

PATIENT FLOW ASSESSED IN PREPARATION FOR POINT-OF-CARE HIV NUCLEIC ACID TESTING (POC NAT) IMPLEMENTATION AT A LARGE HIV CLINIC IN SEATTLE, WASHINGTON

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BACKGROUND

- Implementation of point-of-care HIV nucleic acid tests (POC NATs) could improve adherence counseling and viral load (VL) suppression by providing real-time VL results.
- However, current POC NATs take up to 120 minutes to return results, a challenge for integration into clinical settings in the United States.

METHODS

- In preparation for the GAIN Study, patient flow was observed at Madison Clinic, the largest Ryan White-funded HIV care site in WA State, and the Moderate Needs (MOD) subclinic, which serves patients on a drop-in basis.
- Time and motion data collected by study staff directly observing patients and recording times of transitions between services.
- Median times were compared between clinics using Mann-Whitney tests.
- Madison and MOD Clinic providers were interviewed about their perceptions of the utility of the POC NAT.

RESULTS

- 25 patients observed: 12 from Madison and 13 from MOD.
- Median total visit time was 64 (IQR 42-85) and 74 (IQR 55-97) minutes in Madison and MOD Clinics, respectively ($p=0.2$).
- A majority (18/25, 72%) of all patients spent less than 90 minutes in clinic; only three patients (one Madison and two MOD patients) were in clinic for greater than 120 minutes.
- Time spent with providers and time spent in the waiting room were similar between Madison and MOD clinic (provider: 41.5 vs 45 minutes, $p=0.5$; waiting room 10.5 vs 12 minutes, $p=0.5$, respectively).
- Clinic flow patterns were heterogenous, particularly at MOD.
 - Most patient visits (23/25, 92%) at both Madison and MOD began with a registered nurse or medical assistant.
 - Twelve (48%) patients saw only a primary care provider.
 - A social worker was a part of five (38%) of 13 MOD visits.

Median Total Visit Time: Madison: 64 min (IQR 42-85) MOD: 74 min (IQR 55-97)

Median Provider Time: Madison: 41.5 min (IQR: 21.5-53.5) MOD: 45 min (IQR: 36-47)

Median Waiting Room Time: Madison: 10.5 min (IQR 6-15) MOD: 12 min (IQR 9-26)

