CONSUMER EDUCATION AS A COGNITIVE SERVICE BUSINESS DEVELOPMENT MODEL FOR PHARMACISTS

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EXECUTIVE SUMMARY

We developed, implemented and evaluated a consumer education model to:

1. Increase consumer awareness of their own medication related needs;
2. Determine what proportion of those consumers will purchase additional pharmacist services;
3. Evaluate various outcomes associated with the provision of consumer education and pharmacist services;
4. Determine the financial and operational viability of implementing the new cognitive service business model by community pharmacists.

Our business model took advantage of patients' frequently stated concerns related to the high cost of prescriptions. The model consisted of two parts. A Free Seminar was the patient's entry point into the model. The seminar provided patients with information on the cost of medication, the nature of drug therapy problems and how to avoid them, the difference between cost and value and strategies to obtain the best value/lowest cost for medications. During the Free Seminar, patients also completed a Self Assessment Questionnaire to help determine if they could be suffering any drug therapy problems. Based on the results of the Self Assessment, patients were invited to attend an Individualized Consultation on a fee for service basis. Patients also completed a brief survey to assess their satisfaction with the Free Seminar.

The Individualized Consultation was the second part of the model. During the consultation, pharmacists gathered and assessed patients' histories to identify drug therapy problems, created care plans to resolve such problems and provided the results of the consultation to the patients who were then instructed to discuss the results with their physician. Follow up consultations for patients with documented drug therapy problems were performed as clinically indicated.

Our intention was to introduce the business model in two community pharmacies (one chain, one independent). Pharmacists were to offer the Free Seminar we created and recruit patients for the Individualized Consultation. We created various marketing and patient care tools for pharmacists to use to advertise the program and provide patient care.

We were able to recruit 2 community pharmacies that agreed to participate in the project. Because of limited success of implementing the program in the community pharmacy setting, we then recruited a contract pharmacist who provided the Free Seminar and Individualized Consultations as part of a medication therapy management contract secured with an Area Agency on Aging. The Area Agency on Aging agreed to make the program available to their clients and pay for the contract pharmacist to offer the Seminar and provide consultations. The Area Agency on Aging agreed to sponsor the program based on the empirical evidence of its value and did not require significant use of the marketing and advertising materials we created,

Our contract pharmacist provided the Free Seminar to 175 patients, of whom 69 (39.4%) agreed to participate in a sponsored Individualized Consultation. The Self Assessment Questionnaire was found to be predictive to identify those patients who chose to receive a consultation ($p=0.0038$) and to predict the number of drug therapy problems eventually detected ($p<0.01$). Overall, patients seemed satisfied with the Free Seminar.

Of the 69 patients receiving an Individualized Consultation, 68.1% received the consultation in person and 31.9% took place by telephone. The method of consultation did not appear to influence the number of drug therapy problems found ($p=0.23$). Forty-nine patients (71%) received a follow up consultation and 25 (36.2%) received a second follow up consultation.

A total of 208 drug therapy problems were discovered, of which 41.8% were eventually resolved. The most common drug therapy problems found were Needs Additional Drug Therapy (45.7%) and Non-compliance with Therapy (18.3%). The most common single agents related to drug therapy problems were Calcium (12.1%) and Multivitamins (9.2%).

As a business model, the program was moderately successful. Costs to offer the Free Seminars and Individualized Consultations were $14,025, while program revenue was $15,875. Thus, the gross margin of the program was 11.7% ($1850). Administrative costs (materials, printing, postage etc) were estimated to be $7 per attendee.

All four of our objectives were met. We were able to provide patient education that was found valuable by attendees. Nearly 40% of patients agreed to attend a sponsored consultation. The clinical aspects of the program appear promising and the patient care tools appear to be valuable. The program did turn a modest profit. Since we were unable to use community pharmacies as our study sites, as we originally intended, it is difficult to determine if the model can be generalized to those practice settings. Nevertheless, both our clinical and financial outcomes show that the model is an effective one in the appropriate practice setting. Examples of such practice settings would include programs sponsored by community groups or perhaps employers or Medicare Part D.

