



**Neighborhood
Family Practice**
COMMUNITY HEALTH CENTERS

Moving Towards the Perfect Panel Size: A Defined Empanelment Model

Terry Byrne & John Jason



Speaker Overview

Terry Byrne,
VP of Health Center Operations

Terry plays a key role in facilities management and new operational initiatives. Terry, who began his career as a respiratory therapist, holds master's degrees in health law from Loyola University and health care administration from Cleveland State University. He earned his bachelor's degree in applied health from Baldwin Wallace. Before coming to NFP, Terry was the Chief Operating Officer at a community health center focused on the homeless and those living in public housing. Prior to that, he served in an administrative capacity at University Hospitals Parma Medical Center and Southwest General Health Center with a focus on health information, compliance and risk management.

John Jason,
Site Manager & Patient Advocate Manager

In addition to overseeing one of NFP's Community Health Centers, John manages the workflow development and performance of NFP's Patient Advocate Department. Since John's arrival to NFP almost ten years ago, he has expanded and standardized NFP's operational performance metrics across each of its service lines. He earned his MBA in Operations Management from Cleveland State University and his bachelor's degree in International Business and Political Science from The Ohio State University.

Who We Are

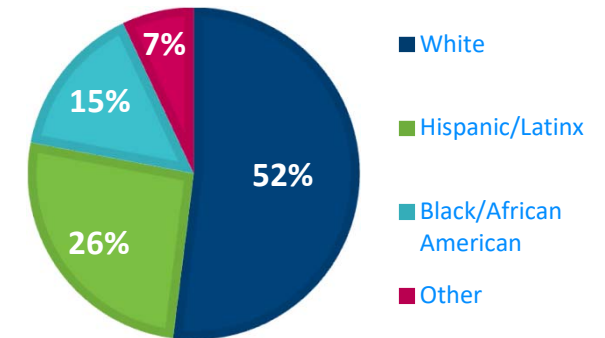
- Federally Qualified Health Center
 - one of five FQHCs in Cleveland and 43 in Ohio
 - only FQHC on Cleveland's west side
- Founded in 1980
- Recognized by NCQA as a Patient Centered Medical Home (PCMH)
- Accredited by the Joint Commission
- 7 locations serving the near west side
- Integrated Primary Care and Behavioral Health including two sites with Centers
- Bilingual staff and providers



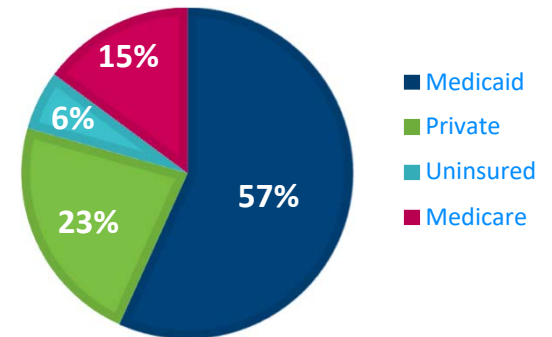
Who We Serve

- Served 21,686 patients in 2020
- Provided 84,969 office visits in 2020
- Focus on families and medically underserved population
 - 62% of patients are at or below the federal poverty level
 - Uninsured rate has dropped from 23% to 6% with the ACA and Ohio's Medicaid expansion
- 74% of patients qualify for financial assistance (200% of poverty and below)
- Only refugee provider in the county

SERVING A DIVERSE POPULATION



INSURANCE



Our Practice

- Primary Care
- Behavioral Health
- Women's Health
- Dental
- Pharmacy
- Wellness
- Refugee Health
- Outreach, Enrollment & Benefits



Primary Care Innovations

- Patient centered teams enable providers to practice at highest scope of license and improve care
- Integrating behavioral health & substance abuse – most rapidly growing part of the practice
- Fostering a culture of improvement and change
 - Team trainings help decrease hierarchical systems
 - Monthly team meetings for peer and cross professional feedback
 - Tracking and monitoring operational and clinical goals
 - Policies and procedures for EMR system and Care Teams
 - We're a model for **Value Based Care Innovation**
 - Ohio Comprehensive Primary Care (CPC) program



Empanelment

- “The act of assigning individual patients to individual primary care providers and care teams with sensitivity to patient and family preference.”

