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Community Health Centers®

## Health Information Technology and Data Needs Assessment

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## Executive Summary

The assessment highlights a transformative shift among Community Health Centers as they integrate social determinants of health (SDOH) data into their care models, fostering more comprehensive and patient-centered services. By leveraging SDOH data, Health Centers can design interventions tailored to the unique needs of individuals and communities, improving patient outcomes.

Significant challenges persist, however, particularly in technical interoperability, with 61% of Health Centers reporting difficulties in aligning health information systems, and privacy concerns, cited by 52% of centers. These issues underscore the urgent need for robust, compatible health IT systems and stronger data protection measures to enable secure and effective data sharing.

Most Community Health Centers have access to claims data, which they utilize for financial planning (60%) and informing value-based care contracts (50%). There is a strong interest in adopting advanced technologies, with many Community Health Centers viewing artificial intelligence (AI), machine learning, and predictive models as opportunities to improve operations. Despite this interest, cost-related barriers hinder the adoption of these tools. Currently, 64% of Health Centers are not using generative AI tools but plan to, and 77% do not use machine learning or predictive models, though many are planning to implement them.

These innovations hold the promise of personalized care, streamlined operations, and better resource allocation, however high costs present a barrier to widespread adoption. Addressing these financial and technological challenges through affordable solutions and grant support will be crucial to enhancing their impact. As shown in this assessment, Community Health Centers' focus on data-driven strategies enables them to continue delivering high-quality, equitable, and innovative primary care to underserved populations.

## Acknowledgements

The NACHC Research Team would like to express our sincere gratitude to the Community Health Centers that diligently completed the assessment. Your commitment and valuable insights have been instrumental in shaping this research. Additionally, we extend our thanks to the individuals and teams who contributed questions and meticulously reviewed the assessment tool. Your expertise and dedication have significantly enriched this project.

## Introduction

Community Health Centers (CHCs) play a crucial role in providing accessible health care to underserved populations. As the demand for quality care grows, integrating Health Information Technology (IT) becomes essential.

In 2023, Community Health Centers employed over 5,800 full-time equivalent (FTE) IT personnel to support their operations. The median number of reported IT personnel per health center was 2.08 FTEs, while the average was 4.28 FTEs (2023 HRSA UDS including 330 and LAL health centers).

## Health IT & Community Health Center Fast Facts

**99.5%**

Of Health Centers had an electronic health record (EHR) system installed and in use, at a minimum, for medical care, by December 31, 2023



**98%**

Of Health Centers used telemedicine to provide remote (virtual) clinical care services in 2023

**53.1%**

Of Health Centers had between 1 and 10 IT personnel FTEs

*Source: Authors analysis of 2023 HRSA UDS Data including 330 funded and Look a Like Community Health centers.*

The Health IT and Data Needs Assessment was conducted to better understand Health Centers' needs related to data sharing, data use, health information technology, artificial intelligence, machine learning, and predictive models. Our overall goal is to maximize health center use of data in order understand and eliminate disparities in access to primary care, modernize technology infrastructure and delivery systems, improve health outcomes and improve sharing of data innovations and best practices.

### *Methods & Demographics*

The needs assessment was conducted in Summer 2024, responses were solicited via email and were collected through an online platform. Due to the complexity of the assessment tool a fillable pdf was created to help Health Centers gather and organize their response.

We received a total of 349 responses, including 32 partial survey responses. The incomplete surveys were included as essential for obtaining a comprehensive understanding of Health IT at health centers and useful for analysis of individual questions. For each question, the sample size (N) is reported based on the number of respondents who answered the question. This approach was employed to account for attrition due to the extensive length of the assessment.

The majority (97%) of responses were from 330-funded Community Health Centers, with the remaining responses from Look-Alike Health Centers. In 2023 there were a total of 1496 Community Health Center organizations (including 133 Look-Alikes); the response rate is 23%.

## Community Health Center's Existing Systems

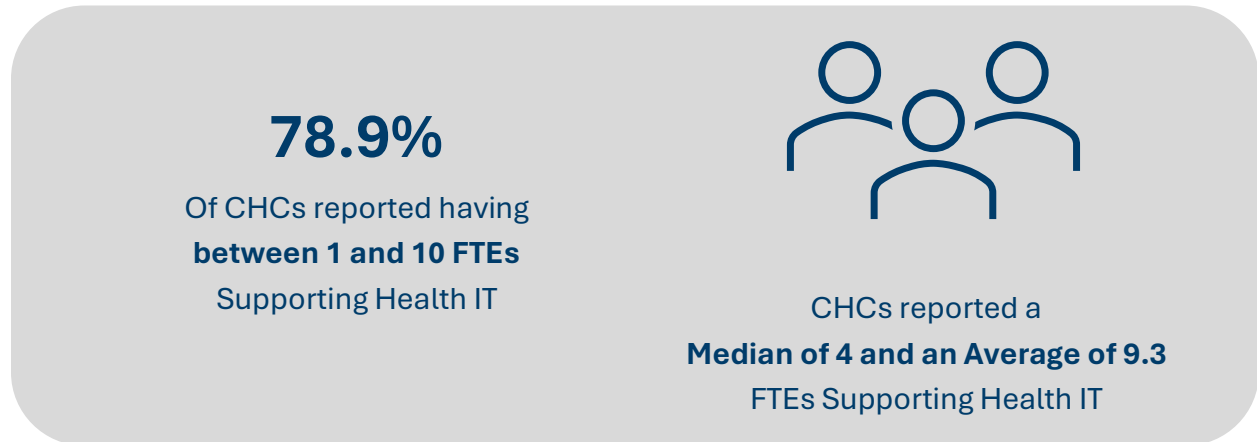
Community Health Centers (CHCs) employ dedicated IT staff to manage and support their technological infrastructure. They utilize various Health Information Technology (HIT) tools to enhance patient care, streamline operations, and ensure data security. Additionally, Health Centers actively participate in Health Information Exchange (HIE) activities, facilitating the secure sharing of patient information across different health care providers to improve coordination and outcomes.

### Key Findings:

- Over half (58.5%) of Health Centers report having between 1 and 5 Active HIT Vendors.

- Over two thirds (69%) of Health Centers report having a cybersecurity leader or committee.
- Many Health Centers have HIT tools integrated with their EHR.

Exhibit 1. Number of FTEs supporting Health IT in Responding Health Centers

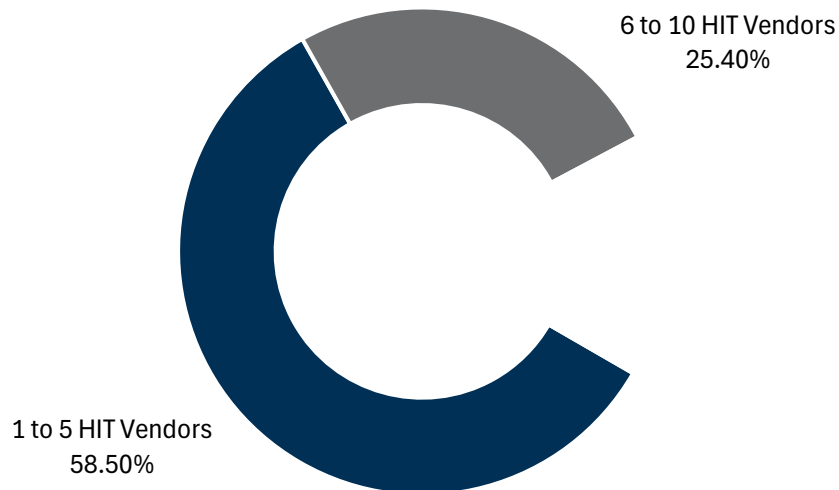


N=285, Margin of Error = ±5.2%

Note: Only repos that reported less than 100 FTEs were included in the analysis. In the 2023 UDS Data the maximum FTEs for IT personnel reported was 86.

Exhibit 2. Most Health Centers Have between 1 and 5 HIT Vendors

Active HIT Contracts with . . .



N= 299, Margin of Error = ±5.1%

Note: Only known values were included in the analysis.

