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Community pharmacy participation in primary care under Thailand's Universal Coverage Scheme: a national cross-sectional survey

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Abstract

Background

Thailand's Universal Coverage Scheme supports community pharmacies in delivering primary care. Planning service expansion requires evidence on which services pharmacies already provide and which they would consider offering. We examined current participation, interest in future participation, and perceived barriers across prescription refill, common-illness and preventive services.

Methods

We conducted a national cross-sectional survey of 1,306 licensed community pharmacies selected by stratified random sampling according to province and year of licensure. Pharmacy licence holders or practising pharmacists completed a postal or online questionnaire covering three prescription refill models, care for common illnesses and six preventive services. We summarised participation and interest by service, examined unadjusted associations between pharmacy characteristics and interest, and compared respondents' ratings across three barrier domains using the Friedman test.

Results

Of the 1,306 sampled pharmacies, 380 responded (29.1%). Care for common illnesses was the most frequently provided service (94/380, 24.7%). Current provision ranged from 12.6% to 20.8% across preventive services and from 0.8% to 9.2% across prescription refill models. For every service, more respondents wanted additional time to consider participation than expressed definite interest. Of the 380 respondents, 160 (42.1%) expressed interest in providing iron and folic acid supplementation, the largest number for any service, although only 31 (8.2%) were definitely interested. Among 284 respondents who did not report already participating in

common-illness care on the interest question, 32.1% of those from accredited pharmacies or pharmacies seeking accreditation expressed definite interest, compared with 4.8% of those from other pharmacies. Respondents most frequently rated claims submission (74.5%) and the time taken to receive reimbursement (71.1%) as major or very major barriers.

Conclusions

Among responding pharmacies, common-illness care was more widely provided than any prescription refill or preventive service. The predominance of respondents who wanted more time to decide limits the use of stated interest to forecast enrolment. Reviewing claims procedures, measuring payment times and tracking subsequent participation by service could inform the expansion of pharmacy-based primary care in Thailand.

Keywords

Community pharmacy services, Primary health care, Universal Coverage Scheme, Provider participation, Prescription refills, Reimbursement, Thailand

Background

Community pharmacies can extend the reach of publicly funded primary care by providing services close to where people live. Whether a covered service is available at a particular pharmacy, however, depends on the staff, time and resources needed to deliver it. An international review identified workload, remuneration, professional training and collaboration with other healthcare professionals as recurring influences on service implementation [1]. Even for an established service such as prescription refilling, countries differ in how pharmacies obtain prescription information, receive payment for medicines and are remunerated for pharmacists' work [2]. For health systems seeking to expand pharmacy participation, an important question is

therefore which services pharmacies can incorporate into routine practice under the arrangements offered.

In Thailand, the National Health Security Office (NHSO) has engaged community pharmacies in the delivery of primary care under the Universal Coverage Scheme (UCS) [3]. Early initiatives enabled patients with chronic conditions to collect repeat prescriptions from an accredited community pharmacy linked to their hospital [4]. A subsequent national study of outpatient dispensing documented the wider adoption of hospital–community pharmacy networks and identified difficulties exchanging information between providers [5]. The scope of pharmacy participation also includes care for common illnesses and selected health promotion and disease prevention services, including contraceptive provision. A Thai economic evaluation estimated potential savings when patients with common illnesses received care at pharmacies rather than hospital outpatient departments [6]. Studies in the Fourth Health Region and Chonburi Province have examined factors associated with pharmacies' participation in regional programmes and common-illness care, respectively [7, 8]. These studies provide evidence about particular services and settings. For national planning, the NHSO also needs to understand how participation differs across services offered to the same pharmacies.

