was obtained from Addis Ababa University School of Public Health ethical clearance committee and permission was obtained from the selected school administration. Informed consent was also obtained from the students who participated in the study.

5. Result

5.1 Socio-Demographic characteristics of respondents

A total of 330 participants were enrolled in this study. The response rate of this study was 98.2 % (330/336). Most of the respondents were 17 year-olds (n=105) followed by 18 years (n=94). Interms of girls school grade, the majorly were from grade 11 (32.1 %) and grade 10 (28.5%); and the remaining were from grade 9 (21.8%) and grade 12 (17.6%). Out of the 330 of the study participants, 80 % lives with both parents, 7.9 % with their mother only, 3.3 % with their grandparents followed by 1.8 % with their father only (Table 5-1).

Table 5.1 Socio-demographic characteristics of female students, Addis Ababa, 2017

Socio-Demographic characteristics of respondents(n-330)	Frequency	Percent (%)
Age		
15	63	19.10
16	68	20.60
17	105	31.80
18	94	28.50
Religion		
Orthodox	189	57.30
Muslim	93	28.20
Catholic	1	0.30
Protestant	42	12.70
Traditional	0	0
Other	5	1.50
Ethnicity		
Oromo	42	12.70
Amhara	103	31.20
Tigree	38	11.50
Gurage	120	36.40

Silte	10	3
Other	17	5.20
Respondent grade level		
9	72	21.80
10	94	28.50
11	106	32.10
12	58	17.60
Live with		
With both of my parents	264	80
With my mother only	26	7.90
With my father only	6	1.80
With brothers/sisters	4	1.20
With grandparents	11	3.30
With cousins	5	1.50
With mother/father and a stepfather or stepmother	2	0.60
With my friends	2	0.60
Others	10	3

5.2 DCE result from Mixed Logit model

Result from mixed logit model shows that all attributes were significant having p-value < 0.05 for participants in determining their preference. The value of mean coefficient shows relative importance of each HPV vaccine attributes. While an individual coefficient does not have meaning on its own, there are three important ways to interpret the coefficients [39].

1. Weighted Ranking of Preferences
2. Girl's trade off
3. Willing to pay measure

Table 5.2. Respondent's preference for HPV vaccination, mixed logit model (n = 330).

HPV vaccine attributes	Coef.	SErr	95 % CI

Degree of protection against cervical cancer (%)	-0.432	0.0722	-0.574, -0.291
Duration of protection (Yr.)	0.022	0.0034	0.015, 0.028
Age at vaccination	-0.014	0.0038	-0.021, -0.006
Number of doses	-0.268	0.0487	-0.363, -0.173
Risk of developing serious side effect	-0.236	0.0731	-0.380, -0.093
Price	-0.003	0.0004	-0.004, -0.002
Way of delivery	0.230	0.0664	0.100, 0.360

Number of obs = 10,560

LR chi2(6) = 265.45

Prob > chi2 = 0.0000

Log likelihood = -3406.0971

5.2.1 Weighted Ranking of Preferences

Weighted ranking was done by comparing coefficients (absolute value) each other to determine a ranking of girls' preferences for the attributes of HPV vaccination included in the survey, which tell us how much more respondents preferred the most preferred vaccine attribute to the other attributes. To do this attributes were listed from larger coefficient value to smaller one [39]. This gives us the following pattern presented in Table 5-3.

Table 5.0.3. Most important vaccine attributes from weighted ranking (n=330)

Rank	HPV vaccine attribute	Coefficient
1st	Degree of protection against cervical cancer (%)	-0.432
2nd	Number of doses	-0.268
3rd	Risk of developing serious side effect	-0.236
4th	Way of delivery	0.23
5th	Duration of protection (year.)	0.022
6th	Age at vaccination (year)	-0.014
7th	Price	-0.003

The negative value of the coefficents implies that preferring the base-case for each attribute. That is, 70 % degree of protection as compared to 98 %, vaccinated at age of 26 years instead of 9 years,

receiving 3 doses as compared to 2 doses, 1/30,000 risk of developing serious side effect as compared to 1/750,000 and paying 200 ETB for vaccine as compared to 100 ETB.

5.2.2 Girl's trade off

Girls' willingness to trade-off was calculated by dividing the coefficient of all attributes by coefficient of protection against cervical cancer multiplied by negative. Doing this mannualy may not give us the significance level and confidence interval. So to get this from STATA the command nlcom (_b [attributes]/ _b [effectivness]) was applied. (Note that protection against cervical cancer was lebeled as effectivness on STATA).

Table 5.4. Participant's trade-off between degree of protection for cervical cancer against other levels of HPV vaccination programme

Change in attribute level	Willingness to trade-off degree of protection			
	%	P>|z|	95% CI	
Protection duration of 25 years instead of 8years	5	0.000	-0.072	-0.027
Vaccination at age 9 years instead of 26 years	3.2	0.003	0.011	0.052
Number of dose of 2 instead of 3	62	0.000	0.333	0.906
Risk of seroius side effects of 1/750,000 instead of 1/30,000	55	0.003	0.189	0.906
Vaccine price of 100ETB.instead of 200ETB.	1	0.000	0.003	0.009
Delivery at school instead of at health care centers	53.3	0.003	-0.883	-0.183

Girls were willing to trade-off 5 % protection against cervical cancer to get HPV vaccination programme having protection duration of 25 years instead of 8 years. They were willing to trade-off 3.2 % protection against cervical cancer to be vaccinated at the age of 9 years instead of 26 years of age. They were willng to trade-off 62 % protection against cervical cancer to get HPV vaccination programme with reduced number of vaccine dose (2 instead of 3). They were willing to to trade-off 55 % protection against cervical cancer to get HPV vaccination programme involving risk of seroius side effects of 1/750,000 instead of 1/30,000. They were willing to to trade-off 53.3% protection against cervical cancer to get HPV vaccination programme which is provided at school instead of health care centers.

5.2.3 Willing to pay measure

Willingness to pay (WTP) tell us the how much amount of money a respondent would be willing to give up in order to obtain other benefits in HPV vaccination [20].

Table 5.5. Respondent's willing to pay (WTP) estimation from mixed logit model

Attribute	WTP	p-value	95% CI
Protection against cervical cancer (%)	154	0.000	82.9, 224.9
Protection duration(Yr.)	-7.66	0.000	-11, -4.3
Age at vaccination	4.88	0.002	1.9, 7.9
Number of dose	95.4	0.000	54.4, 136.5
Risk of developing serious side effects	84.3	0.005	25.9, 142.7
Way of delivery	-81.9	0.002	-134.5, -29.5

On average, respondents were willing to pay 154 ETB for an improvement in protection against cervical cancer from 70 % to 98 %. Similarly, they were willing to pay additional 5 ETB for an improvement in duration of protection from 8 years to 25 years, 95 ETB for decreasing the number of doses from 3 to 2, and 84 ETB for reducing the risk of serious side effects from 1/350,000 to 1/750,000. Surprisingly, rather than paying for, they would like to recive 7.66 ETB and 81.9 ETB for the improvement in protection duration and changing palce of delivery from health care facility to school respectively.

5.3 Participants' knowledge of cervical cancer

From respondents who have ever heard about cervical cancer, the majority of them have the information from Television 96 (62.3 %). The remaining 23(15%) from Radio, 19(12.3%) from family memebrs, and 7 (4.6%) from other sources. Friends 6 (3.9%) and Magazine 3 (1.9%) accounts very minimal.

Majority of the respondents did not know about risk factors of cervical cancer 239 (72.4%), and the availability of a vaccine against cervical cancer 287 (87%). From those who mentioned at least one of the the risk factors for cervical cancer (n = 91), 37 (40.6 %) mentioned multiple sexual partners, 25(27.5%) abortion, 14 (15.4%) sex at an early age, 14 (15.4%) early pregnancy, and 1 (1.1%) lack of hygine as cause to cervical cancer. Regarding the cost coverage of the vaccine, 211 (63.9%) of the respondents belived that it should be provided free of charge while

Regarding the age for HPV vaccination around one third of the respondents 106 (32.1 %) agreed if it is provided by the age of 18-21 years. Of the remaining participants: 100 (30.3%) suggests at any age, and 45 (13.6%) suggests at age 9-13.

Six respondents get vaccination for HPV, only 20 (6.1%) of the participants know any other person from their family or friends who is vaccinated. Most of the girls -295(89.4%), replied, "No" for the question "Does HPV vaccine is only for people who are sexully active?" Half of the participants 167 (50.6%) understand that getting HPV vaccine before starting sexual activity will protect from acquiring cervical cancer.

Table 5.6. Knowledge of cervical cancer among female students, Addis Ababa, 2017 (n=330).

knowledge of cervical cancer(n=330)	Frequency	Percent (%)
Heard about cervical cancer		
Yes	154	46.70
No	176	53.30
Information source(n=154)		
TV	96	62.30
Radio	23	15
Magazine	3	1.90
Friends	6	3.90
Family	19	12.30
Other	7	4.60
Know risk factors/causes of cervical cancer		
Yes	91	27.60
No	239	72.40
Risk factors can cause cervical cancer(n=91)		
Abortion	25	27.50
Multiple sexual partners	37	40.60
Sex at an early age	14	15.40
Lack of hygiene	1	1.10
Early pregnancy	14	15.40
Aware availability of HPV vaccine		
Yes	43	13
No	287	87
Who should pay		
Paid by the society	12	3.60
Partially paid by the society	24	7.30
For free	211	63.90
I don't know	83	25.20

Age for HPV vaccination		
9-13 years	45	13.60
18-21 years	106	32.10
All ages	100	30.30
I don't know	79	24
Ever get vaccination for HPV		
Yes	6	1.80
No	324	98.20
Know family or friends vaccinated		
Yes	20	6.10
No	310	93.90
HPV vaccine is only for those sexually active		
Yes	29	8.80
No	295	89.40
Missing	6	1.80
Vaccination before starting sexual activity		
To protect cervical cancer	167	50.60
To avoid risk of miscarriage	8	2.40
I don't know	87	26.40
Other	41	12.40
Missing	27	8.20

5.4 Result regarding participants' attitude of cervical cancer

304 (92.1%) of the respondents thinks that screening for cervical cancer is needed once vaccinated for HPV. Regarding the gender for which HPV vaccine is effective, 222 (67.3%) respondents replied for females followed by 104 (31.5%) for both (female and male) and 2 (0.6%) for males. Regarding protection obtained from the vaccine, 259 (78.5 %) of girls replied that it could not protect fully from cervical cancer. On one side, doctors' recommendation (34.9 %), mass media campaign (81 %), and family opinion (80 %) were factors that can encourage respondents to get vaccination respectively. On the other hand, Vaccines' side effects (29.1 %), vaccines' price (27 %), parental culture (26.4 %), and availability of the vaccine (10.6%) were mentioned by the respondents as hindering factor for HPV vaccination.

