The Number and Types of Procedures Performed at JeffHOPE Clinics

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Introduction

Student-run free clinics (SRFC) primarily aim to provide medical care and services for underserved and under-resourced communities.[15,3] In addition to providing patient-reported satisfactory healthcare for the communities in which they operate, SRFCs are also a popular source of community engagement and interprofessional education for students.[15] In the 1960s, SRFCs were introduced in the United States and, since then, have become prolific.[1,16-20] In 2014, 106 US AAMC member institutions reported to have at least one SRFC, which is more than double the number of institutions from 2005.[11] SRFCs now exist in many countries throughout the world – with strong representation in Sweden, Germany, the Netherlands, and Australia.[16-20]

Locations of clinics in MD-granting US medical schools include community clinics, churches, shelters, and schools, among other locations.[11] Depending on the clinic's capabilities, these services may include any combination of specialty consultations, pharmacy services, laboratory services, imaging, and procedures.[11] Due, in part, to the variation in clinic settings, procedures provided at SRFCs are heterogeneous. Some clinics have appropriate resources to offer surgical services, like hysterectomy and hernia repair, while other clinics perform mainly noninvasive procedures like blood draws and urine samples.[3,4,11]

Since its establishment in 1992 by Jefferson Medical College, now Sidney Kimmel Medical College, JeffHOPE clinics (JHCs), a network of SRFCs at Thomas Jefferson University, has been serving the Philadelphia community by providing healthcare to underserved Philadelphians[3]. Per the JeffHOPE mission statement, the organization aims to "treat Philadelphia's underserved men, women, and children, embracing the values of kindness, equality, and excellence." [3] At JHCs, all clinically indicated patients have access to noninvasive procedures including, but not limited to, blood draws, urinalysis, DEPO shots, and blood glucose tests.[3] The lack of invasive procedures is chiefly due to JHC's emphasis on patient education, advocacy, and referral to proper long-term primary care. In addition, JeffHOPE clinic settings do not allow invasive procedures to be performed adequately; clinics are mainly in non-medically purposed establishments, like shelters and churches.[3] Procedures performed as part of the urgent care medical services provided at JHCs are common in daily operations. Still, unlike other SRFCs, the numbers and types of procedures performed at each JHC have not yet been reported[3,4]. Kumar et al. reported the numbers and types of procedures performed as evidence of increased gynecologic care access at the Women's Clinic of Clinica Esperanza, an SRFC from the Warren Alpert School of Medicine in Providence, RI, from 2015 to 2017.[4] This is the only study that we know of that reports the number and types of procedures done at a specific clinic. Smith et al. surveyed medical schools to determine the breadth of services offered at US medical clinics clinic to characterize the current functions of SRFCs but did not report the numbers and types of procedures performed at each.[11]

JHCs train incoming procedures committee members based on anecdotal data from the previous committee member. Indeed, a general understanding of the clinic and personal experience is certainly helpful for the incoming procedures committee members, but a lack of an evidence-based approach provides space for biases, like selective memory, which has been shown to lead to a mischaracterization of reality in medical settings, to influence instructors and cause a mischaracterize how often, when, and why certain procedures are performed.[21,22] To best train incoming procedures committee members, it is vital to know the procedural happenings at each JHC accurately. This research aimed to determine the number and types of procedures performed at each JHC. The primary outcome is to provide JeffHOPE clinics with

better training capability for new procedures committee members, enabling better patient care for Philadelphians. We are not aware of another study primarily aimed at improving medical student training capabilities in preparation to staff SRFCs. Secondary outcomes were to (1) summarize patient care provided by JeffHOPE procedures committee and (2) provide recommendations for charting methods used by JeffHOPE clinics.

Methods

An IRB waiver of authorization was obtained to perform a chart review of the JeffHOPE EMR, Practice Fusion (version 3.7.1.161.3713). A key was developed to de-identify the recorded personal health information (date of clinic attendance). The inclusion criteria included anyone 18 years or older attending a JeffHOPE clinic from January 1, 2019 to December 31, 2019.

Practice Fusion was queried for scheduled patients based on the date of clinic attendance using the "Scheduled Patient" function. A patient visit would often include charts from various committees and the medical team. Therefore, only charts indicated to have been filled out by procedures committee members (authored by the procedures committee) or indicated to be the medical team note (entitled SOAP note) were reviewed. Instances where the "Chief complaint" section of Practice Fusion implicated a procedure to be performed, but no additional documentation indicated a procedure was performed ("blood glucose check" or "wound care"), were not recorded.

For each clinic, the procedure type and month when the procedure was performed were recorded using Microsoft Excel®. Summations and means were calculated.

Results

Table 1 summarizes the chart review. In total, there were 2066 charts present but 1987 charts included patients in the inclusion criteria - 84 charts were excluded because they contained medical information for patients under 18 years old. These 84 patients represent 4.1% of patients seen at JeffHOPE clinics in 2019. Out of the charts reviewed, 462 procedures were documented.

