ABSTRACT NUMBER: 2002

Do SMS and Email Reminders Increase the Rate of Seasonal Influenza Vaccination in RA Patients Treated with Biologics: A Nested Randomized Controlled Trial Within the ART Registry?

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SESSION INFORMATION

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Session Title: RA – Treatment Poster IV **Session Time:** 1:00PM-3:00PM

Background/Purpose: In patients treated with biologics, vaccination against influenza is recommended. However, vaccination coverage remains very low. The use of automatic digital reminders is an attractive option for increasing vaccination coverage without using medical/paramedical time. We aimed to evaluate the effectiveness of SMS and email reminders of seasonal influenza vaccination in RA patients on biologics

Methods: Between Sept 2016 and Jan 2022, the multicentric French ART registry (NCT03062865) recruited ~1500 RA patients initiating an anti-TNF in 59 centers. At inclusion, patients were proposed to participate in an e-cohort to complete monthly online questionnaires.

We designed a nested randomized controlled trial (RCT) within ART's e-cohort (NCT05220423). In October 2021 (start of influenza vaccination campaign), patients who actively participated to the e-cohort (n=446) were randomized to receive (n=224) or not (n=222) email and SMS reminders on the importance of influenza vaccination . In March 2022, they received a questionnaire (and, in case of non-response, sms) about their influenza vaccination during the 2021-2022 campaign. Primary endpoint was the vaccination rate. Missing data were handled by multiple imputation.

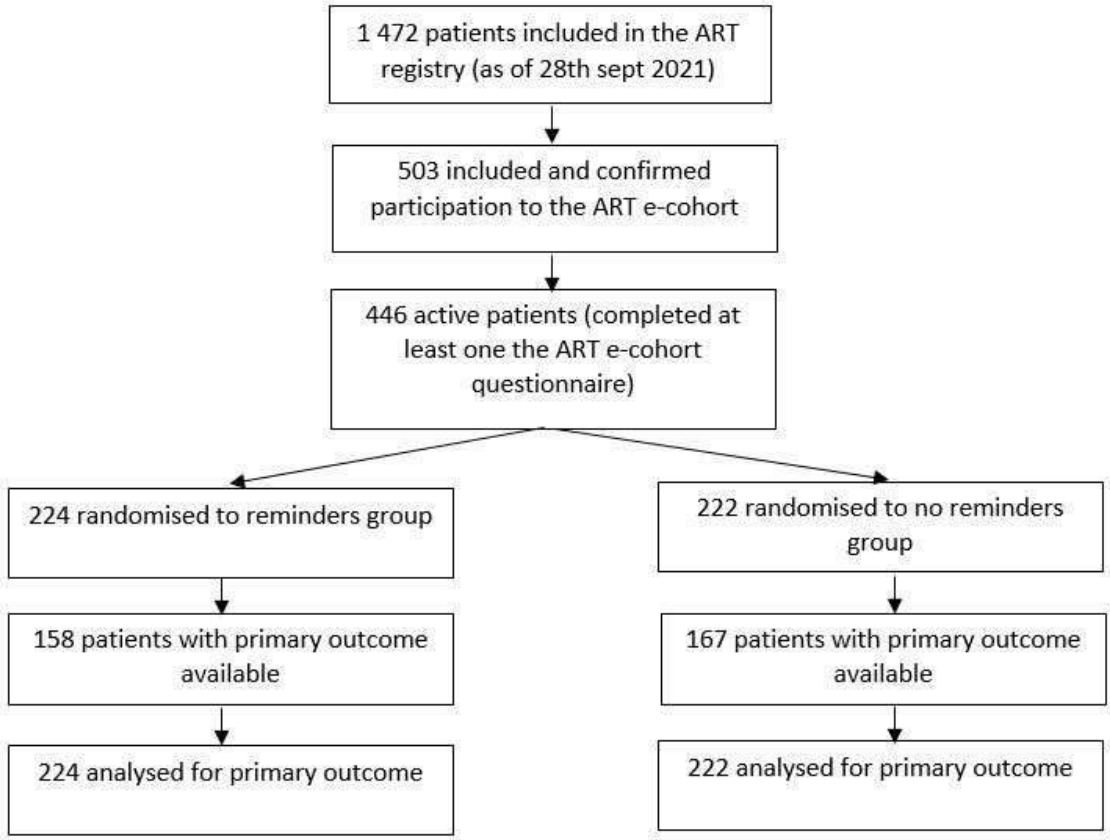
Results: Among the 446 randomized patients, 233 completed the full influenza questionnaire and 92 patients only reported their 2021-2022 influenza vaccinal status. Non-responders (n=121) were younger, more likely to be non-worker or student, and less likely to have their vaccinal status up to date at the inclusion in the registry.