Table 5.7. Attitude regarding cervical cancer among female students, Addis Ababa, 2017 (n=330)

Girl's attitude regarding cervical cancer	Frequency	Percent
Screening once vaccinated		
Yes	304	92.10
No	26	7.90
Vaccinations effective for		
Males	2	0.60
Female	222	67.30
Both	104	31.50
Missing	2	0.60
HPV vaccination fully protect		
Yes	66	20
No	259	78.50
Missing	5	1.50
Factors can encourage vaccination		
Family opinion	80	24.20
Doctors recommendation	115	34.90
Mass media campaign	81	24.30
All can encourage	44	13.30
Others	11	3.30
Reasons can hinder vaccination		
Vaccines' side effects	96	29.10
Vaccines' price	89	27
Availability of the vaccine	35	10.60
Parental culture	87	26.40
All can be hindering factors	23	6.90

6. Discussion

The purpose of this study was to measure and understand the girl's preference for HPV vaccination programme using discrete choice experiment. In this study, we try to rank the propoesd attributes for HPV vaccination, measure the willingness-to-pay, and determine the trade-offs between risk and benefits of the vaccination.

Finding from DCE gives the stastical significance of a coefficient having p-value<0.05 for all the seven HPV vaccine attributes used to determine girls preference. This indicates that participants were able to differentiate between one attribute and its releted level from the other attribute to made there own choice for the vaccination programme [40].

Result from weighted ranking of preferences in the study showed that degree of protection against cervical cancer is the most important attribute which influence girls' preference followed by number of doses, risk of developing serious side effect, way of delivery, duration of protection, age at vaccination and price respectively. This shows that the price of the vaccine has little influence in their preference. This could be because of low concern of adolescent school girls for financial issues since they are dependent on their family or guardians. This is inline with study done in Swedin, which conclude that cost did not appear to be a major barrier [41].

This study provides that girls' trade-off between different vaccine attributes/characteristics levels instead of the pre-determined base case (i.e HPV vaccination program which has 70% protection against cervical cancer, protection duration of 8years, vaccination at age of 26year, dose number of 3, a 1/30,000 risk of serious side effect, price of 200 ETB, and way of delivery at health care centers). All of the selected attributed were significant (P<0.05) in determining the preference of the girls.

Girls were willing to trade off 5 % degree of protection to obtain 25 years protection instead of 8 years, 54.7% degree of protection to obtain risk of serious side effect of 1/750,000 instead of 1/30,000. Study done on parents' preference in Netherlands shows that different result, i.e respondents were willing to trade-off 11% of the degree of protection to obtain life-time protection instead of 25 years. To obtain a vaccination with a risk of serious side effect of 1/750,000 instead of 1/150,000 respondents were willing to trade-off 21% [34].

In addition to the above results, DCE gives us the possibility to estimate willingness to pay. In our study girls were willing to pay for the four attribues (degree of protection, age at vaccination, number of doses, and risk of developing serious side effects), but they are willing to accept 7.66

ETB for an improvement of duration of protection from 8 years to 25 years and 81.9 ETB for an improvement of way of delivery from health care centers to school. This is due to the negative sign of the values of protection duration and way of delivery in WTP result from mixed logit.

In addition, we also explored the knowledge and attitude status of the school-girls for HPV vaccination. In general, we found out that only few girls have appropriate information about cervical cancer; and only small proportion were vaccinated. For example, only half of the participants had ever heard about cervical cancer before. They had the information mainly from TV, radio, and family members. The contribution of printed materials like magazine and peer discussion on this issue is very limited. Large majority of the girls (87%) did not know that the HPV vaccine is availability in the city –Addis Ababa. A quite similar study from Maldives –South Asian island country, shows that 37.9 % participants have ever heard of cervical cancer [42]. Other study in Southeast Asia shows only 11.6% of the participants had heard of HPV and only 7.8% had heard of the newly released HPV vaccine. Of those who had heard of the HPV vaccine, the majority (45.7%) heard about the vaccine from friends, followed by public media (31.4% television, 20% newspapers, 17.1% radio, and 10.0% magazines [43] which is different from our study. This difference could be due to difference in the countries level of development or culture of participants to share ideas freely.

We asked additional questions to explore their level of knowledge about cervical cancer and to enumerate the common risk factors of cervical cancer. In terms of knowing possible causes for cervical cancer, majority (72.4%) of the study participants in this study did not know about it. But the remaining, account around 27 %, were aware of it and they mentioned that having multiple sex partners, abortion, sex at an early age, and early pregnancy (from higher to lower cause) can lead to cervical cancer. From study done in Maldives researchers found that multiple sex partners (22.1%), genital tract infections (21.6%), lack of Hygiene (15.7%) and sex at young age (12.6%) to be major risk factors respectively [42] which is nearly in line with this study.

Regarding the age at which someone should undergo vaccination, this study find that the age group of 18-21 years to be favorable as compared to the standard specified age for immunization by WHO which is from 9-13years.On contrary there were participants who have no clue about the age of vaccination. A qualitative study carried out in India suggested that many parents preferred vaccinating girls against HPV after puberty. Most felt that younger girls were unlikely to be sexually active and therefore should not receive an HPV vaccination until they were adolescents or young adults [44].

In this study, more than two-third of the students agree if vaccines are provided for free by the government or other concerned body. This could be from feer of the undetermined cost of the vaccination. Population based survey done on parents in Sweden shows that 76% of parents were willing to vaccinate their child if the vaccine is for free and 63% were willing to vaccinate even if the vaccine comes with a cost [41].

According to the finding of this study, a small number of participants (8.8%) belived that as if HPV vaccine is given to girls who are sexually active, but majority of them support immunization for sexualy inactive peoples (89.4%). This agree with study from South Africa which showed that majority of the students indicated that the vaccine should be given to girls before beginning sexual activity and more than 90% of the students considerd that physicians will support HPV vaccination and adolescents and young adults will accept HPV vaccination [4]. On contrary, study findings from Gabon suggest that women primarily associate cervical cancer with the issue of sexual behavior [45].

Study participants belive that HPV vaccine is effective firstly on females (67.3%) secondly for both female and male (31.5%) and lastly for males (0.6%) this might be due to their perception" males didn't have cervix". The other thing was that, more than two-third of participants didn't belive if the vaccine protects them fully from cervical cancer. This attitude may affect the utilization of the up-coming vaccination programme.

Regarding student's belive about factors that can encourage them to be vaccinated, the present study shown that doctor's recommendation, mass-media campaign and family opinion play important role for being vaccinated. Systematic review on factors influencing vaccination decision find that provider recommendation being the most important factor which is similar with this study finding [46, 47].

On contrary, vaccines side effect, vaccines price, parental culture and in-availability of the vaccine having 29.1%, 27%, 26.4% and 10.6% respectively are answered by the students for being a hindering factors form getting vaccination. But finding from systematic review from forty-one studies showed that parents may decide not to allow their daughters to be vaccinated, because of cultural or religious perceptions about sexual activity [48].

Limitations of the study

This study has some limitations that the results needs to be carefully inturprited. The first one is regarding the questionnaires we used to assess knowledge and attitude of the participants; it is adopted from other studies done in different countries and we were not able to localy validate this tools.

The second limitation was that lack of strong qualitative study to get actual vaccine attributes in our settings since there might be a chance to get different attributes for DCE which are used in this study. Some of important attributes might not had been incuded in our investigation.

The third limitation was that this study was not able to propose any favorable immunization programme for the concerned bodies (For example, Ministry of Health). This challenge was mainly due to a reason that there is no any routine HPV immunization program that could be considered as a reference case to make a comparsion with.

7. Conclusion

In this study, we found that there was significant variation of preference among girls for all HPV vaccine attributes. Degree of protection, number doses, and the risk of serious side effect were the three most important attributes that guide the choice of girls, while cost of the vaccine had been the least important factor.

This study shows that girls made trade-offs between protection against cervical cancer and other HPV vaccine characteristics. There was high trade-off level of protection against number of doses, seriouse side effects and place of delivery.

This study found that girls were willing to pay for improvement in protection against cervical cancer, age at vaccination, number of dose and risk of developing serious side effects. But willing to accept if improvement is done on protection duration and way of delivery.

This study also found that there are gaps in information to maximize students' knowledge regarding cervical cancer, its possible risk factors and abut HPV vaccine use and availability. Since the study indicates that doctors' suggestion can have important role for initiating adolescent girls to be vaccinated, it is essential to incorporate health care providers in vaccination programme at large to prevent cercical cancer in the future.

8. Recommendation

Based upon the results of this thesis there are some recommendations regarding teaching practice on health. Education on HPV and HPV vaccinations should given promotion by available mass media to educate the public is important. Beside this teaching institutions have the responsibility to integrate their educational content with informations about cervical cancer causes, prevention methods and the adverse side effects of the HPV vaccine to ease girl's concern.

The other thing is that to make health care providers to discuss with their clents about cervical cancer and related issues since our community is very dependent on their consultation and recommendations.

Since HPV vaccine characteristics do have a significant role on the preference of girls toward HPV vaccination, Ministry of health should consider this attributes and the other factors which doesn't incorporate in this study prior to implementation of the programme. And it is necessary to develop adequate and basic information regarding which populations are more vulnerable and other related issues in order to implement a sound prevention programmes. Eventhough this paper is a thesis work; policy makers have to consider the variety of preference in end-user to some extent.

Recommendation for future research

Further researchers should consider parents' or guardians' attitude and preference for HPV vaccination for their childrens. After the implementation of the programme the same study could be important to see whether preferences are changed.

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Annexes

Annex 1: Informed Consent and/or Ascent Form (English version)

Addis Ababa University, School of public health

My name is ……. I am here on behalf of Rahel Assefa student of Addis Ababa University School of public health. She is conducting a research on 'Assessment of girls' preference for Human Papilloma Virus vaccination. A discrete choice experiment" In Addis Ababa, for the partial fulfillment of master's in health service management in Addis Ababa University School of public health. The aim of this study is to assess secondary school girl's preference to take HPV vaccine.

You are selected by random sampling technique to participate in this study because you are currently attending in one of the selected school for the study purpose. Your participation is purely based on your willingness. You have the right to choose not to take part in this study. If you choose to take part, you have the right to stop at any time. Participating in this study will not have any risk or harm. Whether you are willing to participate, refuse or decide to withdraw later, you will not be subjected to any harm.

If you decide to participate in the study, you will be requested to answer different questions about yourself, knowledge regarding cervical cancer and other related questions. Trained individuals are going to guide you to fill the questionnaires.

