

## Vaccination coverage during pregnancy and factors associated with refusal

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**Objective.** The vaccines currently recommended during pregnancy are the dTpa, the influenza vaccine, and, due to SARS-CoV-2 pandemic, the mRNA vaccine against COVID-19. The aim of this study was to evaluate vaccination coverage among pregnant women and factors associated with refusal.

**Materials and Methods.** 307 patients who delivered at term between March and April 2022 at Careggi Hospital answered a questionnaire about vaccines during pregnancy. The primary aim was to assess vaccination coverage and factors associated with refusal. The secondary aim was to detect differences in vaccination between Italian and foreign women.

**Results.** Overall, 74% of patients were vaccinated with dTpa, 82% against COVID-19 and only 33% against Influenza. Vaccination coverage for dTpa and COVID-19 was significantly higher among Italian than foreign patients (80% vs 51%,  $p < 0.001$  and 86% vs 69%,  $p = 0.002$ , respectively). 89% of patients received recommendations for vaccines from the gynecologist, more frequently among Italians than foreigners ( $p = 0.01$ ). The

	Total population (307)	Italians (242)	Foreigners (65)	p value
Adherence to vaccines	dTpa	194 (80.2%)	33 (50.8%)	<0.001
	Covid-19	207 (85.5%)	45 (69.2%)	0.002
	Influenza	100 (33%)	15 (23.1%)	0.06
Recommendations for vaccines from gynecologist	272 (89%)	220 (91%)	52 (80%)	0.014

main reasons behind refusal of vaccinations were: reduced perception of the risk of disease in the case of influenza (41%), inadequate information received from the gynecologist regarding dTpa (35%), fear of side effects (63%) and of effects on the fetus (70%) from the COVID-19 vaccine.

**Conclusions.** Adherence to the Influenza vaccine was low because of reduced perception of the disease risks. Fear of COVID-19 disease led most of the patients to receive the vaccination. The significant difference in vaccination coverage between Italians and foreigners is likely due to less information being received by foreign patients, an example of health care disparity.