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RESEARCH NOTES

Care team perspectives on community pharmacy enhanced services

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ABSTRACT

Objectives: To determine the awareness, collaboration, and perceived values and barriers of enhanced pharmacy services from care managers and primary care practice responders.
Methods: An electronic questionnaire was sent to 1648 primary care practices and 600 care managers that work in 76 North Carolina counties containing an enhanced-service community pharmacy. Questionnaires were distributed in January 2017 and responses collected for 7 weeks. The questionnaire collected data on the awareness and perceived value of enhanced pharmacy services, preferred method and level of communication for referral, and barriers to using enhanced services. Data were gathered with the use of Likert-type, rank-order, dichotomous, and multiple-choice questions. Data were analyzed with the use of descriptive statistics, and group mean responses were compared by means of *t* tests.
Results: Data analysis was performed in March 2017. Response rates were 5.4% (n = 89) from practice responders and 45% (n = 270) from care managers. In the responses received, 35% of practice responders and 88% of care managers were familiar with enhanced services offered by community pharmacies. A majority of respondents thought that enhanced pharmacy services are valuable, with more than 85% of practice responders agreeing that partnering with an enhanced-service pharmacy can help to improve patient health outcomes. Lack of knowledge of enhanced-service pharmacies, services offered, and the referral process were identified as significant barriers for practice responders.
Conclusion: Community-based pharmacies have an opportunity to collaborate with patient-centered medical home teams to provide enhanced pharmacy services, but provider outreach and education on enhanced services offered and the referral process are necessary to maximize this collaboration.

High-functioning health care teams require collaboration among providers, including physicians, nurses, pharmacists, behavioral health specialists, and case managers, as well as nonclinical supportive staff and administrators.[1,2] These high-functioning teams work together to provide high-quality patient-centered care.[2] Many national organizations have supported the incorporation of pharmacists into the health care team,[3-5] and primary care practices that collaborate with clinical pharmacists demonstrate higher provider and patient satisfaction.[6-8] In addition, the incorporation of pharmacists into the health care team leads to positive patient outcomes and reductions in cost of care through decreasing medication-related errors[7,9] and improving patient medical conditions.[8,10,11] Continuity between different care settings and providers is associated with lower costs of care,[12,13] lower chance of departing from clinical best practices,[12] and lower rates of hospitalizations or extended lengths of stay.[11-13] One study noted that patients receiving the most fragmented care had an average total cost almost double that of patients receiving the least fragmented care.[12]

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In an effort to improve the quality of care and lower overall health care costs, North Carolina developed a primary care case management program consisting of more than 1800 patient-centered medical homes and an interdisciplinary care management team that spans all 100 counties in the state. This program, developed by Community Care of North Carolina (CCNC), includes care teams with physicians, nurse and social work care managers, behavioral health specialists, and clinical pharmacists that collectively provide care to more than 1.6 million Medicaid enrollees with the goal to better manage medical, social, and behavioral health conditions to improve patient outcomes.[14] CCNC care managers work throughout the community to meet the needs of high-risk patients by working with the patient's medical home to facilitate communication across settings and providers, connecting patients to needed resources, and improving patients' ability to self-manage their care. Care managers, typically located separate from the patient's primary care provider office, may work with patients and providers through a variety of means based on the patients' or collaborative visits with the provider and patient.[15] CCNC care managers have historically worked with CCNC clinical pharmacists to comanage medication needs of patients cared for within the medical home. CCNC clinical pharmacists provide medication management to high-risk patients, including after discharge, to help reduce preventable hospitalizations and emergency department visits.[16] CCNC care managers and clinical pharmacists use a web-based documentation portal that accesses prescription claims data, medication lists across a variety of care settings, and documented medication-related problems.

In 2014, CCNC began an initiative to expand the reach of their existing pharmacy program by engaging community pharmacies, thereby creating more opportunities for high-risk patients to work with a pharmacist as part of their local CCNC care team. The goals of this community pharmacy enhanced services network (CPESN) align with CCNC: to improve quality of care and patient outcomes related to medication use, enhance patients' overall health trajectory, and reduce total cost of care.[17] The key to accomplishing these goals is active integration of community pharmacists with the larger care team, including primary care providers and care managers, within the patient-centered medical home.[17] To better achieve this integration, CPESN pharmacists were provided access to the web-based documentation portal already used by CCNC care managers and clinical pharmacists.