**Exhibit 3. Health Centers have Various Roles and Teams to Manage Data, Data Governance and Health IT Systems.**

	<b>Percent</b>
Health Center has cybersecurity leader or committee	69%
Health Center has EHR team that approves and manages a backlog and any incidents	68%
Health Center has system that tracks health IT issues with our systems	66%
Health Center has data governance committee or process	48%
Health Center contracts for support of health IT system management	47%
Health Center has single person who manages health IT system requirements	34%
Health Center has a single person who manages data governance	24%
Health Center contracts for support for data governance	23%
Health Center does not have a data governance process or team	19%

*N = 340, Margin of Error= ±4.7%*

**Exhibit 4. Health Centers Participate in a Variety of Health Information Exchange Activities**

<b>HIE Activities</b>	
Claims, enrollment, and quality measure data with payers	73%
Participation in e-Prescribing for members	72%
Participation in exchange with reference laboratories	70%
Participation in exchange with inpatient providers/hospitals	67%
Participation in the State HIE Cooperative Agreement Program	53%
Participation in exchange with specialty care providers	48%
Connection to a community or social service information exchange system	24%

*N= 335, Margin of Error= ±4.7%*

### Exhibit 5. Many HIT Tools are Integrated with Health Centers' EHRs

	<b>Integrated with EHR</b>
e-Prescribing	94%
Patient Portal	88%
Medical billing & coding	87%
Behavioral health records	86%
Practice management	83%
Patient engagement/communication tool(s)	78%
Lab information systems (LIS)	76%
Clinical decision support	76%
Registries	72%
Telehealth/Telemedicine	70%
Electronic health records	68%
Electronic oral health records	68%
Data warehouses for clinical data	63%
Care management systems	62%
Mobile health applications	61%
Personal health records	58%
Provider engagement/communication tool(s)	53%
Data warehouse for administrative/financial data	46%
Pharmacy information systems (e.g. dispensing)	40%
Electronic Visit Verification (EVV)	35%
Remote Patient Monitoring (RPM)	28%

*N=342, Margin of Error= ±4.7%*



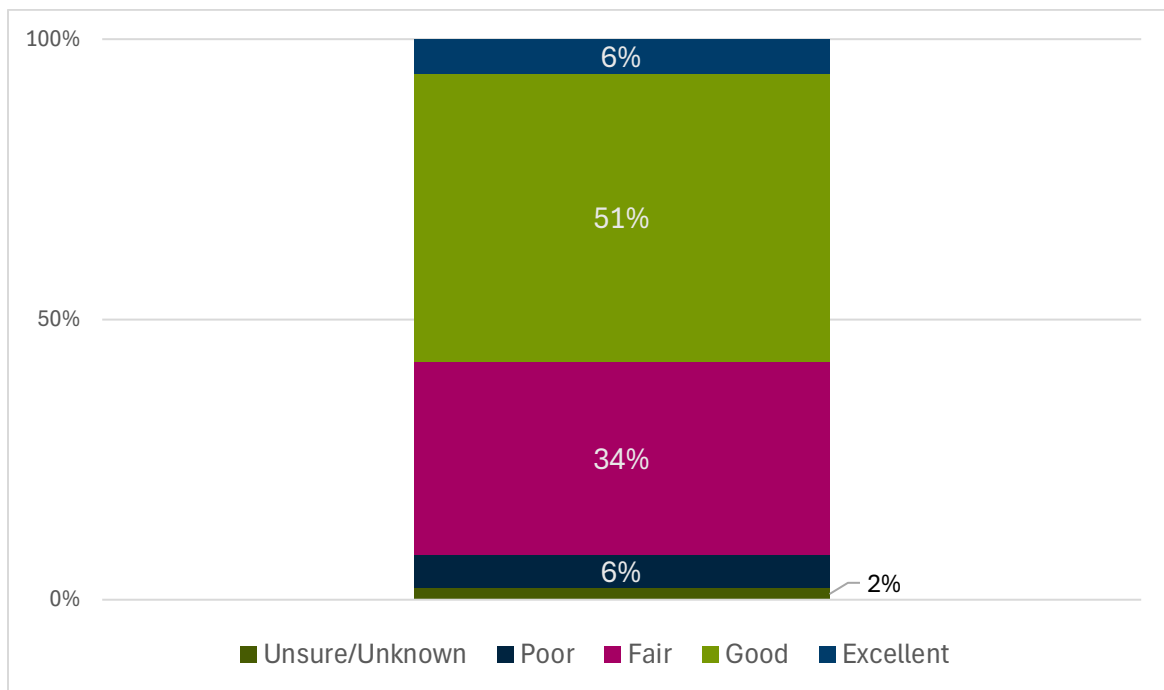
## Community Health Center’s Self-Assessment

Health Centers are making significant strides in leveraging Health Information Technology (HIT) to enhance service delivery. Recent data highlights that about half of Health Centers rate their EHR interoperability as good. Furthermore, a substantial majority report high confidence in using data to inform and improve services, with over two-thirds successfully integrating telehealth with their EHR and HIT systems. However, there remains a strong demand for support in cybersecurity and EHR optimization.

### Key Findings

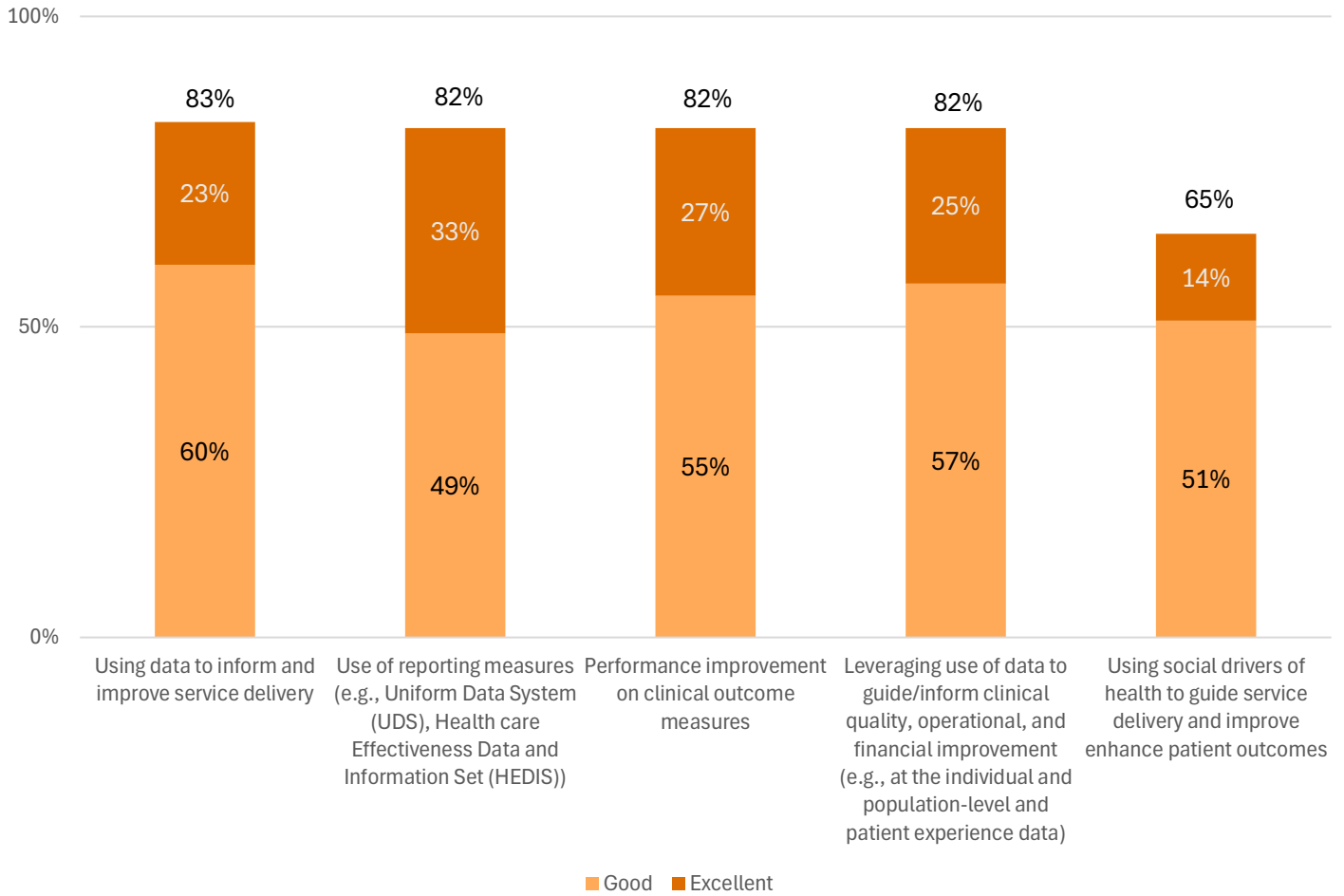
- About half (51%) of Health Centers report that their EHR interoperability with their current HIT System is Good.
- Most (83%) Health Centers report that their ability to use “data to inform and improve service delivery” is Good or Excellent.
- Over two thirds (68%) of Health Centers report that their ability to integrate Telehealth with EHR and HIT Systems is Good or Excellent.
- Cybersecurity and EHR Optimization top the list of where Health Centers would most like support from NACHC.

