



**HAL**  
open science

## **P23 - Implementation evaluation of school-based interventions to improve HPV vaccine coverage in France: results of a mixed-method study embedded in the PrevHPV randomized controlled trial**

Aurélie Bocquier, Maïa Simon, M. Michel, S. Bruel, A. Gauchet, A. Leduc-Banaszuk, Amandine Gagneux-Brunon, Judith E. Mueller, Bruno Giraudeau, Nathalie Thilly

### ► **To cite this version:**

Aurélie Bocquier, Maïa Simon, M. Michel, S. Bruel, A. Gauchet, et al.. P23 - Implementation evaluation of school-based interventions to improve HPV vaccine coverage in France: results of a mixed-method study embedded in the PrevHPV randomized controlled trial. 19ème Conférence francophone d'Épidémiologie Clinique et 32èmes Journées des Statisticiens des Centres de Lutte Contre le Cancer, Comité scientifique et le comité d'organisation EPICLIN2025 / JSCLCC32, May 2025, Bordeaux, France. pp.203053, <10.1016/j.jep.2025.203053>. <hal-05071094>

**HAL Id: hal-05071094**

**<https://ehesp.hal.science/hal-05071094v1>**

Submitted on 21 May 2025

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire HAL, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



HAL Authorization

### P23 - Implementation evaluation of school-based interventions to improve HPV vaccine coverage in France: results of a mixed-method study embedded in the PrevHPV randomized controlled trial

*Evaluation de l'implémentation d'interventions en milieu scolaire visant à améliorer la couverture vaccinale HPV en France : résultats d'une étude mixte au sein de l'essai contrôlé randomisé PrevHPV*

A. BOCQUIER<sup>1,\*</sup>, M. SIMON<sup>1,2</sup>, M. MICHEL<sup>3,4</sup>, S. BRUEL<sup>5,6</sup>, A. GAUCHET<sup>7</sup>, A. LEDUC-BANASZUK<sup>8</sup>, A. GAGNEUX-BRUNON<sup>9,10</sup>, J. MUELLER<sup>11,12</sup>, B. GIRAudeau<sup>13,14</sup>, N. THILLY<sup>1,2</sup>

<sup>1</sup> Université de Lorraine, Inserm, INSPIRE, Nancy, France; <sup>2</sup> Université de Lorraine, CHRU-Nancy, Département méthodologie promotion investigation, Nancy, France; <sup>3</sup> Assistance publique-Hôpitaux de Paris, Hôpital Robert Debré, Unité d'épidémiologie clinique, Paris, France; <sup>4</sup> Université Paris Cité, Inserm, ECEVE, UMR 1123, Paris, France; <sup>5</sup> Faculté de médecine Jacques Lisfranc, Université Saint-Etienne-Lyon, Département de médecine générale, Saint-Etienne, France; <sup>6</sup> Université de Saint-Etienne, Inserm, CHU de Saint-Etienne, CIC 1408, Saint Etienne, France; <sup>7</sup> Université Savoie Mont Blanc, Université Grenoble Alpes, LIP/PC2S, Grenoble, France; <sup>8</sup> Centre régional de coordination des dépistages des cancers-Pays de la Loire, Angers, France; <sup>9</sup> CHU de Saint-Etienne, CIC-1408 Vaccinologie, Saint-Etienne, France; <sup>10</sup> Université Jean Monnet, Université Lyon 1, Inserm, U1111, CNRS, UMR530, Institut Presage Chaire Prevacci, Centre international de recherche en infectiologie, Equipe GIMAP, Saint-Etienne, France; <sup>11</sup> Institut Pasteur, Université Paris Cité, Unité d'épidémiologie des maladies émergentes, Paris, France; <sup>12</sup> Université de Rennes, EHESP, CNRS, Inserm, Arènes - UMR 6051, RSMS (Recherche sur les services et management en santé) - U 1309, Rennes, France; <sup>13</sup> Université de Tours, Université de Nantes, Inserm, SPHERE U1246, Tours, France; <sup>14</sup> Université de Tours, Inserm, CHRU de Tours, CIC 1415, Tours, France

\*Auteur correspondant.

Adresse e-mail: aurelie.bocquier@univ-lorraine.fr

**Background and objective(s):** Human papillomavirus (HPV) vaccine coverage (VC) remains lower than expected in many countries, particularly France. In 2018, the French authorities launched the PrevHPV research program to codevelop school- and primary care-based interventions with stakeholders and evaluate their effectiveness and implementation. The school-based interventions were 'education and motivation' and 'at-school vaccination'. Analyses, without considering the dose of intervention received, showed that only the 'at-school vaccination' intervention significantly increased VC at two months. Implementation weaknesses may negatively impact effectiveness; therefore, it is worth having an in-depth understanding of the intervention implementation. This investigation aimed to evaluate the implementation of the school-based interventions of the PrevHPV program.

