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Protected-setting vaccination as a preventive strategy: the model of the vaccination unit of the University Hospital “Paolo Giaccone” of Palermo

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Background. Vaccination is one of the most effective tools for preventing infectious diseases and represents a cornerstone of public health programs. In selected clinical situations, vaccine administration may require special precautions and should be performed in a protected healthcare setting with a dedicated multidisciplinary team. This approach allows prompt recognition and management of potential post-vaccination allergic reactions. Vaccination in a protected setting is generally recommended for individuals with a history of severe allergic reactions, previous vaccine-related adverse events, or complex clinical conditions.

Materials And Methods. In May 2023, the University Hospital “Paolo Giaccone” of Palermo and the Local Health Authority of Palermo established a formal agreement to standardize the vaccination pathway for subjects at high risk of allergic reactions. Referrals are made by territorial vaccination clinics or primary care pediatricians to the Local Health Authority. Subsequently, healthcare professionals from both institutions evaluate clinical documentation and allergy history. When risk conditions are identified, patients are enrolled in the protected-setting vaccination pathway.

Results. Since the implementation of the agreement, 49 vaccine administrations have been performed in the protected vaccination unit of the University Hospital “Paolo Giaccone” of Palermo, mainly involving pediatric patients. The most frequently administered vaccines were live attenuated vaccines (n=23), delivered to subjects with documented severe egg protein allergy. Additional vaccinations included those recommended by the Italian Lifetime Immunization Schedule for individuals requiring protected-setting administration due to a history of severe vaccine-related adverse events or suspected/confirmed allergy to vaccine components. No severe allergic reactions were observed either during the post-vaccination observation period or in the hours following vaccine administration.

Conclusions. Severe allergic reactions to vaccines are rare. Nevertheless, the availability of a dedicated protected-setting vaccination clinic represents a key strategy to ensure adherence to immunization programs among individuals at increased allergic risk or with a history of adverse events. The experience of the University Hospital “Paolo Giaccone” demonstrates that this organizational model can improve vaccination coverage in clinically vulnerable populations while reducing concerns and hesitancy among caregivers.