I. TITLE & CATEGORY:

Consumer Education as a Cognitive Service Business Development Model for Pharmacists. Category: Practice Demonstration Project

II. STUDY OBJECTIVES

Our study objectives were to introduce, deliver and assess a consumer education program to:

1. Increase consumer awareness of their own medication related needs;
2. Determine what proportion of those consumers will purchase additional pharmacist services;
3. Evaluate various outcomes associated with the provision of consumer education and pharmacist services;
4. Determine the financial and operational viability of implementing the new cognitive service business model by community pharmacists.

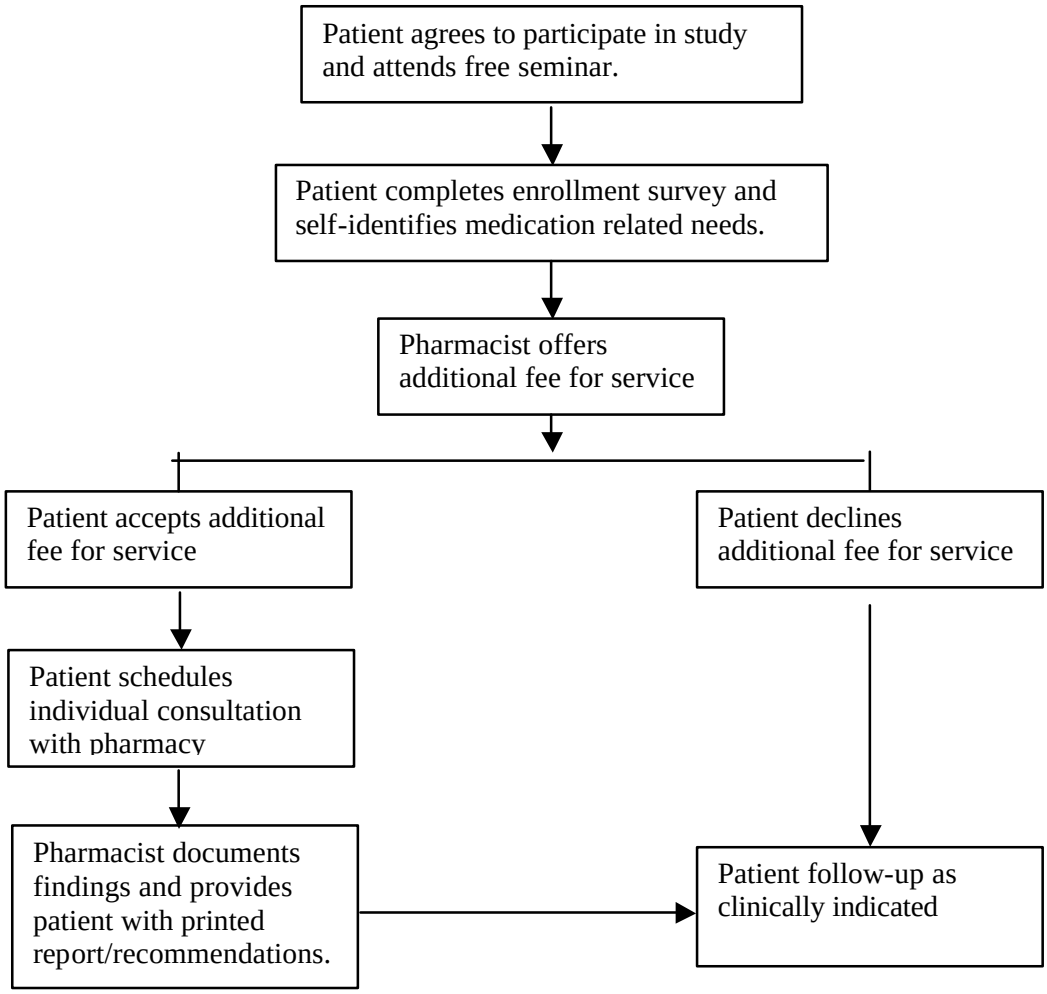
III. METHODS

Business Model*:* We created two separate components for the business model: general consumer group education on medication use and individualized patient consultations. Each component integrated information and services to assist the pharmacist in marketing services aimed at identifying and resolving patient-specific medication needs. The general consumer group education on medication use was offered at no cost and served as an innovative patient entry point to the model. After the patient completed the initial education including a self-assessment instrument, he/she was encouraged to schedule an individualized patient consultation with the pharmacist, for a fee. Figure 1 illustrates the sequence of patient care events.

Pharmacist Identification and Requirements/Operational Capacity and Readiness: We intended to introduce the business model at 2 community pharmacies based upon their existing capacity to provide patient care services and willingness to adhere to the project protocol. One study site was intended to be a chain pharmacy; the second an independently owned pharmacy. Eligible pharmacies were required to have adequate space, staff, workflow characteristics and patient care experience to make success of the project possible.

As discussed in the Results section of this report, we were forced to modify this approach, due to difficulties in implementing the program in community pharmacies.

Figure 1. Patient Care Events



Description of Components

The group medication seminar was the novel point of patient entry into the model and took advantage of frequently communicated patient concerns related to the high cost of prescriptions. Pharmacists were to advertise this free seminar to the general public as one in which participants would learn various strategies to obtain their medication at the lowest cost. While doing so, participants would also receive information on the value that medication offers as well as the concept of drug therapy problems and their attendant costs. By so doing, we channeled patients' primary interest of drug costs, into pharmacists' areas of special expertise, which are drug therapy problems and adding value to prescriptions.