Source: Safety Net Medical Home Initiative

- “Empanelment is a vital enabler of many elements of high-performing primary care.”

Source: Kevin Grumbach, MD, and J. Nwando Olayiwola, MD,MPH

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NFP Current Panel Sizes

- NFP measures its Provider panels based on patient PCP, NFP site and last appointment details (all found within the EMR)
- Patient needs to be assigned to an active NFP Provider and/or NFP site
- Patient must have completed an appointment with NFP in the past 18 months

NFP Volume Budgeting

- Projected Provider Volume = (Weekly Capacity) * (# Weeks Worked) * (Fill Rate) * (Show Rate)
 - Weekly Capacity or # of appointments per week is based on the Provider's FTE and Provider Type (MD, NP)
 - # Weeks Worked = Sum(Annualized PTO, Staff Meetings, Other Absence Scenarios) / 36 clinical hours
 - Annualized PTO also includes Holidays and CME time
 - Other Absences Scenarios i.e. Maternity Leave

Ideal “Panel Size” Formula

Weekly Schedule Capacity * # Weeks Worked / Average Number of Visits per Patient per Year

- (Weekly Schedule Capacity) * (# Weeks Worked) = Yearly Capacity
- Weekly Capacity (Appointments per week) is based on the Provider’s FTE and Provider Type (MD, NP)
- For Empanelment, NFP uses **42** Weeks Worked per year for all Providers

NFP's First "Panel Size" Formula (2016)

- Example: "Provider A" is an MD and has an FTE of 0.60

Weekly Schedule Capacity * **# Weeks Worked** / **Average Number of Visits per Patient per Year**

65 (Appointments per Week) * 42 (Weeks Worked) / 3.19 (Average)

$65 * 42 / 3.19 = 856$ (855.799) Patients

- Where did the 3.19 average come from?
- What do we do with this Panel Size information (856 Patients)?

Previously Consulted Publication

- Mark Murray, MD, MPA, Mike Davies, MD, Barbara Boushon, RN. **Panel Size: How Many Patients Can One Doctor Manage?** *Family Practice Management Journal*, 2007 Apr; 14(4):44-51.
 - 3.19 average was found within this article
 - A single practice average, not a state or national average
 - Encourages practices to analyze their own patient population to determine their own visit average
 - Difficult to compile in 2007 & prior to EMR
 - Which visits are relevant to include in the average?

Questions?



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Problems with the Formula (2016)

- Relevance of the 3.19 visit average
- External (published) average does not consider NFP's population complexities at the organizational or Provider level
- Current formula establishes a "Panel Size" as a single number or midpoint, but not a range of numbers considered acceptable
- NFP did not have defined operational direction when Provider panels were considered over or under paneled.
- NFP's Access Committee is formed in 2019 and considers these issues

NFP Access Committee: Discussion of Empanelment Modeling

1. Find the “New” Panel Midpoint
2. Establish a Panel Range around the midpoint
3. Determine operational actions upon review of the Empanelment Report

1. Find the “New” Panel Midpoint

1. Run a report that includes all completed appointments for the past calendar year
2. Find NFP’s own patient visit average
 - What visits do we consider applicable to be included in this dataset?
 - Only Provider Visits?
 - Provider & RN Visits?
 - All Visits?
 - NFP selected that Provider & RN Visits should be selected when determining its organizational and provider patient visit average as this considers the visit burden of the Provider’s care-team.
3. Find established Provider specific patient visit averages

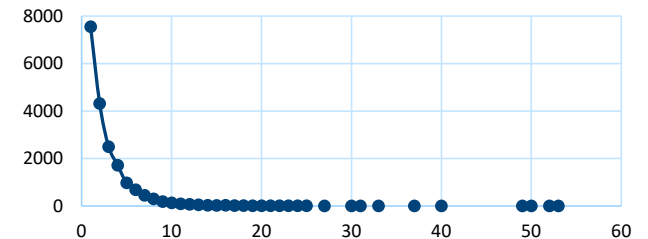
2. Establish a Panel Range

- What range size is considered acceptable?
 - +/- 10% of the new midpoint
 - Arbitrary, but an option
 - Another statistic from the population data
 - Standard Deviation
 - Mean Absolute Deviation
 - Not useful statistics due to the data distribution

