



THINK ABOUT THE LINK[®]

Between Certain Viruses & Cancer
HPV • HEPATITIS B • HEPATITIS C

SURVEY RESEARCH EXECUTIVE SUMMARY

October 2019

preventcancer.org

Executive Summary

Study Overview

The purpose of this study was to understand changes in familiarity, perceptions, and behavior as it relates to human papillomavirus (HPV), hepatitis B, and hepatitis C, both in relation to the virus and vaccinations/ treatment. This study largely replicates research conducted in 2015.

Specific research objectives were to:

- Measure virus and vaccine familiarity
- Evaluate vaccination recommendations, strategies for compliance, education methods, and compliance barriers
- Measure awareness of HPV, hepatitis B, and hepatitis C facts
- Evaluate perceptions of vaccinations in general
- Understand perceived child vaccination necessity among parents

To meet the objectives, Russell Research, an independent survey research firm, conducted an online study among the following populations:

	2015	2019
<u>Healthcare Professionals</u>	<u>657</u>	<u>678</u>
Pediatricians	253	257
General Practitioners (PCP / Internal Medicine / Family Medicine)	252	259
Nurse Practitioners / Physician Assistants	152	162
<u>General Population Adults</u>	<u>1,026</u>	<u>1,020</u>
Caucasian	794	796
African-American (Augmented to reach 200)	211	200
Hispanic (Augmented to reach 200)	207	220
Asian-American (Augmented to reach 200)	207	203

Margin of Sample Error

- Healthcare professional sample at a 95 percent confidence level, a margin of sample error of +/- 3.8 percent.
- General population sample, at a 95 percent confidence level, a margin of sample error of +/- 3.1% percent.
- Ethnicity augments, at a 95 percent confidence level, a margin of sample error of +/- 6.8 percent.

Interviewing for the study was conducted on the following dates:

- 2015 = December 18 – 29, 2015
- 2019 = June 11 – 25, 2019

Sample Criteria

In order to qualify for study inclusion, respondents were screened to meet the following criteria:

Healthcare Professionals

- Ages 25 or older
- Spend 70% or more of their time in clinical practice or direct patient care
- Board certified or board-eligible (Pediatrician/HCP)
- Nationally certified or eligible for certification (Nurse Practitioner/Physician Assistant)
- Regularly perform physicals and other routine preventative care to their patients

General Population

- 50% Female, 50% Male
- Ages 18 and older

Sample for the study was sourced from leading consumer and healthcare professional panels.

Statistical Notation

The statistical significance of a result in this survey is the probability that the observed relationship (e.g., between variables) or a difference (e.g., between means) in a sample occurred by pure chance, and that in the population from which the sample was drawn, no such relationship or differences exist. Using less technical terms, one could say that the statistical significance of a result tells us something about the degree to which the result is "true". More technically, the value of the p-value represents a decreasing index of the reliability of a result. The higher the p-value, the less we can believe that the observed relation between variables in the sample is a reliable indicator of the relation between the respective variables in the population. Specifically, the p-value represents the probability of error that is involved in accepting our observed result as valid, that is, as "representative of the population." For example, a p-value of .05 (i.e., 1/20) indicates that there is a 5% probability that the relation between the variables found in our sample is a "fluke."

The following statistical notations are used throughout the report:

- = Indicates figure is significantly higher than 2019 at a 95% confidence level (i.e. p-value of .05 or less).
- = Indicates figure is significantly lower than 2019 at a 95% confidence level (i.e. p-value of .05 or less).

Healthcare Professionals

There has been an overall increase in the percentage of healthcare professionals recommending the HPV and hepatitis B vaccinations on schedule. Patient compliance is also increasing though not at the same rate.