General Consumer Group Medication Use

The initial complimentary educational seminar included information on:

- America's drug problems – high prices, drug therapy problems
- Patient self assessment to determine if they have a drug therapy problem
- How to avoid drug therapy problems

- Reasons for high drug costs in the USA
- The difference between a drug's cost and its value
- 10 strategies for obtaining the best value/lowest cost for medications
- Offer of individualized sessions at a fee
- Question period

A full-color, professionally designed and printed patient booklet containing information on the above, a self-assessment instrument, a medication diary and self-monitoring record were provided to patients who attended the free seminar.

The self-assessment instrument was designed such that each question asked related to one or more of the drug therapy problems as described in the literature. (Rovers et al. A Practical Guide to Pharmaceutical Care, 2nd edition) Patients assigned a score to each response and totaled their scores. The validity of the self-assessment scores were evaluated by comparing patient scores with drug therapy problems identified during individual consultations.

Individualized Patient Consultations

Methods for conducting individualized patient consultations utilized the comprehensive pharmaceutical care methods and philosophy originally introduced by Hepler and Strand and described in Rovers, et al. "A Practical Guide to Pharmaceutical Care 2nd edition". We created a patient care template and all necessary tools to allow pharmacists to:

- Gather patient-specific information
- Identify and prioritize drug therapy problems
- Develop goals for therapy
- Create and implement care plans to achieve desired goals
- Perform patient monitoring and follow-up activities
- Document patient care activities
- Bill patients for care provided

If problems were identified during the individualized consultation, the pharmacist communicated the results of the consult along with potential solutions directly to the patient. Patients were encouraged to bring the results of the consultation to their physicians, but pharmacists did not contact physicians during the study.

Marketing the Program to Patients

For each pharmacy, we provided marketing plans and advertising materials for use in local/regional newspapers, in-store promotion, physician detailing, community group networking and employer communications. Advertising materials included brochures, print ads, bag-stuffers, and table-top/shelf displays. The costs for printing materials, advertising etc, were paid for using grant funds and pharmacists were given the necessary marketing tools free of charge.

