

## Boosting MMR vaccination through parent-centred reminders in Murcia

Many parents in the Region of Murcia face practical barriers when scheduling their children's routine health check-ups, which include the second dose of the measles, mumps, and rubella (MMR) vaccine. These check-ups, required at 12 months and 4 years of age, are longer than standard vaccination visits and must be booked in advance, either in person or by phone – but not online. This often leads to appointments being overlooked or forgotten, resulting in gaps in vaccination coverage.

To address this, Murcia's health authorities brought vaccination services closer to families through a targeted reminder system, aiming to increase uptake of the second MMR dose among 4-year-olds.

As part of the EU-funded 'Overcoming Obstacles to Vaccination' project, an initiative was piloted where parents received SMS reminders prompting them to book their child's appointment.

The target population of the pilot was composed of 13,804 children born in 2020, among whom 2,744 (19.9%) were not vaccinated with the second dose of MMR. The target population was divided into three groups randomised according to the month of birth:

- Group 1: Parents of children born in January, April, July and October received the SMS reminder.
- Group 2: Parents of children born in February, May, August and November received the SMS reminder and the informative SMS (containing a link to additional information about the MMR vaccine).
- Control group: Parents of children born in March, June, September and December received no intervention.

The distribution of unvaccinated children across the three groups prior to the intervention shows variation, with 17% in group 1, 19% in group 2, and 25% in the control group. This pre-intervention disparity in vaccination uptake is influenced by the month of birth. Due to scheduling delays, when the administrative data were collected children born in the last months of the year were less likely to have attended their 4-year vaccination appointment, compared to those born early in the year, who presented significantly higher vaccination rates prior the intervention (90.24% in January, 88.90% in February vs. 65.30% in November and 47.25% in December).

To reduce the effect of the pre-existing differences in vaccination uptake by month of birth, the assessment of the results of the intervention was carried out considering children born in the first six months of 2020, which presented more similar vaccination coverage. Vaccination coverage increased in all three groups after the intervention: the group that received text messages with an information link recorded the highest increase (1.73 percentage points, 14.45% relative), followed by the SMS reminder group (1.33 percentage points, 12.60% relative). These increases exceeded those in the control group, which saw a smaller increase of 1.08 percentage points (7.89%

relative). The reminder initiative implemented by the pilot improved awareness and made it easier for parents to act.

The pilot also introduced a new IT reminder platform, allowing health authorities to manage vaccination reminders more efficiently. This digital infrastructure strengthens the region's capacity to reach parents and supports future vaccination campaigns.

### *Collaborating with partners to reach families effectively*

The initiative was implemented through close collaboration between key partners, including the Directorate General of Public Health and Addictions, the Ministry of Health's IT Systems Department, the Murcia Health Service, and the Directorate of the Public Health Area of Lorca. Together, they ensured the pilot was strategically guided, technically supported, and effectively delivered.

By adapting a reminder system inspired by Danish best practices, Murcia's health authorities strengthened their vaccination strategy and addressed barriers for parents. The pilot showed how digital tools can enhance outreach, build trust, and deliver timely, evidence-based communication.

Its success highlights the potential for sustainability and transferability. The reminder system is expected to continue beyond the pilot, with the platform expandable to other vaccines or awareness campaigns, offering a scalable model for parent-centred vaccination outreach.

### *Overcoming Obstacles to Vaccination across the EU*

"Overcoming Obstacles to Vaccination" is a three-year EU-funded project that aims to boost vaccination coverage by tackling physical, practical, and administrative barriers to seven key vaccines, including COVID-19, HPV (Human Papillomavirus), and MMR (Measles, Mumps, and Rubella). The project identified effective practices across EU Member States, piloted them in countries facing similar challenges, and developed tailored recommendations for policymakers, health authorities, professionals, and citizens.