- More than nine in ten healthcare professionals (82% 2015 → 91% 2019) typically recommend the HPV vaccination on schedule and more than nine in ten (2015 87% → 2019 93%) recommend the hepatitis B vaccine on schedule. These both represent significant increases since 2015. These were driven by large increases in recommendation by general practitioners (HPV: 73% → 89%, hepatitis B: 78% → 91%).
- This has resulted in significant increases in the percentage of healthcare professionals who recommend these vaccinations to 100% of their patients:
 - Three in five (2015 51% → 2019 59%) recommend the HPV vaccination to 100% of their patients.
 - More than two-thirds (2015 61% → 2019 68%) recommend the hepatitis B vaccination to 100% of their patients.
 - Further, there's been a significant decline in the percentage of HCPs who believe 11-12 years old is too young for the HPV vaccination (2015 32% → 2019 26%).
- Patient compliance on schedule for the HPV vaccination remains low (2015 62% → 2019 64%), while compliance on schedule for the hepatitis B vaccination significantly increased (2015 78% → 2019 81%).
- More than three-fifths of healthcare professionals (62%) believe the reduction in the number of HPV vaccination doses has caused an increase in HPV vaccinations. These HCPs estimate an average of 18% more patients are being vaccinated due to this reduction.

This increased level of recommendation may be linked to a more widely educated profession.

- There have been significant increases in the percentage of HCPs who claim to be very knowledgeable about the HPV (2015 48% → 2019 62%) and hepatitis B (2015 51% → 2019 62%) vaccines. Knowledge levels increased across all three HCP segments, with pediatricians continuing to be most widely knowledgeable (83% hepatitis B, 82% HPV).
- Healthcare professionals continue to initiate the vaccine conversation, with more than four in five initiating the HPV vaccination discussion (2015 81% → 2019 82%) and nearly nine in ten initiating the conversation about the hepatitis B vaccination (2015 84% → 2019 87%).
- Healthcare provider persistence after a patient has declined to be vaccinated continues to be extremely prevalent and increases overall vaccination levels.
 - Nine in ten (2015 90% → 2019 91%) typically attempt to persuade patients to receive the HPV vaccination during future visits and nearly one-half of the time (2015 50% → 2019 48%) the patient ultimately agrees.
 - Nine in ten (2015 88% → 2019 90%) typically attempt to persuade parental permission for the hepatitis B vaccination during future visits and nearly three-fifths of the time (2015 56% → 2019 57%) the parent ultimately agrees.

Healthcare Professionals (Cont'd.)

Patients and parents continue to be perceived as having limited knowledge of HPV and hepatitis B.

- More than four in five healthcare professionals (2015 82% → 84% 2019) indicate their typical patient/parent has limited knowledge about HPV and three in four healthcare professionals (2015 78% → 2019 75%) indicate their typical patient/parent has limited knowledge about hepatitis B. These are both consistent with 2015 findings.
- Although still very limited, there has been a significant increase in the percentage of healthcare professionals who believe the typical patient/parent is very knowledgeable about HPV (2015 5% → 2019 9%).

The concern over potential side effects is increasingly becoming a key patient-side barrier to vaccination compliance.

- Approximately three in ten healthcare professionals indicate concerns about side effects is the primary barrier to patient (2015 21% → 2019 28%) and parental permission (2015 22% → 2019 30%) compliance with the HPV vaccination. These both represent significant increases since 2015.
- One-fifth of healthcare professionals (2015 16% → 2019 21%) indicate concerns about side effects is the primary barrier to parental permission compliance with the hepatitis B vaccination. This is significantly higher in comparison to 2015.
- Not believing they are at risk remains the most prevalent primary barrier to parental permission compliance with the hepatitis B vaccination (2015 43% → 2019 39%).
- In terms of HCP-side barriers, parent discomfort (2015 43% → 2019 51% of pediatricians) and being too young (2015 40% → 2019 41%) remain the leading barriers to HPV vaccination recommendations. Not being perceived as high risk (2015 41% → 2019 28%) remains the leading barrier for hepatitis B vaccinations, however it has significantly decreased since 2015.

Cancer prevention is increasingly being used to gain HPV and hepatitis B vaccination compliance, though tends to be more effective for HPV.

- Most healthcare professionals continue to believe their patients/parents have limited knowledge of the HPV vaccine and lowered cancer risk (2015 84% → 2019 82%). However there was a significant increase in the percentage who perceive them to be very knowledgeable (2015 4% → 2019 9%).
- Using cancer prevention is an increasingly common HPV vaccination compliance strategy, with nearly all healthcare professionals (2015 87% → 2019 95%) using it, and two in five indicating it has worked very well as a strategy (2015 29% → 2019 41%). These both represent significant increases since 2015.
- One-third of healthcare professionals are using cancer prevention as a compliance strategy for the hepatitis B vaccination (2015 27% → 2019 34%), significantly higher than 2015, however few continue to feel this compliance strategy is effective (2015 16% → 2019 15%).