Eligible Patients

Any individual greater than 18 years of age was allowed to attend the initial education session and was eligible to schedule a consultation with the pharmacist. Informed consent was obtained from each patient prior to collecting any data. The study was approved by the Institutional Review Board at Drake University.

Pharmacist Reimbursement

Pharmacists were not intended to be directly reimbursed from project funds for conducting consumer group education sessions. Any revenue generated from patient scheduled individual consultations however, was intended to be completely retained by the pharmacy providing the services. Project investigators assisted in establishing fee schedules based upon market analysis for each individual pharmacy location. As indicated above, marketing and advertising costs of the study were borne by the investigators using grant funds, not the pharmacists.

Data Collection and Analysis

We collected the following data:

- Results of patient self assessment during free seminar
- Patient satisfaction with free seminar
- For patients receiving the individualized consultation; basic patient demographics (name, sex, date of birth, ethnicity) consultation method (telephone vs. in person); types of drug therapy problems; drugs involved in drug therapy problems; date problem resolved; clinical recommendations made.

IV. RESULTS

Pharmacist Recruitment

When we attempted to recruit pharmacists to deliver the free seminar and provide the individualized consultations, a number of significant problems soon arose.

Several pharmacists expressed initial interest in being study sites, but soon withdrew after receiving training on the program and changing their minds. Other pharmacists withdrew when, in spite of being provided with marketing materials and other support tools, they made only token attempts to recruit patients for the free seminar. A single pharmacy that agreed to fully utilize the business model was able to recruit only a small number of patients despite utilizing the full array of marketing and recruitment materials provided to them.

Offers of financial incentives for pharmacists and technicians to market the program were also not successful. Initial attempts to hire a contract pharmacist to market the program directly to physicians and patients and then offer the seminar were likewise unsuccessful. One chain pharmacy offered to participate, but only if they were assured an equity position in any commercially viable products developed as a result of their participation.

Ultimately, we recruited 1 contract pharmacist to offer the free seminar and individualized consultations as part of a medication therapy management contract secured with a Florida Area Agency on Aging. The contract with the Area Agency on Aging provided funding for the pharmacist to provide the group education session at senior centers as well as complete individualized patient consultations either in person or via the telephone. The contract pharmacist had previous experience in community-based patient care and was a certified geriatric pharmacist and diabetes educator. The contract pharmacist was judged to have adequate patient care skills to provide high quality patient care and allow the program materials to be evaluated.

Free Seminars

Between April and December 2005, 175 patients attended a Free Seminar. Of these, 69 patients (39.4%) chose to receive a sponsored individualized consultation paid for by the Area Agency on Aging. Demographic and other information on the patients is shown in Table 1. Overall, patients receiving an individualized consultation were generally female, elderly and White/Caucasian.

Table 1 – Patient Demographics

Total Patients Attending Free Seminar	175	
Total number of patients choosing a sponsored consultation	69	39.4%
Male patients choosing a sponsored consultation	8	11.6%
Female patients choosing a sponsored consultation	61	88.4%
Age (years) N=65*	Mean 78.14 Median 77.0 Mode 77.0 Range 47-104	+/- 9.77 (SD)
Ethnicity** N=69	White/Caucasian 47 Hispanic/Latino 11 African American 10 Asian 1	68.1% 15.9% 14.5% 1.4%

* Data available for 65 patients only
** Data for patients receiving individualized consultations only

Patient Satisfaction - Overall, patients were satisfied with the Free Seminar. Results of the patient satisfaction analysis are shown in Table 2. These results should be interpreted cautiously since 29.0 - 51.6% of patients did not provide a response for any given question.