Exhibit 6. Most Health Centers report that their EHR Interoperability for their current HIT Systems is Fair or Good



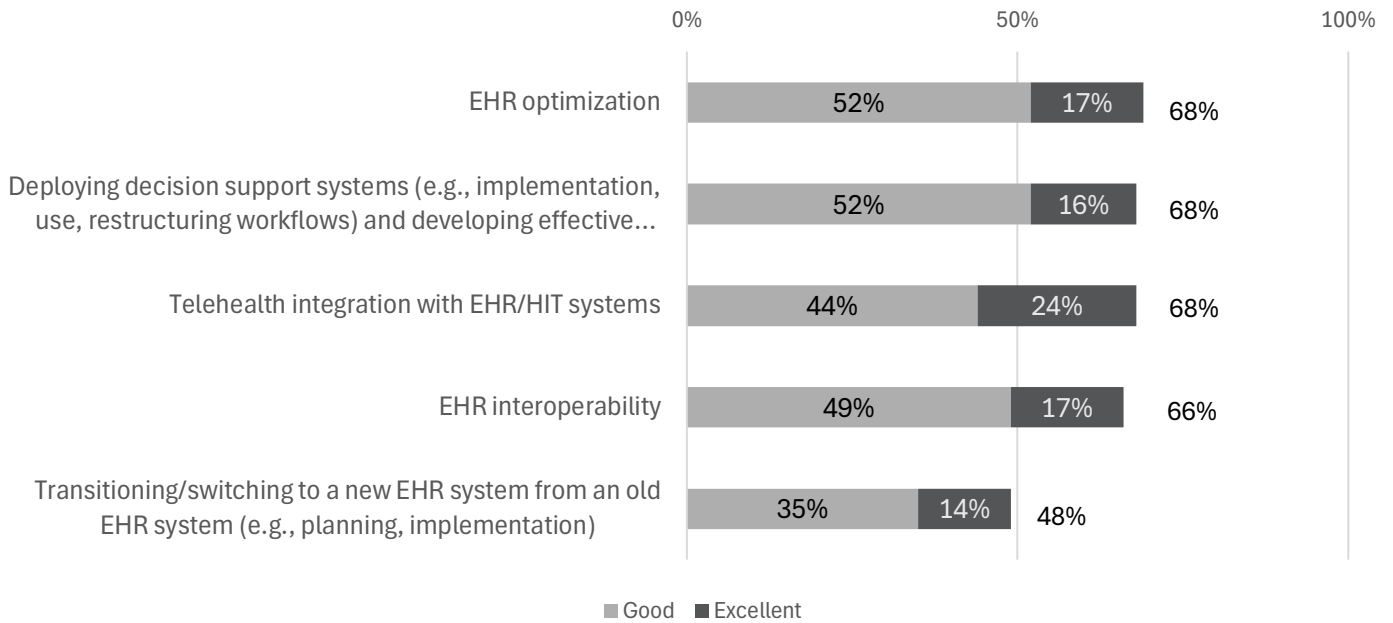
N=340, Margin of Error= ±4.7%

## Exhibit 7. Majority of Health Centers Rate Data Collection and Use Abilities as Good or Excellent



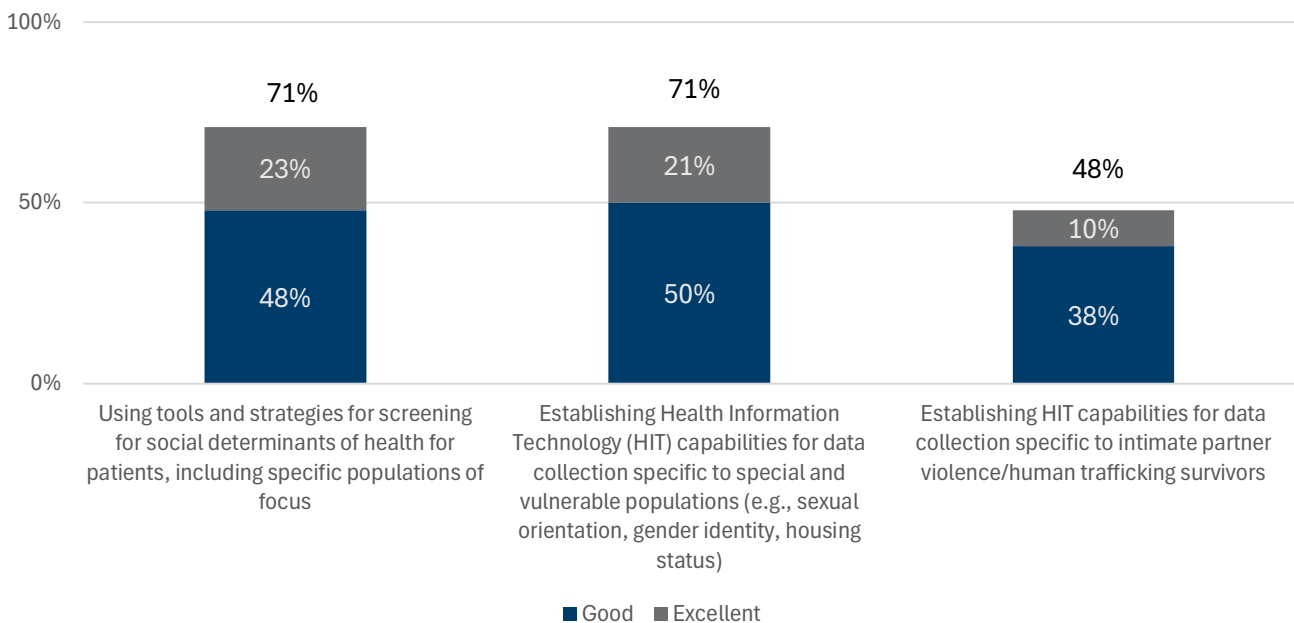
N=340, Margin of Error= ±4.7%

### Exhibit 8. Many Health Centers Rate Their Ability to Complete EHR and HIT Activities as Good or Excellent



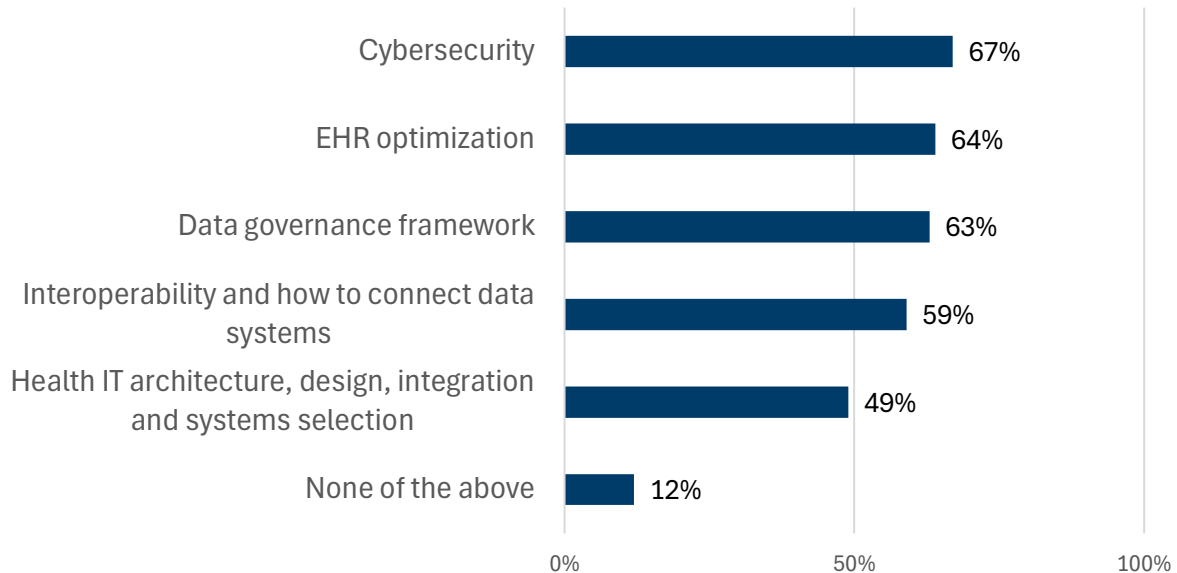
N=340, Margin of Error= ±4.7%

### Exhibit 9. Many Health Centers Rate Their Ability to Assess and Address Patient Needs using Data as Good or Excellent



N=340, Margin of Error= ±4.7%

## Exhibit 10. Many Health Centers would like support in various Health IT and Data Systems from NACHC



*N=338, Margin of Error= ±4.7%*

## Barriers and Challenges for Health IT

Health Centers face numerous challenges and barriers in their operations, particularly in the realm of Health Information Technology (HIT) and Electronic Health Records (EHR). While Health Centers are dedicated to enhancing patient care through advanced technologies, they often face challenges such as financial constraints, limited training opportunities, and the complexities of integrating new systems. These challenges can make it harder to fully leverage HIT and EHR capabilities, highlighting the importance of continued support and access to resources that will help them overcome these barriers and enhance their service delivery.

### Key Findings

- Cost is the most reported barrier (65%) Health Centers experience when it comes to EHRs/EMRs.
- Patient Computer/Technology Literacy (79%) and Access to Broadband internet (71%) were the most reported barriers for telehealth.
- Over one third (36%) of Health Centers report lack of financial incentive as a barrier to providing telehealth services.
- Over half (52%) of Health Centers report privacy concerns as a barrier for participating in data sharing.

Exhibit 11. High Cost of EHR/EMR Hardware and Software Most Reported Barrier for Health Centers.

<b>Barriers Related to EHRs/EMRs</b>	
High cost of hardware, software and/or Software as a service (SaaS)	65%
Complex workflows	51%
Inadequate training for clinical and non-clinical staff	46%
Productivity loss	45%
Difficulty creating queries or analytics	45%
Lack of IT staff for technical support (in-house, contract or vendor)	43%
Difficulty extracting data	41%
Lack of financial incentives	39%
Lack of interoperability with other HIT systems	38%
Poor usability and/or user experience	37%
Data governance	37%
Complex technical infrastructure	35%
Difficulty importing data	33%
Provider disinterest	31%
Data matching issues	28%
Inability to meet reporting requirements	27%
Poor data quality	24%
Privacy and/or security concerns	23%
Patient disinterest	21%
Lack of interoperability with existing billing system	19%

*N=315, Margin of Error= ±4.9%*

## Exhibit 12. Financial Considerations May Prevent Health Centers from Participating in HIEs

<b>Barriers Health Centers Experience related to Health Information Exchanges (HIEs)</b>	
Lack of financial incentives	35%
Complex technical infrastructure	28%
High cost of hardware, software and/or SaaS	27%
Lack of interoperability with other HIT systems	27%
Lack of IT staff for technical support (in-house, contract or vendor)	26%
Data matching issues	23%
Inadequate training for clinical and non-clinical staff	23%
Data governance	22%
Difficulty extracting data	21%
Provider disinterest	21%
Complex workflows	20%
Poor usability and/or user experience	20%
Privacy and/or security concerns	19%
Difficulty importing data	18%
Poor data quality	16%
Difficulty creating queries or analytics	16%
Productivity loss	15%
Inability to meet reporting requirements	14%
Patient disinterest	11%
Lack of interoperability with existing billing system	11%

*N=315, Margin of Error= ±4.9%*

### Exhibit 13. Financial Considerations May Prevent Health Centers from Participating in Remote Patient Monitoring (RPM).

