INNOVATIONS in pharmacy

Volume 3 | Number 3 Article 84

2012

Building Community Pharmacy Work System Capacity for Medication Therapy Management

Jon C. Schommer

Katerina Goncharuk

Andrea L. Kjos

Marcia M. Worley

James A. Owen

Building Community Pharmacy Work System Capacity for Medication Therapy Management

Jon C. Schommer, Ph.D.[1]; Katerina Goncharuk, Pharm.D.[1]; Andrea L. Kjos, Pharm.D., Ph.D.[2]; Marcia M. Worley, Ph.D., R.Ph.[3]; and James A. Owen, BS Pharm, PharmD, BCPS[4]

[1]University of Minnesota, College of Pharmacy; [2]Drake University, College of Pharmacy and Health Sciences; [3]The Raabe College of Pharmacy, Ohio Northern University; and [4]Professional Practice, American Pharmacists Association

Acknowledgements: Funding for this study was provided by the American Pharmacists Association and by a Block Grant from the University of Minnesota Graduate School.

Abstract

Questions within and outside of the pharmacy profession frequently arise about a community pharmacy's capacity to provide patient-care services and maximize contributions to public health. It is surmised that community pharmacy locations must possess specific attributes and have identifiable resources within the location to effectively initiate and optimize their capacity to deliver patient care services in conjunction with medication distribution and other services. The purpose of this paper is to describe three research domains that can help pharmacies make the transition from "traditional" business models to "patient care centered" practices: (1) Work System Design, (2) Entrepreneurial Orientation, and (3) Organizational Flexibility. From these research domains, we identified 21 Work System Design themes, 4 dimensions of Entrepreneurial Orientation, and 4 types of Organizational Flexibility that can be used in combination to assist a practice location in transforming its business model to a "patient care centered" practice. The self-assessment tools we described in this paper could help realign an organization's activities to initiate and optimize capacity for patient care.

Pharmacist Capacity for Contributions to the U.S. Healthcare System

Transformations in pharmacy education and pharmacist residency training have created new competencies which translate into pharmacist capacity for taking on expanded responsibility for optimizing medication use in the U.S. health care system [1]. A segmentation analysis using 2009 data [1] showed that while 41% of U.S. pharmacists were devoted primarily to medication providing (Medication Providers), 43% percent of pharmacists contributed significantly to patient care service provision (Medication Providers who also Provide Patient Care, Patient Care Providers who also Provide Medication, and Patient Care Providers). The remaining 16% (Other Activity Pharmacists) contributed most of their time to business/organization management, research, education, and other health-system improvement activities.

The pharmacy profession has been building capacity so that pharmacists are ideally suited to serve new roles such as being: (1) medication care coordinators for patient-centered medical homes [2-3] and primary care teams [4-7], (2) members of chronic disease management teams that focus on 'episodes' of care in which related services are packaged together [8-9], and (3) the healthcare professional responsible for ensuring optimal medication therapy outcomes through medication therapy management (MTM) service provision [10-17]. However, as shifts in professional roles occur, resources are need for new service provision as well as strategic decisions regarding educational training, professional training and redeployment, updates to practice acts and regulations, new documentation and billing systems, enhanced information exchange, collaborative practice models, infrastructure, technology, policy, and new business models. Resources are scarce, so an understanding of the most appropriate timing for making such changes can lead to cost-effective use of limited resources for improving patient care [18-20].

Corresponding author: Jon C. Schommer, Ph.D., Professor, University of Minnesota, College of Pharmacy, 308 Harvard Street, SE, Minneapolis, MN 55455, Phone: 612-626-9915, Email: schom010@umn.edu

Positioning and Integrating Pharmacist Contributions to the U.S. Healthcare System