Any information that you provide will be kept confidential, names will not be written or specified and all the questionnaires will be coded. The data will not be used for purposes other than the study. Your willingness and active participation is very important for the success of this study. If you have any question you can contact principal investigator **Rahel Assefa** by Phone No. **0939959476/77** or E-mail**:** **rhichail@gmail.com**

If you are willing to participate please confirm by your signature

Signature of participant_____

Date _____

Annex 2. Informed Consent and/or Ascent Form (Amharic version)

አዲስ አበባ ዩንቨርስቲ ሕብረተሰብ ጤና ትምህርት ክፍል

ስሜ _____ይባላል

በራሔል አሰፋ ስም የአዲስ አበባ ዩኒቨርሲቲ የህዝብ የጤና ትምህርት ቤት በኩል ቀርቤአለሁ፡፡ ራሔል አሰፋ በአሁኑ ሰዓት ስለሂዩማን ፓፒሎማ ቫይረስ ክትባት በልጃገረዶች ላይ የጥናት ምርምር ታከናውናለች፡፡ ይህ ጥናት የሚከናወነው በጤና አገልግሎት ማኔጅመንት የትምህርት ዘርፍ የማስተርስ ዲግሪ መረሃ ግብር ከፊል የማሟያ ጥናት በአዲስ አበባ ዩኒቨርሲቲ የህዝብ የጤና ትምህርት ለመፈፀም ነው፡፡ የጥናቱ ዓላማ የ2ኛ ደረጃ ተማሪ ልጃ ገረዶችን በኤችፒቪ ክትባት አወሳሰድ ላይ ያላቸው ተሳትፎ ለመረዳት ነው፡፡

እርሶ ለጥናት ምርምሩ የተመረጡት የተራ ቅደም ተከተልን ባልተከተለ መልኩ እና በአሁኑ ሰዓት ለጥናት ምርምሩ ከተመረጡት ትምህርት ቤቶች ውስጥ አንደኛው በሆነው ትምህርት ቤት ተማሪ በመሆኖ ብቻ ነው፡፡ የእርስዎ ተሳትፎ ሙሉ ለሙሉ በመልካም ፈቃድዎ ላይ የተመሰረተና በጥናቱ ላይ ተካፋይ ላለመሆን የመወሰን መብትዎ የተጠበቀ ነው። ተካፋይ ለመሆን የወሰኑ እንደሆነ ግን በማንኛውም የጥናቱ ሰዓት ላይ ተሳትፈዎን የማቋረጥ መብት አለዎት፡፡ በጥናቱ መሳተፍዎ ጉዳት ወይም ስጋት ውስጥ የሚጥል አጋጣሚን አይፈጥርም፡፡ ለመሳተፍ ፈቃደኛም ሆኖ ወይም ላለመሳተፍ ወስነውም ቢሆን ወይም ከጥናቱ ምርምር በኋላ በመሃል ለማቋረጥ ቢፈልጉም በእርስዎ ላይ የሚደርስ ምንም አይነት ጉዳት አይኖርም፡፡

በጥናቱ ላይ ለመሳተፍ ከወሰኑ ስለራስዎ የተለያዩ መረጃዎችን እንዲሰጡ ይጠየቃሉ፡፡ እንዲሁም ስለ የማህፀን በር ካንሰር ያለዎትን ግንዛቤ እና ሌሎች ተጓዳኝ ጥያቄዎች ይጠየቃሉ፡፡ የሰለጠኑ ባለሙያዎች ጥያቄዎን ሙሉ ለሙሉ እንዲመልሱ እገዛ ይሰጥዎታል፡፡ ማንኛውም እርስዎ የሚሰጡት መረጃ በምስጢራዊነት የሚጠበቅ ይሆናል፡፡ የተሳታፊዎች ስም ስለማይፃፍ እና ስለማይገለጽ ሁሉም መጠይቆች በምስጢራዊ ኮድ የሚለዩ ናቸው፡፡ ከጥናቱ የተሰበሰቡ መረጃዎች ከጥናቱ ዓላማ ውጪ ለሌላ ተግባር አይውሉም፡፡ የእርስዎ መልካም ፈቃድና የነቃ ተሳትፎ ለዚህ ጥናት ስኬት እጅግ አስፈላጊ ነው፡፡ በጥናቱ ላይ ጥያቄ ካለዎት ዋና ጥናቱን አካናዋኝ ራሔል አሰፋን በስ.ቁ.

- 0939959476/77
- rhichail@gmail.com

ለመሳተፍ ፈቃደኛ ከሆኑ እባክዎ በፊርማዎ ያረጋግጡ

የተካፋይ ፊርማ _____ቀን _____

Annex 3. Parental Consent form (WHO ERC standard) English version

This informed consent form is for parents of adolescent girls participating in the researchtitled. "Assessment of Girl's Preference for Human Papilloma Virus Vaccination; In Addis Ababa, Ethiopia: A Discrete Choice Experiment"

I am Rahel Assefa. I am doing some research which might help our health policy to help teenager girls become and stay healthier. In our research we will talk to many girl students, and ask them a number of questions. Whenever researchers study children, we talk to the parents and ask them for their permission. After you have heard more about the study, and if you agree, then the next thing I will do is ask your daughter for her agreement as well. Both of you have to agree independently before I can begin. We want to talk to many girls about their knowledge and type of Human Papilloma virus vaccination program they want for themselves. We would like to ask your daughter to participate because she is a teenager attending class in this school. You do not have to decide today whether or not you agree to have your child participate in this research. Before you decide, you can talk to anyone you feel comfortable with.

Your daughter will fill out a questionnaire which will be provided and collected by trained data collectors, or the questionnaire can be read aloud and she can give us the answer which she wants us to write. We are asking your child to participate in survey which will take about few minutes of her time.

There will be no immediate and direct benefit to your child or to you, but your child's participation is likely to help us find out more about the vaccination needs of teenage girls and we hope that these will help the country health policy to meet those needs better in the future.

We will not be sharing information about your daughter outside of the research team. The information that we collect from this research project will be kept confidential. Information about your child that will be collected from the research will be put away and no-one but the researchers will be able to see it. If you have any questions you may ask now or later, even after the study has started by using address.

Rahel Assefa; - 0939959476/77; rhichail@gmail.com

Certificate of Consent

I have been asked to give consent for my daughter to participate in this research study which will involve her completing one questionnaire I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it. I consent voluntarily for my child to participate as a participant in this study.

Name of Parent or Guardian _____

Signature of Parent or Guardian_____

Date _____

Annex 4. Parental Consent form (WHO ERC standard) Amharic version

የወላጆች ቅድመ ፍቃድ መረጃ

ይህ የወላጆች የቅድመ ፍቃድ መረጃ የቀረበው በህዩማን ፓፒሎማ ቫይረስ ክትባት ላይ የሴቶችን ፍላጎት በተመለከተ በሚደረገው ጥናት ላይ ለምትሳተፈው ለአካለ መጠን የደረሰች ልጃገረድ የቀረበ ነው፡፡ እኔ ራሔል አሰፋ እባላለሁ፡፡ ለጤና ፖሊሲያችን እገዛ ሊሰጥ የሚችል እና ወጣት ልጃገረዶች ጤናማ እንዲሆኑ የሚረዳ የምርምር ጥናትን በማካሄድ ላይ እገኛለሁ፡፡ በጥናታችን ላይ በርካታ ልጃገረድ ተማሪዎችን አናግረናል፡፡ እንዲሁም በርከት ያለ ቁጥር ያላቸው ጥያቄዎችን አቅርበንላቸዋል፡፡ በማንኛውም ጊዜ የጥናት አካናዋኞቹ ልጆቹ ላይ ምርምር በሚያደርጉ ጊዜ ወላጆችን በቅድሚያ ማነጋገር እና ቅድመ ፍቃዳቸውን መጠየቅ የግድ ነው፡፡ ስለጥናቱ በርከት ያለ መረጃዎችን ከሰሙ በኋላ የይሁንታ ፈቃዱን የሚለግሱን ከሆነ ቀጣዩ ተግባራችን ሴት ልጅዎን ስምምነቷን መጠየቅ ነው፡፡ እኔ ሥራዬን ከመጀመሬ በፊት ሁለታችሁን በተናጠል መስማማት አለባችሁ፡፡ ቁጥራቸው በርካታ የሆኑ ልጃገረዶችን ስላላቸው እውቀት እና በሂይማን ፓፒሎማ ቫይረስ ክትባት መረሃግብር ላይ ለራሳቸው ምን እንደሚፈልጉ ጥያቄዎችን እናቀርብላቸዋለን፡፡ ሴት ልጅዎን ለተሳትፎ ልንጠይቅ የፈለግንበት አብይ ምክንያት ታዳጊ ስለሆነች እና እንዲሁም በተመረጠው ት/ቤት ትምህርቷን በመከታተል ላይ ያለች ስለሆነ ነው፡፡ ልጅዎ በጥናቱ ላይ መሳተፍ ወይም አለመሳተፍ ስለምኖርባት ስምምነት የግድ ዛሬውኑ መወሰን የለብዎትም፡፡ ከመወሰንዎ በፊት ማንኛውም ምቾት ሊሰጥዎት የሚችል ግለሰብ ስለጉዳዩ ማናገር ይችላሉ፡፡

ሴት ልጅዎ የምናቀርብላትን መጠይቆች የምትሞላ ሲሆን ስልጡን በሆነ የመረጃ ሰብሳቢ ባለሙያ የሚሰበሰብ ይሆናል ወይም ቃለመጠይቁ በይፋ ሊነበብ ይችላል እንዲሁም መፃፍ እንዲኖርብን ስትፈልግ ምላሽዋን ልትሰጠን ትችላለች፡፡ ልጅዎን ጥቂት ደቂቃዎች ብቻ የሚወስዱትን የጥናት ተግባራት ላይ እንድትሳተፍ እንጠይቃለን፡፡

ከጥናቱ ተሳትፎ ለእርስዎም ሆነ ለልጅዎ ቀጥተኛም ሆነ ወዲያውኑ የሚገኝ ጥቅም አይኖረውም፡፡ የልጅዎ ተሳትፎ ግን ስለ ክትባቱ የላቀ ጠቀሜታ እንዲሁም ለወጣት ልጃገረዶች የሚሰጠውን ጥቅም በአግባቡ እንድንገነዘብ ይረዳናል፡፡ ይህ የሀገሪቱን ነባር የጤና ፖሊሲ በማሻሻል ለወደፊቱ የላቀ ደረጃ ላይ የሚያደርስ ነው፡፡

ከጥናት እና ምርምሩ ቡድን ባሻገር ስለ ልጅዎ ያገኘነውን መረጃ ለሌላ አናካፍለውም፡፡ ከጥናት ፕሮጀክቱ የምናገኘው መረጃ በጥብቅ ምስጢራዊነት የምንይዝ ይሆናል፡፡ ማንኛውንም አይነት ጥያቄ ካለ አሁን ወይም ከቆይታ በኋላ ሊያቀርቡልን ይችላሉ፡፡ ጥናቱ ከተጀመረ በኋላም እንኳን ቢሆን ራሔል አሰፋ 0939959476/77 ወይም rhichail@gmail.com በመጠቀም ጥያቄውን ሊያቀርቡልን ይችላሉ፡፡

<u>የፍቃድ ማረጋገጫ የምስክር ወረቀት</u>

በዚህ የጥናት ምርምር ላይ የሚከተሉትን መረጃዎች አምብቤ ልጄ በሚቀርብላት የባለ መጠይቅ እና የጥናት ምርምር ላይ ተሳታፊ እንድትሆን ፍቅጀአለሁ ወይም ተንቦልኝ ስለጉዳዩ የማጣራት ጥያቄዎችን እንዳቀርብ እድል ተሰጥቶኝ ፈቃዴን ገልጩአለሁ፡፡ ልጄ በጥናቱ ላይ ተሳታፊ ትሆን ዘንድ በግል ፈቃዴ ይሁንታዬን ገልጫለሁ፡፡

የወላጅ ወይም የአሳዳጊ ፊርማ……ቀን……

Annex 5: Survey Questionnaire (English Version)

Addis Ababa University School of Public Health

My name is ……. I am here on behalf of Rahel Assefa student of Addis Ababa University School of public health. She is conducting a research on 'Assessment of girls' preference for Human Papilloma Virus vaccination. A discrete choice experiment" In Addis Ababa, for the partial fulfillment of master's in health service management in Addis Ababa University School of public health. The aim of this study is to assess secondary school girl's preference to take HPV vaccine.

