

Understanding the Impact of Medicaid-Serving Primary Care Team Functioning and Clinical Context on Cancer Care Treatment Quality: Implications for Addressing Structural Inequities

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QUESTION ASKED: How do primary care team structure/context and multiteam system (MTS) inputs and selected processes affect performance on cancer care quality for Medicaid enrollees diagnosed with breast or colorectal cancer?

SUMMARY ANSWER: By exploring critical cases of primary care teams, our findings indicate that variations in primary care team structures and processes may explain performance variations.

WHAT WE DID: We conducted a comparative case study, using critical case sampling of primary care clinics in New Jersey, to provide maximum variation on clinic-level care performance rates (Medicaid enrollees' receipt of guideline-concordant treatment).

WHAT WE FOUND: We found that contextual factors of primary care teams (eg, payment structure/business model, organizational culture) in relation to other teams (eg, cancer) in the MTS may contribute to disparate care outcomes. Primary care teaming strategies are aligned with the organizations' business model and culture/mission, and their boundary status (eg, proportion of component teams working within the same organization, facility, or health system) involved in cancer screening detection and care transition.

BIAS, CONFOUNDING FACTOR(S): Although valuable findings were observed in this study, clinics do not represent all Medicaid-serving primary care settings; however, we purposefully illustrate variation in primary care MTS to provide a more comprehensive understanding of real-world settings. Teams were recruited on the basis of quality metrics using population-based data. Multiple decision points are needed to assign patients to clinics and determine clinic-level performance rates. Clinic performance was determined from patients diagnosed between 2011 and 2016 and team observations were conducted in 2019-2020. Primary care processes and MTSs change over time; to address this, our assessment included understanding history and recent changes.

REAL-LIFE IMPLICATIONS: Our findings highlight the importance of team-based solutions that account organizational and contextual complexity in an MTS. In research, our case studies indicate that we must be mindful about whether the health care delivery contexts where research questions are investigated are sufficiently diverse MTS configurations. In practice, more tailored approaches to address social needs might include adapting supportive care strategies on the basis of primary care within- and between-team capacity.

ASSOCIATED CONTENT

Appendix

Author affiliations and disclosures are available with the complete article online.

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abstract

PURPOSE Primary care factors related to Medicaid enrollees' receipt of guideline concordant cancer treatment is understudied; however, team structure and processes likely affect care disparities. We explore Medicaid-serving primary care teams functioning within multiteam systems to understand performance variations in quality of breast and colorectal cancer care.

METHODS We conducted a comparative case study, using critical case sampling of primary care clinics in New Jersey, to provide maximum variation on clinic-level care performance rates (Medicaid enrollees' receipt of guideline-concordant treatment). Site evaluations, conducted from 2019 to 2020, included observation (2-3 days) and interviews. Using a multistep analytic process, we explored contextual factors within primary care that may contribute to cancer care performance variations.

RESULTS We identified performance variations stemming from adaptations of multiteam system inputs and processes on the basis of contextual factors (ie, business model, clinic culture). Team 1 (average performer), part of a multisite safety-net clinic system, mainly teamed outside their organization, relying on designated roles, protocol-based care, and quality improvement informed by within-team metrics. Team 2 (high performer), part of a for-profit health system, remained mission-driven to improve urban health, teamed exclusively with internal teams through electronically enabled information exchange and health system-wide quality improvement efforts. Team 3 (low performer), a physician-owned private practice with minimal teaming, accepted Medicaid enrollees to diversify their payer mix and relied on referral-based care with limited consideration of social barriers.

CONCLUSION Primary care team structures and processes variations may (in part) explain performance variations. Future research aiming to improve care quality for Medicaid populations should consider primary care teams' capacity and context in relation to composite teams to support care quality improvements in subsequent prospective trials.

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INTRODUCTION

Patients with cancer with Medicaid coverage are more likely to experience low-quality care and worse survival compared with privately insured or Medicare-insured groups.¹⁻⁴ Medicaid, a federal-state-funded partnership, is the largest source of health care coverage in the United States and covers 89 million low-income and other eligible individuals.⁵ Medicaid enrollees have greater burden of multiple chronic conditions, are disproportionately racial/ethnic minorities, and face system barriers that increase the risks of poor care quality when diagnosed with cancer.⁶⁻⁹ Although

Medicaid expansion has contributed to improvements in cancer screening and reductions in late-stage diagnoses,^{10,11} few studies have examined the impact of real-world teaming infrastructures and care processes on Medicaid enrollee cancer care quality.

