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Identifying the No Shows

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IDENTIFYING THE NO SHOWS

@ THE EMMC FAMILY MEDICINE CENTER

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    - FAMILY MEDICINE, ROTATION 2
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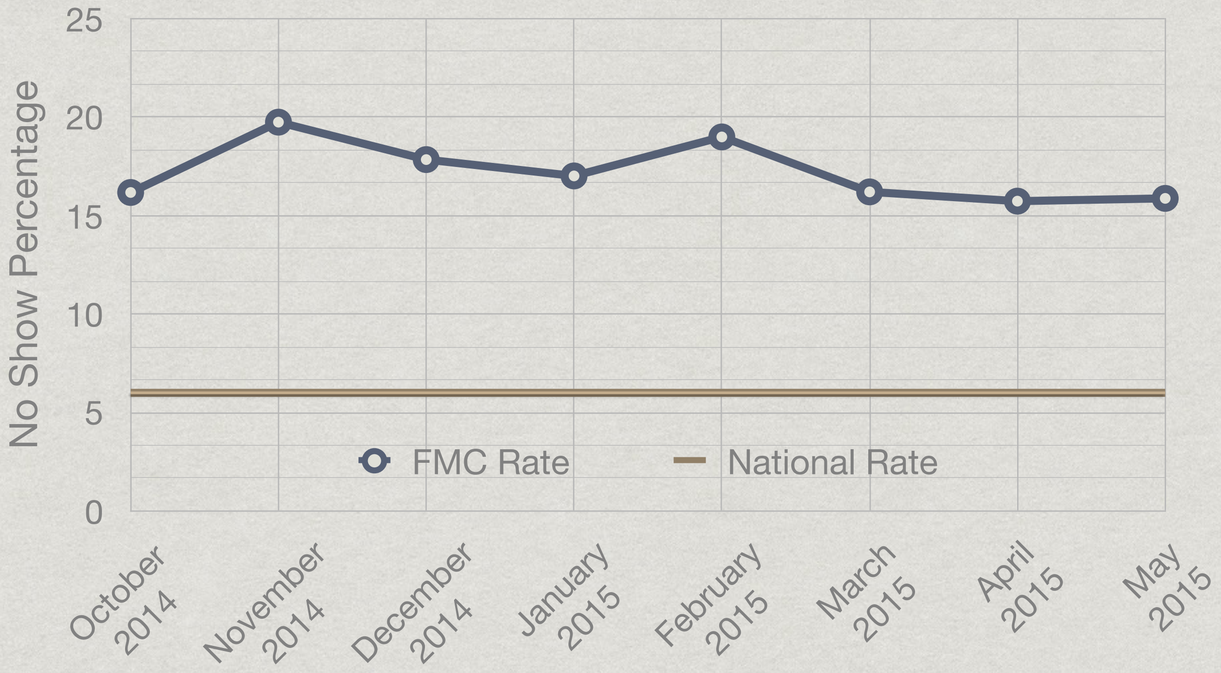
Problem Identification and Need

- The patient population of the Family Medicine Center and Residency (FMC) is predominantly made up of patients who are at high risk for health problems (i.e. chronic illness) due to various issues like low socioeconomic status, opioid addiction maintenance, children born to mothers with addiction problems, unemployment and so on.
- Unfortunately, study after study has shown that high risk patients also tend to miss clinic appointments which only further contributes to their already elevated health risks[1,3,4,6,8].
  - Studies have found that patients with frequent missed appointments were less likely to have received preventive health services and more likely to have poorly controlled hypertension and diabetes[3,4,6].
  - Specifically, patients that missed appointments more than 20% of the time had average A1c levels >1% higher than those who missed <5% of the time. No such relationship was found between the rate of appointments that were canceled/ rescheduled and metabolic control[6].

Problem Identification…early results

- Family Medicine Center and Residency part of the Eastern Maine Medical Center practices missed visit data:
  - 15.75% is the average no show rate average for the FMC
    - This rate is consistent with pre-intervention rates found in other studies evaluating no show rates of family medicine residency programs.
    - Well shy of the national rate of between 5-7% as reported by the Medical Group Management Association.
  - 366.25 missed appointments per month on average for the Family Medicine Center.
  - Minimum of 122.0 patient hours lost each month (based on minimum length 20 minute appointment)
    - This number actually undersells the true impact as a large chunk of additional time will be needed to fit these missed appointments back into the schedule.
  - For a given 12 month period the EMMC FMC projects to accumulate just shy of 4,400 patient no shows.
    - Put another way, 4,400 is more than 2.5x the number of visits a family medicine resident is required to complete during their entire 3 year residency at the FMC.



