The HIV Workforce in New York State: Does Patient Volume Correlate with Quality?

NEW YORK state department of HEALTH

Maeve O'Neill*, Gregory D. Karelas, MSc*, Daniel J. Feller*, Emily Knudsen-Strong, MSc*, Dawn Lajeunesse, MS*, Peter Gordon, MD**, Bruce D. Agins, MD, MPH*
*New York State Department of Health, AIDS Institute; **Division of Infectious Diseases, Columbia University Medical Center

Introduction

The relationship between quality of HIV care and provider experience as measured by HIV+ patient volume has been incompletely addressed in the modern ART era. The demand for capable HIV providers is expected to increase given the fact that people living with HIV have increasingly normal lifespans while new infections persist.

Organizations including HIVMA and the American Academy of HIV Medicine offer guidelines to identify expert HIV care providers. In the absence of formal certification criteria, public health jurisdictions benefit from standards that can help establish a cadre of qualified HIV providers.

Data are lacking to establish the patient volume threshold that correlates with quality care.

Knowledge of care practices among clinicians who annually treat <20 HIV+ patients with antiretroviral therapy (ART) is insufficient, despite their number and likely increase given expected changes in the HIV provider workforce.

Methodology

We used prescription drug claims (NYS Medicaid & ADAP Programs) to identify low-volume prescribers and subsequently interviewed 1,278 clinicians to understand the circumstances under which they prescribed ART.

We reviewed 320 medical records from a representative sample of 84 low-volume prescribers. Performance scores were compared to those of experienced clinicians who deliver care in established HIV care programs.