**Material and Methods:** We carried out a mixed-method study embedded in the national cluster randomized controlled trial PrevHPV (July 2021-June 2022). The cluster was the municipality (n=91). The 'education and motivation' intervention consisted (i) for parents, of a web conference on HPV infection and vaccination; and, (ii) for 8th–9th grade pupils, of two educational group sessions on those topics during school hours, using participatory learning and e-health tools. The 'at-school vaccination' intervention consisted of offering free vaccination to all pupils whose parents agreed on school premises. Quantitative data were collected through standardized activity reports and self-administered questionnaires; the implementation outcomes were fidelity, dose, reach, acceptability and sustainability. Qualitative data were collected through semi-structured group interviews with school staff and analyzed using the Consolidated Framework for Implementation Research.

**Results:** We found high rates for: fidelity (e.g., 69% of the targeted classes had two sessions and 89% of schools invited all pupils for at-school vaccination); acceptability (e.g., pupils' attentiveness and participation satisfying in 90% of the sessions, 96% of vaccinated pupils and 78% of school staff satisfied with the organization of vaccination days); and sustainability (e.g., 91% and 76% of participating schools considered conducting sessions and vaccination days the following year, respectively). However, the withdrawal of 1/3 of schools before the trial started and difficulties in mobilizing parents (e.g., <1% of invited parents participated in a web conference) negatively impacted dose and reach. Facilitators of and barriers to the implementation related to the intervention content and format, the characteristics of both the external and internal environment of the school, the numerous stakeholders and individuals involved, and the implementation strategies used. Facilitators included well-designed provided tools, supportive regulations, motivated leaders, and the presence of an external facilitator; barriers included staff workload, financial and material resources.

**Conclusion:** Schools can play a significant role in HPV vaccine promotion but are challenging settings for implementation. This study highlights challenges for involving stakeholders (parents, school staff) and the organizational changes this implies. This study has practical implications for implementing such interventions in real life, which is more valuable since HPV vaccination has been offered at school to all French 7th-grade pupils since 2023.

**Keywords:** Human papillomavirus, Vaccination, Health education, School-based immunization programs, Implementation

**Declaration of interest** A.G.-B. and A.G. report payment or honoraria for lectures, presentations, etc., by MSD, Moderna, and Pfizer, paid to her institution, as well as support for attending meetings and/or travel by MSD and Moderna. The other authors have no conflicts of interest to report.

<https://doi.org/10.1016/j.jep.2025.203053>

### P24 - Evidence-based recommendations for lung cancer surgery: first results form a systematic review of guidelines

*Médecine basée sur des preuves pour la chirurgie du cancer du poumon : résultats d'une revue systématique des recommandations*

Y. BELAROUSSI<sup>1,2,3,\*</sup>, M. FRASCA<sup>1</sup>, M. POISEUIL<sup>1</sup>, I. POTENZA<sup>3</sup>, F. DELVA<sup>1</sup>, S. MATHOULIN-PÉLISSIER<sup>1</sup>

<sup>1</sup> Université de Bordeaux - Centre Bordeaux Population Health, UMR1219-Epicene, Bordeaux, France; <sup>2</sup> CHU de Bordeaux, Palliative Medicine Department, Bordeaux, France; <sup>3</sup> CHU de Bordeaux, Chirurgie thoracique, Pessac, France

\*Auteur correspondant.

Adresse e-mail: yanissbelaroussi@gmail.com

**Background and objective(s):** Lung cancer remains a leading cause of cancer-related mortality worldwide. Early detection through lung cancer screening programs has demonstrated promise in improving survival rates by identifying malignancies at earlier, more treatable stages. However, a critical limitation of these programs lies in the heterogeneity of care following diagnosis, particularly in lung cancer surgery. Variability in surgical approaches, perioperative management, and adherence to evidence-based clinical practice guidelines (CPGs) significantly impacts patient outcomes. Understanding and implementing high-quality CPGs is essential to address these disparities and ensure standardized, high-quality care across institutions. This systematic review aims to evaluate existing CPGs in thoracic surgery, focusing on their role in standardizing care for patients diagnosed through lung cancer screening programs. By identifying gaps and inconsistencies in current recommendations, this review seeks