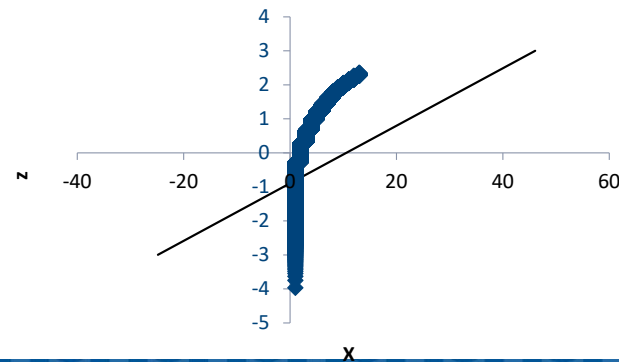
Ex. (2019 population data)

Average	2.873832
Max	59
Min	1
Std. Dev.	2.646793
Mean Abs Dev.	1.781662

Frequency Distribution - Total # of Visits



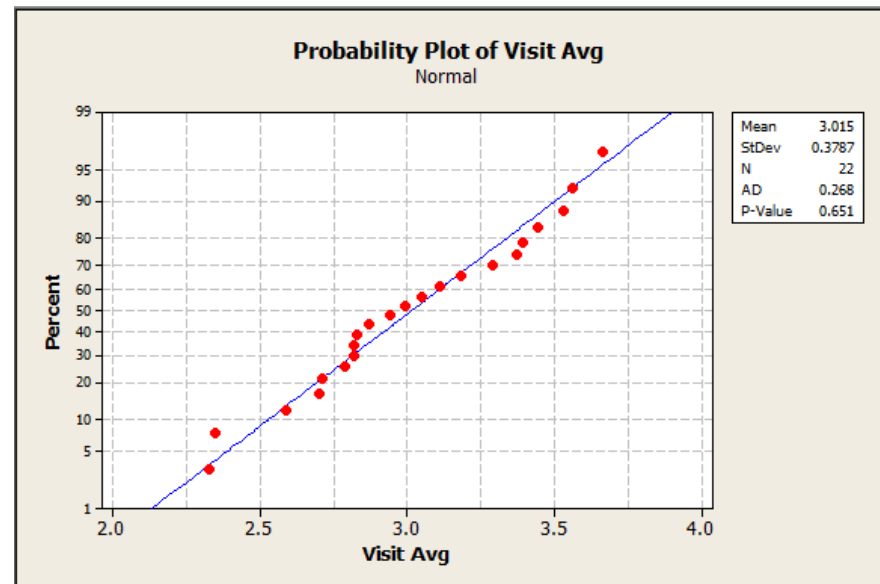
Normal Probability Plot – Provider and RN Visits



2. Establish a Panel Range

- What range size is considered acceptable?
 - A statistic from an alternative dataset – Established Provider Visit Averages
 - Range
 - Standard Deviation
 - Both are better options because this dataset is more normally distributed

Ex. (2019 established Provider visit averages)



2. Establish a Panel Range

- Some Options (from the midpoint):
 1. +/- 10%
 2. +/- Range of NFP's established Provider averages
 3. +/- Standard Deviation of NFP's established Provider averages
- NFP decided to consider its established Provider visit averages as a dataset. This standard deviation of this dataset was then used to establish Provider panel ranges.

3. Determine Operational Actions

	Provider Name	MD/NP	Panel Size -		Weekly Capacity (Slots)	Yearly Capacity (Wk Cap *42 working weeks)	Provider Avg. # of Visits (FY 2018-19)	Ideal Panel Size	The Diff	Ideal Range +/- Std. Dev. Of PCP Avgs.		Within Range?	
			Past 18 Months as of 6/30/20	Wk/FTE as of 7/1/20									
Site 1	Provider A	MD	1070	0.66	71	2982	2.79	1069	1	941	1237	Within Range	
	Provider B	NP	942	0.60	60	2520	2.82	894	48	788	1032	Within Range	
	Provider C	NP	632	0.54	54	2268	3.56	637	-5	576	713	Within Range	
	Provider D	MD	569	1.00	108	4536	2.87	1580	-1011	1396	1821	Under Paneled	
	TEAM TOTAL		3213	3	293	12306		4180	-967	3701	4803		
	non-paneled		151										
	SITE 1 TOTAL		3364	2.8	293	12306		4180	-967	3701	4803		

- Review Provider capacity
- Review Site capacity
- Consider New Patient Visits
- Consider future budgeting and staffing decisions

Questions?