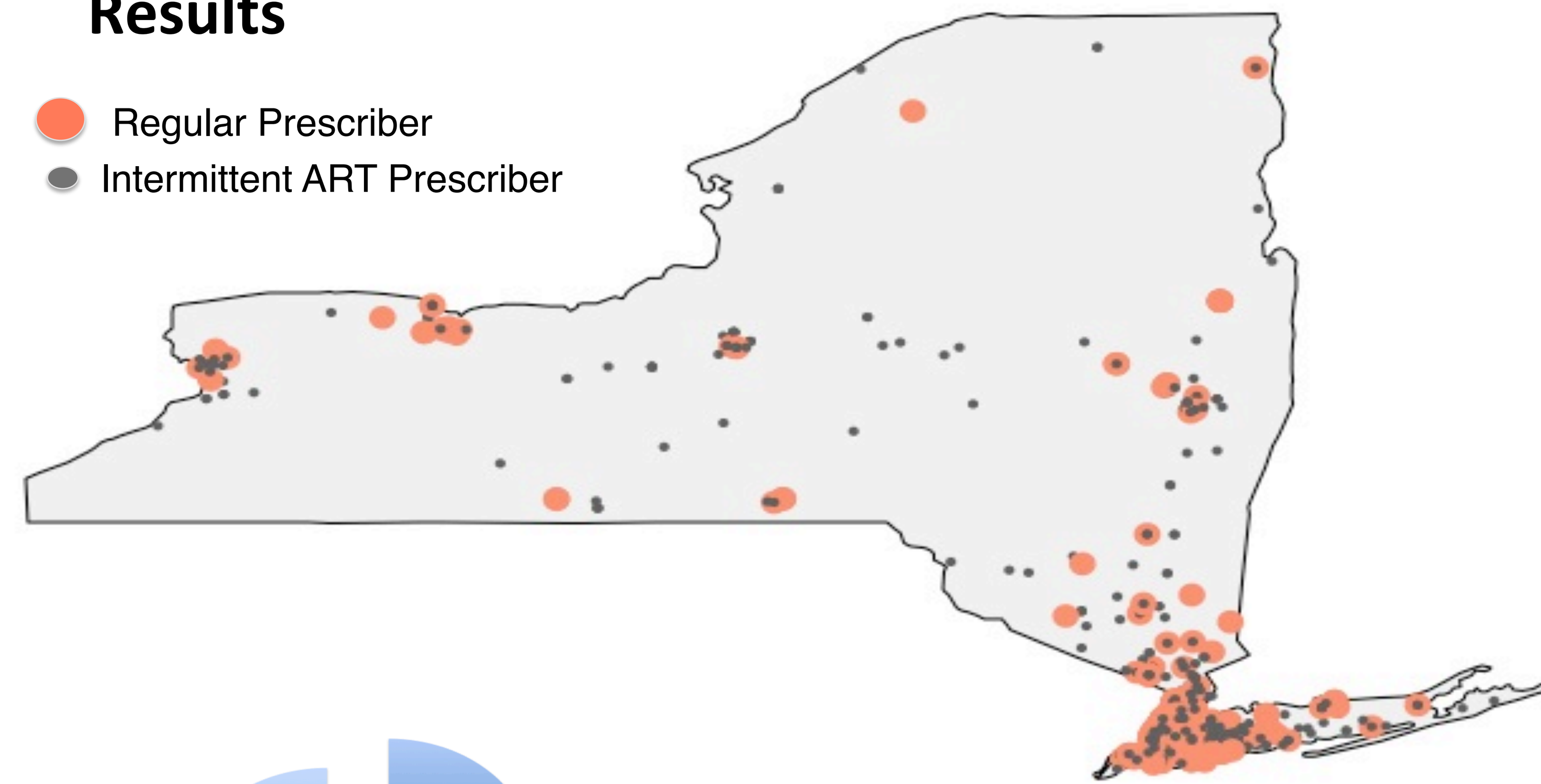
Limitations

We relied on administrative data to identify providers. Because prescription claims do not indicate whether the prescriber is the patient's primary care physician, the use of administrative data to study workforce issues demands extensive follow-up

Some sampled patients may have received ART from multiple clinicians.

We were unable to control for longevity of provider experience.

Results



650 providers (black dots) prescribed ART for 2-19 unique patients but did not routinely provide HIV care. Reasons for writing prescriptions included covering gaps in care (45%), providing inpatient care (20%), use of ART for hepatitis B treatment (13%), and for PEP (8%)

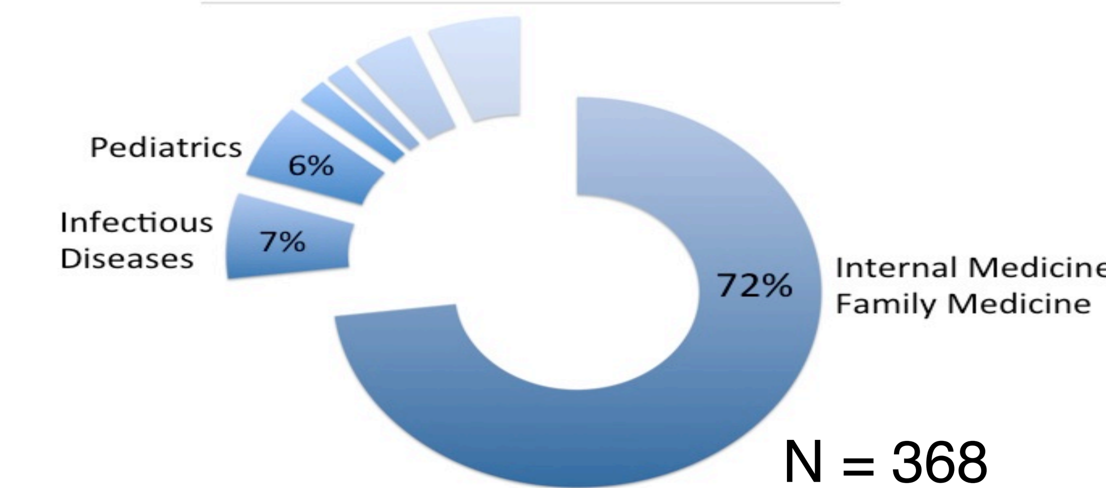
We identified 368 low-volume prescribers (red dots) who confirmed that they *routinely* prescribed ART for 2-19 unique patients. This group of LVPs prescribed ART for an average of 4.3 patients [IQR 2-5].

270 (73%) of the confirmed LVPs practiced in the NYC metropolitan area. However, patients living outside of NYC were more likely to be cared for by an LVP [OR, 1.7 (95% CI 1.4-1.9)].