As of September 2016, CCNC's CPESN network consisted of 275 community-based pharmacies across 76 counties in North Carolina. These pharmacies are committed to providing enhanced services to broaden the availability of medication management resources to the patients in greatest need. Community pharmacists were identified as ideal partners for this effort because North Carolina Medicaid claims data have indicated that the portion of the population most in need of medication management visit their local pharmacy 20-35 times annually.[17] Examples of enhanced pharmacy services include synchronizing chronic medications, using medication adherence packaging, delivering medications to the patient's residence, and identifying medication therapy–related problems and developing a care plan with follow-up. Details of the medication management services provided by CCNC's CPESN pharmacies have been discussed in previous publications.[18] Since the time of this study's completion, CPESN USA networks have grown across the country, each with variations in the enhanced services offered based on patient needs in the area.[17]

Early results have shown that patients of CCNC's CPESN pharmacies are 4% to 5% more adherent to chronic medications than patients using pharmacies outside of CCNC's CPESN.[17] Although medication adherence data is positive, formal evaluation of the program remains under way, and little is known about the knowledge, perspective, and collaboration by primary care practices and care managers regarding the pharmacy network or services it offers.

Objective

To determine care managers' and primary care practice responders' awareness of CCNC's CPESN, collaboration with participating pharmacies, and perceived values and barriers of enhanced community pharmacy services.

Methods

An online survey was developed to gather information from CCNC primary care practices and CCNC care managers who were located in a county with a participating CPESN pharmacy. Specialty practices as well as practices or care managers located in a county without a CPESN pharmacy were excluded. The survey consisted of approximately 15 items (combination of Likert-type, rank-order, dichotomous, and multiple-choice questions). Demographics, such as practice type, patient population, practice setting, number of practice locations, county or counties of practice, number of prescribers, number of patients receiving enhanced pharmacy services, and responder role, were collected. Questions addressed awareness of CPESN pharmacies, knowledge of enhanced services, perceived value of services, referral process to CPESN pharmacies, collaboration with pharmacies, and barriers to using the services. See Appendices 1 and 2 for the survey tools. The surveys were piloted by 18 CCNC pharmacists who did not complete the final survey. Results of the pilot were used to revise and improve the survey for readability and comprehension. A total of 1648 surveys were sent to CCNC primary care practices and 600 to CCNC care managers via e-mail via Qualtrics (Provo, UT). Primary care practice surveys were sent to CCNC's main contact within the practice to complete on behalf of the practice site(s). Surveys were available for a 7-week period from January to March 2017, and 2 reminder e-mails were sent to nonresponders. Data were analyzed with the use of descriptive statistics. Mean responses to questions about perceived value and barriers to enhanced services from care managers and practice site responders were compared by means of a 2-tailed t test of independent samples. Because the samples are independent, the F test for the significance of the variances of the 2 samples was used to determine if pair variances should be assumed as equal or unequal. P values and SDs are reported for comparisons of mean responses. This study received exemption from the Institutional Review Board at the University of North Carolina, Chapel Hill.

Table 1
Response demographics

Primary care practice respondents (n = 89)	
Practice type	
Independent	45% (n = 35)
Health system owned	28% (n = 28)
Federally Qualified Health Center (FQHC)	18% (n = 14)
Other	9% (n = 7)
Target patient population	
Both pediatric and adult primary care	47% (n = 37)
Pediatric primary care	26% (n = 20)
Adult primary care	22% (n = 17)
Practice setting	
Suburban	44% (n = 34)
Rural	35% (n = 27)
Urban	22% (n = 17)
Responder role	
Prescriber[a]	37% (n = 29)
Office manager/practice manager	35% (n = 27)
Other	20% (n = 16)
Director of nursing	5
Pharmacist	3
Quality/risk manager	2
Executive administration (e.g., CEO, CMO)	2
Case manager	2
Behavioral health	1
Marketing/operations manager	1
Nurse	8% (n = 6)
Medical assistant	N/A
Care manager respondents (n = 270)	
Responder role	
Nurse care manager	76% (n = 201)
Social work care manager	11% (n = 29)
Other	10% (n = 25)
Care management support staff	3% (n = 7)
Other certified case manager	1% (n = 2)

[a] Prescriber includes physician (MD, DO), nurse practitioner (NP), and physician assistant (PA).