Table 2 – Patient Satisfaction with Free Seminar

Question Asked (n=155)	Patients Answering Yes (%)	Patients Answering No %	Patients Not Providing an Answer (%)
The presenting pharmacist was well informed and confident.	69.7	1.3	29.0
The presenting pharmacist was able to answer my questions.	63.2	2.6	34.2
The information presented was new to me.	40.6	21.9	37.4
I was hoping for more information on the specific drugs I am taking.	12.9	35.5	51.6
I feel the time I spent attending this program was worthwhile.	67.1	0.6	32.3

Self-Assessment Questionnaire

During the free seminar, patients completed the Self Assessment Questionnaire. Patients who elected to receive a sponsored individualized consultation had significantly higher self-assessment scores than patients who declined a consultation with the pharmacist. Patients who chose a consultation had a mean self-assessment score of 2.98 (n=58) while patients foregoing an individualized consultation had a mean self-assessment score of 1.96 (n=106). (p=0.0038, two tailed t-test).

The Self Assessment Questionnaire was also found to be predictive for the number of drug therapy problems found in patients undergoing individualized consultation. Pearson's Correlation Coefficient for the total self assessment score (independent variable) and the number of drug therapy problems found (dependant

variable) was 0.384 ($p<0.01$) which indicates that the higher the self assessment score, the higher the number of drug therapy problems a patient was likely to have. (n=60)

It should be noted that a number of patients attending the Free Seminar were quite elderly and unable to complete the Self Assessment Questionnaire or required assistance to do so.

Individualized Consultations

Sixty-nine patients (39.4%) ultimately decided to attend a sponsored individualized consultation. Of the initial consultations, 47 (68.1%) were in person and 22 (31.9%) took place by telephone. Forty-nine patients (71%) had a follow-up consultation and 25 (36.2%) had a second follow-up consultation. Overall, the mean number of consultations plus follow-ups was 2.04 +/- 0.85 (SD) per patient. All follow-up consultations were done by telephone.

For the 47 patients whose initial individualized consultation was in person, an average of 2.85 +/-1.53 (SD) drug therapy problems were found. For patients whose initial consultation was by telephone, an average of 3.36 +/-1.87 (SD) drug therapy problems were found. This difference was not significant. ($p=0.23$, 2 tailed t test). These results suggest that in person consultations are not significantly more effective than telephone consultations for finding drug therapy problems.

Drug Therapy Problems – Patients who had completed a self-assessment had a mean of 2.87 +/- 1.58 (SD) (range 1-7; median 2.5; mode 2) drug therapy problems per person. (n=60) Using an intention to treat analysis (considers all patients, not just those in whom data was available), 208 drug therapy problems were identified indicating that patients had a mean of 3.01 problems each (n=69). The nature of the drug therapy problems identified is shown in Table 3.

Table 3 – Drug Therapy Problems Identified

Drug Therapy Problem	Number (n=208)	% of Total Problems
Adverse drug reaction	20	9.6
Dose too high	4	1.9
Dose too low	23	11.1
Needs additional drug therapy	95	45.7
No indication	5	2.4
No problem noted	15	7.2
Non-compliance	38	18.3
Wrong drug	8	3.8

Of the 208 problems identified, 87 (41.8%) were later resolved by the pharmacist. Although this number may seem lower than expected, it is important to note that the method of resolving problems required the patient to take the pharmacist's

recommendations to the physician for evaluation and possible changes in therapy. Considering that pharmacists did not communicate with physicians directly in this study, the proportion of problems resolved seems reasonable.

Drug Categories Involved – The drug therapy problems identified involved a wide range of medications from multiple therapeutic categories. The most common single medication involved was Calcium (n=25; 12.1%) while Multivitamins were the second most common medication(n=19; 9.2%). The nature of the therapeutic categories involved is shown in Table 4.