<b>Barriers Health Centers Experience related to RPM</b>	
High cost of hardware, software and/or SaaS	31%
Lack of financial incentives	30%
Lack of IT staff for technical support (in-house, contract or vendor)	24%
Complex workflows	22%
Patient disinterest	20%
Lack of interoperability with other HIT systems	18%
Inadequate training for clinical and non-clinical staff	17%
Complex technical infrastructure	17%
Provider disinterest	15%
Lack of interoperability with existing billing system	14%
Difficulty importing data	13%
Privacy and/or security concerns	13%
Difficulty extracting data	12%
Poor usability and/or user experience	12%
Productivity loss	11%
Data governance	11%
Difficulty creating queries or analytics	10%
Inability to meet reporting requirements	9%
Data matching issues	7%
We do not experience any barriers or challenges	6%
Poor data quality	6%

*N=315, Margin of Error= ±4.9%*

### Exhibit 14. Most Health Centers Report Access Barriers for Patients to Use Telehealth Services

<b>Access Barriers for Telehealth</b>	<b>Patient</b>	<b>Provider</b>
Computer and/or technology literacy	79%	31%
Access to Broadband Internet	71%	10%
Lack of Private Space	36%	11%
Concerns about Quality of Care	20%	20%
Disinterest in Telehealth	19%	19%

*N=318, Margin of Error= ±4.9%*

### Exhibit 15. Health Centers experience Barriers for Providing Telehealth Services

<b>Barriers Health Centers Experience Related to Telehealth</b>	
Insufficient reimbursement	36%
Lack of financial incentives	29%
Restrictions on audio-only telehealth	29%
High cost of hardware, software and/or SaaS	28%
Lack of reimbursement	25%
Lack of interpretation services	23%
Lack of IT staff for technical support (in-house, contract or vendor)	21%
Inadequate training for clinical and non-clinical staff	21%
Payment parity	20%
Productivity loss	18%
Poor usability and/or user experience	18%
Complex workflows	16%
Privacy and/or security concerns	16%
Lack of interoperability with other HIT systems	14%
Complex technical infrastructure	13%
Data governance	11%
Lack of interoperability with existing billing system	10%
Provider licensing	8%
Poor data quality	7%
Difficulty extracting data	7%
Difficulty importing data	7%
Difficulty creating queries or analytics	7%
Data matching issues	7%
Inability to meet reporting requirements	7%
Health Center Site access to broadband internet	6%

*N=315, Margin of Error= ±4.9%*



## Exhibit 16. System Interoperability is the Most reported Barrier for Data Sharing

<b>Barriers Health Centers Experience related to Data Sharing</b>	
Technical interoperability challenges between different systems	61%
Privacy concerns related to data sharing	52%
Lack of financial incentives for sharing data	43%
Inconsistent data sharing regulations across states/institutions	41%
Legal and regulatory obstacles hindering data sharing	38%
Uncertainty about return on investment (ROI) and costs for creating data sharing infrastructure	34%
Lack of patient awareness about data sharing benefits	33%
Poor data quality	32%
Resistance from health care providers due to workload or perceived risks	32%
Data misuse concerns	31%
Ethical ambiguity regarding data ownership and access	25%
Delays in data availability for research	15%
Competitiveness impact due to data transparency	8%
Health Center does not experience any barriers or challenges	8%

*N=308, Margin of Error= ±5.0%*

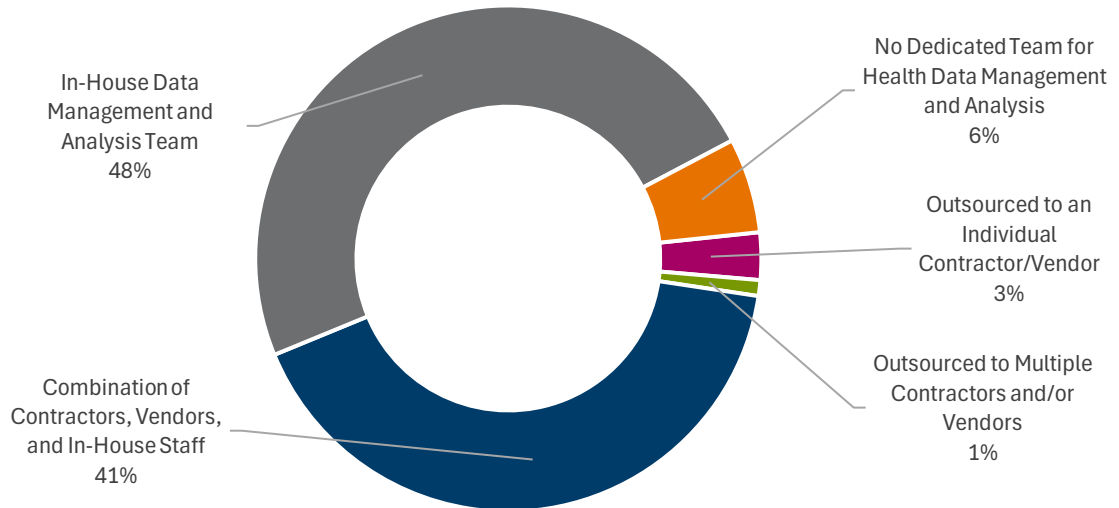
## Data Access, Management, & Analysis

Health Centers play a crucial role in providing primary health care services to underserved populations. Access to public data and claims data is essential for Health Centers to monitor and improve patient outcomes, optimize resource allocation, and ensure compliance with regulatory requirements. The effective use of this data can lead to more informed decision-making and better health outcomes for the communities they serve.

### Key Findings:

- Over two thirds (36%) of Health Centers report using publicly available data.
- Nearly half (47%) of Health Centers report that not knowing what public data is available as a challenge.
- Most Health Centers report having access to individual claims data for Private (69%), Medicare (73%), and Medicaid (76%) Insures.
- Improving patient care outcomes (64%) and supporting financial planning and budgeting (60%) are the most reported use cases for claims data.

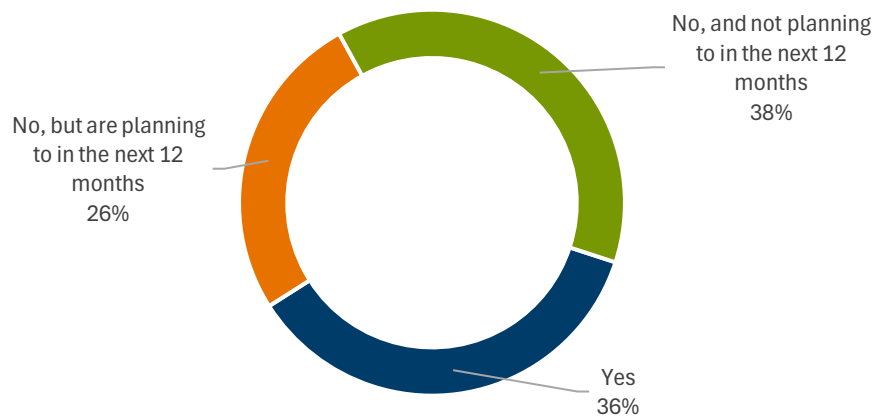
Exhibit 17. Nearly Half of Health Centers Reported Having an In-House Data Management and Analysis Team