Table 1. Summary of Chart Review

Total Possible Charts	Total Excluded Charts[a]	% Excluded	Total Charts Reviewed	Total Procedures Performed
2066	84	4.1	1982	462

[a]Inclusion criteria: patients 18 years of age or greater, patients seen in 2019

Table 2 outlines the number and types of procedures performed at each clinic. The JeffHOPE clinic at Sunday Breakfast Rescue Mission recorded the most blood draws, urinalyses, and urine samples (29, 8, and 36, respectively). The JeffHOPE clinic at Eliza Shirly House recorded the most Depo-Provera injections and pregnancy tests (4 and 5, respectively). The JeffHOPE clinic at Our Brothers Place Shelter recorded the most blood glucose checks and wounds cared for (146 and 16, respectively).

Table 2. Total Procedures Performed per JeffHOPE Clinic

JeffHOPE Clinic	Blood Draw	Urinalysis	Depo-Provera	Blood Glucose	Wound Care	Urine Sample	Rapid Strep	Pregnancy Test Urine	Total
Eliza Shirly	7	3	4	4	1	11	1	5	36
SBRM[a]	29	8	0	132	13	36	1	0	219
ACTS[b]	0	6	1	3	0	3	0	1	14
OBP[c]	9	5	1	146	16	8	0	0	185
Prevention Point	1	2	0	2	0	3	0	0	8
Total	46	24	6	287	30	61	2	6	462

[a]Sunday Breakfast Rescue Mission, [b]Acts Christian Translational Services, [c]Our Brothers Place

Discussion

As this report is being written, COVID-19 has changed the nature of JeffHOPE clinics such that the number and types of procedures being done have changed. For example, anecdotal data suggests that the number of wound care procedures performed at Prevention Point has increased dramatically, and resources needed to perform blood glucose checks are unavailable due to restrictions on clinic personnel at OBP. This marginalizes the usefulness of this quality improvement endeavor concerning setting expectations for future committee members. Therefore, conclusions regarding the secondary outcomes are likely the most useful for the JeffHOPE organization. Regardless, a discussion reviewing the primary and secondary outcomes is present here.

JeffHOPE saw significantly more patients than their counterparts. JeffHOPE served at least 2066 patients in 2019, while over two years (May 2015-May2017), the Clinica Esperanza/Hope Clinic served 138 patients and provided 194 procedures.[3] Compared to this clinic, far fewer procedures per patient were performed at JeffHOPE clinics. This reflects JeffHOPE's prioritization of connecting patients to long-term primary medical care. Regardless, the impact of SKMC's JeffHOPE clinics, as measured by patient volume and procedures provided, is larger than that of its counterpart at the Clinica Esperanza/Hope Clinic. Of course, the medical services are different, so personal significance cannot be commented on in this report. The argument that services provided by Clinical Esperanza/Hope Clinic are more impactful on a personal basis can be made, but this is a subjective measure currently without a quantifiable basis.

Upon review of the total procedures done at each clinic in Table 2, it can be surmised that at least two clinics - Prevention Point and ACTS - likely had a falsely low number of procedures performed; it is very unlikely that only 8 and 14 procedures, respectively, were performed at these clinics throughout the entire year. Due to low patient volume, this discrepancy exists because patients at these clinics were not recorded in the "Scheduled Patients" function in Practice Fusion. Because OBP, SBRM, and Eliza Shirly clinics have a larger patient volume, these clinics used the "Scheduled Patients" function in Practice Fusion more consistently; thus, the number and types of procedures at these clinics are likely more accurate. Triage documents (Google Sheets documents containing patient initials and associated patient MRN numbers) were used instead of the "Scheduled Patients" function in Practice Fusion at the Prevention Point and ACTS clinics. Per protocol, triage documents are deleted after each clinic to maintain patient privacy. However, this prevents the ability to look retrospectively at the notes written per clinic day using the procedure mentioned in the methods section. Therefore, not all patients who attended JeffHOPE clinics in 2019 could be reviewed. Not only did this present a problem for the accuracy of my quality improvement project, but it will also present a problem for any future quality improvement endeavor where the aim is to review the patient charts for each clinic day in Practice Fusion. Without correction, no comprehensively accurate conclusions can be made regarding these clinics' daily actions if there is no standardization of patient documentation in the "Scheduled Patients" section of Practice Fusion. *No matter the clinic or patient load,*

all patients should be recorded such that a retrospective query of Practice Fusion using the "Scheduled Patients" function reveals all patient visits.

Based on the data review, most procedure resources are spent at the SBRM clinic and the OBP clinic. Procedures committee members working at these clinics must be comfortable performing all procedures offered by JeffHOPE except for Depo-Provera injections, rapid strep tests, and pregnancy tests. At SBRM, procedures committee members will likely perform multiple blood glucose checks each day and a couple of blood draws and urine samples monthly. At OBP, procedures committee members will likely perform multiple blood glucose checks daily and have to do one other procedure once a month. Procedures committee members at Eliza Shirly will only do each procedure a handful of times throughout the year but must be comfortable performing all procedures at their disposal. Notably, most patients excluded from the chart review were documented as ACTS and Eliza Shirly clinic patients. It is possible that more procedures at these clinics were done than indicated here (likely mostly Depo-Provera injections and/or pregnancy tests as the patient population excluded was <18 years old).