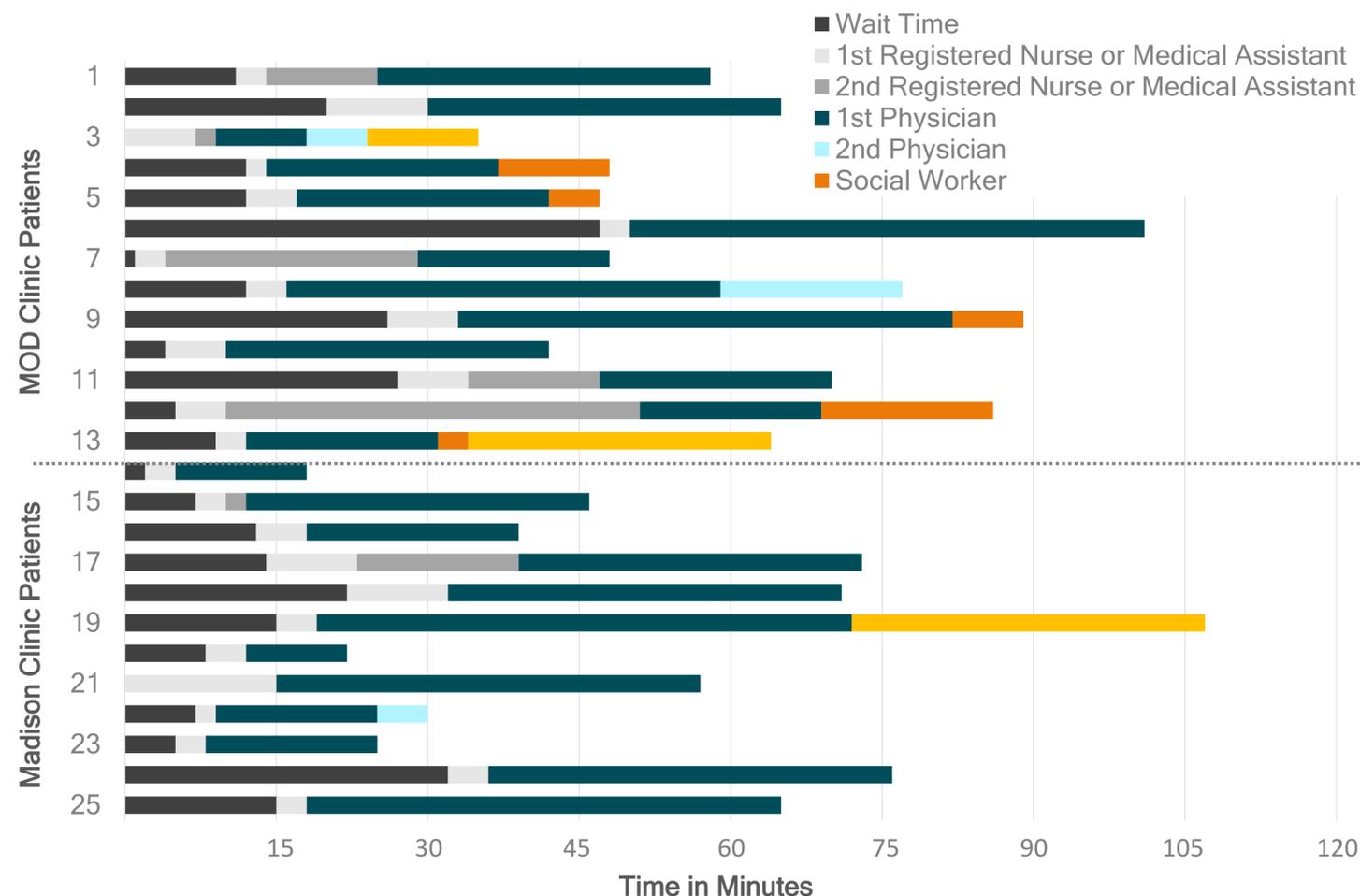


FIGURE: MADISON AND MOD CLINIC PATIENT TIME BY ACTIVITY

Times spent in Madison and MOD Clinic are shown by provider type. Visits did not necessarily occur in the order displayed. Some visits had provider time that overlapped (e.g. Physician and Social Worker). "Other" category included pharmacy (patient 3), a second social worker (patient 13), and psychiatry (patient 19). Patient 10 waited for 259 minutes total because they arrived at the clinic before MOD Clinic opened; wait time above reflects only time waiting after the clinic opened.

LIMITATIONS

- Clinic observations include a sample size collected during only one week time period, during COVID-19.
- Provider interviews may have had a selection bias towards providers more interested in the POC NAT and accepting of the new technology.

REFERENCES

Violette LR, Cornelius-Hudson A, Snidarich M, Niemann LA, Assennato SM, Ritchie A, Goel N, Chavez PR, Ethridge SF, Katz DA, Lee H, Delaney KP, Stekler JD. Evaluation of SAMBA II: a qualitative and semi-quantitative HIV point-of-care nucleic acid test. JAIDS, 21 Dec 2021 [epub ahead of print].

Providers noted the POC NAT would be particularly useful for patients who are difficult to follow up with via phone:

"Some folks are also hard to track down like the folks who are more likely to be not suppressed are the folks who are more likely to maybe not answer their phone if a random or not random number calls them."

With the POC NAT, providers could speak with a patient about an unexpected detectable viral load result immediately instead of contacting them later:

"I certainly could see it [the POC NAT] being useful in... scenarios where someone reports adherence, but then it comes back, you know, detected ...[I]t just happened to me last week. So, in that instance, it would have been useful [to have the POC NAT result]."

Providers thought patients would like the immediate feedback:

"I think patients would really like getting their viral load result in the visit. I don't know what the trade-off of extra time, like a two-hour wait is, but the fact that they would be able to get it right there, and be able to have that point, especially as we are increasing our emphasis on viral load as this kind of key marker that we're following the patients, I do think that the patients will like that."

Providers suggested that having a POC NAT result at a visit might improve adherence counseling and help patients become adherent more quickly:

"I think...mostly it will increase the effectiveness of the counseling. It's very different to have the data right in front of me when the patient is in front of me, and it's not data from two weeks; it's data from now. So, I can tell the patient that you can start changing this today, right? The blood is from today, and the change can start right now. So, I think that's very powerful."

CONCLUSIONS

- Although POC NATs could improve adherence counseling by providing real-time VL feedback, turnaround times that exceed current average visit times could prove a barrier in the U.S.
- The GAIN Study will conduct a randomized clinical trial incorporating POC NAT into adherence counseling.
- In order to facilitate patients receiving results, the study will focus recruitment in MOD Clinic, and will invite patients to come early to initiate POC NAT prior to appointments to realize the near real-time benefits of POC NAT by returning results within the patient visit window.

THANK YOU TO OUR STUDY PARTICIPANTS!

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