

Impact of nursing interventions on continuity of care in persons living with HIV/AIDS (PLWHA)

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Background

Barriers to engagement and patient self-management of HIV create poorer prognoses for PLWHA. Patients more involved with their care have significantly decreased morbidity and mortality rates compared to patients unable to meet the minimum standards of care (SOC) (Parnell et al., 2017). In 2014, the CDC estimated 1.1 million PLWHA. Out of this population, 85% were aware of their diagnosis, 49% of those aware were virally suppressed to an “undetectable” status, and only about 40% of HIV-related clinical appointments were attended. This is largely due to barriers in patient engagement including HIV stigma, transportation, substance abuse, education, support systems, provider knowledge, and mental illness (CDC, 2017). Johns Hopkins University Bartlett Specialty Clinic specializes in HIV/AIDS and Hepatitis C. Within this clinic is the Access Care Early Clinic or “ACE” Clinic; a specialized program organized for populations that may require additional assistance with care than the average patient. The population of patients within the ACE clinic are more likely to be younger (18-30), less educated, and/or contain a mental health disorder or substance abuse comorbidities. Utilizing patient data within the Bartlett and ACE Clinics, we were able to compare the SOC to the additional resources offered in the ACE program. This evaluation was to understand what improvements can be made to the SOC that will lead to better outcomes for PLWHA.

Objectives

- Explore encounters and patient engagement with nurses
- Explore the reasons for phone calls being made
- Identify areas for improvement

Methods

- Data collection from a chart review as well as interviews by the nurse were used to collect data
- Data was characterized from the two groups to assess for demographic and clinical differences in the populations
- Examine clinic utilization by patient, and assess impact of nursing calls on continuity of care
- Identify and evaluate impact of nursing encounters and interventions

Table 1: Encounter completion statistics by specialty.

	Nursing	Emergency Department	Outreach	Pharmacy	Provider	Psychology	Subspecialist	Social Work
Total encounters	1837	225	294	84	2090	580	624	740
Completed	1421	207	161	58	1270	300	331	654
Not completed	416	18	133	27	820	280	293	86
% Completed	77%	92%	55%	69%	61%	52%	53%	88%