Results

Response rate for participants was 16% overall, with individual response rates of 5.4% (n = 89) from primary care practice responders and 45% (n = 270) from care managers. Of the respondents, 35% of the practice responders and 88% of the care managers were familiar with CPESN pharmacies.

Primary care practice responders

Regarding practices, 45% identified as independent, 47% cared for both adult and pediatric patients, and 44% were located in suburban settings. The responder type included 37% prescribers and 35% practice managers. Table 1 presents response demographics.

When provided with a list of CCNC's CPESN pharmacies in their county, 44% of practice responders stated that they collaborated with these pharmacies to provide care to patients beyond traditional dispensing; however, 47% of these interacted equally with these pharmacies and non-CPESN pharmacies, and only 23% interacted more or much more frequently.

A majority of practice responders found value in enhanced pharmacy services, with more than 85% either agreeing or strongly agreeing that working with a CPESN pharmacy can help improve patient health outcomes by providing services to support medication adherence (95%), educating patients about their conditions and medications (93%), communicating nonadherence to the practice (90%), providing an updated list of medications to the practice (90%), performing medication reconciliations after discharge (88%), identifying unmet non–medication-related needs with referral (88%), identifying and following up with medication-related problems through conducting comprehensive medication reviews (88%), and managing patients longitudinally in conjunction with the practice through shared care plans (85%).

Practice responders also ranked emerging enhanced services. Enhanced services focusing on disease state monitoring were thought to be most helpful, followed by diabetes early prevention, senior and elderly care, fall prevention, chronic pain management, and palliative care.

Care managers

Of care manager responders, 76% were nurses. When provided with a list of CCNC's CPESN pharmacies in their county, 71% of the responding care managers stated that they have collaborated with these pharmacies to provide care beyond normal prescription dispensing, with 44% stating that a CPESN pharmacy has assisted in engaging patients.

Care managers were asked to indicate the degree and type of interactions with CPESN pharmacies for patients in their case load. A majority of care managers reported that CPESN pharmacies sometimes to always assisted with activities such as providing patients with enhanced pharmacy services (77%), conducting medication reviews (68%), discussing and solving medication-related problems (61%), and engaging patients (50%).

Care manager and practice responder comparisons

Both practices and care managers were asked how valuable enhanced services offered through CPESN pharmacies were. Table 2 compares responses. Highly rated services included services that improve medication adherence, such as medication synchronization and adherence packaging, comprehensive medication reviews, and providing durable medical equipment and immunizations. However, care managers valued home delivery and medication adherence packaging significantly higher than did practice site responders.

Practice site responders and care managers were also asked to comment on additional services that would be valuable for patients. Both groups found value in services assisting patients' access to affordable medications. Practice site responders cited compounding, smoking cessation, and administration of injectable medications as valuable. Care managers included diabetes education, text/phone reminders for medication refills, covisits with the care manager and provider, and on-call phone lines for patients' medication-related questions as additional valuable services.

Both groups were asked about barriers encountered to using enhanced services. Practice site responders were significantly less likely to be aware of CPESN pharmacies and to lack knowledge of services, familiarity of the CPESN referral process, and ease of referral relative to care managers. Practice