A multiteam system (MTS) is a network of interdependent teams working toward an overarching goal with composite teams owning specific tasks and processes (Fig 1).¹²⁻¹⁴ Primary care and cancer care teams are typically distinct, composite teams that include diverse medical specialties, allied professional and support staff, who are geographically dispersed

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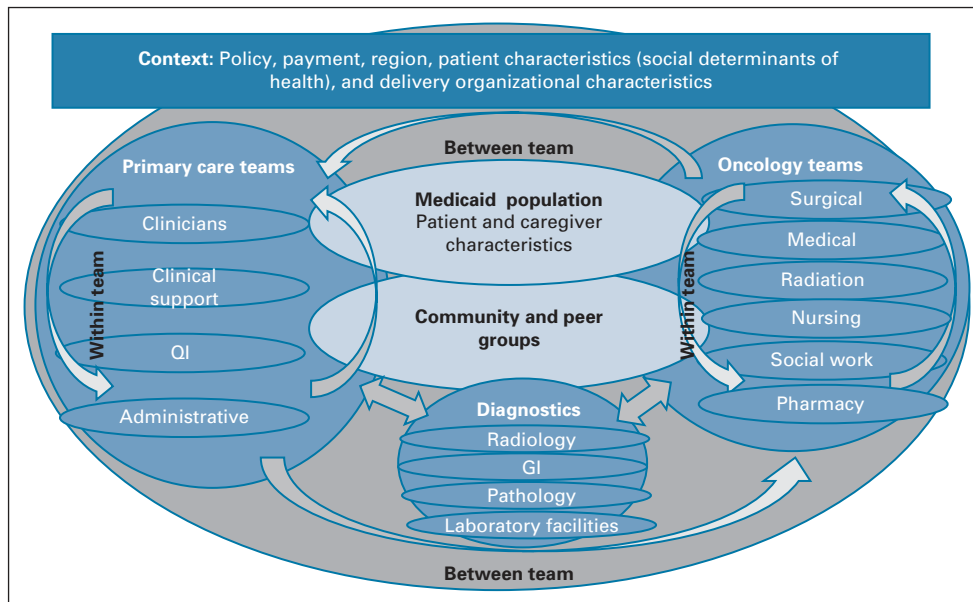


FIG 1. Example of multitask system for BC and CRC screening, diagnosis, and treatment for the Medicaid patient population. BC, breast cancer; CRC, colorectal cancer; GI, gastroenterology; QI, quality improvement.

and may cross organizational boundaries.¹³⁻¹⁵ Cancer care in an MTS requires within- and between-team coordination of tasks and teamwork.¹³ At multiple points along the cancer care continuum, between and within MTS structures and behaviors can enable or impede care quality. Furthermore, contextual, organizational, and policy factors influence systemic issues that also affect care quality. Previous MTS applications to cancer care coordination and care delivery suggest that further investigation of primary care perspectives and MTS contexts that contribute to suboptimal cancer quality is needed.^{14,15}

Previous research using New Jersey State Cancer Registry (NJSCR) and Medicaid claims indicate greater proportions of Medicaid enrollees were diagnosed with late-stage breast cancer (BC) or colorectal cancer (CRC) compared with non-Medicaid cases, and patients with primary care engagement were less likely to have late-stage disease and treatment delays.¹ Few studies to date address the upstream role of primary care teams in the receipt of guideline-concordant cancer care. This study aims to explore and understand how primary care team structure/context and MTS inputs and selected processes affect performance on cancer care quality for Medicaid enrollees diagnosed with BC or CRC to inform broader practice and policy improvements.