N=316, Margin of Error= ±4.9%

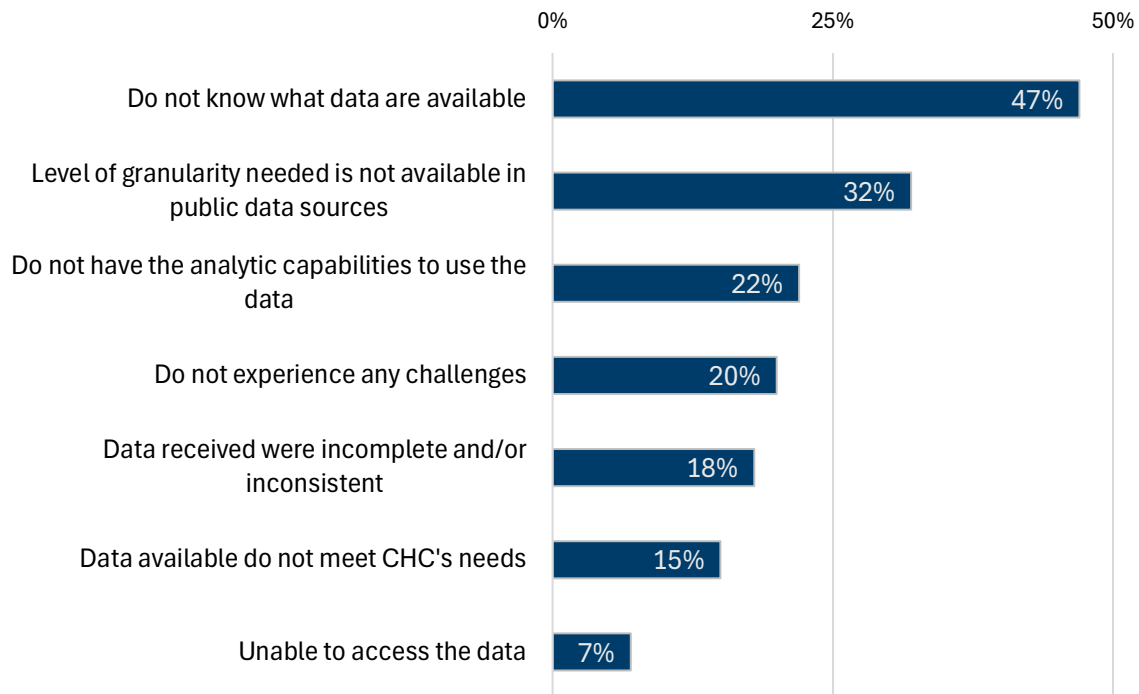
Exhibit 18. Over One Third of Health Centers Reported Using Publicly Available Data Sources

Community Health Center's Use of Publicly Available Data



N=312, Margin of Error= ±4.9%

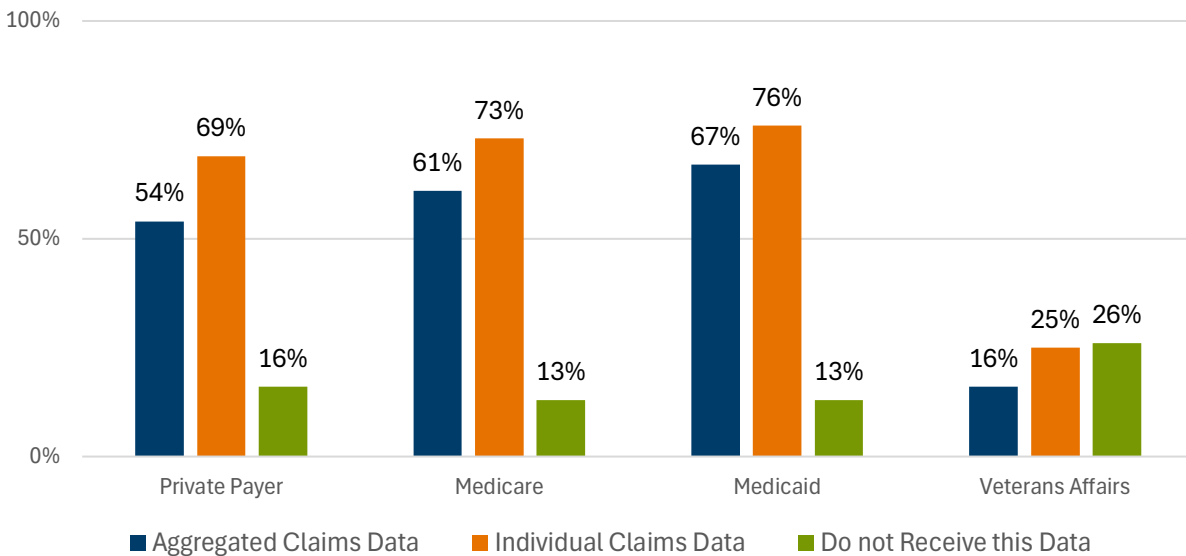
Exhibit 19. Health Centers Cite Data Availability and Granularity as Public Data Challenges



N= 284, Margin of Error= ±5.2%

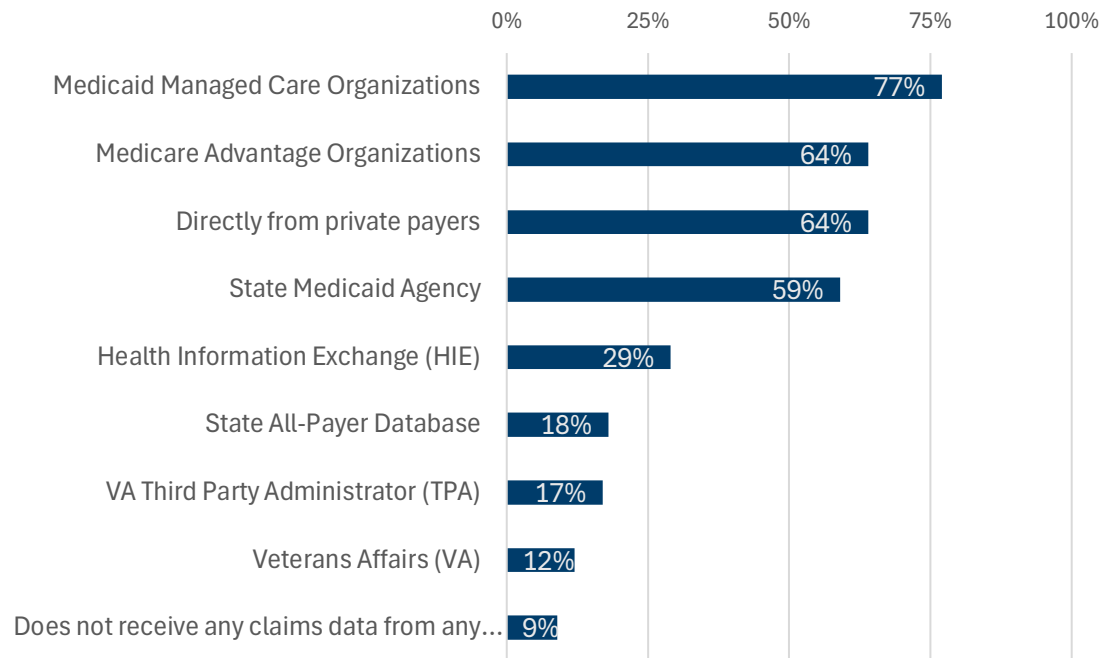
### Claims Data and Health Centers

Exhibit 20. The Majority of Health Centers have access to Claims data for Medicare, Medicaid, and Commercial Insurance