Based on an analysis of data generated from 'Medication Therapy Management (MTM) Environmental Scans' conducted from 2007 through 2010 and from a 'Future of MTM Roundtable' conducted in October 2010, Schommer, et al. proposed that the MTM concept is becoming more developed and some aspects of MTM have become established within the organizations that are providing and paying for these programs [21]. However, their findings also showed that there is a need to better integrate MTM between organizations and patients serviced (business-to-consumer [B2C] relationships), between partnering organizations (business-to-business [B2B] relationships), and between collaborating practitioners (practitioner-to-practitioner [P2P] relationships) [22, 23]. The findings

suggested that there is an emergent "channel of distribution" for MTM program provision through which information, services, and payment are created and exchanged [24, 25]. For this new channel of distribution, they proposed that (1) organizational relationships and (2) cost efficiencies would be important considerations in the near term [21].
The MTM Environmental Scans showed that the developing channel of distribution for MTM can be characterized by providers that (1) offer MTM primarily out of professionalism and patient care motivations, (2) are building competence and capacity for these services, and (3) rely on other organizations for marketing MTM and identifying patients. However, they have been faced with the challenge of establishing widely accepted business models and norms for conducting transactions for MTM programs.

The channel also can be characterized by MTM payers that (1) pay attention to achieving a return on their investment in MTM via cost reduction and/or improved performance, (2) adjust cost and performance goals from year-to-year to reflect organizational strategies, and (3) implement MTM programs with a focus on meeting Medicare Part D guidelines, supply/demand considerations, and transaction cost factors.

Based on insights from an expert panel that participated in a Future of MTM Roundtable [21], the channel of distribution for MTM was described as having:

- a poorly developed concept (MTM) in terms of a service offering that fits within currently dominant practice models
- a poor fit between MTM and current pharmacy practice acts
- a need to change the pharmacist's image and to increase awareness of MTM programs among patients, payers, and other healthcare providers
- a need for integrated models in which information would be accessible and shared, referrals would be made, and transaction costs would be minimized for organizations that make up the channel of distribution for MTM
- business models that would create enough volume for covering the costs of delivering MTM programs.

These findings reveal that the channel of distribution for MTM requires substantial changes in the traditional product-distribution business-models for pharmacies that serve ambulatory patients. In 2008, the American Pharmacists Association, National Association of Chain Drug Stores, and National Community Pharmacists Association initiated **Project Destiny** [26] and developed an approach for moving community pharmacy to a stronger position in the healthcare market. Project Destiny looked at rearranging the business models for community pharmacies in order to provide patient care services.

Project Destiny [26] outlined a model and identified a process by which community pharmacy can adapt and transform the "traditional" business model to a "patient care centered" practice. While several early adopters in the profession have successfully modified and adapted their business practices to facilitate the delivery of patient care services, the widespread implementation and mainstreaming of these services in pharmacy practice have yet to be achieved.

Questions within and outside of the pharmacy profession frequently arise about a community pharmacy's capacity to provide patient-care services and maximize contributions to public health. It is surmised that community pharmacy locations must possess specific attributes and have identifiable resources within the location to effectively initiate and optimize their capacity to deliver patient care services in conjunction with medication distribution and other services [27-28].

The purpose of this paper is to describe three, business-focused, research domains that can help pharmacies make the transition from "traditional" business models to "patient care centered" practices. The three domains are: (1) Work System Design, (2) Entrepreneurial Orientation, and (3) Organizational Flexibility (see Figure 1).

Work System Design
Chui and her colleagues [29] uncovered and described pharmacy work system characteristics that pharmacists identified and changed in order to provide "cognitive pharmaceutical services" in community pharmacies located in Wisconsin. They applied the Systems Engineering Initiative for Patient Safety (SEIPS) model to study pharmacy work systems [30]. Their approach was grounded in factors-engineering principles and was holistic in nature in that it examined various components of work structures, processes, and outcomes [29, 30]. Chui and her colleagues identified 21 themes associated with the SEIPS model components (see Table 1). They grouped these themes into five overall categories: (1) Person (four themes), (2) Tasks (four themes), (3) Environment (one theme), (4) Tools & Technology (four themes), and (5) Organization (eight themes).