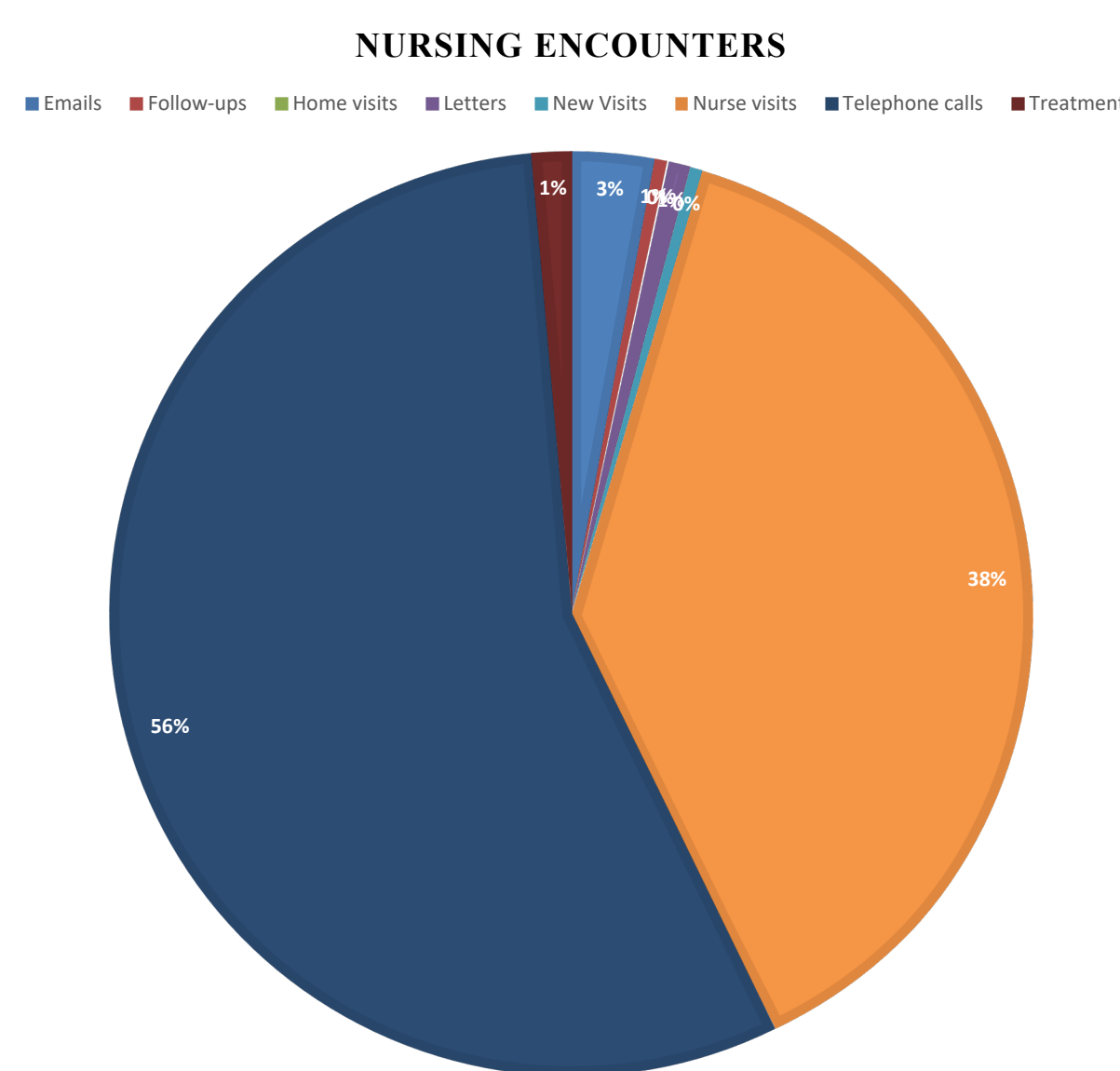


Figure 1: Percentages of nursing encounter types.