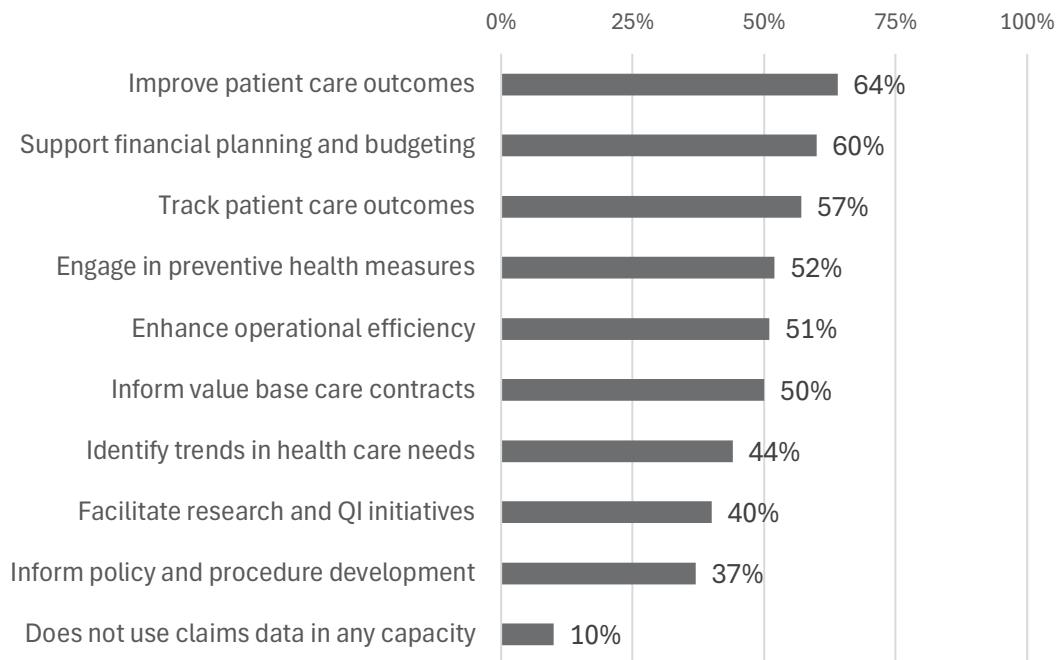
N=296, Margin of Error= ±5.2%

### Exhibit 21. Majority of Health Centers receive Claims Data Directly from Payers



*N=307, Margin of Error= ±5.0%*

### Exhibit 22. Health Centers use the Claims Data they Receive for a Variety of Activities



*N=305, Margin of Error= ±5.0%*

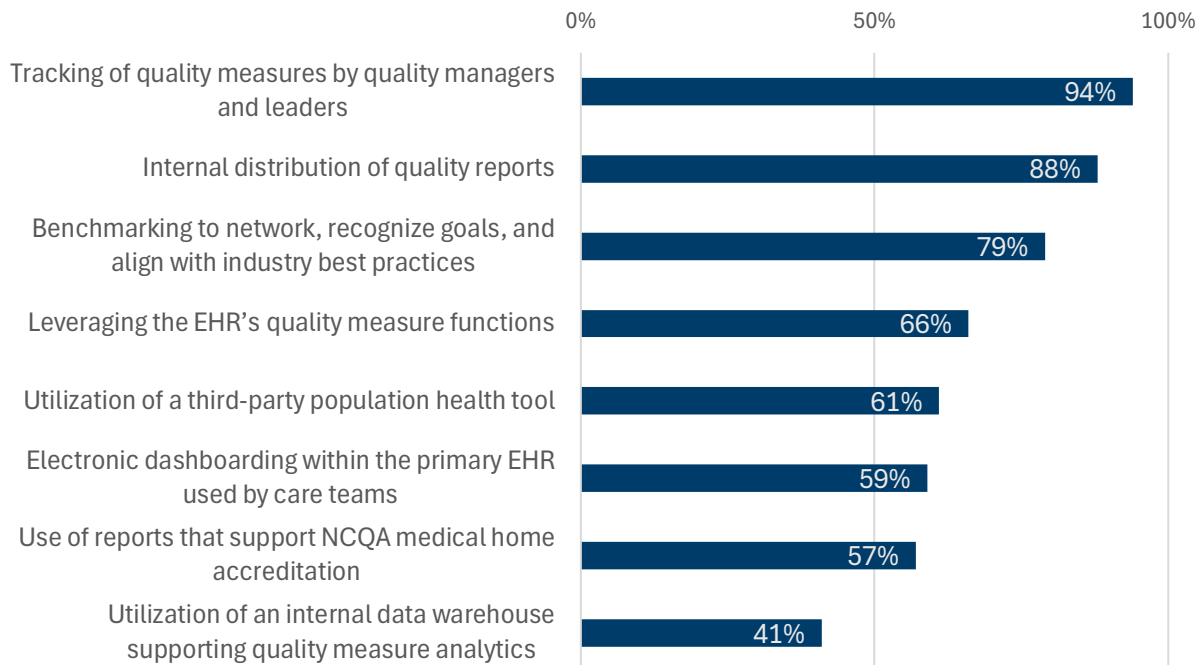
## Quality Improvement

Community Health Centers (CHCs) can leverage Health Information Technology (HIT) to significantly enhance quality improvement efforts. By implementing electronic health records (EHRs), Health Centers can streamline patient data management, ensuring accurate and up-to-date information is readily available for health care providers. This facilitates better coordination of care, reduces errors, and improves patient outcomes. Additionally, HIT tools like electronic registries help Health Centers identify care gaps, track patient progress, and measure quality improvements over time. These technologies empower Health Centers to deliver more efficient, patient-centered care, ultimately enhancing the overall quality of health care services.

### Key Finding:

- The vast majority of Health Centers (94%) use HIT to track quality measures to support Quality Measurement and Reporting.

Exhibit 23. Health Centers use HIT and Health Data to Support Quality Measurement and Reporting



*N=311, Margin of Error= ±4.9%*

Exhibit 24. Health Centers Support Quality Improvement with Health IT and Health Data.

QI Activities	
Incorporating practice guidelines or standards into clinical decision support	84%
Setting performance targets on a network level for specific measures	75%
Automating outreach to patients using health IT applications	69%
Training QI leadership and provider staff in the use of health IT for QI	68%
Participating in health center-specific pay-for-performance initiatives	64%
Assisting with cleaning and formatting data from health IT for QI reporting	59%
Participating in forums for sharing information on quality improvement	57%
Building custom local measures to support health center operations, special populations, and clinical priorities	47%
Participating in Medicare e-Prescribing Incentive Programs	16%
Participating in Physicians Quality Reporting System (PQRS)	15%
Participating in EMRAM scoring (HIMSS)	5%

*N=311, Margin of Error= ±4.9%*

## Machine Learning, Artificial Intelligence (AI), & Predictive Models

Health Centers play a crucial role in providing accessible health care services, especially in underserved areas. Integrating Machine Learning (ML), Artificial Intelligence (AI), and predictive models into Health Centers can significantly enhance patient care. These technologies can help in early diagnosis, personalized treatment plans, and efficient resource management. For instance, predictive models can forecast patient influx, allowing Health Centers to allocate resources more effectively and reduce wait times. AI-driven tools can also assist in identifying at-risk patients and suggesting preventive measures, ultimately improving overall health outcomes.

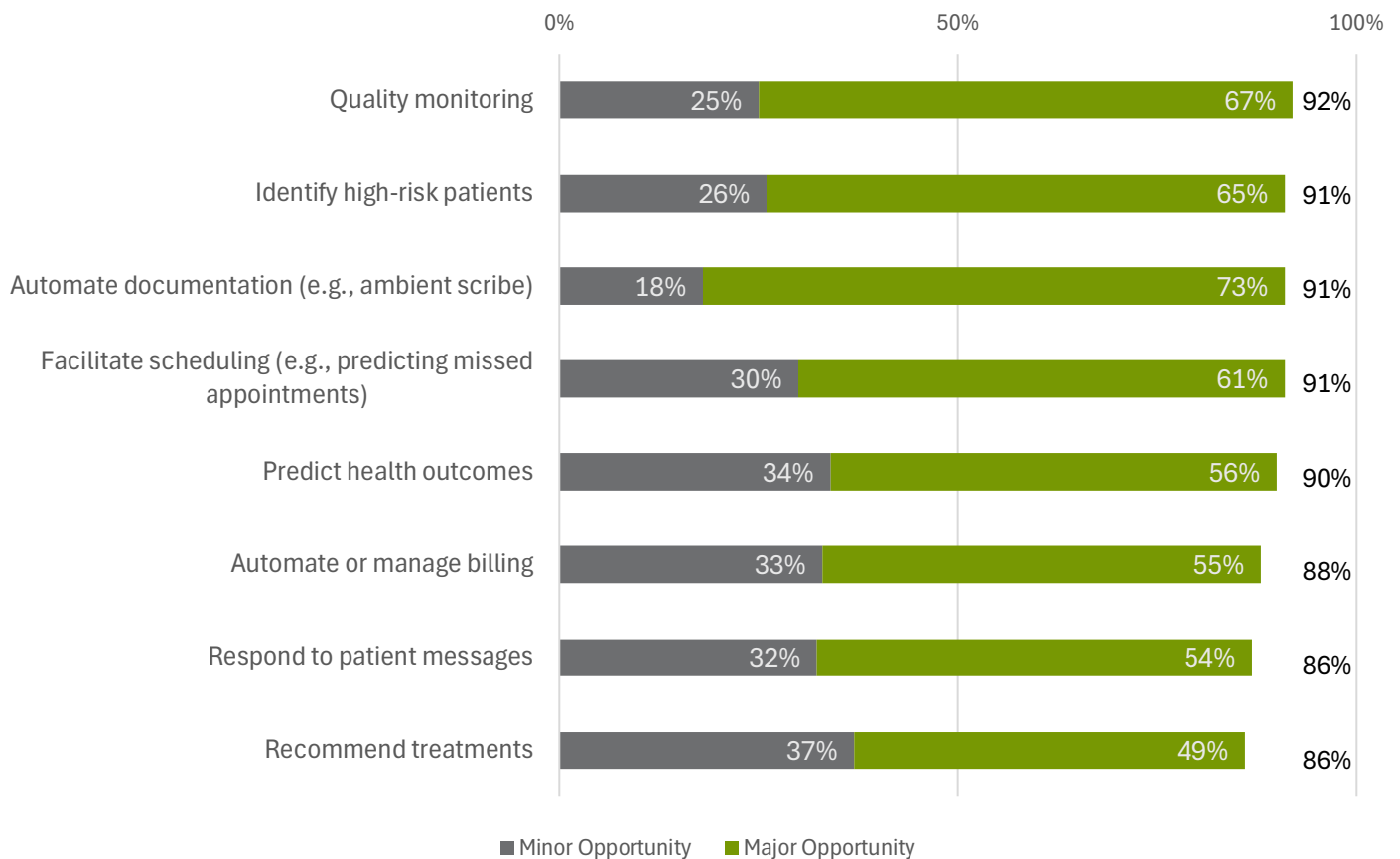
### Key Findings:

- Overwhelmingly Health Centers see AI, Machine Learning, and Predictive Models as opportunities to enhance their operations.

- Expense of the tools is the most reported challenge (97%) for Health Centers to overcome to adopt AI, Machine Learning, and Predictive Model tools.
- Less than a third (32%) of Health Centers report having the resources to evaluate machine learning or predictive models.
- Over half (52%) of Health Centers are using or planning to use Generative AI tools in the next 12 months.
- Over three fourths (77%) of Health Centers do not use predictive Models or Machine Learning.