Chui, et al. noted that the eight themes related to organization were addressed "frequently and by the majority of pharmacists" in their study. These eight themes were: (1) culture, (2) coordination, (3) communication within the pharmacy, (4) leadership, (5) management style, (6) goal

setting, (7) teamwork, and (8) compensation. Chui et al.'s work is insightful and reveals an important step in building capacity for pharmacist-provided, patient-centered services in community pharmacies. They identified 21 important facilitators of change that, as a next step, need to be translated into actionable undertakings. However, decision-makers in community pharmacies might be overwhelmed with all of the things that need to be changed in order to transition from a traditional model into a new patient-centered model. Decision-makers are faced with many questions such as: How does one start to make such transitions? How can a traditional model coexist with a new model as the transitions are being made? In what order should changes be implemented? Is our organization ready for change? The next sections of this paper will describe pertinent work conducted in two areas that can help address these questions.

One area is based upon research conducted in the United States by Doucette and colleagues [31] in which they identified organizational factors that influence pharmacy practice change. The other area is based upon research conducted in Australia by Roberts, Feletto and colleagues [32-36] in which they used an organizational theory framework [37] to provide a greater understanding of change processes and their facilitators in community pharmacies.

Entrepreneurial Orientation

The themes identified by Chui and her colleagues create a useful "self-assessment" regarding work system design for pharmacies to identify what needs to be changed. Complementary to their work, Doucette and colleagues [31] revealed an association between practice change and entrepreneurial orientation. Dimensions of Entrepreneurial Orientation that directly affect change capability include: (1) proactiveness, (2) risk taking, (3) autonomy, and (4) work ethic. These are summarized in Table 2. Doucette et al. [31] developed measures for each dimension that can be rated on a 5-point scale from 1 = strongly disagree through 5 = strongly agree, and then summed to provide overall scores. Their measurement items also are included in Table 2.

We propose that a pharmacy with a relatively high entrepreneurial orientation can identify and react to emerging trends and market demands. Also, such pharmacies would be able to implement work system design changes in efficient and effective ways.

Organizational Flexibility

Some of the themes identified by Chui and her colleagues also resonate well with the results of work conducted in Australia by Roberts, Feletto and their colleagues [32-36]. They applied Volberda's "Organizational Flexibility" concept [37] which has been defined as "the degree to which an organization has a variety of managerial capabilities and the speed at which they can be activated, to increase the control capacity of management and improve the controllability of the organization" [37]. There are two determinants of organization flexibility. The first is managerial capabilities, which is defined as the capabilities of all employees and their ability of integrate knowledge and learning into the organization. The second determinant is called organizational design and is defined as the structure, technology, and culture of an organization.

Volberda defined four states of organizational flexibility (see Table 3): steady state, operational flexibility, structural flexibility, and strategic flexibility [37]. Through their initial research [32,33] , Roberts, Feletto, et al. were able to identify the following facilitators of practice change that explained almost 50% of total variance in their measures of change: relationship with physicians, remuneration, pharmacy layout, patient expectations, manpower/staff, communication/teamwork, and external support/assistance. They applied Volberda's four organizational flexibilities to different business models that Australian pharmacies use [34] and identified five key areas in which capacity could be built. Those areas are: (1) planning (creating a business plan), (2) performance (setting financial goals and allocating resources), (3) service awareness by the customers, (4) people and processes, and (5) infrastructure [35]. Taken together, these results explained almost 50% of total variance in their measures of organizational change.

In a follow-up study, they measured organizational flexibility and used it to assess the capacity of community pharmacy to implement change programs [36]. Although they reported that their scale had some psychometric limitations and needs further development, their findings were consistent with the "organizational flexibility" framework and they took steps forward in applying the framework "to understand the challenge of service implementation and the related capacity and integration issues in community pharmacy" [36].

We propose that a pharmacy characterized by organizational flexibility can be responsive to changes occurring in the economic and political environments. Pharmacies that have identified "what to change" and exhibit a "readiness for change" are better-positioned if they also have a managerial style that has a relatively high "responsiveness for change."