METHODS

Study Design

In this qualitative study, we used critical case sampling of Medicaid-serving primary care clinics in New Jersey (NJ) situated in an MTS. Cases were purposively sampled, using NJSCR-Medicaid linked data to determine clinic-level care transition performance through receipt of guideline-

concordant BC or CRC treatment among Medicaid enrollees. Critical case sampling is an exploratory qualitative technique used to describe a phenomenon in-depth and is not meant to be broadly generalizable.¹⁶ Our investigation provides insights to inform logical generalization and shape broader research questions in subsequent prospective clinical trial designs. We evaluated performance in cancer care treatment quality (which includes but is not limited to transition from primary to cancer care) to systematically compare context, inputs, and selected processes involved in care quality. This study was approved by the Rutgers Biomedical and Health Science Institutional Review Board (Pro20170000587).

Clinic Sampling and Recruitment

Ninety-five distinct Medicaid-serving primary care practices were identified from NJSCR-Medicaid claims linked data of eligible patients with BC and CRC, diagnosed between 2011 and 2016. We use receipt of American Society of Clinical Oncology/National Comprehensive Cancer Network quality measures for BC and CRC guideline-concordant care as downstream outcome measures that may be affected by primary care contexts, coordination, and teamwork as patients transition from screening and diagnosis to cancer treatment. Practices with fewer than five patients with BC or CRC across the 6-year study period were excluded, resulting in 79 total practices, which were then ranked and sorted by practice-level guideline adherence rates.¹⁷ Next, we used a team-based approach to purposively sample critical case sites that offer maximum variation in team structure and context. Practice managers or medical directors from identified practices were contacted and asked to participate in the study.

Data Collection

Data collection occurred during three half-day site visits at each practice between 2019 and 2020. Data included direct observation (except in examination rooms)¹⁸ and in-depth and key informant interviews with clinic members, usually in the context of normal workflow,^{19,20} to document how clinic members discussed and organized care relevant to cancer screening, diagnosis, and treatment follow-up. Each clinic included four to seven semistructured interviews with selected physicians, clinic staff, and administrators. Interviews included questions about the perspectives around and experience of delivering care to Medicaid patients; the team's role in cancer care; and communication with cancer teams. Interviews ran 30-60 minutes in length and were digitally recorded and transcribed verbatim. Qualitative data yielded approximately 280 pages, including fieldnotes from practice observation and key informant interviews with 20 physicians and clinic staff members, and transcripts of 14 in-depth interviews. Interview participants received a \$25 in US dollars (USD) gift card. Clinics received a \$1,000 (USD) incentive.

Analyses

We used an immersion/crystallization analysis approach, guided by two research questions: (1) How does context, team structure, and care delivery processes shape Medicaid-serving primary care teams' performance contributions to cancer care quality? (2) What key primary care within- and between-team processes affect cancer care quality?^{21,22} An initial codebook was applied that included a focus on care coordination and team-based care (Appendix Table A1, online only). After applying the codebook, we organized and connected emerging themes, and consulted the literature to refine our conceptualization of teaming and care coordination.¹⁶ During this phase of interpretation, characterized as a dynamic iterative process, we corroborate with external perspectives and identified the MTS cancer care coordination framework.^{13,14} We then recoded selected initial codes (eg, care coordination, oncology care transition, etc) to highlight the cyclical nature between inputs (MTS structure/inputs), mediators (teamwork and care coordination tasks), and outputs (guideline adherence) using conceptual definition for specific MTS components found in the study by Verhoeven et al.¹³ Two teams ([J.T. and J.H.] and [D.M.O. and M.D.]) coded all data using Atlas.ti version 8. We assessed confirming/disconfirming evidence until thematic saturation was reached and resolved discrepancies using small group discussion.

RESULTS

Medicaid-serving primary care teams varied in their founding missions. Team 1 (intentionally learning team-average performer) and team 2 (technologically together team-high performer) have an organizational culture strongly aligned with removing the social barriers to medical care. Team 3 (care cost-aware team-low performer) leaders described the decision to accept Medicaid patients as a financial one. A

central theme across teams was the organizational and care process variations were responsive to unique clinic contexts. Primary care teaming strategies are aligned with the organizations' business model and culture/mission, and their boundary status (eg, proportion of component teams working within the same organization, facility, or health system) involved in cancer screening detection and care transition.^{13,19} We present the descriptions and inputs of each MTS and treatment guideline-concordance rates (Table 1), MTS coordination structure and processes (Table 2), and descriptions of each primary care team embedded in a larger MTS below.