International experience illustrates why participation should be examined separately for each service. In Finland, a study of repeat prescribing found that physicians were better able to identify and resolve drug-related problems when community pharmacists supplied information during prescription renewal [9]. For minor ailments, a UK systematic review found generally favourable patient outcomes following pharmacy consultations, although evidence about the effect on general practice workload was limited [10]. In Ontario, Canada, an analysis of the publicly funded Minor Ailment Services program found that urinary tract infections and

conjunctivitis accounted for 59% of claims [11]. Thus, even within a single programme, an aggregate measure of uptake can conceal substantial differences in the care delivered. Preventive services raise a further distinction between professional interest and actual provision. After Oregon authorised pharmacists to prescribe hormonal contraception, researchers assessed prescribing experience at six and twelve months, documenting how the service was incorporated into practice [12]. International evidence on remuneration likewise shows that payment arrangements vary by service and jurisdiction [13]. These findings make a case for asking pharmacists about current provision, future interest and perceived adequacy of payment as distinct aspects of participation.

This national cross-sectional survey aimed to describe community pharmacies' past and current participation in three areas of primary care under Thailand's UCS: prescription refill services for patients with chronic conditions, care for common illnesses, and selected health promotion and disease prevention services. We examined how interest in future participation varied across services and which respondent and pharmacy characteristics were associated with that interest. We also assessed respondents' perceptions of the benefits of participation and the barriers to providing these services.

Methods

Study design and setting

We conducted a national cross-sectional survey of community pharmacies in Thailand to examine participation in primary care services under the Universal Coverage Scheme (UCS). The survey covered three areas of service delivery supported by the National Health Security Office (NHSO): prescription refills for patients with chronic conditions, care for common illnesses, and selected health promotion and disease prevention services. The pharmacy was the

sampling unit. Respondents reported their pharmacy's service provision and their own perceptions of, and interest in, participation.

Sampling frame and sample size

The sampling frame comprised 18,396 pharmacies listed in the Thai Food and Drug Administration's 2022 register as holding a type 1 licence to sell modern medicines. We used stratified random sampling, with strata defined by province and the year in which the pharmacy received its operating licence. Pharmacies were eligible irrespective of previous participation in UCS services. The questionnaire could be completed by the pharmacy licence holder or a pharmacist practising at the sampled pharmacy, including respondents who held both roles.

We calculated a minimum sample size of 377 completed questionnaires using DATAtab, based on the finite population of 18,396 pharmacies, a 95% confidence level and a margin of error of 5 percentage points. Drawing on previous postal surveys of community pharmacies in Thailand [14, 15], we assumed a response rate of 30% and allowed for an estimated 3.9% of mailings to be undeliverable. The resulting mailing sample comprised 1,306 pharmacies.

Questionnaire and data collection

The research team developed a structured, self-administered questionnaire specifically for this study. The questionnaire covered respondent and pharmacy characteristics, perceptions of UCS service provision, perceived barriers, and interest in participating in individual services. An English-language version of the questionnaire is provided as Supplementary File S2.

The questionnaire distinguished three prescription refill models under Thailand's hospital decongestion programme. In Model 1, the hospital prepared each patient's medicines and sent them to the community pharmacy for dispensing. In Model 2, the hospital supplied stock to the community pharmacy, where the pharmacist managed the stock and prepared and dispensed each

patient's prescription. In Model 3, the community pharmacy procured and managed its own stock and prepared and dispensed medicines against hospital prescriptions.

We mailed a survey package containing a cover letter, study information and a paper questionnaire to each sampled pharmacy. Respondents could return the completed questionnaire by post or submit an electronic version using the QR code provided. Data collection took place over a five-month period, during which the study team made four postal contacts to request participation. We calculated the crude response rate using all sampled pharmacies as the denominator and recorded undeliverable mailings separately.

Survey measures

Participation in UCS services. For each service, respondents indicated whether their pharmacy had never provided the service, was providing it at the time of the survey, or had previously provided it and subsequently discontinued it. The questionnaire distinguished among the three prescription refill models used in the hospital decongestion programme. It also assessed common-illness care and six preventive services: provision of oral contraceptives, emergency contraception, condoms, risk screening, pregnancy test kits, and iron and folic acid supplements.

Interest in future participation. For each service, respondents were asked to indicate whether their pharmacy was already participating, was definitely interested in participating within two months, was interested in participating within two months but needed additional time to obtain information, or was definitely not interested in participating. Analyses of factors associated with future interest included respondents who selected one of the three interest categories for the service concerned. The denominator therefore varied by service.