33% of ambulatory HIV care providers prescribed ART for < 20 patients (estimated total 3,381)

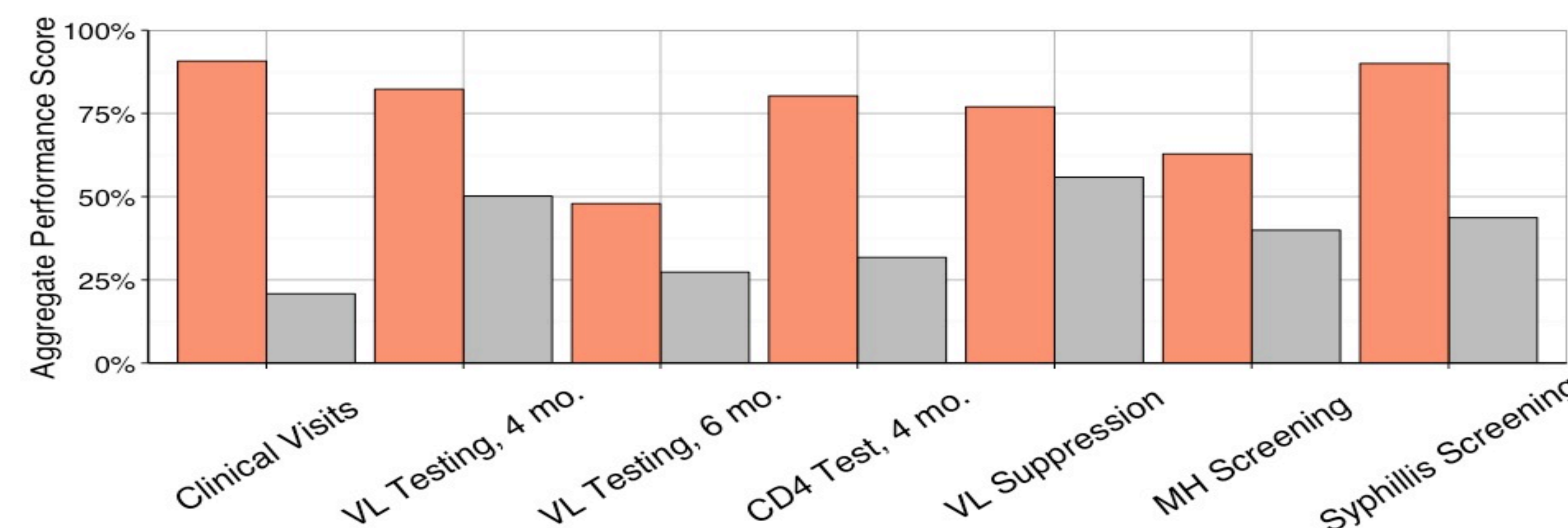
Only 13% of LVPs reported that they participated in the co-management of HIV+ individuals, which may be problematic because only 4 (out of 368) considered themselves HIV 'specialists'

Specialties of Contacted Low-Volume Providers



Other circumstances included Nurse Practitioner (4%), OB-GYN (2%), Geriatrics (1.5%), Physician Assistant (1.5%).

Clinical Performance of Low- and High-Volume Prescribers



Experienced Clinicians

Low Volume Prescribers

Experienced providers in established HIV programs performed better on core quality of care indicators than the 84 sampled low-volume providers. Indicators included viral load suppression, clinical visit frequency, regular viral load testing (4 mo. & 6 mo.), regular CD4 testing, as well as mental health and syphilis screenings.

Conclusions

We estimate that 33% of all NYS HIV ambulatory care providers care for <20 patients, and that these low-volume prescribers ultimately care for 3,381 patients statewide annually.

Providers who treat higher volumes of PLWH performed better on NYS HIV Quality of Care Program indicators than those who prescribe for < 20. We corroborate earlier studies that found patient volume to be a predictor of clinical performance and extend their findings to a large public health jurisdiction.

Our findings contradict the assumption that low-volume HIV prescribers predominantly practice in rural areas where the number of PLWHA is lower and access to HIV care is limited.

Innovative care models that involve multidisciplinary care teams may improve low-volume prescribers' ability to deliver optimal HIV care. Additionally, consultation and coaching through distance telecommunications technology may build the capacity to deliver quality care.

Strategies to build capacity in the HIV workforce are needed, given the eventual retirement of first-generation HIV providers and the perceived lack of graduates expressing interest in HIV care.

Administrative data should expand to include more information about providers and their practice circumstances to better provider workforce analysis. In the interim, extensive outreach is required to gather accurate information.

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