Recommendations

From our review of the literature, we propose that the application of Work System Design, Entrepreneurial

Orientation, and Organizational Flexibility can be helpful for building community pharmacy work system capacity for Medication Therapy Management (MTM). The work by Chui et al. revealed 21 Themes [29] that community pharmacy decision-makers can use for conducting a self-assessment of **Work System Design** changes that are needed in order to create capacity for patient-care services such as MTM. We suspect that most pharmacies will be similar to the ones in Chui et al.'s study in that the eight "organization" themes will surface frequently for the majority of pharmacies (see Table 1). This focus on Work System Design can be useful for identifying **"what to change."**

As a next step, a self-assessment regarding an organization's **"readiness for change"** could be conducted by using Doucette et al.'s [31] measures for the four dimensions of **Entrepreneurial Orientation** (see Table 2). After this second step, a pharmacy not only would have identified "what to change" through the Work System Design self-assessment, but also learned about their "readiness to change" through an Entrepreneurial Orientation self-assessment.

Then, to help complement those self-assessments, the work by Feletto et al. revealed four types of **Organizational Flexibility** [34-36] that community pharmacy decision-makers can use for conducting a self-assessment of management style changes that are needed in order to create capacity for patient-care services such as MTM (see Table 3). This step would help identify an organization's **"responsiveness for change."**

The self-assessments we described in this paper may reveal that, while a pharmacy can identify what to change, it may not exhibit readiness for change, or it may not have a management style that is sufficiently responsive for change. If this occurs, there is a need for leadership to effect change. A useful series regarding Transitions in Pharmacy Practice was published by Holland and Nimmo [38-42] and would have useful application in these cases. In this five-part series, Holland and Nimmo described their views on: (1) taking pharmacy practice beyond the pharmaceutical care paradigm, (2) new roles for pharmacy personnel, (3) how to effect change in pharmacies, (4) how to help personnel be prepared for change, and (5) how to motivate personnel as change takes place. Germane to our discussion, Part 3 of their series describes effecting change through modifying the practice environment, training individuals, and using motivational strategies [40]. In Part 4, they describe personal and social characteristics of pharmacy practitioners that dispose them to reacting a certain way to change and how this can be addressed [41]. In Part 5, they describe useful motivation strategies that might be needed when pharmacy practitioners exhibit the fear of "falling off the tight rope" while changes are being made [42]. We propose that the application of the Holland-Nimmo Practice Change Model would help pharmacies overcome challenges related to "readiness for change" and "responsiveness for change."

In summary, we propose that the 21 Work System Design themes, the 4 dimensions of Entrepreneurial Orientation, and the 4 types of Organizational Flexibility can be used in combination to assist a practice location in transforming its business model to a "patient care centered" practice. The self-assessment tools we described could help realign an organization's activities to initiate and optimize capacity for patient care. When self-assessment reveals challenges relating to "readiness for change" and "responsiveness for change," we propose that the Holland-Nimmo Practice Change Model would be an excellent resource for overcoming these challenges.

References

1. Schommer, Jon C., Lourdes G. Planas, Kathleen A. Johnson, William R. Doucette, Caroline A. Gaither, David H. Kreling, and David A. Mott, "Pharmacist Capacity for Contributions to the Reforming U.S. Healthcare System," INNOVATIONS in pharmacy, 2010, Vol. 1, No. 1, Article 7, 16 pages.
2. Dettloff, Richard W., Patricia Glosner, and Susannah Motl Moroney. "Establishing the Role of the Pharmacist in the Patient-Centered Medical Home… The Opportunity is Now," Journal of Pharmacy Technology, (2009), Vol. 25, September/October: 287-291.
3. Webb, C. Edwin. "Integration of Pharmacists' Clinical Services in the Patient-Centered Primary Medical Home," March, 2009. American College of Clinical Pharmacy, Lenexa, KS. www.accp.com.
4. Gebhart, Fred, "Put Pharmacists on Primary Care Team, Says Perdue CMO," Drug Topics, (2010), Vol. 154, No. 1: 23.
5. American Society of Health-System Pharmacists. "ASHP Statement on the Pharmacist's Role in Primary Care." American Journal of Health-System Pharmacy, (1999), Vol. 56: 1665-1667.
6. Manolakis, Patti Gasdek and Jann B. Skelton, "Pharmacists' Contributions to Primary Care in the U.S. – Collaborating to Address Unmet Patient Care Needs," The American Association of Colleges of Pharmacy, Alexandria, VA. Issue Brief, July 2009, www.aacp.org.