Perceptions and barriers. Respondents rated statements about the professional, organisational and financial implications of participation on a five-point scale ranging from strongly disagree to strongly agree. Items addressed perceived benefits to patients and the health system, the role of community pharmacists, and implications for workload, revenue and stock management. Respondents also rated the extent to which individual factors represented barriers on a five-point scale. The barriers covered three domains: respondents' attitudes and confidence, pharmacy resources, and programme administration. Administrative barriers included participation requirements, reimbursement procedures and duplicate data entry.

Statistical analysis

We summarised categorical variables as frequencies and percentages and continuous characteristics as means and standard deviations. For each service, we reported service history and interest in future participation separately. A pharmacy could report providing more than one service. Analyses of interest excluded respondents who selected "already participating" for the service or programme concerned.

We used unweighted counts to examine associations between respondent or pharmacy characteristics and the three levels of interest in participation. We used Pearson's chi-square test when all expected cell counts were at least 1 and at least 80% were 5 or greater. For other contingency tables, we used the Fisher–Freeman–Halton test with Monte Carlo estimation of the p-value based on 1,000,000 replicates. These service-specific comparisons were unadjusted and exploratory. We used the Friedman test to compare ratings across the three barrier domains within respondents, followed by pairwise Wilcoxon signed-rank tests with a Bonferroni-adjusted significance threshold of 0.017.

Ethics approval and consent to participate

The Silpakorn University Research Ethics Committee approved the study (REC 67.0520-071-3501; COA 67.0712-042). Participation was voluntary, and all participants received written information about the study before completing the questionnaire. Informed consent was obtained from all participants through completion and return of the paper questionnaire or submission of the online questionnaire, which constituted implied informed consent.

Results

Survey response and pharmacy characteristics

Of the 1,306 pharmacies sampled, 380 returned a questionnaire, yielding a crude response rate of 29.1%. Eighteen mailings were undeliverable. Respondents had a mean age of 40.8 years (standard deviation [SD] 10.4) and a mean of 12.7 years of experience in community pharmacy (SD 7.2). More than two-thirds were both the licence holder and a practising pharmacist at the sampled pharmacy (261/380, 68.7%). Most responding pharmacies were single-outlet independent businesses (320/380, 84.2%). At the time of the survey, 115 pharmacies (30.3%) held accreditation and 32 (8.4%) were applying for accreditation (Table 1).

Current and discontinued service provision

Common-illness care was the most frequently provided UCS service. Of the 380 pharmacies, 94 (24.7%) reported that they currently provided this service, 2 (0.5%) had discontinued it, and 284 (74.7%) had never provided it (Table 2, panel A). Among preventive services, current provision ranged from 48 pharmacies (12.6%) for physical or mental health risk screening to 79 (20.8%) for oral contraception.

Current participation in each prescription refill model was below 10%. Model 1, in which hospitals prepared patient-specific medicines for dispensing at community pharmacies, had the most current providers (35/380, 9.2%), although a further 30 pharmacies (7.9%) had

discontinued it. Nineteen pharmacies (5.0%) provided Model 3, in which pharmacies procured and managed their own stock. Model 2, in which pharmacies dispensed from hospital-supplied stock held on site, had the fewest current providers (3/380, 0.8%); ten pharmacies (2.6%) reported having discontinued it (Table 2, panel A).

Interest in future participation

For every service, more respondents expressed interest but wanted additional time to consider participation than expressed definite interest (Table 2, panel B). Across all 380 respondents, the largest combined proportions selecting either interest category were observed for iron and folic acid supplementation (160/380, 42.1%), pregnancy test provision (154/380, 40.5%), and common-illness care (153/380, 40.3%). Definite interest alone was less frequent: 31 respondents (8.2%) selected this option for iron and folic acid supplementation, 34 (8.9%) for pregnancy test provision, and 28 (7.4%) for common-illness care. Among the refill models, combined interest was highest for Model 3 (142/380, 37.4%), followed by Model 1 (133/380, 35.0%) and Model 2 (131/380, 34.5%).

On the interest item for common-illness care, 96 respondents selected “already participating”. Among the remaining 284, 131 (46.1%) were definitely uninterested, 125 (44.0%) were interested but wanted more time, and 28 (9.9%) were definitely interested. The corresponding numbers available for the analyses of interest in refill Models 1, 2 and 3 were 339, 373 and 359, respectively.