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Review: NFP's Selected Model

- Panel Size: Use NFP annual appointment data (Provider and RN visits) to determine organizational and Provider visit averages

$(\text{Weekly Schedule Capacity}) * (\text{\# Weeks Worked}) / (\text{Average Number of Visits per Patient per Year})$

- Panel Range: Determined by the standard deviation of the established provider visit averages

$(\text{Yearly Schedule Capacity}) / ((\text{Provider Visit Average}) +/- (\text{Standard Deviation}))$

- Operational Direction: Review Provider panel sizes semiannually to adjust for scheduling, capacity and staffing

Sample Empanelment Report

	Provider Name	MD/NP	Panel Size - Past 18 Months as of 6/30/20	Wk/FTE as of 7/1/20	Weekly Capacity (Slots)	Yearly Capacity (Wk Cap *42 working weeks)	Provider Avg. # of Visits (FY 2018-19)	Ideal Panel Size	The Diff	Ideal Range +/- Std. Dev. Of PCP Avgs.		Within Range?		
Site 1	Provider A	MD	1070	0.66	71	2982	2.79	1069	1	941	1237	Within Range	} 2 New Patient Visits per day	
	Provider B	NP	942	0.60	60	2520	2.82	894	48	788	1032	Within Range		
	Provider C	NP	632	0.54	54	2268	3.56	637	-5	576	713	Within Range		
	Provider D	MD	569	1.00	108	4536	2.87	1580	-1011	1396	1821	Under Paneled	} 1 New Patient Visit per day	
	TEAM TOTAL		3213	3	293	12306		4180	-967	3701	4803			
	non-paneled		151											
	SITE 1 TOTAL		3364	2.8	293	12306		4180	-967	3701	4803			
Site 2	Provider X	MD	1458	0.67	72	3024	2.82	1072	386	945	1239	Over Paneled	} 4 New Patient Visits per day	
	Provider Y	NP	573	1.00	99	4158	2.33	1785	-1212	1535	2131	Under Paneled		
	Provider Z	NP	942	1.00	99	4158	3.11	1337	-395	1192	1522	Under Paneled		
	TEAM TOTAL		2973	2.67	270	11340		4194	-1221	3672	4892			
	non-paneled		51											
	SITE 2 TOTAL		3024	2.67	270	11340		4194	-1221	3672	4892			

Empanelment Reports

- 3rd Quarter 2019 Report
 - Appointment data from calendar year 2018
 - Initial modeling options were discussed and evaluated using this dataset
 - NFP Universal Visit Average = 2.80 visits per patient
 - Standard Deviation of Provider Visit Averages = 0.3558
- Mid-2020 Report
 - Appointment data from calendar year 2019
 - NFP Universal Visit Average = 2.87 visits per patient
 - Standard Deviation of Provider Visit Averages = 0.3787
- Mid-2021 Report
 - Appointment data from calendar year 2020
 - NFP Universal Visit Average = 2.95 visits per patient
 - Standard Deviation of Provider Visit Averages = 0.4107

Critiquing Current Model

- Concerns re: Provider Visit Average Dataset
 - Is this dataset a satisfactory representation of NFP's population data?
 - Comparing dataset averages:
 - 2019 Report: NFP Universal Visit Average = 2.80
 - NFP Provider Visit Average (dataset) = 2.96
 - 2020 Report: NFP Universal Visit Average = 2.87
 - NFP Provider Visit Average (dataset) = 3.02
 - 2021 Report: NFP Universal Visit Average = 2.95
 - NFP Provider Visit Average (dataset) = 3.09
 - In both reports, the mean of the NFP Provider Visit Average datasets fell within the 95% confidence interval of their respective population average, verifying this dataset is a satisfactory representation of the population data.

Final Considerations...

- PCP assignment within your EMR
 - When is a new patient assigned to a Provider?
- PCP accuracy within your EMR
 - Requires constant maintenance with each patient interaction
- Panel size calculations require:
 - Analysis and criticism with each new Empanelment Report
 - Operational procedures based on the findings of the report

Questions?



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Thank You!

Contact Information

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