You are selected by random sampling technique to participate in this study because you are currently attending in one of the selected school for the study purpose. Your participation is purely based on your willingness. You have the right to choose not to take part in this study. If you choose to take part, you have the right to stop at any time. Participating in this study will not have any risk or harm. Whether you are willing to participate, refuse or decide to withdraw later, you will not be subjected to any harm.

If you decide to participate in the study, you will be requested to answer different questions about yourself, knowledge regarding cervical cancer and other related questions. Trained individuals are going to guide you to fill the questionnaires.

Any information that you provide will be kept confidential, names will not be written or specified and all the questionnaires will be coded. The data will not be used for purposes other than the study. Your willingness and active participation is very important for the success of this study. If you have any question you can contact principal investigator **Rahel Assefa** by Phone No. **0939959476/77** or E-mail**:** **rhichail@gmail.com**

If you are willing to participate please confirm by your signature

Signature of participant_____

Date _____

Questionnaire ID Number _____

Addis Ababa University School of Public Health

Part1. Socio-demographic part			
No.	**Question and filters**	**Response/Choices**	**Skip**
101	How old are you?	---------- years	
102	What is your religion?	1.Orthodox 2.Muslim 3.Catholic 4.Protestant 5.Traditional 6.Other (specify)	
103	To which ethnic group do you belong?	1.Oromo 2.Amhara 3.Tigree 4.Gurage 5.Other specify	
104	Which grade are you now?	……	
Part 2. Questions regarding knowledge of cervical cancer			
201	Have you heard about cervical cancer?	1.Yes 2. No	If yes go to 202

202	Who informed you about cervical cancer?	1.TV 2. Radio 3. Magazine 4. Friends 5. Family 6. Other (specify)	
203	Do you know the risk factors/causes of cervical cancer?	1.Yes 2. No	If **Yes** go to next Q.
204	What risk factors you think can cause cervical cancer?	1. Abortion 2. Multiple sexual partners 3. Sex at an early age 4. Lack of hygiene 5. Early pregnancy 6. Other……. (specify)	
205	Are you aware of the availability of a vaccine against cervical cancer?	1.Yes 2. No	
206	Who should pay for cervical cancer vaccine ?	1. Paid by the society 2. Partially paid by the society 3. For free 4. I don't know	
207	At what age should someone undergo HPV vaccination?	1. 9-13 years 2. 18-21 years 3. All ages 4. I don't know	
208	Have you ever get vaccination for HPV?	1.Yes 2.No	

209	Do you know anyone who get vaccinated for HPV in your family or friends?	1.Yes 2.No	
210	Does HPV vaccine is only for people who are sexually active?	1.Yes 2.No	
211	Why do you think HPV vaccine should be delivered before starting sexual activity?	……..	
Part Three. Questions regarding attitude of cervical cancer			
301	Did you believe women will no longer have to be screened for cervical cancer once vaccinated?	1.Yes 2.No	
302	To whom did you believe HPV vaccinations are effective?	1.For males 2. For female 3. For both	
303	Did you believe you will be fully protected against cervical cancer after HPV vaccination?	1.Yes 2.No	
304	What kind of factors can encourage you to be vaccinated against HPV?	1.Family opinion 2.Doctors recommendation 3.Mass media campaign 4.All can encourage 5.Others……..	
305	What kind of reasons can hinder a person form getting HPV vaccination?	1.Vaccines' side effects 2.Vaccines' price 3.Availability of the vaccine 4. Parental culture 5.All can be hindering factors	

Part 4. Discrete choice experiment choice sets

401.

Attributes	Program A	Program B
Protection against cervical cancer (%)	70%	70%
Protection duration(Yr.)	25yr	25yr
Age at vaccination	9yr	26yr
Number of dose	2	3
Risk of developing serious side effects	1:750,000	1:30,000
Price($)	9.2	9.2
Way of delivery	At health care facility	At school
Which vaccine program do you prefer?	**A** ☐	**B** ☐

402.

Attributes	Program A	Program B
Protection against cervical cancer (%)	70%	98%
Protection duration(Yr.)	25yr	25yr
Age at vaccination	26yr	9yr
Number of dose	3	2
Risk of developing serious side effects	1:750,000	1:30,000
Price($)	4.5	9.2
Way of delivery	At school	At health care facility
Which vaccine program do you prefer?	**A** ☐	**B** ☐

403.

Attributes	Program A	Program B
Protection against cervical cancer (%)	98%	98%
Protection duration(Yr.)	8yr	8yr
Age at vaccination	9yr	9yr
Number of dose	2	2
Risk of developing serious side effects	1:750,000	1:30,000
Price($)	4.5	9.2
Way of delivery	At school	At school
Which vaccine program do you prefer?	**A** ☐	**B** ☐

404.

Attributes	Program A	Program B
Protection against cervical cancer (%)	70%	98%
Protection duration(Yr.)	8yr	8yr
Age at vaccination	9yr	9yr
Number of dose	2	3
Risk of developing serious side effects	1:750,000	1:750,000
Price($)	4.5	9.2
Way of delivery	At health care facility	At school
Which vaccine program do you prefer?	**A** ☐	**B** ☐

405.

Attributes	Program A	Program B
Protection against cervical cancer (%)	98%	98%
Protection duration(Yr.)	8yr	25yr
Age at vaccination	9yr	26yr
Number of dose	2	2
Risk of developing serious side effects	1:750,000	1:750,000
Price($)	9.2	4.5
Way of delivery	At health care facility	At school
Which vaccine program do you prefer?	**A** ☐	**B** ☐

406.

Attributes	Program A	Program B
Protection against cervical cancer (%)	98%	70%
Protection duration(Yr.)	25yr	25yr
Age at vaccination	26yr	9yr
Number of dose	2	2
Risk of developing serious side effects	1:30,000	1:30,000
Price($)	4.5	9.2
Way of delivery	At health care facility	At school
Which vaccine program do you prefer?	**A** ☐	**B** ☐

407.

Attributes	Program A	Program B
Protection against cervical cancer (%)	70%	98%
Protection duration(Yr.)	8yr	25yr
Age at vaccination	26yr	9yr
Number of dose	2	3
Risk of developing serious side effects	1:30,000	1:750,000
Price($)	9.2	4.5
Way of delivery	At school	At school
Which vaccine program do you prefer?	**A** ☐	**B** ☐

408.

Attributes	Program A	Program B
Protection against cervical cancer (%)	70%	70%
Protection duration(Yr.)	25yr	25yr
Age at vaccination	26yr	26yr
Number of dose	2	2
Risk of developing serious side effects	1:30,000	1:750,000
Price($)	4.5	4.5
Way of delivery	At school	At health care facility
Which vaccine program do you prefer?	**A** ☐	**B** ☐

409.

Attributes	Program A	Program B
Protection against cervical cancer (%)	98%	98%
Protection duration(Yr.)	25yr	8yr
Age at vaccination	9yr	9yr
Number of dose	3	2
Risk of developing serious side effects	1:30,000	1:30,000
Price($)	4.5	4.5
Way of delivery	At health care facility	At health care facility
Which vaccine program do you prefer?	**A** ☐	**B** ☐

410.

Attributes	Program A	Program B
Protection against cervical cancer (%)	70%	98%
Protection duration(Yr.)	25yr	8yr
Age at vaccination	26yr	26yr
Number of dose	2	2
Risk of developing serious side effects	1:30,000	1:750,000
Price($)	9.2	4.5
Way of delivery	At health care facility	At health care facility
Which vaccine program do you prefer?	**A** ☐	**B** ☐

411.

Attributes	Program A	Program B
Protection against cervical cancer (%)	98%	70%
Protection duration(Yr.)	8yr	25yr
Age at vaccination	9yr	9yr
Number of dose	3	3
Risk of developing serious side effects	1:30,000	1:750,000
Price($)	4.5	4.5
Way of delivery	At school	At health care facility
Which vaccine program do you prefer?	**A** ☐	**B** ☐

412.

Attributes	Program A	Program B
Protection against cervical cancer (%)	98%	70%
Protection duration(Yr.)	25yr	8yr
Age at vaccination	26yr	26yr
Number of dose	2	3
Risk of developing serious side effects	1:30,000	1:30,000
Price($)	9.2	4.5
Way of delivery	At school	At school
Which vaccine program do you prefer?	**A** ☐	**B** ☐

413.

Attributes	Program A	Program B
Protection against cervical cancer (%)	98%	98%
Protection duration(Yr.)	25yr	8yr
Age at vaccination	9yr	9yr
Number of dose	2	3
Risk of developing serious side effects	1:750,000	1:750,000
Price($)	9.2	4.5
Way of delivery	At school	At health care facility
Which vaccine program do you prefer?	**A** ☐	**B** ☐

414.

Attributes	Program A	Program B
Protection against cervical cancer (%)	70%	70%
Protection duration(Yr.)	25yr	8yr
Age at vaccination	9yr	26yr
Number of dose	3	3
Risk of developing serious side effects	1:30,000	1:30,000
Price($)	9.2	9.2
Way of delivery	At health care facility	At health care facility
Which vaccine program do you prefer?	**A** ☐	**B** ☐

415.

Attributes	Program A	Program B
Protection against cervical cancer (%)	70%	70%
Protection duration(Yr.)	25yr	8yr
Age at vaccination	26yr	9yr
Number of dose	3	2
Risk of developing serious side effects	1:750,000	1:30,000
Price($)	9.2	4.5
Way of delivery	At health care facility	At school
Which vaccine program do you prefer?	**A** ☐	**B** ☐

416.

Attributes	Program A	Program B
Protection against cervical cancer (%)	98%	98%
Protection duration(Yr.)	25yr	8yr
Age at vaccination	9yr	26yr
Number of dose	2	2
Risk of developing serious side effects	1:750,000	1:750,000
Price($)	4.5	9.2
Way of delivery	At health care facility	At school
Which vaccine program do you prefer?	**A** ☐	**B** ☐

417.