Team 1: Intentionally Learning Team

Organizational input/structures. Team 1 works in a flagship site in a large, nonprofit federally qualified health center (FQHC) system and one of the largest clinics of its type in the state. Cancer screening and follow-up is highly protocolized, with designated staff roles at each step of the care delivery process. Initially, the screening process uses a sequential interdependence that is routinized to reduce losing patients to follow-up and maximizing information received back by external teams.

MTS structures/processes. External teams in this process are for-profit health care organizations that do not share the team's safety-net mission. To address this, referral medical assistants (MAs) keep handwritten logs of which specialists to refer to and rotate referral of Medicaid enrollees to diversify the payer mix of referred patients. Poor information exchange is widely recognized by MAs: "the hardest part [of completing screening] is the MAs not getting [specialists] reports back." This requires so much labor; a three-call policy is used to retrieve information from specialists. Upon receipt of abnormal results, high-risk navigators (four MAs and two registered nurses), centralized off-site, provide protocolized cancer-site-specific follow-up. The interdependence of this process is reciprocal with the navigator exchanging information with patients, the physician, and the cancer care team. The director of quality described that navigators close the loop to get patients to specialists and after that it is a big vacuum. The team embraces learning to address and remove social barriers and improve information exchange between teams.

Outcomes. Continuous quality improvement using FQHC metrics for within-team performance informs process improvements. Nurse coordinators troubleshoot whether the metrics are accurate and access within- and between-team processes. The team used quality improvement cycles for cancer (eg, mammography and FIT) screenings when metrics indicated poor performance. Team members acknowledge procedural weakness; one physician stated, "We're really good at [CRC] screening but when there's an abnormal [result]...it gets difficult."

Team 2: Technologically Together Team

Organizational inputs/structure. Team 2 operates in a hospital-owned clinic and maintains the founding mission

TABLE 1. Organizational Structures and Inputs of Medicaid-Serving Primary Care Clinics

	T1: Intentionally Learning Team	T2: Technologically Together Team	T3: Care Cost-Aware Team
Organizational Inputs and Structure			
PC clinic structure	Multisite FQHC funded by HRSA and other state and foundation grants	Hospital-owned primary care clinic that focuses on Medicaid patients only	Physician-owned private practice, focused on privately insured patients and a purposeful mix of Medicaid patients
PC team	One family physician, three internists, six nurse practitioners, six registered nurses, four LPNs, 14 MAs, three referral navigators, and one scribe	One family physician, four internists, two nurse practitioners, one registered nurse, four LPNs, and five MAs	Two internists, two PAs, two MAs, one office manager, one-receptionist, and one secretary
PC annual visits	Approximately 86,100	Approximately 16,687	Approximately 15,800
Payer-mix	Medicaid: 42% Uninsured: 45% Medicare: 3% Private/employer-sponsored: 10%	Medicaid: 42% Uninsured: < 1% Medicare: 22% Private/employer-sponsored: 35%	Medicaid: 30% Uninsured: 5% Medicare: 30% Private/employer-sponsored: 35%
racial and/or ethnic minority–clinic population (%)	81% Hispanic; 12% African American/Black	44% Hispanic; 36% AA/Black	15% Hispanic; 42% AA/Black
PCMH designation	Joint commission	NCQA-designated level 3	No
Medical neighborhood	Part of FQHC system with 11 clinics in three counties	Part of a large health system that includes a hospital, comprehensive cancer center, and medical group	Colocated next to a community hospital (not affiliated)
Relationship with cancer centers	No relationships with cancer center	Comprehensive cancer center is part of same hospital system and located on same street	Hospital cancer center located adjacent to but not a part of the same system
Type of team interdependence	Within: screening process is sequential; abnormal follow-up reciprocal teaming between high-risk navigators, MDs, and referral MAs Between: sequential teaming between primary care, diagnosticians, and oncology	Within: sequential teaming between the clinicians, LPNs, and health coaches Between: sequential teaming between the primary care team, diagnosticians, and the oncology navigators and oncologists	Within: sequential teaming between front desk staff, MA, and physicians/PAs Between: sequential teaming between diagnosticians and specialist referrals
ASCO/NCCN Adherence Rates of Cancer Care Transitions			
Breast adherence	50%	71.4%	39.3%
CRC adherence	100%	77.8%	< 5 patients, could not be calculated