Perceived benefits and barriers

Most respondents agreed that participation benefited the national health system (317/380, 83.4%) and increased public recognition of community pharmacists’ professional role (314/380, 82.6%).

At the same time, 252 (66.3%) agreed that participation required substantial working capital, and 216 (56.8%) agreed that it placed an excessive workload on the pharmacist (Table 3).

Submitting claims for service fees received the highest mean barrier rating (4.08 out of 5), with 283 respondents (74.5%) rating it as a major or very major barrier. The time taken to receive reimbursement for medicines and services ranked second (mean 4.00), with 270 respondents (71.1%) selecting one of the two highest ratings. Insufficient staffing and insufficient time were rated as major or very major barriers by 233 (61.3%) and 226 (59.5%) respondents, respectively (Table 3).

Ratings differed across the three barrier domains (Friedman test, $p < 0.001$). Programme administration had the highest mean rank (2.30), followed by pharmacy resources (1.96) and personal attitudes and confidence (1.74). Respondents rated administrative barriers higher than each of the other two domains (both pairwise $p < 0.001$). The difference between pharmacy resources and personal attitudes and confidence did not reach the Bonferroni-adjusted significance threshold of 0.017.

Factors associated with interest in participation

Pharmacy accreditation status was associated with the distribution of interest across all three prescription refill models, common-illness care and the health promotion and disease prevention programme (all $p < 0.001$, Table 4). The largest difference in definite interest between accreditation groups was observed for common-illness care. Among respondents included in that analysis, 17 of 53 (32.1%) from pharmacies that were accredited or applying for accreditation expressed definite interest, compared with 11 of 231 (4.8%) from pharmacies that were neither accredited nor applying. For the health promotion and disease prevention programme, the corresponding proportions were 19 of 81 (23.5%) and 13 of 214 (6.1%).

The distribution of interest varied by age group in all five analyses (p = 0.002–0.014, Table 4). For common-illness care, interest also varied by years of community pharmacy experience (p = 0.006), business structure (p = 0.002) and prior UCS programme participation (p = 0.011). Definite interest was reported by 12 of 69 respondents (17.4%) with prior programme experience and 16 of 215 (7.4%) without such experience. Counts for all three interest categories are provided in Table S1.

Discussion

Among the 380 responding community pharmacies, participation in primary care under Thailand's Universal Coverage Scheme (UCS) varied substantially by service. Approximately one-quarter provided common-illness care, whereas fewer than one in ten provided any individual prescription refill model. Interest in future participation followed a different pattern. Iron and folic acid supplementation attracted the highest combined proportion of respondents expressing interest, although most of these respondents wanted more time to consider providing the service. Across services, respondents recognised the professional and public value of pharmacy participation while identifying claims submission and the time taken to receive payment as the most prominent barriers. These findings point to two distinct tasks for the National Health Security Office (NHSO): supporting pharmacies that already provide a service and understanding what pharmacies need before deciding whether to participate.

Differences in participation across services

The difference between common-illness care and prescription refills is relevant to how these services are organised. Patients can present directly to a participating pharmacy for assessment of a common illness. A refill requires a hospital prescription and coordination between the hospital and pharmacy, even under Model 3, in which the pharmacy procures its own stock. Chetsurakarn

et al. identified difficulties exchanging patient information and managing medicine costs in Thai hospital–community pharmacy networks [5]. Our findings add a provider perspective: 64.7% of respondents rated access to hospital prescription and patient information as a major or very major barrier. Coordination requirements are therefore a plausible explanation for the lower participation in refills, although the survey did not establish why an individual pharmacy chose one service over another.

The service-history data also show why current participation and discontinuation should be examined separately. For Model 1, 35 pharmacies were still providing refills and 30 had discontinued. For common-illness care, 94 were still providing the service and only two reported discontinuation. These counts identify former Model 1 providers as a group whose experience could inform programme design. They cannot establish that common-illness care had better retention, because pharmacies may have entered the programmes at different times and the survey did not measure duration of participation. International evidence reinforces the value of service-specific measures. In Ontario, claims for two conditions accounted for 59% of activity under a publicly funded minor-ailment programme [11]. The Ontario study measured claims volume, whereas ours measured the number of pharmacies reporting provision. Together, these measures answer complementary questions about where services are available and how often patients receive them.