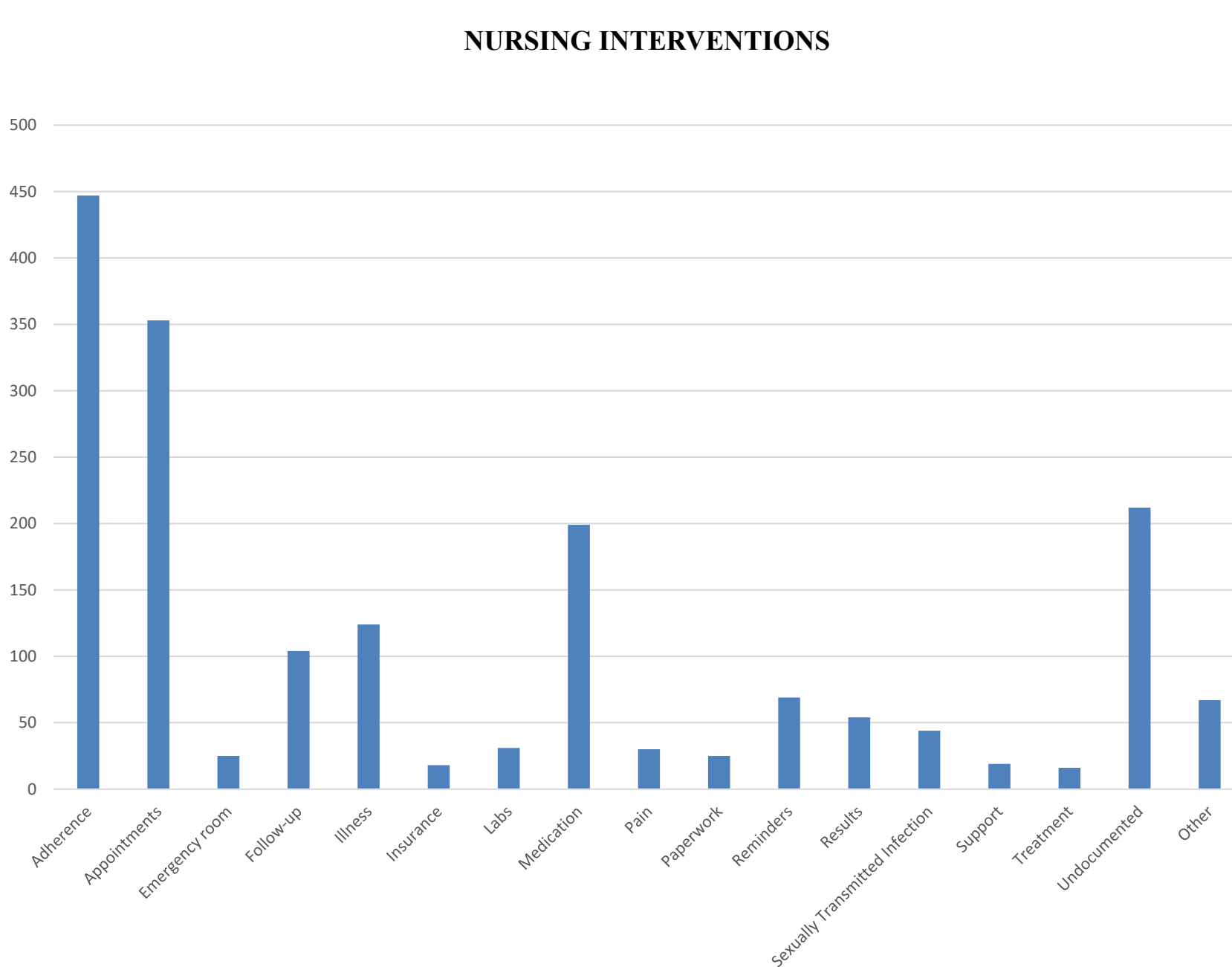


Figure 2: Data displaying specific encounters distributed by intervention type.

Results

The data collected in this study was originally used to track patient compliance and continuity of care. The data found showed the relationship between the standards of care and ACE clinic were insignificant when comparing viral loads ($p=0.24$) and CD₄ counts ($p=0.86$). However, when using the data to compare continuity of care and patient involvement, the ACE clinic was significantly higher than the standards of care ($p=0.001$). Table 1 shows the breakdown of encounters, the amount completed and not completed, and the percentage of completion among specialties. One specific comparison to note is the 22% increase in completions between nursing and outreach. Nursing staff was able to have a higher patient engagement than the outreach programs also attempting to commission patients using various forms of communication. Figure 1 depicts the categories and breakdown of nurse-specific encounters showing the two highest forms of communication are nurse phone calls (56%) and nurse visits (38%). Figure 2 explains the types of nursing encounters how they contribute to continuity of care. The majority of documented nurse-patient interactions consisted of outreaches for adherence (447), appointments (353), and medications (199) making up 62% of overall documented interventions. The data collected also showed significant findings for mental health/psychology, education, and overall outcomes in the ACE Clinic. Specifically, nursing interventions showed significant p-values for nurse visits ($p<0.001$) and nurse phone calls ($p<0.001$).

Conclusions

From the data collected, patients responding to nursing calls had a better engagement and continuity of care. However, nursing interventions did not improve viral suppression or CD₄ counts when compared to SOC. Regarding the overall ACE Clinic, patients had a significant increase in mental health, education, psychologic disorders, overall outcomes, and continuity of care. Patients in the ACE Clinic also received significantly higher nurse visits and nurse phone calls. These contributed to increased engagement of care which is pertinent to PLWHA. Other studies assessing nursing interventions found similar outcomes with no significance in patient medication adherence, CD₄ counts, or viral loads. Additionally, these studies showed statistical significance with continuity of care and patient engagement. Braitstein et al. (2012) compared two PLWHA at high risk groups; one utilizing the SOC, and a specialty group receiving additional resources. Although they did not receive significant increases in CD₄ counts, patients in this specialty group were able to elevate their CD₄ to an optimum level allowing them to qualify for needed immunizations. Results showed that the specialty group had significant decreases in mortality and failures to follow up when compared to the SOC group utilizing nursing calls and interventions. Ivers and colleagues (2011), showed the benefits of task-shifting from providers to nurses in rural Haiti. Providers in this study performed only 2% of the 135 HIV-related tasks (normal provider SOC is 62% of tasks), while nurses performed 92% of HIV-related tasks. Due to shortages of providers and nurses in developing countries, task-shifting and nursing intervention is important to provide proper care for patients. The data collected showed this model had significant increases in access to care, HIV-related services, patient follow-up, and clinical outcomes revealing that nursing intervention had a positive impact on continuity of care.

Future Directions

- Analysis of cost effectiveness of ACE program
- Implementation of adherence programs (home visits, video DOT, and peer support)
- Standardized protocol for new patients
- Focus on those transitioning from pediatrics
- Develop model/module for replication at other sites

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Funding Source

The Helene Fuld Leadership Program for the Advancement of Patient Care Quality and Safety



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