RECOMMENDATIONS ON VACCINATION AGAINST COVID-19 IN PERSONS LIVING WITH HIV IN SPAIN

01// BACKGROUND AND RATIONALE

Most studies to date—in settings with a high coverage of antiretroviral therapy (ART) and in high-income countries—report greater mortality from COVID-19 in persons living with HIV (PLWH) than in the general population matched for age and sex (1-9). In Spain, 97% of PLWH are receiving ART, and viral load is suppressed in 90% (10). Fortunately, fewer and fewer PLWH in Spain are immunosuppressed. According to estimations from the AIDS Investigation Network Cohort (CoRIS) and Hospital Survey carried out for this report, approximately 7% (10,600 persons) have CD4 counts <200/mm3 and 1% (1,700 persons) <50/mm3. However, the prevalence of diabetes mellitus, arterial hypertension, cardiovascular disease, chronic kidney failure, COPD, chronic liver failure, non–AIDS-related tumors, and other comorbid conditions is higher in PLWH than in the general population. According to the abovementioned sources, approximately 40% of PLWH in Spain have comorbid conditions associated with a poor prognosis of COVID-19.

To date, HIV infection has not been shown to have an independent effect on mortality in people taking stable ART, once the abovementioned prognostic factors have been taken into account. The association between the clinical severity of COVID-19 and CD4 and viral load values is not consistent, although in high-income countries, the number of persons with COVID-19 and low CD4 counts and high viral load is low, thus preventing these associations from being studied (5, 8, 11-14). Nevertheless, some authors report greater mortality of COVID-19 in persons with CD4 counts <200/mm3 (13-14). The factors associated with increased severity of COVID-19 in PLWH are the same as for non-PLWH, namely, age, immunodepression, and comorbid conditions (6-8, 11-12).

All currently available vaccines are indicated for PLWH. There are no contraindications for PLWH and no safety concerns. While it is possible in theory that persons with a low CD4 count could have a weaker immune response, there are no data on differences in vaccine efficacy.

Given the current situation in Spain, where the number of doses of the COVID-19 vaccine is limited, vaccination should be prioritized for PLWH at the greatest risk of severe disease, as proposed for the general population (17-18). Prioritization should involve allotting vaccines to those at greatest risk and organizing public and community health services so that those eligible for vaccination have access to it and are not affected by the socioeconomic inequalities and exclusion they face.

02// METHODOLOGY

A working group was formed comprising 2 representatives from the following organizations National AIDS Plan (Plan Nacional sobre el sida PNS, Dirección General de Salud Pública, Ministerio de Sanidad), the State HIV and AIDS Coordinator (Coordinadora estatal de VIH y sida, CESIDA), the AIDS-SEIMC Study Group (Grupo de Estudio del sida-SEIMC, GeSIDA), the Spanish Interdisciplinary AIDS Society (Sociedad Española Interdisciplinaria del SIDA, SEISIDA), and the Spanish Society of Hospital Pharmacy (Sociedad Española de Farmacia Hospitalaria, SEFH). All published recommendations on criteria for prioritizing vaccination in PLWH were compiled and reviewed. The scientific literature on severity and risk factors associated with COVID-19 in PLWH was also reviewed.

Similarly, and based on recent published evidence on greater morbidity and mortality in PLWH according to sociodemographic and clinical characteristics, patients were stratified in line with increased morbidity and mortality by identifying risk factors for severe COVID-19.

03// PRIORITIZATION OF PLWH FOR VACCINATION

The prioritization proposed will be included in the recommendations stipulated by the Technical Working Group for COVID-19 Vaccination of the Spanish Vaccination Registry and Program Committee. Thus, PLWH included in any of the groups set out below will be vaccinated together with the non-PLWH general population. Linking PLWH to the healthcare system will be promoted from local government and the tertiary sector. In the case of PLWH not receiving ART, initiation of ART will be prioritized.

- **GROUP 1 :** Residents and medical staff and social and healthcare staff working in nursing homes and caring for highly dependent persons.
- **GROUP 2 :** Front-line medical staff and social and healthcare staff.

- **GROUP 3 :** Other medical staff and social and healthcare staff.
    - Hospital and primary care staff not included in group 2, dentists, dental hygienists, and other staff.
    - Staff in public health management services and response to the pandemic. Medical staff and social and healthcare staff not previously vaccinated Physiotherapists, occupational therapists, pharmacy staff, persons working with dental prostheses.
    - Remaining health care and social-health staff not previously vaccinated.
    - Security forces, emergency forces, and armed forces.
    - Teaching staff and persons working with preschool children and children with special educational needs.
    - Teaching staff and persons working in primary and secondary schools.

- **GROUP 4 :** Noninstitutionalized highly dependent persons.

- **GROUP 5 :**
    - Persons aged ≥80 years.
    - Persons <80 years with very-high-risk conditions for severe COVID-19, such as stem cell recipients, solid organ recipients and persons on the solid organ transplant waiting list, persons undergoing hemodialysis and peritoneal dialysis, persons with oncologic-hematologic diseases, persons with solid organ cancer receiving cytotoxic chemotherapy, lung cancer patients receiving chemotherapy or immunotherapy, persons with Down syndrome aged >40 years, immunocompromised persons, and all those selected by the vaccination committee. This group will include PLWH with <200/mL despite efficacious ART and an undetectable viral load.
    - Persons aged 70-79 years.
    - Persons aged 60-69 years.

- **GROUP 6 :** PLWH aged <60 years with high-risk conditions for COVID-19, such as diabetes mellitus, cerebrovascular disease, cardiovascular disease, decompensated cirrhosis, advanced chronic kidney disease, presence of 2 or more moderate- to high-risk comorbid conditions, and all those accepted by the vaccines committee.

- **GROUP 7 :** Persons aged 56-59 years.

- **GROUP 8 :** Persons aged <56 years.

04// IDENTIFYING AND ACCOMPANYING PLWH FOR VACCINATION

PLWH are followed at hospital clinics.

Hospital HIV units can easily identify patients who fulfill the criteria for vaccination and can administer the vaccine in the same way as other vaccines.

HIV units can report which patients meet the criteria for vaccination to the Public Health General Directorate of the Autonomous Community so that vaccines can be administered where considered necessary.

Most HIV units in Spain work in association with HIV community bodies that support patients who require help to collect their medication and need to be accompanied to visits. They play a key role in supporting vaccination of the most vulnerable persons. Also notable is the role of the HIV coordinators of the Public Health General Directorates in the Autonomous Communities in the response to HIV infection and cooperation with the National AIDS Plan.

05//REFERENCES

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