Interest in participation and the role of accreditation

Across all ten services and refill models, respondents who wanted more time to consider participation outnumbered those who were definitely interested. This distinction materially affects estimates of potential expansion. For example, 160 respondents expressed some interest in iron and folic acid supplementation, but only 31 of the 380 respondents (8.2%) expressed

definite interest. A similar pattern was apparent for common-illness care. Among the 284 respondents who did not select “already participating” on the interest item, 44.0% wanted more time and 9.9% were definitely interested. For service planning, these responses identify pharmacies that might consider participation. Estimating how many will begin providing care would require follow-up through enrolment and the first completed service.

Participation in the pharmacy accreditation programme had a consistent association with interest across the three refill models, common-illness care and preventive services. The largest observed difference concerned common-illness care: 32.1% of respondents from accredited pharmacies or pharmacies applying for accreditation expressed definite interest, compared with 4.8% from pharmacies in neither category. This extends earlier Thai work on participation in regional pharmacy programmes and common-illness services [7, 8] by showing a similar association across several services within the same survey. Its interpretation requires care. Accredited pharmacies and applicants were analysed together, so the association could reflect familiarity with service requirements, resources available to prepare an application, or an existing intention to expand professional services. The unadjusted comparisons do not isolate the contribution of accreditation itself.

Administrative barriers and implications for service delivery

The strongest point of agreement concerned the value of participation: 83.4% believed it benefited the national health system. At the same time, 74.5% rated the process of submitting service fee claims as a major or very major barrier, and 71.1% gave the same ratings to the time taken to receive reimbursement. The within-respondent comparison likewise placed programme administration above both pharmacy resources and personal attitudes. Thai qualitative research helps explain how these views can coexist. Pharmacists delivering common-illness care

described helping patients and developing their professional role as reasons to participate, while also reporting technical problems with the service system [16]. International reviews similarly identify workload, remuneration and organisational support as relevant to the delivery of professional pharmacy services [1, 13].

For the NHSO, the findings identify two aspects of payment that can be investigated directly: the work required to submit a valid claim and the interval between submission and payment. These distinctions matter for pharmacies that must commit staff time or working capital before reimbursement. Research on Ghana's National Health Insurance Scheme also found that providers and insurance managers linked claims-processing difficulties and delayed reimbursement to problems delivering covered services [17]. In the Thai setting, a practical first step would be to examine where claims require repeat data entry or correction and to measure payment intervals by service. For prescription refills, the same review could examine whether pharmacies receive the prescription and patient information needed to complete dispensing. The survey provides a basis for prioritising these questions. It did not measure actual payment delays or establish what fee would be sufficient to sustain participation.

Strengths and limitations

The national sampling frame and inclusion of pharmacies with and without UCS experience allowed the study to capture perspectives beyond those of current providers. Asking the same respondents about several services also made it possible to distinguish current provision, discontinued provision and interest in future participation. This distinction exposed differences that an overall measure of willingness to participate would have obscured.

Several limitations affect interpretation. First, the crude response rate was 29.1%. Pharmacies with a particular interest in UCS services or stronger views about programme administration may

have been more likely to respond. The reported proportions therefore describe responding pharmacies, and their generalisability to all licensed pharmacies in Thailand is uncertain. Second, participation was self-reported. The service-history and interest items yielded slightly different counts of current providers, including 94 and 96 respondents, respectively, for common-illness care. We retained the denominator corresponding to each question. Third, the cross-sectional design cannot determine whether prior UCS experience or involvement in accreditation preceded interest in new services. The analyses were unadjusted, and multiple associations were examined, so individual *p*-values warrant cautious interpretation. Finally, pharmacy participation was measured at the provider level. The findings do not establish the volume of care delivered, the geographical accessibility of participating pharmacies, or patient outcomes. Linking future provider surveys with service and claims records would allow reported interest to be examined alongside subsequent enrolment, service delivery and continuation.