Vaccination rate was 116/158 (73%) in the reminders group and 105/167 (63%) in the no-reminder group. After handling missing data by multiple imputation, the RR of vaccination in the reminders group was 1.07, 95%CI [0.95-1.22] as compared to no-reminders group.

In June 2020, 169 patients responded to a questionnaire about their influenza vaccination status during 2019-2020 campaign (before COVID pandemic); 118 (70%) reported having been vaccinated against influenza. Among patients who completed the 2 surveys, the rate of vaccination did not differ between 2020 and 2022 questionnaires (99/137 (72%) vs 99/137 (72%), p=1.00).

Among the 233 patients who fully completed the 2022 questionnaire, 144 (85%) declared that COVID pandemic had not impacted their attitude regarding influenza vaccination. They reported being vaccinated mainly for self-protection (77%) or protection of their relatives (32%). Main reasons of non-vaccination were prioritization of COVID-19 vaccine in 33% or no fear of influenza infection in 25%. Fear of side effects or non-confidence in vaccines were only marginally reported (6 and 8%). Also, 221 (95%) were vaccinated against COVID19.

Conclusion: In RA patients treated with biologics and adherent to monthly online questionnaires, SMS/email reminders of importance of influenza vaccination, only modestly, but not significantly, increased vaccination coverage. However, population included in this RCT (reminders or not) had one of the highest reported rates of influenza vaccination. COVID pandemic/vaccinal campaign did not impact RA patient habits regarding influenza vaccination.



Flow chart of the randomized controlled trial

		Reminders (N=224)	No-reminders (N=222)
Characteristics at inclusion in the ART registry			
age (years)	Mean(SD)	51.5 (13.6)	51.1 (13.4)
Women		166 (74.1%)	160 (72.1%)
Disease duration (years)	Median [Q1-Q3]	2.0 [1.0-7.0]	3.0 [1.0-9.0]
	Mean (SD)	5.4 (7.6)	6.5 (8.1)
Targeted therapy	Anti-TNF	224 (100.0%)	222 (100%)
First line biologic		199 (88.8%)	192 (86.5%)
Vaccine status	Influenza	104/193 (53.9%)	96/179 (53.6%)
	Pneumococcal	121/193 (62.7%)	113/179 (63.1%)
Characteristics at the time of randomization (October 2021)			
age (years)	Mean(SD)	53.5 (13.4)	53.2 (13.3)
age ≥ 65 years		51 (22.8%)	50 (22.5%)
Professional status	Active	129 (57.6%)	132 (59.5%)
	Student	4 (1.8%)	5 (2.3%)
	Non-worker	36 (16.1%)	30 (13.5%)
	Retired	55 (24.6%)	55 (24.8%)
Rapid 3 scoring	Available data	138	124
	High severity	36 (26.1%)	35 (28.2%)
	Moderate severity	48 (34.8%)	30 (24.2%)
	Low severity	24 (17.4%)	21 (16.9%)
	Near remission	30 (21.7%)	38 (30.6%)
Biological/targeted therapy	Available data	119	114
	Anti-TNF	65 (54.6%)	75 (65.8%)
	Other mechanism of action	35 (29.4%)	23 (20.2%)
	None	19 (15.9%)	16 (14.0%)

Characteristics of the 446 RA patients randomized to receive or not reminders on importance of influenza seasonal vaccination in the ART e-cohort

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