Abbreviations: CRC, colorectal cancer; FQHC, federally qualified health center; HRSA, Health Resources and Services Administration; LPN, licensed practical nurse; MA, medical assistant; MD, medical doctor; NCCN, National Comprehensive Cancer Network; NCQA, National Committee for Quality Assurance; PC, primary care; PCMH, patient-centered medical home; T1, team 1; T2, team 2; T3, team 3.

to improve urban health. This team has a 20-year tenure in this community. Over the past decade, the hospital system established a partnership with a National Cancer Institute–designated comprehensive cancer center.

MTS structures/processes. Primary care teaming occurred between teams in the same health system—screenings, diagnostic testing, follow-up, and cancer care, gastroenterology specialists’ visits occur within the hospital system, and specialists rotate on site on set days. Virtually enabled handoffs are used for abnormal finding follow-up for primary care, radiology/imaging, and gastroenterology. One medical doctor described, “If there’s a spot on the mammogram that needs to be followed up... they [the cancer team] essentially

take over for me, so I don’t need to be ordering follow-up studies, and scheduling biopsies and things like that.” The proximity of cancer center and their robust supportive care team infrastructure addressed patient barriers. The cancer team completes all care coordination and charity care applications. One physician described, “Once they get hooked in there [the cancer team] their social workers help them...” Another described, “some magic happens where they [the cancer team] reach out to the patient and they get the patient in.”

Outcomes. The medical director described that although cancer care did not change dramatically following the cancer center partnership, an extensive amount of system-wide quality

TABLE 2. MTS Structures, Coordination Mechanism, Modalities, and Selected Processes in Medicaid-Serving Primary Care Clinics

	C1: Intentionally Learning Team	C2: Technologically Together Team	C3: Care Cost-Aware Team
MTS Structure			
Internal teams	Primary care MTS High-risk navigators (off-site for serving multiple in clinic) Rotating specialists: cardiology, podiatry, and dental	Primary care MTS In-hospital system specialists (gastroenterologists), radiology imaging, and NCI-designated cancer center oncologists, cancer center navigators, nursing, and supportive care team	Primary care MTS
External teams	Multiple radiology imaging sites Oncology MTS Multiple oncologists and team	NA	Multiple specialists (gastroenterologists) Multiple radiology imaging sites Multiple specialists Adjacent community cancer center and hospital
Boundary status	Primary care teams all worked in the same organization. Imaging and specialists (cardiology, podiatry, and dental) rotated in clinic but others were external, which made coordination more challenging	Teams composed of primary care, imaging, and oncology care were all in the same organization. GI rotates in practice and does colonoscopy and has arranged for prep visits to be done by PCP team	Dual roles in primary care and hospital for clinicians but different organizations. Imaging and specialists were rotated (not in hospital) during screening and diagnosis
Type of multidisciplinary care approach	Combination of panel management, navigated, and referral-based care	Combination of navigated (health coach), referral, and clinic-based care	Referral-based care
Coordination mechanisms	Chart prep before visit Standing orders for screening Designated coordinators for abnormal findings Care protocol for abnormal test Social work to address social barriers (eg, transportation) Written log of specialists for rotating referrals to breast/CRC follow-up	EHR-based tools for screening Standing orders for BC screenings Clinician reminders for CRC screening Streamlined colonoscopy scheduling EHR alerts for abnormal findings to primary care and oncology Designated health coaches to address social needs/barriers to care	Chart prep before visit No procedures for CRC-MA/providers must see it in the chart Mammography-EHR alert for some patients but insurance-specific Screenings part of annual physical
Coordination modalities	EHR requires scanning in reports from external sources Heavily phone-based, appointment reminder/follow-up conducted via telephone from MAs (eg, patients, schedule, and get information back from specialists). Report retrieval: phone/fax/scan to EHR In-person: daily huddles In-person: PDSA for cancer screenings	EHR-based, PC, and ONC on same record but not fully operational EHR clinician reminders In-person: daily huddles, health coaching/navigation Phone-based health coaching EHR limited, so MAs send record requests (calls/faxed) scanned info in EHR Patient portal-screening reminders sent to patients through portal	EHR requires scanning in reports from external sources, different from hospital Abnormal findings sent to patient via letter and practice via phone or fax Hospital HER available to MDs and PAs, but not MAs or other staff Faxed/mailed reports from diagnosticians that require scanning in EHR Patient portal-request appointments, view laboratory results, and send messages to MDs
MTS Processes			
Information exchange	Huddles, staff meetings Lack of closed loop from diagnosticians—MAs call ×3 to attempt to get information High-risk navigators receive abnormal finding and communicates with MD and patient to close the loop to get patients to oncologists	Huddles, staff meetings Touch work system: electronic task messaging system Directory: Health providers and contact information within and between teams In-person, phone, and portal with patients Phone reminders for appointments (patients with diabetes only)	Patients call or send requests for appointments through portal Patient messages to MDs screened by MAs
Adaptability (organic communication/information exchange)	In-person, phone, and fax	In-person, e-mail, text, and phone with oncologists	Daily lunch with all clinicians and staff Clinician relationships and calls to specialists directly for follow-up on abnormal findings