Table 4 – Therapeutic Categories Involved

Therapeutic Category	**Number of Problems Related to Category (n=207)***	**% of Total Problems**
Miscellaneous Needs Therapy	57	27.5
Vitamin/Mineral/Nutritional	54	26.1
Cardiac/Fluid	35	16.9
Hyperlipidemia	10	4.8
Ortho/MSK/Pain	9	4.4
Central Nervous System	9	4.4
Respiratory	8	3.9
Diabetes	7	3.4
Gastrointestinal	7	3.4
Genitourinary	3	1.4
Endocrine	3	1.4
Allergy	1	0.5
Dermatologic	1	0.5
Anti-infective	1	0.5
Ear/Nose/Throat	1	0.5
Education	1	0.5

*data missing for one problem

Financial Issues

The costs to deliver the group education program and complete individualized patient consultations were calculated based on the contract pharmacist ‘s self-reported time estimates and related expenses as outlined in Table 5. Total costs to provide the group education program to 175 seniors at 18 senior centers and complete 69 individual consultations were $14,025. Revenue obtained from the Area Agency on Aging totaled $15,875 leaving a net program operating revenue for the program of $1850 with a net operating margin to total revenue of 11.7%.

Table 5 - Program Costs

Contract Pharmacist Costs ($50/hr)	**Est. Time**	**Total Hours**	**Total**
Round trip travel time to and from 18 senior centers	1.5 hours	27	$1,350
Time to deliver 18 group education sessions.	1 hour	18	$900
Time to complete 69 initial consultations (in-person or telephonic)	1 hour	69	$3,450
Time to complete documentation and prepare 69 initial patient reports.	1 hour	69	$3.450
Time to complete 74 telephonic patient follow-ups.	0.5 hour	37	$1,850
Schedule programs at 18 sites	2 hours	36	$1800
Administrative Costs	**Cost per Attendee**	**Total Attendees**	
Education materials/handouts, personal medication diaries, postage to mail reports to patient.	$7	175	$1,225
		TOTAL PROGRAM COST	**$14,025**

IV. DISCUSSION

Our study objectives were to introduce, deliver and assess a consumer education program to:

1. Increase consumer awareness of their own medication related needs;
2. Determine what proportion of those consumers will purchase additional pharmacist services;
3. Evaluate various outcomes associated with the provision of consumer education and pharmacist services;
4. Determine the financial and operational viability of implementing the new cognitive service business model by community pharmacists.

All four of these objectives were successfully met by this project.

Consumer Awareness – Our combined Free Seminar and Individualized Consultation method proved to be an effective means to increase consumer's awareness of their medication related needs.

Over an eight-month period, 175 patients attended the Free Seminar. The Patient Self Assessment Questionnaire proved to be a valid predictive tool to determine which of the patients would decide to attend an Individualized Consultation. Patients with higher scores on the Self Assessment Questionnaire were significantly more likely to attend an individualized consultation and the higher the self assessment score, the greater the number of drug therapy problems found. Pharmacists offering advanced cognitive services would likely find such a tool useful in order to determine to whom their

programs should be marketed as well as to be able to screen rapidly for patients who merit services beyond basic education and counseling.

Overall, patients were satisfied with the Free Seminar. More than two-thirds of attendees felt that the program was worthwhile. Although only 40% of patients stated the information presented during the Free Seminar was new to them, this must be balanced against the 37% who did not provide a response to the question. Only 22% of patients stated the information presented was not new to them.

We conclude that our Free Seminar is a useful means to attract patients into a practice, that the Seminar is valued by patients and that the Self Assessment Questionnaire is a useful screening tool to identify patients who would benefit from an Individualized Consultation.

Purchase of Additional Services - Prior to beginning the study, our expectation was that perhaps 10% of patients would purchase an additional service. Given that 39% of patients who attended a Free Seminar later agreed to a sponsored Individualized Consultation, these expectations were certainly exceeded.

However, these results must be interpreted cautiously.