### Opportunities

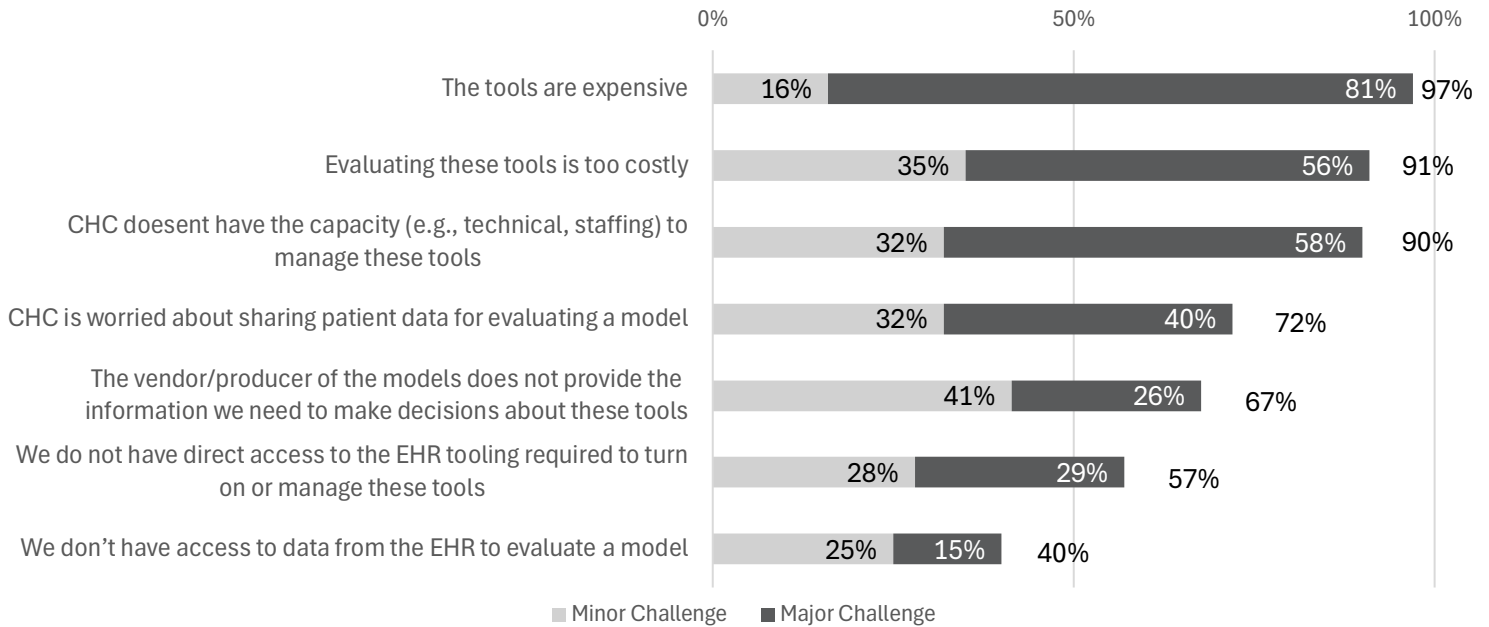
Exhibit 25. Health Centers Indicate that AI, Machine Learning, and Predictive Models offer Major Opportunities for many of their operations.



N=312, Margin of Error= ±4.9%

### Challenges

Exhibit 26. Health Centers Report Cost and Capacity as Top Challenges for using AI, Machine Learning, and Predictive Models.

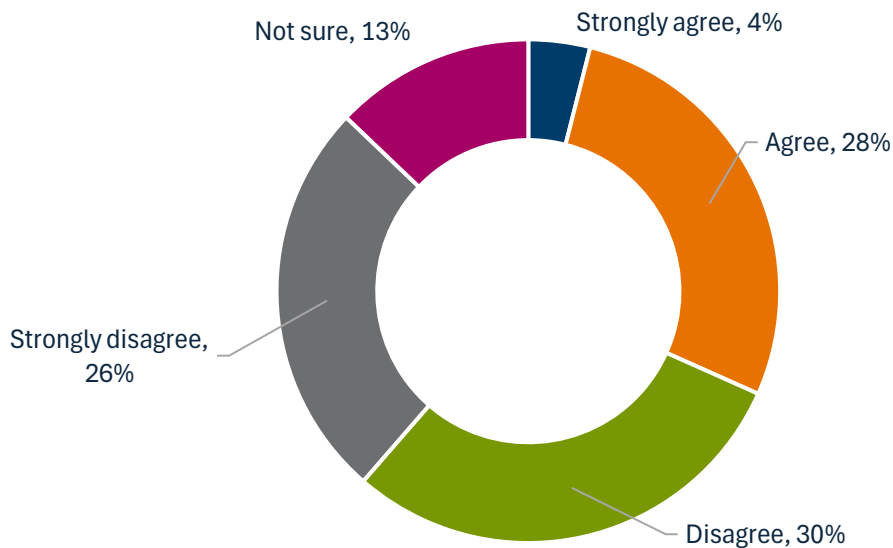


N=310, Margin of Error= ±4.9%

### Evaluation of AI, Machine Learning, and Predictive Model Tools

Exhibit 27. Most Health Centers Do Not Have Sufficient Resources to Evaluate Machine Learning and Predictive Models.

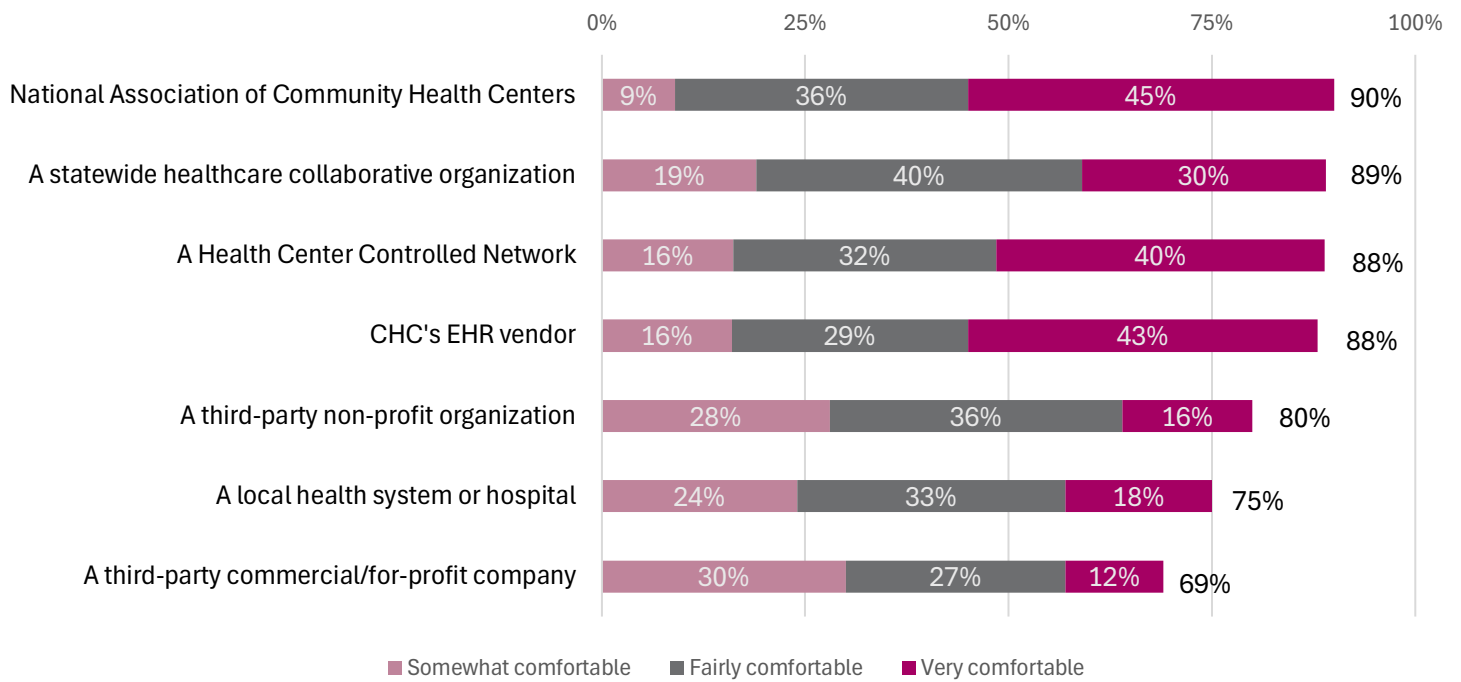
Health Center's level of agreement with the following statement: My health center has access to sufficient resources to evaluate machine learning and predictive models.