7. Dobson, Roy T., Jeff G. Taylor, Carol J. Henry, et al. "Taking the Lead: Community Pharmacists' Perception of Their Role Potential within the Primary Care Team," Research in Social and Administrative Pharmacy, (2009), Vol. 5: 327-336.
8. Lipton, Helene L. "Home is Where the Health Is: Advancing Team-Based Care in Chronic Disease Management," Archives of Internal Medicine, (2009), Vol. 169, No. 21: 1945-1948.
9. Goff Jr., David C. and Philip Greenland, "The Change We Need in Health Care," Archives of Internal Medicine, (2009), Vol. 169, No. 8: 737-739.
10. Owen, James A. and Anne Burns, "Medication Use, Related Problems and Medication Therapy Management," in The Pharmacist in Public Health: Education, Applications, and Opportunities," (2010), American Pharmacists Association, Washington, DC.
11. Planas, Lourdes G., Carole L. Kimberlin, Richard Segal, et al. "A Pharmacist Model of Perceived Responsibility for Drug Therapy Outcomes," Social Science & Medicine, (2005), Vol. 60: 2393-2403.
12. Barnett, Mitchell J., Jessica Frank, Heidi Wehring, et al. "Analysis of Pharmacist – Provided Medication Therapy Management (MTM) Services in Community Pharmacies Over 7 Years," Journal of Managed Care Pharmacy, Vol. 15, No. 1: 18-31.
13. Hassol, Andrea and Sarah J. Shoemaker. "Exploratory Research on Medication Therapy Management: Final Report," July 8, 2008, Abt Associates, Cambridge, MA.
14. Smith Scott R. and Carole M. Clancy. "Medication Therapy Management Programs: Forming a New Cornerstone for Quality and Safety in Medicare," American Journal of Medical Quality, (2006), Vol. 21:276-279.
15. The Lewin Group. Medication Therapy Management Services: A Critical Review. Journal of the American Pharmacists Association, (2005) Vol. 45:580-587.
16. Schommer, Jon C., Lourdes G. Planas, Kathleen A. Johnson, and William R. Doucette, "Pharmacist-Provided Medication Therapy Management (Part 1): Provider Perspectives in 2007, Journal of the American Pharmacists Association, (2008), Vol. 48, No. 3: 354-363.
17. Schommer, Jon C., Lourdes G. Planas, Kathleen A. Johnson, and William R. Doucette, "Pharmacist-Provided Medication Therapy Management (Part 2): Payer Perspectives in 2007, Journal of the American Pharmacists Association, (2008), Vol. 48, No. 4: 478-486.
18. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, "The Adequacy of Pharmacist Supply: 2004 to 2030," December 2008, accessible at: http://bhpr.hrsa.gov/healthworkforce/pharmacy/.
19. Rogers, Everett M. *Diffusion of Innovations, Fifth Edition. 2003, New York, NY: Free Press.*
20. *Schommer, Jon C., Richard R. Cline, Tom A. Larson, et al. "Pharmacy Looks to the Future," In* M.I. Smith, A.I. Wertheimer, and J.E. Fincham (Eds), *Pharmacy and the U.S. Health Care System,* Third Edition (2005). Pharmaceutical Products Press, New York: 417-443.
21. Schommer, Jon C., William R. Doucette, Kathleen A. Johnson, and Lourdes G. Planas, "Positioning and Integrating Medication Therapy Management," Journal of the American Pharmacists Association, 2012, Jan/Feb, Vol. 52, No. 1, e20 – e32.
22. Wong, Wendy C. "B2B and B2C Marketing: Organizing to Maximize Brand Value," Journal of Integrated Marketing Communications, 2009, 57-62.
23. Akcura, M. Tolga and Kemal Altinkemer. "Diffusion Models for B2B, B2C, and P2P Exchanges and E-Speak," Journal of Organizational Computing and Electronic Commerce, 2002, 12 (3), 243-261.
24. Klein, Saul, Gary L. Frazier, and Victor J. Roth, "A Transaction Cost Analysis Model of Channel Integration in International Markets," Journal of Marketing Research, 1990, (XXVVI, May), 196-208.
25. Shelanski, Howard A. and Peter G. Klein, "Empirical Research in Transaction Cost Economics: A Review and Assessment," Journal of Law, Economics, & Organization, 1995, 11 (2), 335-361.
26. Project Destiny, executive summary, (2008), accessed on February 10, 2012 at: http://www.pharmacist.com/AM/Template.cfm?Section=Home2&TEMPLATE=/CM/ContentDisplay.cfm&CONTENTID=15490
27. Law AV, Okamoto MP, Brock K. Ready, willing, and able to provide MTM services?: A survey of community pharmacists in the USA. Res Social Adm Pharm.2009 Dec;5(4):376-81. Epub 2009 Apr 28.
28. Moczygemba LR, Barner JC, Roberson K. Texas pharmacists' opinions about and plans for provision of medication therapy management services. J Am Pharm Assoc (2003). 2008 Jan-Feb; 48(1):38-45. PubMed PMID: 18192129.