Our initial intention was to create a cognitive service business model that would be implemented and investigated in typical community pharmacies. Given the poor uptake of the model by practicing pharmacists, we were forced to study patients in an alternate setting. Since neither the seminar nor the offer of an Individualized Consultation occurred in a typical pharmacy, it is difficult to determine if the practice setting influenced results. We would be curious to learn whether, since the practice setting did not also include prescriptions, over-the-counter medications and all the other usual appurtenances of a community pharmacy, did this make patients more or less likely to accept the model and believe the pharmacist could assist with their drug therapy?

Two other factors may also have influenced patients' willingness to purchase additional services.

First, patients were not required to pay for the Individualized Consultation since such services were paid for by the Area Agency on Aging. Since one of our primary goals in this study was to determine the willingness of patients to pay for such a consultation in a typical community pharmacy setting, it is disappointing not to be able to answer the question.

However, it does appear that, in practice settings where these services are sponsored by a third party (e.g. a community group, or perhaps an employer or, Medicare Part D) consumer acceptance of the model is considerable. Although we cannot comment on the success of the business model in a community pharmacy, it does appear to have appeal to both payers and consumers. Pharmacists who elect to adopt this model in their own practices are accordingly advised to market the program vigorously to

sponsoring agencies, since nearly 40% of patients did elect to purchase an Individualized Consultation.

The second factor that may have influenced our results is our use of a contract pharmacist to offer both the Free Seminar and the Individualized Consultation. The contract pharmacist had significant hands-on, direct patient care experience in the community setting and had completed a Doctor of Pharmacy Degree. Again, we had hoped to study more typical pharmacists who would be more likely to have a Bachelor's degree, not to have completed a residency and to have comparatively little experience in providing direct patient care beyond OBRA counseling, OTC recommendations and general patient education. It must also be pointed out that the contract pharmacist would have been a stranger to the patients attending the Free Seminar. Given the close relationship that community pharmacists often have with their patients, the consequences of having these services provided by unfamiliar pharmacists is uncertain. We would assume that patient acceptance of such services would be higher when offered by the patient's usual pharmacist, but it is not possible to confirm this bias based on our results.

Our use of advertising and marketing materials is also worth noting. We intended that pharmacists use these materials to promote the Free Seminar. Since almost no Free Seminars were provided by community pharmacists, the impact of these materials cannot be assessed. What is noteworthy however, was the acceptance of the concept of our business model by the Area Agency on Aging Offices. The administrators of these offices accepted the value of the model empirically. We conclude from this that, if marketed directly by the pharmacist to the appropriate decision maker, there appears to be little need to also employ the usual brochures, leaflets and other materials that pharmacists typically employ to market their services

Outcomes of the Model - Our results indicate that this was a clinically useful practice model. Pharmacists uncovered 208 drug therapy problems in 69 patients, or 3 problems per patient. Of these, 41.8% were later found to be resolved during follow-up visits.

Although this 41.8% problem resolution rate is lower than in similar work published by other groups, it must be pointed out that our clinical model was different than that used by others. Our contract pharmacist did not communicate directly with physicians to resolve drug therapy problems, but instead, provided patients with a written summary of the consultation plus her recommendations with instructions to discuss the results with their physicians at their next scheduled visit. When also factoring in the advanced aged of our study population (mean 78 yrs), our 41.8% problem resolution rate seems plausible, an efficient use of the pharmacist's time and clinically reasonable.

The method of providing the Individualized Consultation did not seem to influence pharmacists' ability to identify drug therapy problems. The average number of problems found per patient was not statistically different in patents who received an in person consultation compared to those whose consultation was provided by telephone. Since all follow up consultations were done by telephone, we cannot comment on the

effect of the consultation method on uncovering drug therapy problems during follow up visits.

We conclude that communicating with the patient rather than the physician and providing consultations by telephone are effective clinical care methods. They may also be a more efficient use of the pharmacist's time.