Attributes	Program A	Program B
Protection against cervical cancer (%)	70%	70%
Protection duration(Yr.)	8yr	8yr
Age at vaccination	26yr	9yr
Number of dose	2	3
Risk of developing serious side effects	1:30,000	1:750,000
Price($)	4.5	9.2
Way of delivery	At health care facility	At health care facility
Which vaccine program do you prefer?	**A** ☐	**B** ☐

418.

Attributes	Program A	Program B
Protection against cervical cancer (%)	98%	70%
Protection duration(Yr.)	8yr	25yr
Age at vaccination	26yr	26yr
Number of dose	2	2
Risk of developing serious side effects	1:30,000	1:750,000
Price($)	9.2	9.2
Way of delivery	At health care facility	At school
Which vaccine program do you prefer?	**A** ☐	**B** ☐

419.

Attributes	Program A	Program B
Protection against cervical cancer (%)	98%	98%
Protection duration(Yr.)	25yr	25yr
Age at vaccination	26yr	9yr
Number of dose	3	3
Risk of developing serious side effects	1:750,000	1:750,000
Price($)	9.2	9.2
Way of delivery	At school	At health care facility
Which vaccine program do you prefer?	**A** ☐	**B** ☐

420.

Attributes	Program A	Program B
Protection against cervical cancer (%)	98%	98%
Protection duration(Yr.)	8yr	25yr
Age at vaccination	26yr	26yr
Number of dose	2	3
Risk of developing serious side effects	1:30,000	1:30,000
Price($)	4.5	4.5
Way of delivery	At school	At school
Which vaccine program do you prefer?	**A** ☐	**B** ☐

421.

Attributes	Program A	Program B
Protection against cervical cancer (%)	70%	70%
Protection duration(Yr.)	8yr	25yr
Age at vaccination	9yr	26y
Number of dose	2	3
Risk of developing serious side effects	1:750,000	1:30,000
Price($)	9.2	4.5
Way of delivery	At school	At health care facility
Which vaccine program do you prefer?	**A** ☐	**B** ☐

422.

Attributes	Program A	Program B
Protection against cervical cancer (%)	70%	70%
Protection duration(Yr.)	8yr	8yr
Age at vaccination	26yr	26yr
Number of dose	3	2
Risk of developing serious side effects	1:750,000	1:750,000
Price($)	4.5	4.5
Way of delivery	At health care facility	At school
Which vaccine program do you prefer?	**A** ☐	**B** ☐

423.

Attributes	Program A	Program B
Protection against cervical cancer (%)	98%	98%
Protection duration(Yr.)	8yr	8yr
Age at vaccination	26yr	26yr
Number of dose	3	3
Risk of developing serious side effects	1:750,000	1:30,000
Price($)	9.2	4.5
Way of delivery	At health care facility	At health care facility
Which vaccine program do you prefer?	**A** ☐	**B** ☐

424.

Attributes	Program A	Program B
Protection against cervical cancer (%)	70%	70%
Protection duration(Yr.)	8yr	25yr
Age at vaccination	9yr	9yr
Number of dose	3	2
Risk of developing serious side effects	1:30,000	1:30,000
Price($)	4.5	4.5
Way of delivery	At health care facility	At health care facility
Which vaccine program do you prefer?	**A** ☐	**B** ☐

425.

Attributes	Program A	Program B
Protection against cervical cancer (%)	98%	98%
Protection duration(Yr.)	8yr	25yr
Age at vaccination	26yr	26yr
Number of dose	3	3
Risk of developing serious side effects	1:750,000	1:30,000
Price($)	4.5	9.2
Way of delivery	At school	At health care facility
Which vaccine program do you prefer?	**A** ☐	**B** ☐

426.

Attributes	Program A	Program B
Protection against cervical cancer (%)	70%	70%
Protection duration(Yr.)	25yr	8yr
Age at vaccination	9yr	9yr
Number of dose	3	2
Risk of developing serious side effects	1:30,000	1:30,000
Price($)	4.5	9.2
Way of delivery	At school	At health care facility
Which vaccine program do you prefer?	**A** ☐	**B** ☐

427.

Attributes	Program A	Program B
Protection against cervical cancer (%)	98%	98%
Protection duration(Yr.)	8yr	8yr
Age at vaccination	9yr	26yr
Number of dose	3	3
Risk of developing serious side effects	1:30,000	1:30,000
Price($)	9.2	9.2
Way of delivery	At health care facility	At school
Which vaccine program do you prefer?	**A** ☐	**B** ☐

428.

Attributes	Program A	Program B
Protection against cervical cancer (%)	98%	98%
Protection duration(Yr.)	25yr	25yr
Age at vaccination	9yr	26yr
Number of dose	3	2
Risk of developing serious side effects	1:30,000	1:750,000
Price($)	9.2	9.2
Way of delivery	At school	At health care facility
Which vaccine program do you prefer?	**A** ☐	**B** ☐

429.

Attributes	Program A	Program B
Protection against cervical cancer (%)	98%	70%
Protection duration(Yr.)	25yr	8yr
Age at vaccination	26yr	26yr
Number of dose	3	2
Risk of developing serious side effects	1:750,000	1:750,000
Price($)	4.5	9.2
Way of delivery	At health care facility	At health care facility
Which vaccine program do you prefer?	**A** ☐	**B** ☐

430.

Attributes	Program A	Program B
Protection against cervical cancer (%)	70%	70%
Protection duration(Yr.)	8yr	8yr
Age at vaccination	26yr	9yr
Number of dose	3	3
Risk of developing serious side effects	1:750,000	1:750,000
Price($)	9.2	4.5
Way of delivery	At school	At school
Which vaccine program do you prefer?	**A** ☐	**B** ☐

431.

Attributes	Program A	Program B
Protection against cervical cancer (%)	70%	98%
Protection duration(Yr.)	25yr	25yr
Age at vaccination	9yr	9yr
Number of dose	2	2
Risk of developing serious side effects	1:750,000	1:30,000
Price($)	4.5	4.5
Way of delivery	At school	At school
Which vaccine program do you prefer?	**A** ☐	**B** ☐

432.

Attributes	Program A	Program B
Protection against cervical cancer (%)	70%	70%
Protection duration(Yr.)	8yr	25yr
Age at vaccination	9yr	9yr
Number of dose	3	3
Risk of developing serious side effects	1:30,000	1:750,000
Price($)	9.2	9.2
Way of delivery	At school	At school
Which vaccine program do you prefer?	**A** ☐	**B** ☐

Annex 6: Survey Questionnaire (Amharic Version)

<u>አዲስ አበባ ዩኒቨርሲቲ የህዝብ የጤና ትምህርት ቤት</u>

ስሜ _____ ይባላል

በራሔል አሰፋ ስም የአዲስ አበባ ዩኒቨርሲቲ የህዝብ የጤና ትምህርት ቤት በኩል ቀርቤአለሁ፡፡ ራሔል አሰፋ በአሁኑ ሰዓት ስለሂዩማን ፓፒሎማ ቫይረስ ክትባት በልጃገረዶች ላይ የጥናት ምርምር ታከናውናለች፡፡ ይህ ጥናት የሚከናወነው በጤና አገልግሎት ማኔጅመንት የትምህርት ዘርፍ የማስተርስ ዲግሪ መረሃ ግብር ከፊል የማሟያ ጥናት በአዲስ አበባ ዩኒቨርሲቲ የህዝብ የጤና ትምህርት ለመፈፀም ነው፡፡ የጥናቱ ዓላማ የ2ኛ ደረጃ ተማሪ ልጃ ገረዶችን በኤችፒቪ ክትባት አወሳሰድ ላይ ያላቸው ተሳትፎ ለመረዳት ነው፡፡

እርሶለጥናት ምርምሩ የተመረጡት የተራ ቅደም ተከተልን ባልተከተለ መልኩ እና በአሁኑ ሰዓት ለጥናት ምርምሩ ከተመረጡት ትምህርት ቤቶች ውስጥ አንደኛው በሆነው ትምህርት ቤት ተማሪ በመሆኖ ብቻ ነው፡፡ የእርስዎ ተሳትፎ ሙሉ ለሙሉ በመልካም ፈቃድዎ ላይ የተመሰረተና በጥናቱ ላይ ተካፋይ ላለመሆን የመወሰን መብትዎ የተጠበቀ ነው። ተካፋይ ለመሆን የወሰኑ እንደሆነ ግን በማንኛውም የጥናቱ ሰዓት ላይ ተሳትፈዎን የማቋረጥ መብት አለዎት፡፡ በጥናቱ መሳተፍዎ ጉዳት ወይም ስጋት ውስጥ የሚጥል ኢጋጣሚን አይፈጥርም፡፡ ለመሳተፍ ፈቃደኛም ሆኖ ወይም ላለመሳተፍ ወስነውም ቢሆን ወይም ከጥናቱ ምርምር በኋላ በመሃል ለማቋረጥ ቢፈልጉም በእርስዎ ላይ የሚደርስ ምንም አይነት ጉዳት አይኖርም፡

በጥናቱ ላይ ለመሳተፍ ከወሰኑ ስለራስዎ የተለያዩ መረጃዎችን እንዲሰጡ ይጠየቃሉ፡፡ እንዲሁም ስለ የማህፀን በር ካንሰር ያለዎትን ግንዛቤ እና ሌሎች ተጓዳኝ ጥያቄዎች ይጠየቃሉ፡፡ የሰለጠኑ ባለሙያዎች ጥያቄዎን ሙሉ ለሙሉ እንዲመልሱ እገዛ ይሰጥዎታል፡፡ ማንኛውም እርስዎ የሚሰጡት መረጃ በምስጢራዊነት የሚጠበቅ ይሆናል፡፡ የተሳታፊዎች ስም ስለማይፃፍ እና ስለማይገለጽ ሁሉም መጠይቆች በምስጢራዊ ኮድ የሚለዩ ናቸው፡፡ ከጥናቱ የተሰበሰቡ መረጃዎች ከጥናቱ ዓላማ ውጪ ለሌላ ተግባር አይውሉም፡፡ የእርስዎ መልካም ፈቃድና የነቃ ተሳትፎ ለዚህ ጥናት ስኬት እጅግ አስፈላጊ ነው፡፡ በጥናቱ ላይ ጥያቄ ካለዎት ዋና ጥናቱን አካናዋኝ ራሔል አሰፋን በስ.ቁ.

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ለመሳተፍ ፈቃደኛ ከሆኑ እባክዎ በፊርማዎ ያረጋግጡ

የተካፋይ ፊርማ ..... ቀን.....