Table 2
Perceived values and barriers to utilizing enhanced pharmacy services

Service or barrier	Primary care practice responders (n = 56)	Care managers (n = 219)	*P* value[c]
Value of enhanced pharmacy services[a]			
Comprehensive medications review	4.04 ± 0.93	4.30 ± 0.93	0.06
Home delivery	4.09 ± 0.86	4.57 ± 0.92	< 0.01[d]
Immunization	3.52 ± 1.09	3.46 ± 0.98	0.77
Medication adherence packaging	3.93 ± 1.12	4.34 ± 0.88	< 0.01[d]
Provision of durable medical equipment	4.11 ± 1.06	4.01 ± 1.12	0.58
Synchronizing chronic medications	4.20 ± 1.31	4.36 ± 1.30	0.24
Barriers to using enhanced pharmacy services[b]	(n = 50)[a]	(n = 214)[a]	
Distance of patient's residence from CPESN pharmacies	2.54 ± 0.97	2.44 ± 1.12	0.58
Distance of practice from CPESN pharmacies	2.28 ± 1.07	2.18 ± 1.19	0.60
Lack of ease in making a referral to CPESN	2.84 ± 1.17	1.88 ± 1.11	< 0.01[d]
Lack of familiarity with how to make a referral to CPESN	3.16 ± 1.23	1.79 ± 1.05	< 0.01[d]
Lack of knowledge of enhanced services	3.46 ± 1.15	1.89 ± 1.07	< 0.01[d]
Overall access to a CPESN pharmacies	2.28 ± 0.92	2.21 ± 1.12	0.63
Patient communication barriers	2.58 ± 1.16	1.93 ± 1.03	< 0.01[d]
Patient resistance to using a new pharmacy	2.80 ± 1.01	2.83 ± 1.05	0.85
Pharmacy and prescriber communication barriers	2.58 ± 1.18	1.95 ± 1.06	< 0.01[d]
Unaware of CPESN pharmacies	3.14 ± 1.37	1.53 ± 0.95	< 0.01[d]

Values are reported as mean ± SD.
Abbreviation used: CPESN, Community Pharmacy Enhanced Services Network.
[a] 1 = not, 2 = slightly, 3 = moderately, 4 = very, 5 = extremely valuable.
[b] 1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = always encountered.
[c] Two-tailed *t* test of independent samples.
[d] Statistically significant difference.

site responders also expressed greater concerns about communication barriers with patients and prescribers. Table 2 summarizes results. Care managers commented that other barriers, such as lack of multilingual staff, communication difficulties, and awareness of specific services offered at each pharmacy, were common barriers.

Finally, practice site responders and care managers were asked if they have used the CPESN USA pharmacy locator website[19] to identify a local pharmacy that offers enhanced services. Approximately 87% of practice site responders and 68% of care managers stated that they were either unaware of the pharmacy locator website or had not used it to locate a pharmacy or enhanced services in their area.

Discussion

Although both primary care practice responders and care managers agreed that enhanced pharmacy services are highly valuable, differences in barriers encountered should be noted. Practice responders reported statistically less familiarity with enhanced pharmacy services than care managers. This difference was anticipated. An initial goal during CCNC's CPESN development in 2014 was to broaden the capacity of medication management within the existing care management team.[16] Because of this, initial relationship building between care managers and CPESN pharmacists made care managers more aware of enhanced services. In comparison, providers may have historically collaborated with pharmacies for traditional dispensing activities, but approximately one-half of responders stated that they had not collaborated to provide enhanced pharmacy services or worked with CPESN pharmacies any more often than with non-CPESN pharmacies. It has been documented in the literature that establishing relationships among providers is essential to high-functioning teams.[20-23] Our findings support these results by demonstrating the differing degrees of relationships between the 2 responder groups. Establishing relationships between pharmacists of CPESN pharmacies and providers beyond traditional dispensing activities will be important to achieve a deeper integration of community pharmacists into the larger health care team.

Primary care practice responders also reported significantly more challenges with referring patients to CPESN pharmacies compared with care managers. This was not unexpected, given that care managers routinely interact with multiple providers across different types of practice settings to coordinate care for patients, whereas practice staff commonly interact with providers and clinical support staff located in the same physical location or with a common electronic health record (EHR) messaging system. CCNC care managers and pharmacists of CCNC's CPESN pharmacies used the same documentation and communication platform, making the referral process less cumbersome. When community pharmacies and physician's offices have shared access to an EHR, collaboration and workflow efficiency is improved.[24,25] Only some of the practices and the pharmacies in the present study had access to the same EHR and documentation system, making communication and referral through these systems not possible for those without common access and increasing the challenges with referring patients. Similarly to current literature,[26] physicians in this study were receptive and valued the services that community pharmacies could provide; however, they were unaware of ways to best partner with them. Further research is warranted to determine the best workflow between practices and enhanced-service pharmacies. This study supports those findings and underscores the importance

of conducting provider outreach and developing working relationships to identify optimal referral methods so that collaborations can occur around these valued services.