The nature of the drug therapy problems uncovered during patient Individualized Consultation merits discussion. Similar to the results published by other groups, we found that the most common drug therapy problem discovered was Needs Additional Drug Therapy (45%). The most common drug associated with the drug therapy problems was Calcium (12%). Since the most common demographic group in the study was postmenopausal women, it appears that the most common single clinical event that pharmacists worked on was advising such patients to increase their calcium intake. This impression is consistent both with existing literature as well as with the patient care notes kept by our contract pharmacist.

The second most common drug therapy problem discovered was patients' noncompliance with their medication (18%). This is somewhat higher than the result found by other groups. We find the relatively high incidence of this drug therapy problem encouraging for several reasons. Unlike most other drug therapy problems that usually need to be resolved by having the physician change a drug or a dose, noncompliance is a problem that pharmacists have routinely been intervening in for years. If a pharmacist is concerned that he/she may not have the clinical skills to intervene on decisions of drug selection or dosing, it may be of comfort to note that a significant number of patients can be managed directly by the pharmacist with no physician participation whatsoever.

Although it was only the fifth most common problem discovered, it is interesting to note that 7% of patients did not have a drug therapy problem found during their Individualized Consultation. This may be a useful result in that pharmacists can use this data when marketing such a program. If patients are unduly worried about what the results of an Individualized Consultation may reveal, they may be comforted if the pharmacist can also mention that the consultation can serve as a medication 'check up' and that 7% of patients do not in fact have a drug therapy problem. Stated another way, patients have a 7% chance of having their drug therapy deemed appropriate during the Individualized Consultation.

Financial and Operational Viability - Even though the original intent of the cognitive business model was for community pharmacists to market and promote the program as a pharmacy-based service, the numerous attempts to recruit patients using traditional face-to-face, signage and print-ad marketing techniques were not effective. There are likely multiple reasons for this failure ranging from inadequate pharmacists' personal selling skills to patient skepticism with being offered a free program followed by secondary sales pitch. Since one of the original hypotheses of this project was that patients are not aware

of their medication needs it is also possible that the marketing message did not adequately convey the benefits of participation.

Because the in-store, direct marketing approach was not successful, securing a secondary payer source and program sponsor (Area Agency on Aging) added credibility to the program and allowed patients to participate without having to travel to a pharmacy. The telephonic patient consultation option was included to further accommodate patient transportation issues. By adapting the program delivery process it was possible to successfully evaluate components of the program and would suggest the program is useful for engaging the patient with the pharmacist and identification of drug therapy problems.

The costs to deliver the program and revenue generated also suggest that the program is financially viable as a business model when operated externally from usual community pharmacy operations. Pharmacists who can identify community groups or other third parties to sponsor, promote and pay for the pharmacist to provide education and medication therapy management have the definite potential to profitably deliver the program while offering patient services that can improve patient medication outcomes.

V. RECOMMENDATIONS

Development and implementation of this model pre-date the onset of Medicare Part D's Medication Therapy Management Services (MTMS). We believe that our model could be a useful one for pharmacists offering MTMS services.

Although offering our Free Seminar plus Individualized Consultations is one approach, our results suggest that this may not be fully necessary. Although patients' acceptance of the Free Seminar outside of the pharmacy setting was gratifying, pharmacists had little enthusiasm for offering the Seminar and the accompanying Consultations. However, the patient Self Assessment Questionnaire was found to be predictive of patients who were likely to accept an Individualized Consultation, sponsored by a third party.

Accordingly, we suggest that pharmacists offering MTMS use our Self Assessment Questionnaire as a screening tool to attract patients to a new, cognitive service paid for by a third party. The predictive value of the questionnaire suggests it can be used to identify patients who would benefit from MTMS. We also note that the age of MTMS patients and the fact that it is a third party benefit mimic the practice environment of this study.

Although we believe that the combined Seminar plus Consultation can be an effective practice and business strategy in some pharmacies, our results indicate that adoption of our questionnaire plus consultation may be the most efficient use of a pharmacist's time, can select for patients likely to want advanced clinical services and both identify and resolve patients' drug therapy problems.