የመጠይቅ መለያ ቁ_____

አዲስ አበባ ዩኒቨርሲቲ የህዝብ የጤና ት/ቤት

ክፍል አንድ የማህበረሰብ ጥናት ክፍል			
ተ.ቁ	ጥያቄዎች	ምላሽ እና አማራጮች	የሚታለፍ
101	ዕድሜዎ ስንት ነው ?	_____ አመት	
102	ሐይማኖትዎ ምንድን ነው?	1/ ኦርቶዶክስ 2/ ሙስሊም 3/ ካቶሊክ 4/ ፕሮቴስታንት 5/ ባህላዊ 6/ሌሎች (የተለዩ ካለዎ)_____	
103	ብሄሮት ምንድነው ?	1/ ኦሮሞ 2/ አማራ 3/ ትግሬ 4/ ጉራጌ 5/ ሌላ ካለ_____	
104	የስንተኛ ክፍል ተማሪ ኖት	_____	
105	ከማን ጋር እየኖሩ ይገኛሉ ?	1/ ከሁለቱም ቤተሰቦቼ ጋር 2/ ከእናቴ ጋር ብቻ 3/ከአባቴ ጋር ብቻ 4/ ከእህትና ወንድሜ ጋር 5/ ከአያቶቼ ጋር 6/ ከአከስት ልጆች ጋር 7 ከእናት ከአባት/ከእንጀራ አባት ወይም ከእ/እናት 8/ ከጓደኞቼ ጋር 9/ሌላ ካሉ _____	
ክፍል ሁለት የማህፀን በር ካንሰር እውቀትን የተመለከቱ ጥያቄዎች			
201	ስለ ማህፀን በርካንሰር ሰምተው ያውቃሉን ?	1/አውቃለሁ 2/ አላውቅም	ምላሹ አውቃለሁ ከሆነ ወደ ጥያቄ 202 ይሂዱ
202	ስለ ማህፀን በር ካንሰር መረጃ ከየት አገኙ?	1/ ከቲቪ 2/ ከሬዲዮ	

		3/ ከመፅሄት 4/ ከጓደኞቼ 5/ ከቤተሰብ 6/ ሌላ ካለ ይግለፁ	
203	የማህፀን በር ካንሰር መንስኤዎችን በተመለከተ ግንዛቤ አለዎትን ?	1/ አለኝ 2/ የለኝም	ምላሹ አለኝ ከሆነ ወደ ቀጣዩ ጥያቄ ይሂዱ
204	ለማህፀን በር ካንሰር ዋንኛ መንስኤ ምን ይመስልዎታል ?	1/ የፅንስ ማስወረድ 2/ በርካታ የግብረስጋ ግንኙነት ጓደኞች መያዝ 3/ በለጋ እድሜ የግብረስጋ ግንኙነት መፈፀም 4/ ከንፅህና ጉድለት 5/ በለጋ እድሜ ለእርግዝና መጋለጥ 6 ሌላ ካለይግለፁ _____	
205	ለማህፀን በር ካንሰር የሚሰጥ ክትባት እንዳለ አውቃሉን?	1/ አውቃለሁ 2/ አላውቅም	
206	ለማህፀን በር ካንሰር ክትባት ክፍያ መሸፈን ያለበት በማን ነው ?	1/ በማህበረሰቡ በሚፈፀም ክፍያ 2/ በማህበረሰቡ በሚደረግ ከፊል ክፍያ 3/ በነፃ 4/ አላውቅም	
207	አንድ ሰው የኤችፒቪ ክትባት በየትኛው የእድሜ ክልል ማግኘት አለበት ይላሉ ?	1/ 9-13 ዓመት 2/ 18-21 ዓመት 3/ በሁሉም ዕድሜ ክልል 4/ አላውቅም	
208	የኤችፒቪ ክትባት ተከትበው ያውቃሉን?	1/ አውቃለሁ 2/ አላውቅም	
209	ከጓደኛዎ ወይም ከቤተሰብዎ መካከል የኤችፒቪ ክትባት የተከተበ ሰው ያውቃሉን?	1/ አውቃለሁ 2/ አላውቅም	
210	የኤችፒቪ ክትባት የግብረስጋ ግንኙነት ለሚፈፅሙ ሰዎች ብቻ የሚሰጥ ነውን	1/ አዎ 2/ አይደለም	
211	የግብረስጋ ግንኙነት ከመጀመሩ በፊት የኤችፒቪ ክትባት ለምን መሰጠት ያለበት ይመስሎታል ?		
ክፍል ሶስት የማህፀን በር ካንሰር ግንዛቤዎችን የተመለከቱ ጥያቄዎች			
301	አንዴ ክትባት ከተወሰደ በኋላ ሴቶች የማህፀን በር ካንሰር ምርመራ ማድረግ የለባቸውንም?	1/አለባቸው 2/ የለባቸውም	

302	የኤችፒቪክትባት ውጤታማ የሚሆነው በየትኛው ዕታ ላይ ነው ብለው ያምናሉ?	1/ በወንዶች ላይ 2/ በሴቶች ላይ 3/ በሁለቱም	
304	የኤችፒቪክትባት ሙሉ በሙሉ ከማህፀን በር ካንሰር ይከላከለኛል ብለው ያምናሉ?	1/ አዎ 2/ አይ	
305	እርስዎየኤችፒቪ ክትባትን እንዲከተቡ ምን አ?ይነት ነገሮች ሊያበረታቱዎት ይችላሉ	1/ የቤተሰብ አመለካከት 2/ የዶክተሮች ምክር 3/ የመገናኛ ብዙሃን ዘመቻ 4/ ሌላ ካለ ይጥቀሱ.....	
306	አንድ ሰው የኤችፒቪክትባትን እንዳይከተብ ሊያደናቅፉ የሚችሉ ምክንያቶች ምን ይመስሎታል?	1/ የክትባቱ የጎንዮሽ ጉዳቶች 2/ የክትባቱ ዋጋ 3/ የክትባቱ በአቅራቢያ መገኘት 4/ የቤተሰብ ባህል	

ክፍል 4 በጥናቱ ምርጫ የመፈፀም ብቸኛ መብት መስፈርቶች

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ተጓዳኝሁኔታዎች	መረሃግብርሀ.	መረሃግብርለ.
የማህፀንበርካንሰርየመከላከልብቃት (በመቶኛ)	70%	70%
የመከላከያውውጤታማነት የጊዜወሰን (በአመት)	ለ25 አመት	ለ25 አመት
የመጀመሪያው ክትባት መወሰድ ያለበት እድሜ	በ9አመት	በ26 አመት
የአወሳሰድ መጠን /ዶስቁ./	2	3
አስጊየሆነየጎንዮሽችግርመጎልበት	1፡750,000	1፡30,000
የክትባቱ ዋጋ (በብር)	200	200
የመከተቢያ ቦታ	በጤናማዕከላት	በት/ቤት
የትኛውን የክትባት መረሃግብር ይመርጣሉ? ሀ. □ለ. □		

402.

ተጓዳኝሁኔታዎች	መረሃግብርሀ.	መረሃግብርለ.
የማህፀንበርካንሰርየመከላከልብቃት (በመቶኛ)	70%	98%
የመከላከያውውጤታማነት የጊዜወሰን (በአመት)	ለ25 አመት	ለ25 አመት
የመጀመሪያው ክትባት መወሰድ ያለበት እድሜ	በ26 አመት	በ9 አመት
የአወሳሰድ መጠን /ዶስቁ./	3	2
አስጊየሆነየጎንዮሽችግርመጎልበት	1:750,000	1:30,000
የክትባቱ ዋጋ (በብር)	100	200
የመከተቢያ ቦታ	በት/ቤት	በጤናማዕከላት
የትኛውን የክትባት መረሃግብር ይመርጣሉ? ሀ. □ለ. □		

403.

ተጓዳኝሁኔታዎች	መረሃግብርሀ.	መረሃግብርለ.
የማህፀንበርካንሰርየመከላከልብቃት (በመቶኛ)	98%	98%

የመከላከያውውጤታማነት የጊዜወሰን (በአመት)	ለ8አመት	ለ8አመት
የመጀመሪያው ክትባት መወሰድ ያለበት እድሜ	በ9አመት	በ9አመት
የአወሳሰድ መጠን /ዶስቁ./	2	2
አስጊየሆነየጎንዮሽችግርመጎልበት	1:750,000	1:30,000
የክትባቱ ዋጋ (በብር)	100	200
የመከተቢያ ቦታ	በት/ቤት	በት/ቤት
የትኛውን የክትባት መረሃግብር ይመርጣሉ?	ሀ. □ለ. □	

404.

ተጓዳኝሁኔታዎች	መረሃግብርሀ.	መረሃግብርለ.
የማህፀንበርካንሰርየመከላከልብቃት (በመቶኛ)	70%	98%
የመከላከያውውጤታማነት የጊዜወሰን (በአመት)	ለ8አመት	ለ8አመት
የመጀመሪያው ክትባት መወሰድ ያለበት እድሜ	በ9አመት	በ9አመት
የአወሳሰድ መጠን /ዶስቁ./	2	3
አስጊየሆነየጎንዮሽችግርመጎልበት	1:750,000	1:750,000
የክትባቱ ዋጋ (በብር)	100	200
የመከተቢያ ቦታ	በጤናማዕከላት	በት/ቤት
የትኛውን የክትባት መረሃግብር ይመርጣሉ?	ሀ. □ለ. □	

405.

ተጓዳኝሁኔታዎች	መረሃግብርሀ.	መረሃግብርለ.
የማህፀንበርካንሰርየመከላከልብቃት (በመቶኛ)	98%	98%
የመከላከያውውጤታማነት የጊዜወሰን (በአመት)	ለ8አመት	ለ25አመት
የመጀመሪያው ክትባት መወሰድ ያለበት እድሜ	በ9አመት	በ26አመት
የአወሳሰድ መጠን /ዶስቁ./	2	2
አስጊየሆነየጎንዮሽችግርመጎልበት	1:750,000	1:750,000
የክትባቱ ዋጋ (በብር)	200	100
የመከተቢያ ቦታ	በጤናማዕከላት	በት/ቤት
የትኛውን የክትባት መረሃግብር ይመርጣሉ?	ሀ. □ለ. □	

406.

ተጓዳኝሁኔታዎች	መረሃግብርሀ.	መረሃግብርለ.
የማህፀንበርካንሰርየመከላከልብቃት (በመቶኛ)	98%	70%
የመከላከያውውጤታማነት የጊዜወሰን (በአመት)	ለ25አመት	ለ25አመት
የመጀመሪያው ክትባት መወሰድ ያለበት እድሜ	በ26አመት	በ9አመት
የአወሳሰድ መጠን /ዶስቁ./	2	2
አስጊየሆነየጎንዮሽችግርመጎልበት	1:30,000	1:30,000
የክትባቱ ዋጋ (በብር)	100	200
የመከተቢያ ቦታ	በጤናማዕከላት	በት/ቤት
የትኛውን የክትባት መረሃግብር ይመርጣሉ?	ሀ. □ለ. □	

407.