Variation in the nature and frequency of collaboration should also be noted. Care managers selectively identify and work with patients with greater levels of need, risk, and medical complexity compared with a primary care provider's typical patient panel. This difference in patient population may have affected the perceived value of enhanced services from care manager and practice perspectives. Care managers valued certain "enhanced dispensing" services, such as home delivery and adherence packaging, more highly than did practice responders. Within this study, care managers were caring for the highest-risk and highest-cost Medicaid population, whereas practices were seeing patients with a wide variety of payer types and complexity. Care managers typically identify needs related to social determinants of health, such as lack of transportation or access to resources to manage medications, leading to more frequent referral for enhanced pharmacy services compared with practices. Finally, although many patients within a care manager's case load may benefit from referral to CPESN pharmacies for medication access or adherence assistance,[27] some services included in the survey, such as home visits or longitudinal follow-up, may be reserved for a smaller portion of the highest-risk patients and are therefore not used as frequently.

Opportunities for future work include maximizing the types of enhanced pharmacy services offered, how services are marketed to patients and primary care practices, and developing a more streamlined approach to referring patients. In addition, aligning quality measures and related incentives of the community pharmacies and primary practice sites has a tendency to improve the quality of care and patient outcomes related to medication use. Further investigation is warranted to investigate best practice models of active integration of the community pharmacist with the larger health care team to better align and improve these quality measures and incentives.

Limitations

One major limitation of this study was the low response rate from practice sites. This was due, in part, to the optional question requirements for respondents, lack of survey incentive, and additional surveys sent to providers during this survey's distribution period. With this limited response rate, there was the potential for nonresponse bias.

Conclusion

Community-based pharmacies have an opportunity to collaborate with primary care practices and their medical home support teams, such as care managers, to provide enhanced pharmacy services. Many providers and care managers think that enhanced pharmacy services are valuable and that working with CPESN pharmacies can help to improve the overall health outcomes of their patients. However, provider outreach and education around enhanced services offered by community-based pharmacies are necessary to maximize this collaboration.

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Appendix 1. Practice survey

1. Please choose the phrase to best describe your role.
   a. Employed by a primary care practice
   b. Care manager for Community Care of North Carolina
2. Indicate the number of practice locations you are responding for.
   a. *(Open Response)*
3. Indicate the county or counties in which you are located.
   a. *(Multiselectable answer from a list of all 100 counties of North Carolina)*
4. Indicate the total number of prescribers in your practice. Note: prescribers include physicians, physician assistants, nurse practitioners, and clinical pharmacist practitioners.
   a. *(Open Response)*
5. Indicate your practice type.
   a. Independent
   b. Health System Owned
   c. Federally Qualified Health Center (FQHC)
   d. Other
6. Indicate your target patient population.
   a. Pediatric Primary Care
   b. Adult Primary Care
   c. Both Pediatric and Adult Primary Care
7. Indicate your practice setting.
   a. Rural (less than 250 people per square mile)
   b. Suburban (250–750 people per square mile)
   c. Urban (more than 750 people per square mile)
8. Indicate your role in the practice.
   a. Prescriber
   b. Nurse (other than nurse practitioner)
   c. Medical Assistant
   d. Office Manager/Practice Manager
9. Are you familiar with the Community Pharmacy Enhanced Services Network (CPESN)?
   a. Yes
   b. No
10. *[CPESN Pharmacies in _____ County include: _____].* With these pharmacies in mind, have you collaborated with any of them to provide care to your patients beyond normal prescription dispensing?
    a. Yes
    b. No
11. To what degree does your interaction with these pharmacies differ from non-CPESN community pharmacies?
    a. Interact MUCH LESS frequently with CPESN pharmacies
    b. Interact LESS frequently with CPESN pharmacies
    c. Interact EQUALLY with CPESN and non-CPESN pharmacies
    d. Interact MORE frequently with CPESN pharmacies
    e. Interact MUCH MORE frequently with CPESN pharmacies
12. From your perspective, to what degree can CPESN pharmacies best work with your practice to improve patient health outcomes?
    Likert-type scale: Strongly disagree (1); Disagree (2); Agree (3); Strongly agree (4)
    a. Pharmacy services to support medication adherence
    b. Identification of potentially unmet non–medication-related needs, followed by referral to appropriate resource/care team member
    c. Patient education regarding his or her disease and medications
    d. Communication about patient nonengagement or nonadherence to medications
    e. Medication reconciliation after a patient is discharged from the hospital
    f. Periodically providing an updated list of the patient's medications to the practice
    g. Conduct comprehensive medication reviews and create a care plan to resolve drug therapy problems to optimize a patient's medication regimen
    h. Longitudinal management of a patient with your practice with shared care plans (either in the provider's office, in the pharmacy, or via telephone)
    i. Care coordination among other providers through assisting in organizing patient care activities and sharing information among care team
13. From your perspective, to what degree are the following services offered through CPESN pharmacies valuable?
    Likert-type scale: NOT valuable (1); SLIGHTLY valuable (2); MODERATELY valuable (3); VERY valuable (4); EXTREMELY valuable (5)
    a. Comprehensive review of all the patient's medications, including prescriptions, over-the-counter medications, herbals, and nutritional supplements
    b. Synchronizing all of a patient's chronic medications to be filled on a single day each month
    c. Packaging medications in blister cards or bubble packaging to promote adherence
    d. Home delivery
    e. Provision of durable medical equipment
    f. Immunizations
14. The Community Pharmacy Enhanced Services Network is considering the following new services for implementation in Spring/Summer 2017. Please rank the following services in how helpful each would be to you and your patients (1 = most helpful, 6 = least helpful. Please select each value only once).
    a. Palliative Care
    b. Senior/Elderly Care
    c. Chronic Pain Management
    d. Fall Prevention
    e. Disease State Monitoring
    f. Diabetes Early Prevention
15. From your perspective, to what degree have you encountered the following barriers to using CPESN pharmacies?
    Likert-type scale: Never (1); Rarely (2); Sometimes (3); Often (4); Always (5)
    a. Distance of practice from participating pharmacies
    b. Distance of patient's residence from participating pharmacies
    c. Overall access to a CPESN pharmacy (e.g., hours of operation, etc.)
    d. Patient resistance to using a new pharmacy
    e. Lack of familiarity with how to make a referral to CPESN