Conclusions

Among responding community pharmacies, participation in Thailand's Universal Coverage Scheme varied by service. Common-illness care was the most widely provided service, while participation was below 10% for each prescription refill model. Across all services, respondents who wanted more time to consider participation outnumbered those who expressed definite interest. Claims submission and the time taken to receive payment were the most frequently reported barriers.

These findings identify priorities for the National Health Security Office as it expands pharmacy-based primary care. Reviewing claims procedures and measuring payment times by service could help identify where administrative changes are needed. For prescription refills, this review should also examine how pharmacies obtain hospital prescriptions and patient information.

Monitoring which pharmacies begin, continue or discontinue each service would allow the NHSO to assess whether these changes support sustained participation.

List of abbreviations

UCS, Universal Coverage Scheme

NHSO, National Health Security Office

Declarations

Ethics approval and consent to participate

The study was conducted in accordance with the ethical principles of the Declaration of Helsinki. Ethical approval was obtained from the Silpakorn University Research Ethics Committee on 12 July 2024 (REC 67.0520-071-3501; COA 67.0712-042). The approval was subsequently extended through 11 July 2026. All participants received written information about the study objectives, procedures, confidentiality, and voluntary nature of participation. Informed consent to participate was obtained from all participants through completion and return of the paper questionnaire or submission of the online questionnaire, which constituted implied informed consent.

Consent for publication

Not applicable.

Availability of data and materials

Aggregate survey data are presented in the article and Supplementary Table S1. The de-identified dataset is available from the corresponding author on reasonable request.

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

NS and SL designed the study and analysed the survey data. NS, SL, NK, PP and RC developed the questionnaire. DP coordinated survey administration and prepared the dataset for analysis. NS, SL, NK, PP and RC interpreted the findings. NS drafted the manuscript with contributions from SL. All authors critically reviewed the manuscript, read the final version and approved it for submission.

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Table 1. Characteristics of survey respondents and participating community pharmacies in Thailand (N = 380)

Characteristic	**Value**
Respondent characteristics	
Age, years, mean (SD)	40.8 (10.4)
Experience in community pharmacy, years, mean (SD)	12.7 (7.2)
Female, *n* (%)	224 (58.9)
Male, *n* (%)	153 (40.3)
Sex not reported, *n* (%)	3 (0.8)
Respondent's role, *n* (%)	
Licence holder and practising pharmacist at the sampled pharmacy	261 (68.7)
Practising pharmacist who did not hold the licence	98 (25.8)
Non-pharmacist licence holder	14 (3.7)
Pharmacist licence holder who did not routinely practise at the sampled pharmacy	7 (1.8)
Business structure, *n* (%)	
Single-outlet independent pharmacy	320 (84.2)
Independent business with multiple outlets	45 (11.8)
Chain pharmacy	15 (3.9)
Accreditation status, *n* (%)	
Accredited	115 (30.3)
Applying for accreditation	32 (8.4)
Neither accredited nor applying	233 (61.3)
Type of operation, *n* (%)	
Retail only	347 (91.3)
Retail and wholesale	33 (8.7)
Customers per day, mean (SD)	56.2 (34.7)

Table 2. Current and discontinued provision of UCS services and interest in future participation (N = 380)

Panel A. Service history

Service or refill model	**Never provided *n* (%)**	**Currently providing *n* (%)**	**Discontinued *n* (%)**
Refill Model 1	315 (82.9)	35 (9.2)	30 (7.9)
Refill Model 2	367 (96.6)	3 (0.8)	10 (2.6)
Refill Model 3	352 (92.6)	19 (5.0)	9 (2.4)
Common-illness care	284 (74.7)	94 (24.7)	2 (0.5)
Oral contraception	289 (76.1)	79 (20.8)	12 (3.2)
Emergency contraception	297 (78.2)	74 (19.5)	9 (2.4)
Condom provision	295 (77.6)	76 (20.0)	9 (2.4)
Physical or mental health risk screening	317 (83.4)	48 (12.6)	15 (3.9)
Pregnancy test provision	316 (83.2)	58 (15.3)	6 (1.6)
Iron and folic acid supplementation	323 (85.0)	51 (13.4)	6 (1.6)