Public Health Cost of No Shows

- Patients who skip appointments in primary care often use emergency departments as sources of both primary and chronic care, driving up costs and straining hospital systems[3,4].
  - Studies conducted at residency clinics have found that the rate of ED use among patients who frequently missed appointments was 5x that of the typical patient population[4].
  - Previous studies from the National Center for Health Statistics found that as many as 55% of ED visits were non-urgent, and two studies in Utah found that 44% of all visits were primary care sensitive and between 40 and 60% of all ED visits for children were non-urgent.

    Choudhry L., Douglass M., Lewis J., Olson C., Osterman R., and Shah P. The Impact of Community Health Centers & Community-Affiliated Health Plans on Emergency Department Use . Association for Community Affiliated Plans and National Association of Community Health Centers. April 2007.
  - Data from the National Association of Community Health Centers found that over $18 billion is wasted annually on unnecessary ED visits. Maine was responsible for more than $100 million in waste.

    Choudhry L., Douglass M., Lewis J., Olson C., Osterman R., and Shah P. The Impact of Community Health Centers & Community-Affiliated Health Plans on Emergency Department Use . Association for Community Affiliated Plans and National Association of Community Health Centers. April 2007.
- Missed appointments compromise continuity and quality of care for both the patients who no show and others who would have been scheduled in those appointment slots[3].
  - In the United States, the estimated cost of “no-shows” accounts for 3% to 14% of total outpatient clinic income[8].
  - No-shows also cause a significant decrease in productivity of a practice where that “empty” time not only affects the clinics ability to care for a patient who could’ve used that spot but it has a financial impact beyond just the lost income from that visit[3,8].

Community Perspectives

- Interview with **Dr. P**
  - *Paraphase*: A large majority of our patient population are of lower economic status and thus naturally predisposed to chronic disease, disease complications and other negative aspects of living such a hard life.”
  - *Paraphase*: We’ve been evaluating patient “no shows” from the provider side by evaluating provider opinions, interactions with patients who skip visits and more, however, this is not a population that can be simply discharged as we are often there last option for care before it becomes such an inconvenience were they stop pursuing care at all except in emergency situations.
  - *Paraphase:* We’ve adopted a text messaging alert system that has had a significant effect on the overall rate but that’s an intervention that requires a cell phone and many of the patients missing a large number of visits do not have reliable means of contact.
  - Spoke of strategies to further improve no show rate and of the various ideas put forth (example: identifying transportation issues) there goal was always sort of who are the people that we can try to help show up.

Community Perspectives

- Interview with **Dr. I** (recently joined the faculty moving from a practice in Lincoln, ME where they had recently addressed their no show problem)
    - Confirmed that the effect of missed visits not only affect the practice financially but serve as a hinderance to the health of other patients who could've been seen in that appointment.
    - Discussed scheduling strategies that had been implemented in Lincoln like Advanced Access scheduling which limits the majority of appointments from being scheduled only a few days before they are needed. We spoke of how this allows those who need to be seen to actually be seen, and how the short relative time frame from scheduling to visit allows for the importance of the visit to be maintained as opposed to decaying over several weeks.
- Interview with **Various Residents at CFM**
    - "The patients that miss usually need to be seen (example: pregnant women) so I feel like I have to try to fit them back in. Unfortunately, this typically backs up my schedule and every patient the rest of the day can suffer".
    - General consensus from the residents is that there is a psychological component to no show visits and that would be an aspect worth looking into .

Intervention and Methodology

- **Intervention**
  - Identify a cohort of patients who are missing an inordinate amount of visits compared to the other patients at the Family Medical Center. The ultimate goal of this is to identify groups within the cohort so that strategies and solutions can be tailor made to solve their unique situation.
- **Methodology:** Data Search
  - The EMR used by the family medicine center has a database with a flexible but crippled search function that didn't allow for easy identification of the targeted no show data (example: it would identify no show patients for a month but not the actual number of missed visits).
  - Additionally, once search parameters were devised that produced each and every missed visit in alphabetical order the massive number of results would not be displayed by the computer. Thus, roughly 500 pages were printed at the main hospital and the data collection was manually performed at the Family Medicine Center.