Upon review of each patient chart, blood draws, urinalyses, pregnancy tests, Depo-Provera injections, urine sample collections, and rapid strep tests were explicitly stated in the patients' charts; thus, documentation of these procedures was straightforward. Blood glucose checks and wound care procedures were often stated in the "Chief Complaint" section of practice fusion but were not documented in the body of the note. In these instances, my judgment of the clinical situation was used to determine whether a procedure had been performed. This made it hard to know what had happened during the patient visit. My suggestion for correcting this issue is to have the procedures committee member always write their own note for each patient encounter. In addition to recording data elsewhere in the chart, like vitals or blood glucose in their respective sections in the chart, it would be intuitive for the procedures committee members to document the current patient encounter and any procedures done (and the results of such a procedure) in the "Plan" section of Practice Fusion in their note. This way, it is clear that the procedures committee member encountered the patient during their visit to a JeffHOPE clinic, and the result of the procedure for that current visit is unambiguous. *Every procedure and outcome of that procedure performed by procedures committee members should be clearly and consistently documented in the "Plan" section of Practice Fusion.*

The JeffHOPE clinic at Eliza Shirly was most consistent in its documentation. If a medical team saw a patient, the medical team wrote a patient encounter note in the "Subjective," "Objective," "Assessment," and "Plan" sections of Practice Fusion. If any committee member saw the patient, the committee member wrote their independent note detailing the work they did for the patient, often "Plan" section of Practice Fusion. The committee member's note's title was their committee's name (for example, the advocacy committee's note would say "Advocacy Note"). Medical team notes often reference the fact that a committee member was planning to see the patient and describe why that visit was necessary in the "Plan" section of their note. Addendums were minimized. This consistency was not retained at other clinics. Most notably, committee members would write the details of their patient encounters within the medical team's SOAP note, making it challenging to quickly know who saw the patient and what resources the patient received. *Medical teams should use the SOAP format for documentation, and committee members should write notes detailing their patient encounters in the "Plan" section.*

In terms of note writing in general, all the medical team documentation often resided in the "Subjective," "Objective," "Assessment," and "Plan" sections of Practice Fusion, making notes simple to review. Periodically, vital signs may be recorded in a different section in Practice Fusion; addendums would be used to document committee member patient encounters or resident signatures or the entire medical team note would be written under the "Subjective" or "Chief Complaint" section. This variation made it challenging to navigate patient charts and confidently conclude what occurred during the patient visit. I suggest that resident names be contained beneath the medical student's name in the "Plan" section. Committee members should not write addendums. Rather, committee members should write a separate note

detailing their concerns. Addendums should be used exclusively by residents who must include their thoughts in the medical student's note on the patient encounter. I also recommend not using the chief complaint section of the note. The information should be included in a committee member's note or in the "Subjective" section of the medical team's note. The "Chief Complaint" section, if it is to be used at all, should be a short phrase describing the need for the patient visit (for example, "Advocacy committee visit," "Cough for three days," "Wound care visit," etc.). *For medical teams, patient notes should be completely contained in the "Subjective," "Objective," "Assessment," and "Plan" sections of Practice Fusion. Residents should use addendums only to include their thoughts on patient encounters if needed. The "Chief Complaint" should be used sparingly and judiciously.*

An itemized list of charting and note-writing recommendations

1. *No matter the clinic or patient load, all patients should be recorded such that a retrospective query of Practice Fusion using the "Scheduled Patients" function reveals all patient visits.*
2. *Every procedure and outcome of that procedure performed by procedures committee members should be clearly and consistently documented in the "Plan" section of Practice Fusion.*
3. *Medical teams should use the SOAP format for documentation, and committee members should write notes detailing their patient encounters in the "Plan" section.*
4. *For medical teams, patient notes should be completely contained in the "Subjective," "Objective," "Assessment," and "Plan" sections of Practice Fusion. Residents should use addendums only to include their thoughts on patient encounters if needed. The "Chief Complaint" should be used sparingly and judiciously.*

Conclusion

The number and types of procedures performed at each JeffHOPE clinic in 2019 for patients over 18 years or older have been determined. The next steps include developing a procedures committee training protocol using these data as a guide for training incoming committee members. The total number of procedures performed and patients seen at JeffHOPE clinics was more than its counterpart at the Clinica Esperanza/Hope Clinic. Recommendations regarding chart management and note writing were made. Future interventions could include standardizing chart writing practices at JeffHOPE. Based on the chart review, future investigations could include the numbers and types of medications given at JeffHOPE clinics.

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