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CHIC: Coalition to Strengthen the HPV Immunization Community

Briefing on HPV and Vaccination

Human papillomavirus

Human papillomavirus (HPV) is the most common sexually transmitted infection worldwide, affecting over 43 million people in 2018 alone. The virus can easily be spread from sexual skin-to-skin contact with someone who is infected, but it may not present with physical symptoms. Typical symptoms of infection include the development of genital warts that vary in appearance depending on the HPV strain involved. Although HPV is usually harmless, long-lasting infection has been shown to cause more than 630,000 new cancer cases and 311,000 deaths globally per year. The majority of cases – 530,000 – are cervical cancers, but HPV strains have also been associated with cancers of the vulva, vagina, anus, penis, and oropharynx. With over half a million cases each year, cervical cancer continues to present as a major public health concern, ranking as the third most common cause of cancer incidence and mortality among women worldwide.

HPV Vaccination and Programs

To date, three safe and efficacious HPV vaccines have been licensed by the U.S. Food and Drug Administration (FDA) that protect against more than 70% of cancer-causing HPV infections, making HPV vaccination the most cost-effective intervention for the prevention of cervical cancer. The World Health Organization (WHO) has recommended HPV vaccination be included in national immunization agendas. Since the introduction of the quadrivalent HPV vaccine in 2006, the Centers for Disease Control and Prevention (CDC) reported the percentage of all HPV-related cervical precancers declined from 53% in 2008 to 44% in 2014.

Despite the proven safety and efficacy of HPV vaccines, there are significant barriers in its global implementation and coverage remains suboptimal. Currently, over 85% of the global burden of HPV-related cervical cancers occurs in low-and middle-income countries (LMICs), yet less than 30% of LMICs have introduced HPV vaccination compared to more than 85% of high-income countries. Among all HPV-related cancers, 92% could be prevented if HPV vaccination recommendations was completed.

Addressing the global burden of HPV requires greater advocacy and increased implementation of vaccination programs as the global burden of cervical cancer disproportionately falls on LMICs. Low-resource settings face limited financial resources to provide adequate HPV prevention programs encompassing screening services and vaccine coverage. As of early 2021, only three manufacturers have HPV vaccines prequalified by the WHO; this lack of new market entrants has limited the capacity to meet future vaccine demand at affordable and sustainable prices.

In their commitment to eliminate cervical cancer, the WHO has set the target of 90% vaccination coverage among adolescent girls under age 15 by 2050. However, the COVID-19 pandemic has caused significant constraints in vaccine supply chains and halted many vaccination programs, putting many resource-constrained communities at greater risk for under-immunization. Moving forward, the global HPV vaccine community must formulate a plan of action to meet the needs of LMICs and move towards cervical cancer elimination by 2050.