



Self-Reported Covid-19 Vaccination Experience among Adults Surveyed Using a Practice-Registration System.*					
Group	Percent Vaccinated	Percent Not Vaccinated			
		Vaccine Ready		Vaccine Neutral	Vaccine Resistant
		Avid†	Receptive‡	Somewhat unlikely or don't know‡	Very unlikely to get vaccinated
People ≥65 yr of age (n = 41,828)	74	8	8	5	4
Health care workers (n = 20,375)	51	8	17	14	11
People ≥65 yr of age with chronic conditions (n = 21,829)	73	9	9	5	4
People <65 yr of age with chronic conditions (n = 40,115)	26	15	29	15	14
All respondents (n = 138,604)§	40	12	24	13	11

\* Data are from patient surveys collected from 138,604 patients 18 years of age or older who checked in digitally for routine medical visits between March 4 and March 31, 2021. Percentages may not sum to 100 because of rounding.

† These respondents tried to get the vaccine.

‡ These respondents have not tried to get the vaccine.

§ The total for all respondents is not the sum of listed groups because listed groups are not mutually exclusive and some groups are not listed.

couraging vaccination should be coupled with previously used strategies that place vaccines where people usually receive care. It should also be accompanied by motivational guidance from local nurses and doctors, whom most people name in surveys as the most trusted sources of health information.<sup>2</sup>

To better understand the potential of usual care venues as Covid-19 vaccination sites, Phreesia (where one of us is the chief clinical officer), a company that supports digital patient registration for outpatient practices nationwide, digitally surveyed 138,604 people as they checked in online for regular medical visits between March 4 and March 31, 2021. As the table shows, many patients were unvaccinated despite being eligible for vaccination.

Among unvaccinated patients, the survey suggests, there is a spectrum of vaccine “hesitance,” ranging from being “vaccine ready” to “vaccine neutral” to

“vaccine resistant.” The survey results suggest that people who are vaccine ready can be further categorized as either avidly seeking vaccination or simply receptive — prepared to accept vaccination if it involves minimal effort.

Framing acceptance of Covid-19 vaccination as a new behavior, Prochaska’s “stages of change” model, tells us that people move fluidly between stages as they weigh the risks, benefits, and convenience of vaccination.<sup>3</sup> Clinicians are familiar with applying this model to assist people in pursuing healthy behaviors. Unvaccinated people who are vaccine neutral or vaccine resistant may be “precontemplative,” whereas those who are vaccine receptive are contemplating vaccination. Determining a person’s stage in this process can help in tailoring persuasion efforts.

Ready access may be crucial in converting those who are vaccine receptive. People who are

vaccine receptive may “contemplate” vaccination for an extended period. For example, in our survey, only half of patients who were also health care workers had been vaccinated despite having been eligible and having access for months (an additional 25% were “ready”). Others who are vaccine receptive may have less access and limited contact with the health care system, except when acute problems arise. People who are uninsured, reside in the United States without documentation, speak limited English, or have complex health and social needs may be reluctant to use pharmacies or mass-vaccination sites. Offering vaccines during urgent care visits at clinics that serve Medicaid-covered or uninsured patients may be one way to reach vaccine-receptive people.

Like the vaccine-receptive group, the vaccine-neutral group, who are “precontemplative,” may nonetheless accept vaccination when they seek care for other problems if

vaccine is available and they receive a “nudge” from a trusted clinician. This group includes younger adults who are open to vaccination but unconcerned about Covid-19 (64% of unvaccinated survey respondents younger than 45 agreed that it is important to get vaccines, but only half were concerned about their risk of getting Covid-19). Increasing vaccine literacy may make a difference for this group by highlighting the threat of getting sick from Covid-19 rather than emphasizing the collective goal of achieving a vaccinated public.<sup>4</sup>

Even people who are truly resistant — reporting that they are unlikely to get vaccinated — may reconsider once they are in a doctor’s office where vaccine is available. For this group, regularly scheduled visits may be the best option for addressing vaccine concerns and motivating vaccine acceptance. Primary care clinicians have a core responsibility to make preventive services, including vaccination, available. Most practices are well acquainted with the task of persuading patients who are resistant to preventive services, including vaccines. Among unvaccinated survey respondents, one in six (15%) said they would be more inclined to be vaccinated if their health care provider recommended it to them.

Policymakers and planners have focused on vaccine-hesitant groups in national polls. Although this characterization is a useful

first approximation, it underestimates variability in stages of readiness, the fluidity of people’s views, and the persuasive power of access to health professionals embedded in the communities where people live and work. Primary care clinicians and trusted health care organizations often have the working relationships with community leaders to create solutions that fit local needs and preferences.

That Ms. E. went unvaccinated, despite her high risk for complications and lack of qualms about getting the shot, suggests that with the right supporting infrastructure, primary care offices can play a key role in administering vaccine. Through their alliances with community health workers, community centers, and churches, as well as by providing home-based care in support of population health initiatives, these practices can reach people who might otherwise be left out and accelerate vaccination equity among the people who may be most difficult to reach. Single-dose, easy-to-store vaccines may ease the logistics of vaccination at regular appointments, but some states, such as Wisconsin and Maryland, have already shown that community-based practitioners can be leveraged.<sup>5</sup>

As vaccination is extended to children and if booster shots become necessary for adults, this shift to local providers will be imperative. Messaging is crucial

but not sufficient. Emphasizing hesitancy misses the point. Planners should expand access by building flexibility into the sites, times, and methods for administering Covid-19 vaccines, engaging the most trusted purveyors of health care in many communities: the doctors, nurses, and community leaders who know how to create access, convey persuasive messages, and deliver care.

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From the City University of New York Graduate School of Public Health (S.R.); the Commonwealth Fund (E.C.S.); and Phreesia Inc. (H.H.) — all in New York; and Ascension Health, St. Louis (J.C.).

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