(continued on following page)

TABLE 2. MTS Structures, Coordination Mechanism, Modalities, and Selected Processes in Medicaid-Serving Primary Care Clinics (continued)

	C1: Intentionally Learning Team	C2: Technologically Together Team	C3: Care Cost-Aware Team
Situation monitoring	Referral clerk role Three call policy to get reports back UDS cancer screening measure monitoring High-risk navigators maintain case until patient transitions to oncology	EHR alerts and interoperable charts between primary care and inpatient Hospital system-wide breast and cancer screening value-based composite metrics Parent NCI-designated cancer center monitors quality, care protocols and provides feedback to hospital system	No specific roles or processes to monitor task completion

Abbreviations: BC, breast cancer; C1, Clinic 1; C2, Clinic 2; C3, Clinic 3; CRC, colorectal cancer; EHR, electronic health record; GI, gastroenterology; MA, medical assistants; MTS, multiteam system; NCI, National Cancer Institute; ONC, oncology; PA, physician assistants; PCP, primary care physician; PDSA, Plan, Do, Study, Act Quality Improvement Process; UDS, Uniform Data System.

monitoring and protocols were implemented. He described that the partnership required the hospital system to meet their standards for cancer care delivery, “so it wasn’t name only that happened here, there was definitely a culture change.” The health system has a hospital-wide value-based quality monitoring that consists of eight metrics, which includes measures on BC and CRC screening, such as implementing standing orders for mammograms and omitting barriers to referrals for 3-D mammograms. One physician described that the primary care team helps the larger for-profit health system, acknowledging “we’re not making money.” Instead, he explained the primary care team creates savings by caring for complex, high costs patients more efficiently.

Team 3: Care Cost-Aware Team

Organizational inputs/structure. Team 3 operates in a small physician-owned clinic, led by a medical director with a 25-year tenure. Team physicians have leadership roles and admitting privileges in the adjacent community hospital, which has a cancer center. Physician-owners contracted with only one Medicaid managed care organization in the state to purposely balance their payer mix, stating “It’s all economic... we don’t make as much income on these Medicaid patients... I felt that Obamacare might become a major practice... And that, if we were not part of that... we may miss out on a lot of new patients.” The team physicians have relationships with and refer primarily to specialists in the adjacent community hospital.

MTS structures/processes. This team did not prioritize or use specific protocols related to cancer screening or coordination to cancer care settings. The main task for cancer screening were physician-driven referrals. Doctors referred patients to personal contacts at the hospital and called specialists directly. The medical director explained, “My main mantra is try [ing] to keep everything local if possible...the changes of my continuing care with the patient are better. If I send the patient to [another center]... I’m going to lose contact with that case.” The electronic health record had clinician prompts for annual mammograms on the basis of the patient’s insurance. There is no situation monitoring, as described by the physician assistant, “We can’t be constantly calling, hey, did this patient come in? But we try to...We give them [patients’] the

prescription for the mammogram but, at times, you’ll be waiting for 3 months for that report to come in...we can order it on our aspect, but we can’t, of course, take the patient to get the testing done.”