Panel B. Interest in participation

Service or refill model	**Definitely uninterested *n* (%)**	**Interested, wanted more time *n* (%)**	**Definitely interested *n* (%)**	**Already participating *n* (%)**
Refill Model 1	206 (54.2)	113 (29.7)	20 (5.3)	41 (10.8)
Refill Model 2	242 (63.7)	110 (28.9)	21 (5.5)	7 (1.8)
Refill Model 3	217 (57.1)	119 (31.3)	23 (6.1)	21 (5.5)
Common-illness care	131 (34.5)	125 (32.9)	28 (7.4)	96 (25.3)
Oral contraception	160 (42.1)	110 (28.9)	31 (8.2)	79 (20.8)
Emergency contraception	163 (42.9)	115 (30.3)	32 (8.4)	70 (18.4)
Condom provision	166 (43.7)	111 (29.2)	28 (7.4)	75 (19.7)
Physical or mental health risk screening	192 (50.5)	107 (28.2)	31 (8.2)	50 (13.2)
Pregnancy test provision	168 (44.2)	120 (31.6)	34 (8.9)	58 (15.3)
Iron and folic acid supplementation	166 (43.7)	129 (33.9)	31 (8.2)	54 (14.2)

UCS, Universal Coverage Scheme. Each row uses all 380 respondents as the denominator. Respondents answered separate questions about service history (panel A) and interest (panel B). Counts selecting "currently providing" and "already participating" therefore reflect the responses to their respective questions. For the service-specific analyses of interest, respondents who selected "already participating" in panel B were excluded.

Table 3. Selected perceived benefits, operational demands and barriers to providing UCS services (N = 380)

Survey item	**Mean score (1–5)**	**Respondents selecting either of the two highest categories *n* (%)**
Perceived benefits and operational demands		
Increased public recognition of community pharmacists' professional role	4.25	314 (82.6)
Benefit to the national health system	4.21	317 (83.4)
Increased customer numbers	3.94	274 (72.1)
Increased pharmacy revenue	3.84	255 (67.1)
Substantial working capital requirements	3.82	252 (66.3)
Excessive pharmacist workload	3.58	216 (56.8)
Perceived barriers		
Process for submitting service fee claims	4.08	283 (74.5)
Time taken to receive reimbursement for medicines and services	4.00	270 (71.1)
Remuneration relative to workload	3.82	239 (62.9)
Service documentation requirements	3.78	251 (66.1)
Access to hospital prescription and patient information	3.77	246 (64.7)
Insufficient staffing	3.71	233 (61.3)
Insufficient time	3.61	226 (59.5)

For perceived benefits and operational demands, the two highest categories were "agree" and "strongly agree". For barriers, they were "major barrier" and "very major barrier". Percentages were calculated from the combined counts before rounding. The table presents selected questionnaire items. The domain-level comparisons reported in the text used all three barrier domains.

Table 4. Unadjusted associations of age group and pharmacy accreditation programme status with interest in UCS services

Service or refill model	**Respondents in analysis *n***	**Definitely interested among accredited pharmacies or applicants, %**	**Definitely interested among pharmacies neither accredited nor applying, %**	***P-value* for accreditation programme status**	***p-value* for age group**
Refill Model 1	339	12.6	2.3	<0.001	0.006
Refill Model 2	373	12.6	1.3	<0.001	0.007
Refill Model 3	359	14.6	1.7	<0.001	0.014
Common-illness care	284	32.1	4.8	<0.001	0.002
Health promotion and disease prevention programme	295	23.5	6.1	<0.001	0.003

UCS, Universal Coverage Scheme. Percentages are calculated within each accreditation group among respondents included in the service-specific analysis. Each p-value is from an unadjusted Pearson's chi-square test comparing the distribution across all three interest categories (definitely uninterested, interested but wanted more time, and definitely interested). The final row refers to the preventive programme as a whole. Table 2 presents responses for individual preventive services.

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- SupplementaryTableS1.docx
- SupplementaryFileS2.docx