ተጓዳኝሁኔታዎች	መረሃግብርሀ.	መረሃግብርለ.

የማህፀንበርካንሰርየመከላከልብቃት (በመቶኛ)	70%	98%
የመከላከያውውጤታማነት የጊዜወሰን (በአመት)	ለ8አመት	ለ25አመት
የመጀመሪያው ክትባት መወሰድ ያለበት እድሜ	በ26አመት	በ9አመት
የአወሳሰድ መጠን /ዶስቁ./	2	3
አስጊየሆነየንንዮሽችግርመጎልበት	1:30,000	1:750,000
የክትባቱ ዋጋ (በብር)	200	100
የመከተቢያ ቦታ	በት/ቤት	በት/ቤት
የትኛውን የክትባት መረሃግብር ይመርጣሉ?	**ሀ.** ☐**ለ.** ☐	

408.

ተጓዳኝሁኔታዎች	**መረሃግብርሀ.**	**መረሃግብርለ.**
የማህፀንበርካንሰርየመከላከልብቃት (በመቶኛ)	70%	70%
የመከላከያውውጤታማነት የጊዜወሰን (በአመት)	ለ25አመት	ለ25አመት
የመጀመሪያው ክትባት መወሰድ ያለበት እድሜ	በ26አመት	በ26አመት
የአወሳሰድ መጠን /ዶስቁ./	2	2
አስጊየሆነየንንዮሽችግርመጎልበት	1:30,000	1:750,000
የክትባቱ ዋጋ (በብር)	100	100
የመከተቢያ ቦታ	በት/ቤት	በጤናማዕከላት
የትኛውን የክትባት መረሃግብር ይመርጣሉ?	**ሀ.** ☐**ለ.** ☐	

409.

ተጓዳኝሁኔታዎች	**መረሃግብርሀ.**	**መረሃግብርለ.**
የማህፀንበርካንሰርየመከላከልብቃት (በመቶኛ)	98%	98%
የመከላከያውውጤታማነት የጊዜወሰን (በአመት)	ለ25አመት	ለ8አመት
የመጀመሪያው ክትባት መወሰድ ያለበት እድሜ	በ9አመት	9አመት
የአወሳሰድ መጠን /ዶስቁ./	3	2
አስጊየሆነየንንዮሽችግርመጎልበት	1:30,000	1:30,000
የክትባቱ ዋጋ (በብር)	100	100
የመከተቢያ ቦታ	በጤናማዕከላት	በጤናማዕከላት
የትኛውን የክትባት መረሃግብር ይመርጣሉ?	**ሀ.** ☐**ለ.** ☐	

410.

ተጓዳኝሁኔታዎች	**መረሃግብርሀ.**	**መረሃግብርለ.**
የማህፀንበርካንሰርየመከላከልብቃት (በመቶኛ)	70%	98%
የመከላከያውውጤታማነት የጊዜወሰን (በአመት)	ለ25አመት	ለ8አመት
የመጀመሪያው ክትባት መወሰድ ያለበት እድሜ	በ26አመት	በ26አመት
የአወሳሰድ መጠን /ዶስቁ./	2	2
አስጊየሆነየንንዮሽችግርመጎልበት	1:30,000	1:750,000
የክትባቱ ዋጋ (በብር)	200	100
የመከተቢያ ቦታ	በጤናማዕከላት	በጤናማዕከላት
የትኛውን የክትባት መረሃግብር ይመርጣሉ?	**ሀ.** ☐**ለ.** ☐	

411.

ተጓዳኝሁኔታዎች	መረሃግብርሀ.	መረሃግብርለ.
የማህፀንበርካንሰርየመከላከልብቃት (በመቶኛ)	98%	70%
የመከላከያውውጤታማነት የጊዜወሰን (በአመት)	ለ8አመት	ለ25አመት
የመጀመሪያው ክትባት መወሰድ ያለበት እድሜ	በ9አመት	በ9አመት
የአወሳሰድ መጠን /ዶስቁ./	3	3
አስጊየሆነየጎንዮሽችግርመጎልበት	1:30,000	1:750,000
የክትባቱ ዋጋ (በብር)	100	100
የመከተቢያ ቦታ	በት/ቤት	በጤናማዕከላት
የትኛውን የክትባት መረሃግብር ይመርጣሉ?	ሀ. □ለ. □	

412.

ተጓዳኝሁኔታዎች	መረሃግብርሀ.	መረሃግብርለ.
የማህፀንበርካንሰርየመከላከልብቃት (በመቶኛ)	98%	70%
የመከላከያውውጤታማነት የጊዜወሰን (በአመት)	ለ25አመት	ለ8አመት
የመጀመሪያው ክትባት መወሰድ ያለበት እድሜ	በ26አመት	በ26አመት
የአወሳሰድ መጠን /ዶስቁ./	2	3
አስጊየሆነየጎንዮሽችግርመጎልበት	1:30,000	1:30,000
የክትባቱ ዋጋ (በብር)	200	100
የመከተቢያ ቦታ	በት/ቤት	በት/ቤት
የትኛውን የክትባት መረሃግብር ይመርጣሉ?	ሀ. □ለ. □	

413.

ተጓዳኝሁኔታዎች	መረሃግብርሀ.	መረሃግብርለ.
የማህፀንበርካንሰርየመከላከልብቃት (በመቶኛ)	98%	98%
የመከላከያውውጤታማነት የጊዜወሰን (በአመት)	ለ25አመት	ለ8አመት
የመጀመሪያው ክትባት መወሰድ ያለበት እድሜ	በ9አመት	በ9አመት
የአወሳሰድ መጠን /ዶስቁ./	2	3
አስጊየሆነየጎንዮሽችግርመጎልበት	1:750,000	1:750,000
የክትባቱ ዋጋ (በብር)	200	100
የመከተቢያ ቦታ	በት/ቤት	በጤናማዕከላት
የትኛውን የክትባት መረሃግብር ይመርጣሉ?	ሀ. □ለ. □	

414.

ተጓዳኝሁኔታዎች	መረሃግብርሀ.	መረሃግብርለ.
የማህፀንበርካንሰርየመከላከልብቃት (በመቶኛ)	70%	70%
የመከላከያውውጤታማነት የጊዜወሰን (በአመት)	ለ25አመት	ለ8አመት
የመጀመሪያው ክትባት መወሰድ ያለበት እድሜ	በ9አመት	በ26አመት
የአወሳሰድ መጠን /ዶስቁ./	3	3
አስጊየሆነየጎንዮሽችግርመጎልበት	1:30,000	1:30,000
የክትባቱ ዋጋ (በብር)	200	200
የመከተቢያ ቦታ	በጤናማዕከላት	በጤናማዕከላት
የትኛውን የክትባት መረሃግብር ይመርጣሉ?	ሀ. □ለ. □	

415.

ተጓዳኝሁኔታዎች	መረሃግብርሀ.	መረሃግብርለ.
የማህፀንበርካንሰርየመከላከልብቃት (በመቶኛ)	70%	70%
የመከላከያውውጤታማነት የጊዜወሰን (በአመት)	ለ25አመት	ለ8አመት
የመጀመሪያው ክትባት መወሰድ ያለበት እድሜ	በ26አመት	በ9አመት
የአወሳሰድ መጠን /ዶስቁ./	3	2
አስጊየሆነየጎንዮሽችግርመጎልበት	1:750,000	1:30,000
የክትባቱ ዋጋ (በብር)	200	100
የመከተቢያ ቦታ	በጤናማዕከላት	በት/ቤት
የትኛውን የክትባት መረሃግብር ይመርጣሉ?	ሀ. □ለ. □	

416.

ተጓዳኝሁኔታዎች	መረሃግብርሀ.	መረሃግብርለ.
የማህፀንበርካንሰርየመከላከልብቃት (በመቶኛ)	98%	98%
የመከላከያውውጤታማነት የጊዜወሰን (በአመት)	ለ25አመት	ለ8አመት
የመጀመሪያው ክትባት መወሰድ ያለበት እድሜ	በ9አመት	በ26አመት
የአወሳሰድ መጠን /ዶስቁ./	2	2
አስጊየሆነየጎንዮሽችግርመጎልበት	1:750,000	1:750,000
የክትባቱ ዋጋ (በብር)	100	200
የመከተቢያ ቦታ	በጤናማዕከላት	በት/ቤት
የትኛውን የክትባት መረሃግብር ይመርጣሉ?	ሀ. □ለ. □	

417.

ተጓዳኝሁኔታዎች	መረሃግብርሀ.	መረሃግብርለ.
የማህፀንበርካንሰርየመከላከልብቃት (በመቶኛ)	70%	70%
የመከላከያውውጤታማነት የጊዜወሰን (በአመት)	ለ8አመት	ለ8አመት
የመጀመሪያው ክትባት መወሰድ ያለበት እድሜ	በ6አመት	በ9አመት
የአወሳሰድ መጠን /ዶስቁ./	2	3
አስጊየሆነየጎንዮሽችግርመጎልበት	1:30,000	1:750,000
የክትባቱ ዋጋ (በብር)	100	200
የመከተቢያ ቦታ	በጤናማዕከላት	በጤናማዕከላት
የትኛውን የክትባት መረሃግብር ይመርጣሉ?	ሀ. □ለ. □	

418.

ተጓዳኝሁኔታዎች	መረሃግብርሀ.	መረሃግብርለ.
የማህፀንበርካንሰርየመከላከልብቃት (በመቶኛ)	98%	70%
የመከላከያውውጤታማነት የጊዜወሰን (በአመት)	ለ8አመት	ለ25አመት
የመጀመሪያው ክትባት መወሰድ ያለበት እድሜ	በ26አመት	በ26አመት
የአወሳሰድ መጠን /ዶስቁ./	2	2
አስጊየሆነየጎንዮሽችግርመጎልበት	1:30,000	1:750,000
የክትባቱ ዋጋ (በብር)	200	200
የመከተቢያ ቦታ	በጤናማዕከላት	በት/ቤት

የትኛውን የክትባት መረሃግብር ይመርጣሉ? ሀ. ☐ለ. ☐

419.

ተጓዳኝሁኔታዎች	መረሃግብርሀ.	መረሃግብርለ.
የማህፀንበርካንሰርየመከላከልብቃት (በመቶኛ)	98%	98%
የመከላከያውውጤታማነት የጊዜወሰን (በአመት)	ለ25አመት	ለ25አመት
የመጀመሪያው ክትባት መወሰድ ያለበት እድሜ	በ26አመት	በ9አመት
የአወሳሰድ መጠን /ዶስቁ./	3	3
አስጊየሆነየንንዮሽችግርመጎልበት	1:750,000	1:750,000
የክትባቱ ዋጋ (በብር)	200	200
የመከተቢያ ቦታ	በት/ቤት	በጤናማዕከላት
የትኛውን የክትባት መረሃግብር ይመርጣሉ? ሀ. ☐ለ. ☐		

420.