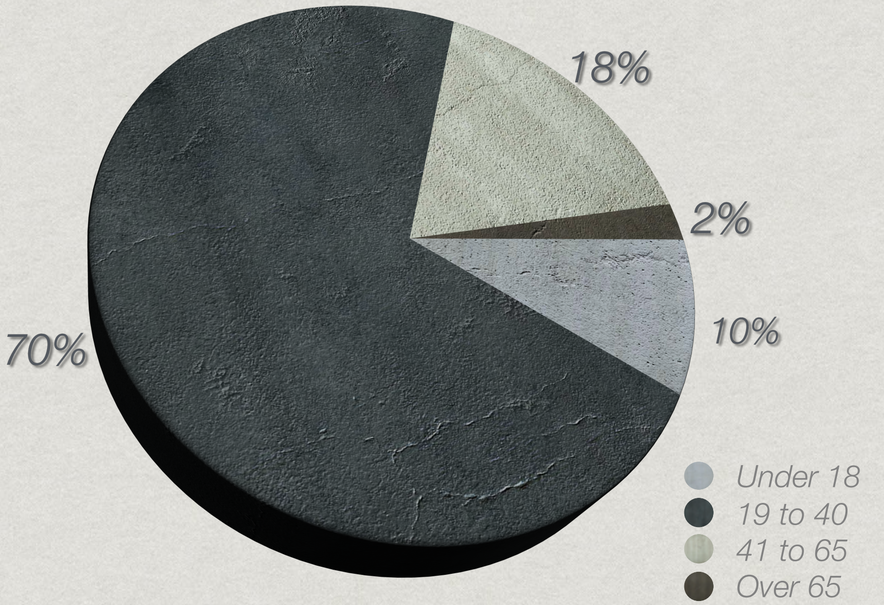
Intervention and Methodology

- **Methodology:** Data Collection and Analysis
  - 1st pass of data: Patients with 3 or more missed visits in the prior 8 months were circled and their individual total number recorded.
  - 2nd pass of data: Those identified on the initial review had their visit specifics scrutinized. References to excused misses, updates on prior missed visits, and proper cancellations were subtracted from their individual total resulting in the elimination of many initially identified patients.
  - Physical Data to Electronic Data: Patient names, number of missed visits and sex were recorded in Microsoft Excel. Pt's were also stratified into the following age groupings: 0-17, 18-40, 41-65 and 65+.
  - Data Analysis: Performed using Microsoft Excel and Apple Pages.

Results

- **No Show Analysis**
  - In the last 8 months 1431 patients missed a total of 2930 appointments at the FMC.
  - 296 out of those 1431 patients or 20.7% were found to have missed 3 or more appointments in those 8 months.
  - Of those 2930 total missed appointments, the **No Show Cohort** was responsible for a total of 1469 or 50.1% of all missed visits.
  - On average each cohort member missed 4.96 visits over the 8 month period.
    - Women: 5.18 no shows over study period
    - Men: 4.06 no shows over study period
- **Cohort Demographics**
  - 81.1% of the cohort is female.
  - 70.3% are between the age of 19 and 40 years old.
  - 62.2% are female and between the age of 19 and 40 years old.
    - This group had averaged 5.61 no shows over the study period
  - 19.9% of the cohort is over 40 years old and only 2.4% is older than 65.

Cohort Demographics: Age



Evaluation and Limitations

- **Evaluation**
  - The results clearly identify a target population females between the ages of 19-40 that the clinic can focus on to devise strategies for. From what I've gathered from attending and residents this population is likely
  - After completing the initial cohort identification over the next week or so I was able to check those patients who would no show against the Identified cohort.
  - During that week long review of only my patients I found that 62% of the time the patient who missed was a member of the cohort.
- **Limitations**
  - The massive quantity of data limited the amount of demographic specific data that I was able to identify due to the limited time frame of the rotation.
  - The nature of the EMR at the family medicine center also limits the ease of identification of each no show and there is a possibility that some no shows were not identified.
  - While I would've preferred to go back further than 8 months the FMC only began accurately tracking there no show visits in my focused time period. Prior to this time the specific document I was able to target to identify each no show was not reliably produced.

Recommendations for Future Interventions

- **Future Interventions**
  - **These were interventions used successfully in other clinics that may be beneficial at the FMC**
    - Education covering the effects of missed visits on not only there own health but how their missed visits affect other FMC patients can be provided.
    - Contact Reminders (research has found patient population with 8% no-shows when the interval between scheduling was 0–3 days, 16% when the interval was 4–6 days, and 22% at 28–30 days)$_1$.
      - 1st **text message** and **email** sent 3 days prior to visit requesting patient confirm with office if they will be attending
        - Confirmation ceases further confirmatory **messaging** (research has found that patient engagement in appointment reminders by phone from a person compared to automated notifications results in better appointment attendance; research has also shown text messages to be equivalent to phone calls for appointment reminders)$_2$.
        - Failure to respond initiates additional confirmatory texts be sent at 48 hours and 24 hours from visit.
    - Modified Double Booking
      - This intervention sought to protect patient flow by scheduling members of the NS cohort with a separate, virtual provider at two times: 9:30 am for the morning session and 2 pm for the afternoon session.
      - If the patient arrived for their appointment, they were inserted into a clinician's schedule along with an existing appointment.
      - Patients were notified of these new policies and their purpose at the end of the scripted discourse given upon their request for an appointment.

Recommendations for Future Interventions

- **Future Projects**
  - Most of the leg work has been done for someone to come in and add additional demographic data like insurance type, chronic disease, psych issues, number of children, mode of transportation to the clinic, opioid maintenance program members and so on.
    - I feel like there is so much beneficial information that can be added to this to further identify means in which to provide solutions to the problems facing these individuals.
  - With the cohort identified it would be great if a future project could obtain the opinions of this group and their various reasons and feelings toward missed visits.

References

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