   f. Lack of ease in making a referral to CPESN (e.g., not aligned with practice workflow and normal communication with pharmacies)
   g. Lack of knowledge about services offered at CPESN pharmacies and how they could help your patients
   h. Patient communication barriers (e.g., no multilingual staff at CPESN pharmacies, etc.)
   i. Pharmacy–prescriber communication barriers (e.g., different EMR system, faxing capabilities, etc.)
   j. Unaware of CPESN pharmacies
16. What additional services would be beneficial to your patients if offered by a CPESN pharmacy?
   a. *(Open Response)*
17. What additional barriers have you encountered to using CPESN pharmacies?
   a. *(Open Response)*
18. Have you used CCNC's CPESN Pharmacy Locator website (https://cpesn.com/locator) to identify a pharmacy that offers specific service(s) for a patient?
   a. Yes
   b. No
   c. Attempted to but encountered errors or unable to identify a pharmacy
   d. Unaware of CCNC's Pharmacy Locator website
19. Are you interested in learning more about CPESN pharmacies in your area?
   a. Yes
      i. Please provide your name and contact information so that additional information regarding CPESN pharmacies can be provided to you.
         1. Name
         2. Practice Site
         3. Phone Number
         4. Fax Number
   b. No

Appendix 2. Care manager survey

1. Please choose the phrase to best describe your role.
   a. Employed by a primary care practice
   b. Care manager for Community Care of North Carolina
2. Indicate your primary county or counties of practice.
   a. *(Multiselectable answer from a list of all 100 counties of North Carolina)*
3. Indicate your role.
   a. Nurse Care Manager
   b. Social Work Care Manager
   c. Other Certified Case Manager (non-RN, non-SW)
   d. Care Management Support Staff
   e. Other
4. Are you familiar with the Community Pharmacy Enhanced Services Network (CPESN)?
   a. Yes
   b. No
5. *[CPESN Pharmacies in _____ County include: _____]*. With these pharmacies in mind, have you collaborated with any of them to provide care to your patients beyond normal prescription dispensing?
   a. Yes
   b. No
6. Has a CPESN pharmacy ever assisted you with engaging a patient who you were previously struggling to engage?
   a. Yes
   b. No, because the patient was not willing to engage with the CPESN pharmacy staff
   c. No, but I have never sought help with engagement from the CPESN pharmacy staff
   d. No, because there are no CPESN pharmacies in the area that I cover
7. What is your current case load?
   a. 0–15
   b. 16–30
   c. 31–45
   d. 46–60
   e. ≥61
8. How many patients in your current case load are receiving enhanced services from a CPESN pharmacy?
   a. 0
   b. 1–15
   c. 16–30
   d. 31–45
   e. 46–60
   f. ≥61
9. How many patients in your current case load could benefit from enhanced services from a CPESN pharmacy?
   a. 0
   b. 1–15
   c. 16–30
   d. 31–45
   e. 46–60
   f. ≥61
10. For patients in your current case load who are also receiving care from a CPESN pharmacy, indicate the degree of your collaboration with the CPESN pharmacy.
   Likert-type scale: Never (1); Rarely (2); Sometimes (3); Often (4); Always (5)
   a. The CPESN pharmacy assisted me with patient engagement
   b. The CPESN pharmacy provided enhanced services to the patient
   c. The CPESN pharmacy conducted the medication review for the patient
   d. The CPESN pharmacist and I discussed problems identified with the patient
