

## **CHAPTER VI**

### **CONCLUSION**

In this chapter, it has divided into two sections: 6.1 will be presented the conclusion of this research for next future research and the recommendations will be presented in section 6.2.

#### **6.1 Conclusions**

This study established the framework of performance measurement for the healthcare supply chain. The framework consists of numerous performance criteria related gathering by the iterative and more reliable processes of the modified Delphi method through eligible experts evaluation and the selected experts can have a more thorough thinking. All criteria are built according to the multi-decision making processes of the Analytic Network Process for the complex decision making, inner feedback and interdependent relationships. Through the complexity of the Analytic Network Process processes, total of 153 pairwise is weighed by eligible experts. Then, this framework with the weighting criteria is applied to a case study.

In fact, supply chain performance is affected by numerous factors. The result in Chapter4 shows that most supply chain members have emphasized on the innovativeness criterion in new technology as most affecting to the supply chain performance. Moreover, the results align with the previous study shows that the development and implementation of new technology can help to support medication ordering, dispensing, administration, and monitoring causing from continuing changes in pharmacy services in hospitals and organized delivery system. The complexity of the medication use process have changed the pharmacy's focus to include the multidisciplinary nature of medication use including collaborative efforts with physicians, nurses, and with information technology to meet these goals (Wolper, 2011). Thus, it is reasonable that the integration of information technology to supply

chain is crucial to effective, real-time communication to support the medication use process.

From the experts' weighting processes through the ANP method, the results highlighted that there is most consensus issued among experts or representative supply chain members, it is collaboration issues. Collaboration issues are attracting by the highest weighting scores of 0.234 or 23.4 percent among six issues (quality, cost, time, flexibility, innovativeness, and collaboration). These issues also align with the previous research of Cai (2010) that collaboration is playing the important role on performance of most supply chains in nowadays and it still utilized in building strong relationship with each other. This research suggests that healthcare providers could benefit from more collaboration with other providers through joint decision synchronization and information sharing. Supply chain participants are also collaborating with supplier or organizations outside of healthcare supply chain. The enormous majority of healthcare provider respondents signify active collaboration with their supply chain partners in order to improve their own supply chain performance. Similar to other industries, healthcare supply chain partners are attempting to better collect and manage their data to be effectively, improve visibility, reduce inventory, and streamline processes. There is strong evidence of implementing the strategies recommended by 1996 Efficient Healthcare Consumer Response across all sectors of the healthcare supply chain (Nachtmann and Pohl, 2009). From interviewing the hospital executive, the Healthcare Group Purchasing Organizations (GPOs) play an essential role in driving collaboration among suppliers, distributors and providers, however it still need for improvement. Healthcare is still facing with greater collaboration across healthcare to overcome many obstacles

The results of adopting a particular supply chain should give an incentive to supply chain members to review their supply chain situations. Misbelieving in measuring the supply chain by cost only, should rid off. For Cost criterion, it is related to profits directly and easily to measure, but it is only part of the performance outcome. In facts, for example, cost may be not really related to the medicines ordering of the healthcare providers, but it must depend on invisible relationship history of each other such as GPOs and suppliers, suppliers and providers etc. or professional preferences. However, this framework can be provided benefits for

supply chain members who will be utilized this model to gauge their supply chain or using for comparing their performance to other supply chains in the next future.

## **6.2 Recommendations**

This study is concentrated on Thailand healthcare supply chain experts. The framework is applied to a case study of pharmaceutical supply chain that is in the healthcare supply chain for giving illustrative example. However, this framework can be applied to other chains which is in healthcare supply chain related

The area of both criteria and sub-criteria for healthcare supply chain performance measurement may be changed or adjusted upon the time. The network relationship of framework that the criteria (second level) and sub-criteria (third level) are identified as a strict hierarchical structure. Healthcare supply chain performance is affected by numerous factors, and the interdependence between these criteria is complex. The effect and complex relationships among sub-criteria relating healthcare supply chain performance should be focused in next future research.