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Background

- Prior research indicates that long wait times and suboptimal visit duration are negatively associated with patient satisfaction and perception of quality of care^{1,2,3}
- In 2021, Cardinal Free Clinics created a digitized tracking method implemented over Covid-19. The method was utilized both during virtual clinic visits and in-person visits. As part of our transition to in person clinic, the patient tracker served as an instrument to assess clinic flow and monitor visit duration in real-time
- Although record keeping fidelity increased after tracker implementation during virtual visits, data regarding patient wait times after return to in-person clinic have not yet been examined
- It is crucial to identify prominent cause of clinic bottleneck and potential solutions to increase patient satisfaction as we transition fully to in-person clinic

Methods

- After a year of in person clinic, we sought to understand:
 1. % of visits being tracked
 2. Average wait times and duration
 3. Sources of bottleneck in clinic

This data will allow us to ideate feasible and sustainable interventions for managing patient wait times across Arbor Free Clinic and Pacific Free Clinic.

- We analyzed 405 patient tracker data available between January 9th to December 18th, 2022
- Analysis was conducted using word Microsoft excel and prism

Results

- Clinic visits were tracked using our digitized cloud-based tracker developed in-house (see below).
- The most prominent wait time was waiting for the physician visit across both clinic sites.

| | Pacific Free Clinic | Arbor Free Clinic |
|--|---------------------|---|
| # of Encounters Analyzed | 211 | 194 |
| % of Clinic Visits Fully Recorded (no missing data fields) | 88.15 | 86.6 |
| Wait time for Preclinical Volunteer Visit | 21.4 | NA-Observations suggest arbor Preclin did not have a lot of wait time |
| Wait time for MD Visit | 25.3 | 19 |
| Wait time for Social Referral Services Visit | NA | 5 |
| Wait times for Laboratory Visit | 9.4 | NA, does not provide lab |

Representative clinic tracker record (identifying information redacted)

| Pt appt time | 8:00 AM | Patient 1 | Patient 2 | Patient 3 | Patient 4 |
|--|-------------|---------------|---------------|---------------|---------------|
| Pt initials | TARGET TIME | | | | |
| Language / Visit Type / Video or Phone | English | Mandarin | English | English | English |
| Pre-clin | | | | | |
| MD | | | | | |
| PHN | | | | | |
| PHNC | | | | | |
| B2C volunteer | | | | | |
| Clinic room | | clinic room 1 | clinic room 2 | clinic room 1 | clinic room 3 |
| Status >> | Discharged | Discharged | Discharged | Discharged | Discharged |
| Time elapsed since last step >> | Discharged | Discharged | Discharged | Discharged | Discharged |
| Patient check-in (enter "N/S" if no show); | | | | | |
| FD begin visit | 8:00 AM | 9:02:00 AM | 10:40:00 AM | 10:46:00 AM | 10:46:00 AM |
| FD end visit | 8:10 AM | 9:06:00 AM | 10:43:00 AM | 10:54:00 AM | 10:59:00 AM |
| Vitals begin | 8:10 AM | 9:06:00 AM | 10:43:00 AM | 10:55:00 AM | 10:58:00 AM |
| Vitals end | 8:15 AM | 9:12:00 AM | 10:49:00 AM | 11:01:00 AM | 11:05:00 AM |
| Pre-Clin begin visit | 8:20 AM | 9:17:00 AM | 10:49:00 AM | 11:05:00 AM | 11:19:00 AM |
| Pre-Clin end visit | 8:40 AM | 9:52:00 AM | 11:00:00 AM | 11:14:00 AM | 11:34:00 AM |
| Pre-Clin presentation begins (SNS begin) | 8:40 AM | 9:55:00 AM | 11:00:00 AM | 11:15:00 AM | 10:35:00 AM |
| Pre-Clin presentation ends (SNS end) | 8:50 AM | 10:10:00 AM | 11:05:00 AM | 11:26:00 AM | 11:45:00 AM |
| MD visit begins | 8:50 AM | 10:10:00 AM | 11:05:00 AM | 11:26:00 AM | 11:45:00 AM |
| MD visit ends | 9:10 AM | 10:30:00 AM | 11:20:00 AM | 11:37:00 AM | 12:02:00 AM |
| B2C hand off begins | 9:10 AM | 10:30:00 AM | 11:21:00 AM | 11:42:00 AM | 12:03:00 AM |
| B2C hand off ends | 9:20 AM | 10:38:00 AM | 11:25:00 AM | 11:42:00 AM | 12:14:00 AM |
| B2C (referrals) visit begins | 9:20 AM | 10:50:00 AM | 11:25:00 AM | 11:46:00 AM | 12:15:00 AM |
| B2C (referrals) visit ends | 9:30 AM | 11:04:00 AM | 11:27:00 AM | 11:48:00 AM | 12:22:00 AM |
| Patient checked-out | 9:30 AM | 11:05:00 AM | 11:28:00 AM | 11:49:00 AM | 12:23:00 AM |

Discussion

- Challenges persist in consistency of record keeping, especially as we transition to in-person clinic operation. Our record keeping fidelity reduced from 96% during virtual operation to average 87.4% during in-person operation. Ideation of ways to better integrate clinic tracker into in-person operation is needed for record consistency.
- There is a need to increase awareness of and incentivize Cardinal Free clinics opportunities among physician staff at Stanford Health Care. Identifying sources of funding to support physician recruitment efforts may aid in increasing clinic efficiency and improving patient satisfaction.
- Further work can be done to study whether expediting student volunteer presentation to physicians prior to MD-patient visit impacts patient care satisfaction

Conclusions

- Tracker implementation has proved to improve communication and real-time updates between different members of care team throughout visit
- Sources of record keeping inconsistency continue to stem from human error of forgetting to update tracker in real-time and unexpected delays due to complications that arise during clinic visit
- The most prominent wait time was waiting for physician visit across both clinics, which indicates a need for more physician volunteers to reduce patient wait times, improve clinic efficiency, and improve patient satisfaction.

References

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