Outcomes. The medical director described the cancer team as, “... a black hole for me. But, as long as they take care of them [his referred patients], I don’t care.” This team did not measure or monitor care quality. Care decisions were framed from a business lens. For example, the medical director described how with Medicaid enrollees there is a “need to, sort of spread around those referrals and the uninsured locally...you can’t send that to your friend consistently...or [they will] delete your number.”

DISCUSSION

Population-level data are used to describe cancer care disparities for Medicaid enrollees for a variety of screening and outcome indicators.^{1,10,11,23} To address disparities in care delivery, connections between societal forces, clinical systems, and care teams must be understood in context.^{18,20} By exploring critical cases of primary care teams (within MTSs), this study provides foundational insights on how team processes and context may affect care quality disparities. We found that contextual factors of primary care teams (eg, payment structure/business model and organizational culture) in relation to other teams (eg, cancer) in the MTS may contribute to disparate care outcomes. These insights inform the development of research questions to interrogate which coordination practices and contextual factors relate to care transition performance and support the need for larger studies that include a variety of MTS configurations. Medicaid-serving primary care teams operate in a team of teams with diverse inputs, processes, and contexts; vary in their business models; and differ in the proportion of composite teams operating within the organization and system boundaries.

Our study demonstrates how MTSs in Medicaid-serving settings occur at the intersection of clinical contexts, which includes teams, organizations, health care neighborhoods, and broader community risks. A national assessment of safety-net cancer care coordination programs cited the need for the involvement of multiple cancer teams because of the clinical needs and

social risks of Medicaid populations.²¹ Responsivity to social needs within primary care delivery is shifting, and models that proactively respond to these needs outperform traditional approaches.²² Medicaid enrollees seen in community health centers have lower health care utilization and spending than patients in other primary care settings²⁴ and are more likely to receive mammography (but not CRC) screening.²⁵ This care quality pattern was observed in team 1, attributed to the long-standing issue of specialty care access for Medicaid enrollees.²⁵⁻²⁷ Teams 1 and 3 also described the need to rotate referrals to the specialists. In terms of social risks, teams 1 and 2 had processes and roles designated to proactively address social needs, while team 3 did not frame this type of care as within their scope of practice. For team 3, payment structures that incentivize social care integration may be needed to shift practice scope.²⁸ As nearly one fifth of all patients with cancer are enrolled in Medicaid,²³ with increasing Medicaid enrollment overall in recent years,²⁹ future research should investigate how incentivizing bundled care episodes could better motivate between teams collaboration to remove barriers to care more effectively.

Previous research studies on team-based cancer care have not adequately or consistently measured the structure and processes of MTS.³⁰ We investigated how primary care team context and processes within MTSs contribute to cancer care quality metrics. We recognize this is a dynamic process that includes interdependent primary care and cancer care teams that may intently focus on local tasks and responsibilities. Presently, primary care and cancer care teams may not view the shared overarching goal as receipt of guideline-concordant cancer care; however, the path forward for improvements may require more ambitious goals that require greater levels of coordination. Future research studies that identify and consistently collect key variables related to MTS structure and process are needed and should focus on the entire care pathway, in a diversity of health care system configurations, to elucidate the mechanisms of MTS dynamics that affect cancer-focused outcomes, especially in the context of Medicaid-serving teams.

Although valuable findings were observed in this study, some limitations should be noted. First, these clinics do not represent all Medicaid-serving primary care settings; however, we purposefully illustrate variation in primary care MTSs to provide a more comprehensive understanding of 'real-world' settings. Teams were recruited on the basis of

quality metrics using population-based data. Multiple decision points are needed to assign patients to clinics and determine clinic-level performance rates. In certain instances, we were unable to calculate rates because of small numbers (eg, team 3 CRC performance). Second, clinic performance was determined from patients diagnosed between 2011 and 2016 and team observations were conducted from 2019 to 2020. Primary care processes and MTSs change over time; to address this, our assessment included understanding history and recent changes. Third, this study examined clinic business models more than case-mix payment structures. More information on specific payer contracts and other financial drivers of clinic-level behaviors and processes should be included in future research. Fourth, we did not design our data collection with the MTS conceptual framework, but used it after an initial immersion/crystallization analysis phase to guide the organization and interpretation of findings within an empirically driven care coordination framework.¹⁶