Healthcare Professionals (Cont'd.)

HCPs widely believe most of their patients in high risk segments do not understand they are at increased risk.

- Only 8% of general practitioners/nurse practitioners/physician assistants indicate their African-American patients are aware they are at increased risk of certain types of HPV-associated cancers. Approximately one-half (53%) of those who are recommended the vaccination are ultimately compliant.
- Only 7% of general practitioners/nurse practitioners/physician assistants indicate their Hispanic patients are aware they are at increased risk of certain types of HPV-associated cancers (versus 5% in 2015). There has been a significant increase in vaccination compliance among this population (2015 48% → 2019 52%).
- One in six general practitioners/nurse practitioners/physician assistants (2015 14% → 2019 17%) indicate their Asian patients are aware they are at increased risk of hepatitis B. There has been a significant increase in vaccination compliance among this population (2015 52% → 2019 57%).
- One-quarter of general practitioners/nurse practitioners/physician assistants (2015 17% → 2019 25%) indicate their Baby Boomer patients are aware they are at increased risk of certain types of hepatitis C-associated cancers. This represents a significant increase since 2015.

There's been an increase in the percentage of hepatitis C patients who ultimately receive treatment.

- Healthcare professionals with hepatitis C patients indicate approximately two-thirds of these patients (2015 59% → 2019 67%) ultimately receive treatment. This is a significant increase since 2015.
- Cost (2015 74% → 2019 72%) and lack of insurance (2015 60% → 2019 63%) continue to be the leading barriers to receiving hepatitis C treatment, while significantly fewer cite adverse effects as a barrier (2015 37% → 2019 26%).

General Population

There continues to be relatively low levels of familiarity with HPV, hepatitis B, and hepatitis C. While the level of concern towards them remains very low, it has increased since 2015.

- Overall familiarity with HPV (2015 45% → 2019 46%), hepatitis B (2015 44% → 2019 48%), and hepatitis C (2015 49% → 2019 51%) remained consistent with 2015 findings. However there has been a significant increase in familiarity of hepatitis B (2015 43% → 2019 55%) among Hispanic adults.
- Although still very low, a significantly higher percentage of adults are concerned of being at increased risk of HPV (2015 20% → 2019 24%), hepatitis C (2015 17% → 2019 22%) and hepatitis B (2015 16% → 2019 21%).
- Adults not concerned about HPV continue indicate it's because the virus impacts people who have multiple sex partners (2015 27% → 2019 28%) and people who do not practice safe sex (2015 27% → 2019 25%). There has been a significant increase in the percentage who believe HPV is uncommon for their age group (2015 18% → 2019 25%) – this percentage increased across all age segments.

Discussions about HPV and hepatitis B vaccinations remain uncommon though their familiarity has increased among the adult population. Discussions about vaccination specifics have made a minor transition to digital resources.

- Only one in eight adults have had a discussion with a physician about the HPV vaccination (2015 12% → 2019 13%) and one in six have discussed the vaccination for hepatitis B (2015 14% → 2019 17%). A near equal percentage have been recommended the vaccines (HPV: 2015 10% → 2019 12%, hepatitis B: 2015 15% → 2019 16%).
- However nearly one-half of adults indicate they are very or somewhat familiar with the HPV (2015 39% → 2019 45%) and hepatitis B (2015 39% → 2019 47%) vaccinations, both representing significant increases since 2015.
- In general, the percentage of adults who have been recommended a vaccination to reduce cancer risk has nearly doubled since 2015 (2015 7% → 2019 13%). However, recommendations of the HPV vaccination for this purpose remained the same (2015 51% → 2019 34% among those recommended, equal to 4% of overall population each year).
- Direct physician discussions significantly decreased for both HPV (2015 73% → 2019 55%) and hepatitis B (2015 73% → 2019 55%) vaccination discussions. During this same time, while still low, there have been significant increases in the percentage who have:
 - Been directed to a pharmaceutical company website related specifically to the virus (HPV: 2% → 9%, hepatitis B: 3% → 12%, hepatitis C: 7% → 16%)
 - Been directed to an association or website related specifically to the virus (HPV: 2% → 11%, hepatitis B: 3% → 8%, hepatitis C: 4% → 12%)

General Population (Cont'd.)

