



Immunization Practices, Barriers, and Attitudes in Cancer Care: A Multispecialty Provider Survey in North Carolina

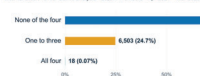
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BACKGROUND

- Patients receiving immunosuppressive cancer therapy face elevated risk of severe respiratory infection, yet recommended immunizations are frequently missed as responsibility diffuses across oncology, primary care, and pharmacy.^{1,4}
- Across patient surveys, the most consistent driver of non-vaccination is the **absence of a clinician recommendation**. In one chemotherapy cohort, 93% of patients had never been advised to vaccinate after diagnosis; post-diagnosis vaccination was 80% among those advised versus 4.2% among those not.³
- Provider-side surveys point to **guideline uncertainty and unclear ownership**: only about half to 60% of pediatric oncologists reported familiarity with immunization guidelines for immunocompromised patients, and 66.7% held that immunization should be managed by primary care with oncology guidance.³
- An internal BCBSNC claims analysis of 26,277 members with lung, breast, prostate, or colorectal cancer found that **75% had received none of the four recommended respiratory immunizations (COVID-19, influenza, pneumococcal, RSV)** and only **0.07% were up to date on all four** (Figure 1). The provider level barriers inside a value-based network have not yet been characterized.
- Immunization completion is a population health priority for payers; preventing avoidable hospitalizations among immunocompromised patients supports both individual outcomes and the quality goals tied to value-based care.

Figure 1. A large coverage gap in claims-based immunization data



OBJECTIVES

- Primary:** To characterize the barriers North Carolina clinicians report to recommending and administering four respiratory immunizations (COVID-19, influenza, pneumococcal, respiratory syncytial virus) to patients with cancer, across provider/knowledge, patient, and system domains.
- Secondary:** To describe current immunization assessment and administration practices, confidence in applying guidelines, perceived responsibility, and the tools clinicians identify as most likely to close the gap.

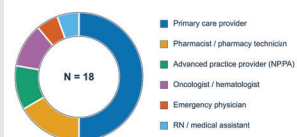
METHODS

- This cross-sectional, investigator-developed electronic survey was administered via Microsoft Forms from July 13th to September 18th, 2026. Responses were summarized descriptively as counts and proportions.
- The survey contained 14 question items, of which covered respondent role, perceived immunization status of cancer patients, how status is determined, timing of discussions, immunizations recommended, preferred administration site, confidence applying ACIP/IDSA guidance, perceived responsibility, barriers, and desired supports.
- Barriers were assessed across three domains: provider/knowledge (4), patient (5), and system (4), each rated *not a barrier*, *minor barrier* (occasionally slows or complicates), or *major barrier* (frequently prevents).
- Blue Premier pharmacists distributed the survey to established contacts at partner ACO organizations, who forwarded it to eligible clinicians. Outreach was later extended to organizations such as the NC Comprehensive Cancer Control Program and the American Cancer Society.

RESULTS

Q1. What is your primary role?

Only 2 of 18 practiced primarily in oncology (N = 18).



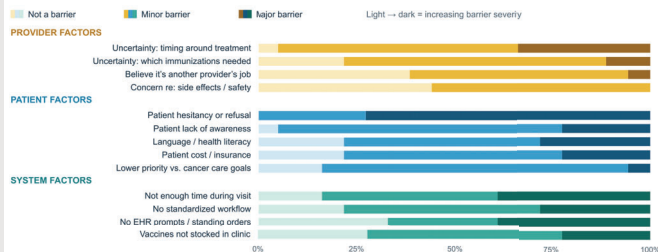
Q8. How confident are you applying ACIP/IDSA guidance?

6 of 18 felt less than fully confident.



Q10. How much of a barrier is each of the following?

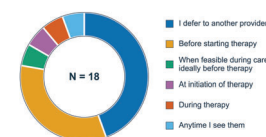
Patient hesitancy remains the top barrier overall; items are grouped and ranked within provider, patient, and system domains.



No respondent rated safety concerns a major barrier.
Bars show % of respondents; counts at right = rated "major". N = 18.

Q4. When do you discuss or recommend immunizations?

Over 40% (8/18) deferred immunization timing to another provider.



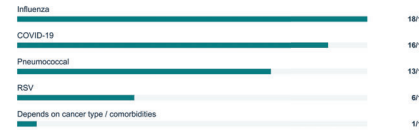
Q9. Who should be responsible for immunizations?

83% say responsibility should be shared across oncology, primary care, and pharmacy.



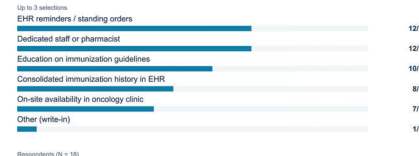
Q5. Which immunizations do you routinely recommend?

All 18 recommend influenza; just 6 recommend RSV.



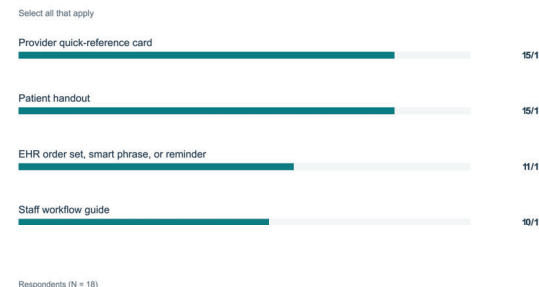
Q11. What would most help improve immunization rates?

EHR reminders and dedicated staff top the wish list.



Q12. Which resources would help support immunizations?

83% want a provider quick-reference card and a patient handout.



CONCLUSIONS & NEXT STEPS

- Clinicians were not opposed to immunizing patients with cancer; safety ranked last of all 13 barriers. The gap between what they endorse and what the claims show is one of execution, not clinical resistance.
- Patient hesitancy was the top single barrier. More broadly, clinicians rated patient factors above their own, mirroring a prior oncology survey on goals of care.⁵ Given that clinician recommendation is the strongest known predictor of vaccination,^{2,3} whether some of this reflects recommendations never made is a hypothesis for future work, not a conclusion from the survey.
- Responsibility was endorsed as shared (83%), yet 44% deferred immunization timing to another provider, a pattern also seen among pediatric oncologists.³
- Barriers spanned all three domains: patient hesitancy was the largest single barrier, but system issues (visit time, no EHR prompts) and provider uncertainty about treatment timing were comparably common.
- Clinicians ranked a quick-reference card, patient handout, and EHR standing orders as top resources. The next steps would be to develop the card/handout and propose EHR order sets as a build request with pharmacy informatics.

LIMITATIONS

- Distribution was indirect, so the number of clinicians reached is unknown and no response rate can be calculated. Respondents were enriched for primary care relative to oncology, so oncology-specific barriers are likely under-represented.
- Responses reflect self-reported practices and perceptions, which may not correspond to actual immunization behavior, and were not linked at the patient level to the claims analysis.
- Findings reflect a single commercial payer's value-based network in one state and may not generalize to other populations or payer arrangements.
- Network security policies at some sites blocked access to the survey link, excluding an unknown number of otherwise eligible respondents.
- Clinicians with a pre-existing interest in immunization may be more likely to respond, which would bias reported confidence and practice patterns upward.

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