ተጓዳኝሁኔታዎች	መረሃግብርሀ.	መረሃግብርለ.
የማህፀንበርካንሰርየመከላከልብቃት (በመቶኛ)	98%	98%
የመከላከያውውጤታማነት የጊዜወሰን (በአመት)	ለ8አመት	ለ25አመት
የመጀመሪያው ክትባት መወሰድ ያለበት እድሜ	በ26አመት	በ26አመት
የአወሳሰድ መጠን /ዶስቁ./	2	3
አስጊየሆነየንንዮሽችግርመጎልበት	1:30,000	1:30,000
የክትባቱ ዋጋ (በብር)	100	100
የመከተቢያ ቦታ	በት/ቤት	በት/ቤት
የትኛውን የክትባት መረሃግብር ይመርጣሉ? ሀ. ☐ለ. ☐		

421.

ተጓዳኝሁኔታዎች	መረሃግብርሀ.	መረሃግብርለ.
የማህፀንበርካንሰርየመከላከልብቃት (በመቶኛ)	70%	70%
የመከላከያውውጤታማነት የጊዜወሰን (በአመት)	ለ8አመት	ለ25አመት
የመጀመሪያው ክትባት መወሰድ ያለበት እድሜ	በ9አመት	በ26አመት
የአወሳሰድ መጠን /ዶስቁ./	2	3
አስጊየሆነየንንዮሽችግርመጎልበት	1:750,000	1:30,000
የክትባቱ ዋጋ (በብር)	200	100
የመከተቢያ ቦታ	በት/ቤት	በጤናማዕከላት
የትኛውን የክትባት መረሃግብር ይመርጣሉ? ሀ. ☐ለ. ☐		

422.

ተጓዳኝሁኔታዎች	መረሃግብርሀ.	መረሃግብርለ.
የማህፀንበርካንሰርየመከላከልብቃት (በመቶኛ)	70%	70%
የመከላከያውውጤታማነት የጊዜወሰን (በአመት)	ለ8አመት	ለ8አመት
የመጀመሪያው ክትባት መወሰድ ያለበት እድሜ	በ26አመት	በ26አመት
የአወሳሰድ መጠን /ዶስቁ./	3	2
አስጊየሆነየንንዮሽችግርመጎልበት	1:750,000	1:750,000
የክትባቱ ዋጋ (በብር)	100	100

የመከተቢያ ቦታ	በጤናማዕከላት	በት/ቤት
የትኛውን የክትባት መረሃግብር ይመርጣሉ?	**ሀ.** ☐ **ለ.** ☐	

423.

ተጓዳኝሁኔታዎች	**መረሃግብርሀ.**	**መረሃግብርለ.**
የማህፀንበርካንሰርየመከላከልብቃት (በመቶኛ)	98%	98%
የመከላከያውውጤታማነት የጊዜወሰን (በአመት)	ለ8አመት	ለ8አመት
የመጀመሪያው ክትባት መወሰድ ያለበት እድሜ	በ26አመት	በ26አመት
የአወሳሰድ መጠን /ዶስቁ./	3	3
አስጊየሆነየንንዮሽችግርመጎልበት	1:750,000	1:30,000
የክትባቱ ዋጋ (በብር)	200	100
የመከተቢያ ቦታ	በጤናማዕከላት	በጤናማዕከላት
የትኛውን የክትባት መረሃግብር ይመርጣሉ?	**ሀ.** ☐ **ለ.** ☐	

424.

ተጓዳኝሁኔታዎች	**መረሃግብርሀ.**	**መረሃግብርለ.**
የማህፀንበርካንሰርየመከላከልብቃት (በመቶኛ)	70%	70%
የመከላከያውውጤታማነት የጊዜወሰን (በአመት)	ለ8አመት	ለ25አመት
የመጀመሪያው ክትባት መወሰድ ያለበት እድሜ	በ9አመት	በ9አመት
የአወሳሰድ መጠን /ዶስቁ./	3	2
አስጊየሆነየንንዮሽችግርመጎልበት	1:30,000	1:30,000
የክትባቱ ዋጋ (በብር)	100	100
የመከተቢያ ቦታ	በጤናማዕከላት	በጤናማዕከላት
የትኛውን የክትባት መረሃግብር ይመርጣሉ?	**ሀ.** ☐ **ለ.** ☐	

425.

ተጓዳኝሁኔታዎች	**መረሃግብርሀ.**	**መረሃግብርለ.**
የማህፀንበርካንሰርየመከላከልብቃት (በመቶኛ)	98%	98%
የመከላከያውውጤታማነት የጊዜወሰን (በአመት)	ለ8አመት	ለ25አመት
የመጀመሪያው ክትባት መወሰድ ያለበት እድሜ	በ26አመት	በ26አመት
የአወሳሰድ መጠን /ዶስቁ./	3	3
አስጊየሆነየንንዮሽችግርመጎልበት	1:750,000	1:30,000
የክትባቱ ዋጋ (በብር)	100	200
የመከተቢያ ቦታ	በት/ቤት	በጤናማዕከላት
የትኛውን የክትባት መረሃግብር ይመርጣሉ?	**ሀ.** ☐ **ለ.** ☐	

426.

ተጓዳኝሁኔታዎች	**መረሃግብርሀ.**	**መረሃግብርለ.**
የማህፀንበርካንሰርየመከላከልብቃት (በመቶኛ)	70%	70%
የመከላከያውውጤታማነት የጊዜወሰን (በአመት)	ለ25አመት	ለ8አመት
የመጀመሪያው ክትባት መወሰድ ያለበት እድሜ	በ9አመት	በ9አመት
የአወሳሰድ መጠን /ዶስቁ./	3	2
አስጊየሆነየንንዮሽችግርመጎልበት	1:30,000	1:30,000

የክትባቱ ዋጋ (በብር)	100	200
የመከተቢያ ቦታ	በት/ቤት	በጤናማዕከላት
የትኛውን የክትባት መረሃግብር ይመርጣሉ?	ሀ. ☐ለ. ☐	

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ተጓዳኝሁኔታዎች	መረሃግብርሀ.	መረሃግብርለ.
የማህፀንበርካንሰርየመከላከልብቃት (በመቶኛ)	98%	98%
የመከላከያውውጤታማነት የጊዜወሰን (በአመት)	ለ8አመት	ለ8አመት
የመጀመሪያው ክትባት መወሰድ ያለበት እድሜ	በ9አመት	በ26አመት
የአወሳሰድ መጠን /ዶስቁ./	3	3
አስጊየሆነየጎንዮሽችግርመጎልበት	1:30,000	1:30,000
የክትባቱ ዋጋ (በብር)	200	200
የመከተቢያ ቦታ	በጤናማዕከላት	በት/ቤት
የትኛውን የክትባት መረሃግብር ይመርጣሉ?	ሀ. ☐ለ. ☐	

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ተጓዳኝሁኔታዎች	መረሃግብርሀ.	መረሃግብርለ.
የማህፀንበርካንሰርየመከላከልብቃት (በመቶኛ)	98%	98%
የመከላከያውውጤታማነት የጊዜወሰን (በአመት)	ለ25አመት	ለ25አመት
የመጀመሪያው ክትባት መወሰድ ያለበት እድሜ	በ9አመት	በ26አመት
የአወሳሰድ መጠን /ዶስቁ./	3	2
አስጊየሆነየጎንዮሽችግርመጎልበት	1:30,000	1:750,000
የክትባቱ ዋጋ (በብር)	200	200
የመከተቢያ ቦታ	በት/ቤት	በጤናማዕከላት
የትኛውን የክትባት መረሃግብር ይመርጣሉ?	ሀ. ☐ለ. ☐	

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ተጓዳኝሁኔታዎች	መረሃግብርሀ.	መረሃግብርለ.
የማህፀንበርካንሰርየመከላከልብቃት (በመቶኛ)	98%	70%
የመከላከያውውጤታማነት የጊዜወሰን (በአመት)	ለ25አመት	ለ8አመት
የመጀመሪያው ክትባት መወሰድ ያለበት እድሜ	በ26አመት	በ26አመት
የአወሳሰድ መጠን /ዶስቁ./	3	2
አስጊየሆነየጎንዮሽችግርመጎልበት	1:750,000	1:750,000
የክትባቱ ዋጋ (በብር)	100	200
የመከተቢያ ቦታ	በጤናማዕከላት	በጤናማዕከላት
የትኛውን የክትባት መረሃግብር ይመርጣሉ?	ሀ. ☐ለ. ☐	

430.

ተጓዳኝሁኔታዎች	መረሃግብርሀ.	መረሃግብርለ.
የማህፀንበርካንሰርየመከላከልብቃት (በመቶኛ)	70%	70%
የመከላከያውውጤታማነት የጊዜወሰን (በአመት)	ለ8አመት	ለ8አመት
የመጀመሪያው ክትባት መወሰድ ያለበት እድሜ	በ26አመት	በ9አመት
የአወሳሰድ መጠን /ዶስቁ./	3	3

አስጊየሆነየጎንዮሽችግርመጎልበት	1:750,000	1:750,000
የክትባቱ ዋጋ (በብር)	200	100
የመከተቢያ ቦታ	በት/ቤት	በት/ቤት
የትኛውን የክትባት መረሃግብር ይመርጣሉ?	**ሀ.** ☐**ለ.** ☐	

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ተጓዳኝሁኔታዎች	**መረሃግብርሀ.**	**መረሃግብርለ.**
የማህፀንበርካንሰርየመከላከልብቃት (በመቶኛ)	70%	98%
የመከላከያውውጤታማነት የጊዜወሰን (በአመት)	ለ25አመት	ለ25አመት
የመጀመሪያው ክትባት መወሰድ ያለበት እድሜ	በ9አመት	በ9አመት
የአወሳሰድ መጠን /ዶስቁ./	2	2
አስጊየሆነየጎንዮሽችግርመጎልበት	1:750,000	1:30,000
የክትባቱ ዋጋ (በብር)	100	100
የመከተቢያ ቦታ	በት/ቤት	በት/ቤት
የትኛውን የክትባት መረሃግብር ይመርጣሉ?	**ሀ.** ☐**ለ.** ☐	

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ተጓዳኝሁኔታዎች	**መረሃግብርሀ.**	**መረሃግብርለ.**
የማህፀንበርካንሰርየመከላከልብቃት (በመቶኛ)	70%	70%
የመከላከያውውጤታማነት የጊዜወሰን (በአመት)	ለ8አመት	ለ25አመት
የመጀመሪያው ክትባት መወሰድ ያለበት እድሜ	በ9አመት	በ9አመት
የአወሳሰድ መጠን /ዶስቁ./	3	3
አስጊየሆነየጎንዮሽችግርመጎልበት	1:30,000	1:750,000
የክትባቱ ዋጋ (በብር)	200	200
የመከተቢያ ቦታ	በት/ቤት	በት/ቤት
የትኛውን የክትባት መረሃግብር ይመርጣሉ?	**ሀ.** ☐**ለ.** ☐	