29. Chui, Michelle A., David A. Mott, and Leigh Maxwell. A qualitative assessment of a community pharmacy cognitive pharmaceutical services program, using a work system approach. Research in Social and Administrative Pharmacy, 2011 (7), Epub, 11 pages.
30. Carayon P, Hundt AS, Karsh BT, et al., "Work system design for patient safety: the SEIPS model." Quality and Safety in Health Care, 2006, 15: i50-i58.
31. Doucette, William R., Justin C. Nevins, Caroline Gaither, David H. Kreling, David A. Mott, Craig A. Pedersen, and Jon C. Schommer, "Organizational factors influencing pharmacy practice change," Research in Social and Administrative Pharmacy, 2012, 8(4): 274-297.
32. Roberts, Alison S., Trine Hopp, Ellen Westh Sorensen, Shalom I. Benrimoj, Timothy F. Chen, Hanne Herborg, Kylie A. Williams, and Parisa Aslani, "Understanding practice change in community pharmacy: a qualitative research instrument based on organizational theory," Pharm World Sci, 2003, 25(5): 227-234.
33. Roberts, Alison S., Shalom I. Benrimoj, Timothy F. Chen, Kylie A. Williams, and Parisa Aslani, "Practice change in community pharmacy: quantification of facilitators," Ann Pharmacother, 2008, 42(6): 861-868.
34. Feletto, Eleonora, Laura K. Wilson, Alison S. Roberts, and Shalom I. Benrimoj. Flexibility in community pharmacy: a qualitative study of business models and cognitive services. Pharm World Sci, 2010 (32): 130-138.
35. Feletto, Eleonora, Laura Kate Wilson, Alison Sarah Roberts, and Shalom Isaac Bemrimoj. Building capacity to implement cognitive pharmaceutical services: Quantifying the needs of community pharmacies. Research in Social and Administrative Pharmacy, 2010 (6): 163-173.
36. Feletto, Eleonora, Laura Kate Wilson, Alison Sarah Roberts, and Shalom Isaac Bemrimoj. Measuring organizational flexibility in community pharmacy: Building the capacity to implement cognitive pharmaceutical services. Research in Social and Administrative Pharmacy, 2011 (7): 27-38.
37. Volberda HW. Building the Flexible Firm: How to Remain Competitive. Oxford: Oxford University Press; 1998.
38. Holland, Ross W. and Christine M. Nimmo. Transitions, part 1: Beyond pharmaceutical care. American Journal of Health-System Pharmacy, 1999 (56), September 1: 1758-1764.
39. Nimmo, Christine J. and Ross W. Holland. Transitions in pharmacy practice, part 2: Who does what and why. American Journal of Health-System Pharmacy, 1999 (56), October 1: 1981-1987.
40. Holland, Ross W. and Christine M. Nimmo. Transitions in pharmacy practice, part 3: Effecting change – the three-ring circus. American Journal of Health-System Pharmacy, 1999 (56), November 1: 2235-2241.
41. Nimmo, Christine J. and Ross W. Holland. Transitions in pharmacy practice, part 4: Can a leopard change its spots? American Journal of Health-System Pharmacy, 1999 (56), December 1: 2458-2462.
42. Nimmo, Christine J. and Ross W. Holland. Transitions in pharmacy practice, part 5: Walking the tightrope of change. American Journal of Health-System Pharmacy, 2000 (57), January 1: 64-72.