To address structural inequities faced by Medicaid enrollees, insights into the implicit rules through which teams embedded in an MTS self-organize to deliver care are needed.³¹ In these critical cases, we presented examples of how different Medicaid-serving teams may have misaligned goals, incentives, and cultures. There are a variety of primary care clinical structures designed specifically to address the care for Medicaid-serving populations (eg, FQHCs and safety-net hospital-affiliated clinics). Our findings highlight the importance of team-based solutions that account for organizational and contextual complexity in an MTS. It is tempting in health care delivery research to sacrifice real-world relevance of complex delivery contexts in support of feasibility provided in integrated health care system-based studies.³² Our case studies indicate we must be mindful about the diversity of MTS configurations when conducting health services research to inform cancer care improvements. In practice, more tailored approaches to address social needs might include adapting supportive care strategies on the basis of primary care within- and between-team capacity and context. The multilevel challenges that emerge across MTS settings may be different for composite teams. For practice improvements and care delivery research to be relevant, they must reflect the challenges that Medicaid-serving teams face when navigating fragmented MTSs.

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DISCLAIMER

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AUTHORS' DISCLOSURES OF POTENTIAL CONFLICTS OF INTEREST

Understanding the Impact of Medicaid-Serving Primary Care Team Functioning and Clinical Context on Cancer Care Treatment Quality: Implications for Addressing Structural Inequities

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Open Payments is a public database containing information reported by companies about payments made to US-licensed physicians ([Open Payments](#)).

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APPENDIX

TABLE A1. Initial Code Names and Conceptual Definitions

Code Name ^a	Definition
Abnormal screening workup	Processes and referrals related to follow-up for abnormal screenings
Care coordination-oncology/cancer center	Care coordination structures or processes taking place in cancer care center settings; includes organization of and activities related to patient care; and multiple participants involved in patients care
Care coordination-primary care	Care coordination structures or processes taking place in primary care settings; includes organization of and activities related to patient care; and multiple participants involved in patients care
Communication/relationships with specialists	Sharing of information between and among participants in patients care; includes information transfer and interpersonal communication
Health care professional roles	Provider and staff perceptions, beliefs, and issues identified around their own or others' roles in the clinic, including issues of training, job satisfaction, burnout, and the lack of roles within the clinic to fulfill certain tasks
Cancer care—access	Relationship of primary care to cancer centers, oncology practices, or cancer-related specialists, and ability of their patients to make appointments and seek cancer care; also includes geographic proximity
Cancer care—transition	Specific protocols, clinic staff, or communication strategies used to transition patients from primary care to cancer care
Organizational context	Includes regional context/medical neighborhood, practice history, and practice mission
Organizational structure	Includes service availability, staffing, configuration of teams, leadership, and roles
Patient barriers/facilitators	Barriers to accessing recommended or needed health care related to patient demographic, economic, psychologic, or structural/institutional characteristics
Payer-Medicaid	Refers to Medicaid insurance coverage for health care services

(continued in next column)

TABLE A1. Initial Code Names and Conceptual Definitions (continued)

Code Name ^a	Definition
Payer-private/Medicare	Refers to private and Medicare insurance coverage for health care services
Payer uninsured/charity care	Refers to lack of any insurance coverage for health care services; can include hospital-based charity care programs
Population health management	Tracking and monitoring of specific conditions within electronic health records, roles related to population health management, and (noncancer) screenings/assessments for population health assessment
Quality improvement	Activities related to intentionally improving care delivery including tracking metrics, process improvements, and reporting
Referral network—social services	Referral to programs or services related to social needs (eg, transportation, language, and food insecurity)
Referral network—noncancer specialists	Referral to (noncancer) specialty providers or settings
Team-based care	Activities and interactions within the clinic and between the clinic and outside health care teams to organize and execute care delivery

^aOriginal coding template was based on the AHRQ National Center of Excellence in Primary Care Research measures on care coordination.³³