HPV vaccinations have increased since 2015.

- One in eight adults have received the HPV vaccination (2015 9% → 2019 12%), a significant increase over 2015 findings.
- There has been no change for hepatitis B vaccinations (2015 30% → 2019 29%).

There is increased concern over side effects from vaccinations.

- More than one-quarter of adults (2015 21% → 2019 27%) believe the HPV vaccine can have side effects which are more threatening than HPV. This is a significant increase since 2015.
- One-quarter of adults (2015 17% → 2019 25%) believe the hepatitis B vaccine can have side effects which are more threatening than hepatitis B. This is also a significant increase since 2015.
- Eight percent of adults who have not received the HPV vaccination indicated it's due to concern over possible side effects (significantly higher than 2015 – 6%).
- Further, more than two-fifths of adults (2015 38% → 2019 43%) believe in spreading out vaccines over a longer time period of time rather than their recommended schedule. This percentage is significantly higher than in 2015.

A majority of adults continue to be unaware of many facts about these viruses.

- One-half of adults are aware that HPV can lead to cancer if untreated (46%) and less than one-half (46%) are aware that with immunization, HPV-related cancers can be avoided.
- Although awareness has significantly increased since 2015, less than two in five adults are aware hepatitis B increases the risk of liver cancer (2015 33% → 2019 38%) and one-third (2015 24% → 2019 33%) are aware the hepatitis B vaccine can lower your risk of liver cancer.
- Adults are more aware that it's recommended girls be vaccinated for HPV (61%) than the recommendation of boys being vaccinated (50%).
- Less than one-half of adults (2015 44% → 2019 43%) are aware you can contract both HPV and hepatitis B or C.

General Population (Cont'd.)

There is greater awareness of increased risks of virus-related cancers among at-risk populations. However overall awareness levels remain low.

- There is increased knowledge among Hispanic adults since 2015:
 - Three in ten are aware Hispanic adults have higher rates of certain types of HPV-associated cancers (2015 17% → 2019 31% - significant increase).
 - Three in ten are aware Hispanic adults have higher rates of certain types of hepatitis B-associated cancers (2015 13% → 2019 30% - significant increase).
 - One-quarter are aware Hispanic adults have higher rates of certain types of hepatitis C-associated cancers (2015 12% → 2019 25% - significant increase).
 - Nearly three in ten are aware that liver cancer spreads faster among Hispanics (2015 16% → 2019 28% - significant increase).
- Awareness of increased rates of hepatitis C-associated cancers among Baby Boomers has nearly tripled since 2015 (2015 11% → 2019 31%).
- Less than two in five African American adults (36%) are aware African-Americans have higher rates of certain types of HPV-associated cancers.
- One-third of Asian adults are aware they have a higher rate of certain types of hepatitis B-associated cancers (2015 29% → 2019 32%). This is consistent with 2015 findings.

Most parents continue to vaccinate according to the CDC schedule. Additionally, more parents see the need for and are having their children receive the HPV vaccination.

- Vaccinations on their pediatrician's recommended schedule from birth continue to be high for children (2015 92% → 2019 92%).
- One-half of parents believe it's absolutely necessary for their children to have the HPV vaccination at the recommended age (2015 38% → 2019 51%), two in five have had it recommended by their physician (2015 33% → 42%) and more than one-third have had their children vaccinated (2015 20% → 2019 35%). These all represent significant increases over 2015 findings.
- Parents of boys under the age of 11 are significantly more likely to vaccinate for HPV compared to four years ago (2015 68% → 2019 81%), while plans to vaccinate their daughters remains high (2015 77% → 2019 80%).
- However, nearly two-thirds of parents (2015 62% → 2019 64%) still agree their children's pediatrician has not stressed the importance of having the HPV vaccination. This is unchanged since 2015.