Table 1
Work System Design: 21 Themes Identified for Community Pharmacy [ref. 29-30]

Person

1. Pharmacist communication skills
2. Pharmacist time management skills
3. Pharmacist/technician psychological characteristics (situation awareness, perseverance)
4. Pharmacist/technician training (formal and on-the-job)

Tasks

1. Job content (actively delegating and initiating services)
2. Scheduling patients for appointments
3. Challenge and utilization of skills
4. Time pressure and workload

Environment

1. Private consultation room

Tools & Technology

1. Pharmacy dispensing system
2. Non-electronic/paper tools (identifying, tracking, and managing patients)
3. Online documentation and billing tools
4. External communications with payers

Organization

1. Culture
2. Coordination
3. Communication within the pharmacy
4. Leadership
5. Management style
6. Goal setting
7. Teamwork
8. Compensation

Table 2
Dimensions of Entrepreneurial Orientation with Measurement Items [ref. 31]

1. **Proactiveness** refers to processes designed to scan and react to the current environment to anticipate future needs. Anticipating future needs enables pharmacies to identify needed resources to create the capacity for practice change.

Measurement Items:
___ Our pharmacy usually takes action in anticipation of future market conditions.
___ We try to shape our business environment to enhance our presence in the market.
___ Because market conditions are changing, we continually seek out new opportunities.

2. **Risk Taking** is the degree to which an organization is inclined to engage in breakthrough initiatives. When a pharmacy expands its focus to include the delivery of pharmacy services, it must allocate valuable resources without a guaranteed return on investment.

Measurement Items:
___ Taking gambles is part of our strategy for success.
___ We take above-average risks in our business.
___ Taking chances is an element of our business strategy.

3. **Autonomy** refers to employees being responsible for their work as well as evaluating their own performance. It also denotes the extent to which management is willing to consider ideas brought forth by employees. Motivated employees, working in a culture of open communication, can reduce employee resistance to change, which increases an organization's change capacity.

Measurement Items:
___ New service ideas suggested by employees are acted upon by decision makers.
___ Management approves of independent activity by employees to develop new services.
___ Identifying new business opportunities is the concern of all employees.

4. **Work Ethic** describes attitudes toward and moral belief in hard work. Highly motivated, hardworking employees can facilitate practice change.

Measurement Items:
___ We consider ourselves as having high motivation toward work.
___ Our employees are a group of hardworking individuals.
___ At our pharmacy, we are very ambitious about our work.

Measurement items for each dimension can be rated on a 5-point scale from 1 = strongly disagree through 5 = strongly agree, and then summed to provide overall scores.

Table 3
Four Types of Organizational Flexibility [ref. 32-37]

1. **Steady state** is described by constant procedures being used within an environment that is considered to be stable.

2. **Operational flexibility** is described by a low variety of capabilities and high responsiveness to market demands. This focus means that a firm has a short-term orientation and is trying to respond to predictable changes in the environment.

3. **Structural flexibility** is described by managerial capabilities that are used to alter a firm's structure, including decision-making and communications processes, relative to both internal and external pressures. This focus suggests a medium term time orientation.

4. **Strategic flexibility** is described by a firm's ability to engage in proactive strategic initiatives. The focus is on the goals and activities being less structured and non-routine in order to accommodate changing conditions. A long-term focus is generally used within an environment that is considered to be uncertain.

Figure 1
Summary of Work System Design, Entrepreneurial Orientation, and Organizational Flexibility