N=312, Margin of Error= ±4.9%

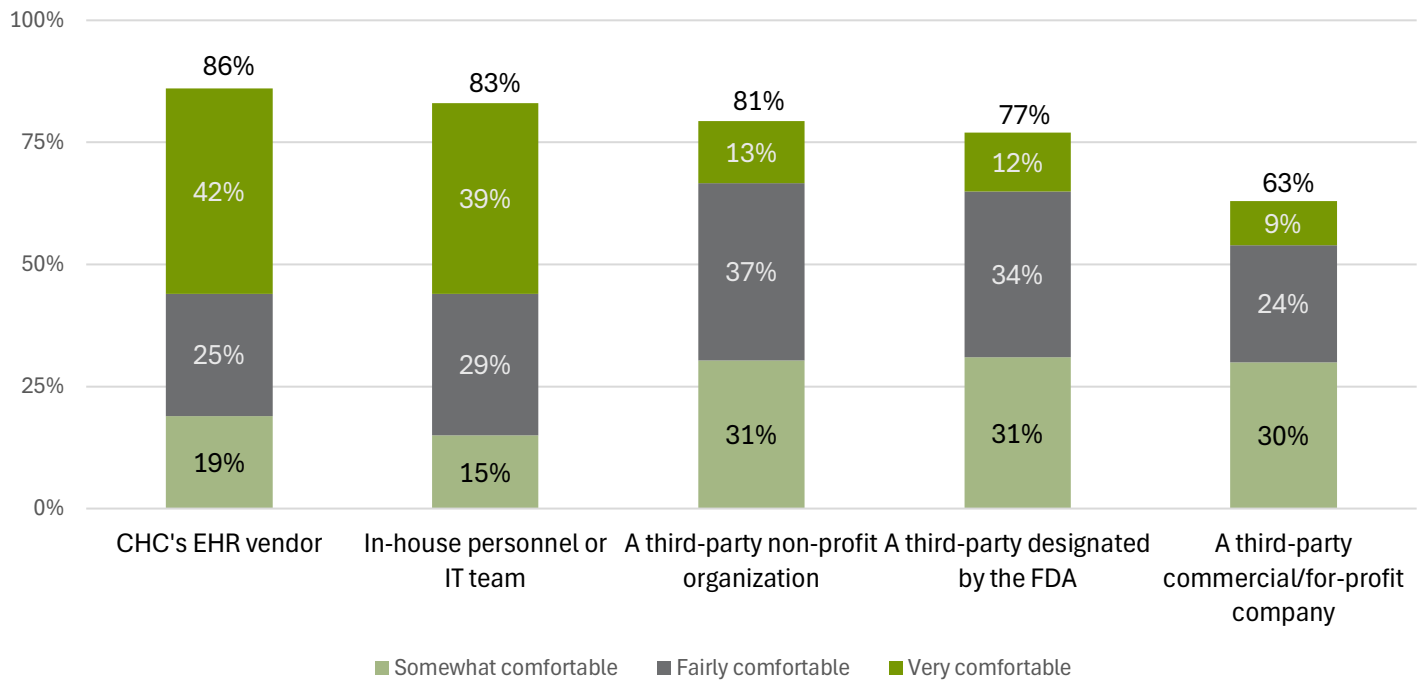


## Exhibit 28. Health Centers are Comfortable with Partnering with Other Organizations to Evaluate Predictive Models



*N=311, Margin of Error= ±4.9%*

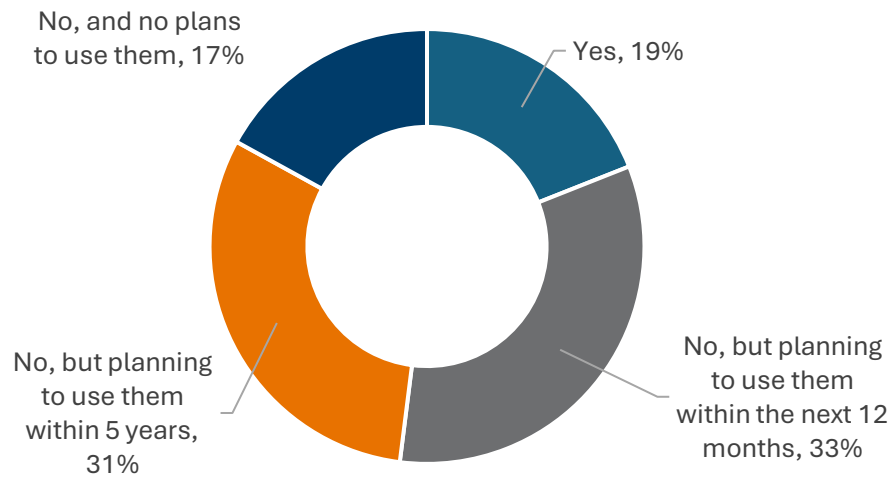
Exhibit 29. Most Health Centers Report Being Comfortable with Using Predictive Models Evaluated by Other Organizations.



N=308, Margin of Error= ±5.0%

*Generative AI Use at Health Centers*

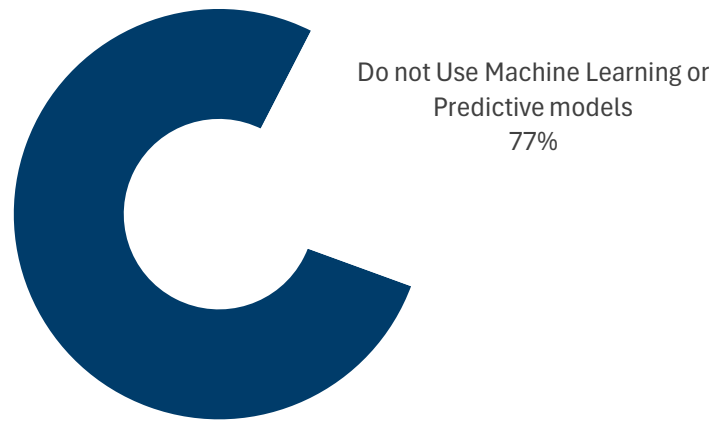
Exhibit 30. Health Centers Are embracing Generative AI (e.g., ambient scribe, patient-facing chatbot)



N=310, Margin of Error= ±4.9%

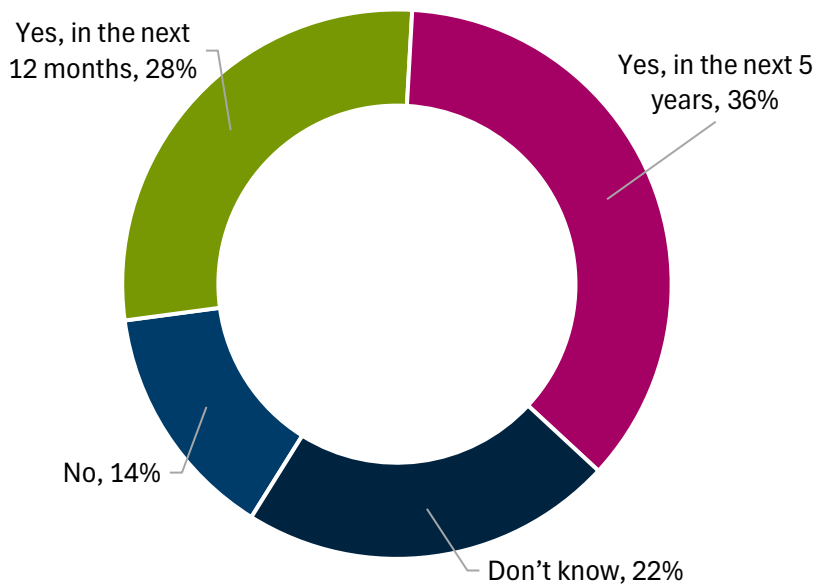
### Machine Learning & Predictive Model Use in Health Centers

Exhibit 31. Most Health Centers do not currently use Machine Learning or Predictive Models



N = 309, Margin of Error= ±4.9%

Exhibit 32. Almost 2/3 of Health Centers Plan to Use Machine Learning and Predictive Models in the Next 5 Years



N=273 Margin of Error= ±5.4%

## Discussion

The assessment underscores a significant and encouraging trend among Health Centers: the integration of SDOH data into their service delivery models. This shift represents a critical step toward providing more comprehensive, patient-centered care. Leveraging SDOH data effectively has the potential to improve patient outcomes, enabling the design of services that are tailored to meet the unique needs of individuals and communities.

Despite this progress, challenges remain. Interoperability and privacy concerns are two major hurdles that Health Centers must address to fully capitalize on the value of SDOH data. Notably, 61% of Health Centers report technical interoperability challenges, highlighting the need for more robust, compatible health information technology systems. Additionally, over half (52%) of Health Centers cite privacy concerns, indicating a need for stronger data protection measures and policies that safeguard sensitive patient information while enabling data sharing.

In addition to advancements in SDOH data usage, Health Centers are increasingly utilizing claims data for financial planning and value-based care contracts. This indicates a growing capability to leverage available data to enhance both financial sustainability and operational efficiency. These practices are crucial for ensuring the long-term viability of Community Health Centers as they strive to meet the needs of underserved populations.

The growing enthusiasm for artificial intelligence (AI), machine learning, and predictive modeling among Community Health Centers is promising. These technologies have the potential to revolutionize health care delivery by generating predictive insights, optimizing workflows, and automating routine tasks. However, the costs associated with acquiring, implementing, and evaluating these tools present barriers to adoption. This suggests the need for more affordable solutions, as well as grant opportunities to support the integration of advanced technologies into health care systems.

The planned adoption of generative AI tools and machine learning models reflects the innovative and forward-thinking approach of Community Health Centers. As these technologies become more accessible and cost-effective, their adoption is likely to increase, leading to more innovative, efficient and scalable health care solutions. The benefits of these tools include personalized patient care, streamlined operations, and better resource allocation, all of which are critical to addressing the challenges faced by health centers serving underserved communities.

In conclusion, while Community Health Centers are making significant progress in using data to enhance service delivery and patient outcomes, substantial barriers remain. Addressing technical interoperability and privacy concerns, as well as reducing the costs associated with advanced technologies, will be pivotal to fully realizing the potential of

data-driven health care. in Community Health Centers. By overcoming these challenges, Community Health Centers can continue to lead the way in delivering high-quality, equitable, and innovative primary care to the populations they serve.