   e. The CPESN pharmacist and I comanaged the patient for a period of time
   f. The CPESN pharmacist joined me on a home visit
   g. The CPESN pharmacy agreed to follow the patient longitudinally (with periodic check-in) after I signed off from a care management perspective
11. From your perspective, to what degree are the following services offered through CPESN pharmacies valuable?
   Likert-type scale: NOT valuable (1); SLIGHTLY valuable (2); MODERATELY valuable (3); VERY valuable (4); EXTREMELY valuable (5)
   a. Comprehensive review of all the patient's medications, including prescriptions, over-the-counter medications, herbals, and nutritional supplements

   b. Synchronizing all of a patient's chronic medications to be filled on a single day each month
   c. Packaging medications in blister cards or bubble packaging to promote adherence
   d. Home delivery
   e. Provision of durable medical equipment
   f. Immunizations
12. From your perspective, to what degree have you encountered the following barriers to using CPESN pharmacies?
    Likert-type scale: Never (1); Rarely (2); Sometimes (3); Often (4); Always (5)
   a. Distance of practice from participating pharmacies
   b. Distance of patient's residence from participating pharmacies
   c. Overall access to a CPESN pharmacy (e.g., hours of operation, etc.)
   d. Patient resistance to using a new pharmacy
   e. Lack of familiarity with how to make a referral to CPESN
   f. Lack of ease in making a referral to CPESN (e.g., not aligned with practice workflow and normal communication with pharmacies)
   g. Lack of knowledge about services offered at CPESN pharmacies and how they could help your patients
   h. Patient communication barriers (e.g., no multilingual staff at CPESN pharmacies, etc.)
   i. Pharmacy–prescriber communication barriers (e.g., different EMR system, faxing capabilities, etc.)
   j. Unaware of CPESN pharmacies
13. What additional services would be beneficial to your patients if offered by a CPESN pharmacy?
   a. *(Open Response)*
14. What additional barriers have you encountered to using CPESN pharmacies?
   a. *(Open Response)*
15. Have you ever participated in a joint home visit with a patient and staff from a CPESN pharmacy?
   a. Yes
   b. No
      i. Why have you not yet participated in a joint home visit with a patient and staff from a CPESN pharmacy?
         1. I am not sure which of my patients would benefit from a joint home visit with a pharmacist
         2. One of us had already completed our home visit before beginning comanagement
         3. Patient is reluctant to have multiple care team members visit the home at the same time
         4. I never asked/invited a CPESN pharmacy to join me on a home visit
         5. The CPESN pharmacy declined to join me on a home visit
16. Have you used CCNC's CPESN Pharmacy Locator website (https://cpesn.com/locator) to identify a pharmacy that offers specific service(s) for a patient?
   a. Yes
   b. No
   c. Attempted to but encountered errors or unable to identify a pharmacy
   d. Unaware of CCNC's Pharmacy Locator website
17. Are you interested in learning more about CPESN pharmacies in your area?
   a. Yes
      i. Please provide your name and contact information so that additional information regarding CPESN pharmacies can be provided to you.
         1. Name
         2. CCNC Network
         3. Phone Number
         4. Fax Number
   b. No