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**Innovative Distribution Channels for the Pharmaceutical Industry in Europe:  
Analysis and first assessment of different Home Care & Home Delivery models**  
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# Innovative Distribution Channels for the Pharmaceutical Industry in Europe: Analysis and first assessment of different HomeCare & Home Delivery models

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## Summary:

This thesis addresses some of the challenges faced by the pharmaceutical industry in Europe by analyzing innovative distribution models that allow pharmaceutical companies to expand their focus from purely product focused to more service-oriented. Home Care and Home Delivery are feasible routes to market for producers to explore, and the analysis shows that such a strategy has the potential to increase the pharmaceutical companies profit and also improve the healthcare of all within the EU.

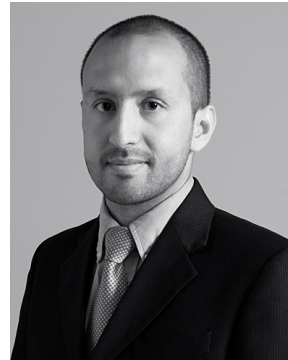


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## KEY INSIGHTS

1. A Fully Managed HomeCare and Home Delivery model provides better financial returns than either an Outsourced or traditional distribution model.
2. Both the Fully Managed and Outsourced HomeCare and Home Delivery models significantly improve days of inventory over the As-Is situation.
3. The Netherlands is the ideal market for manufacturers to develop an innovative distribution model; the market can also act as a staging ground for other European markets.

## Introduction

As people age, their need for medical attention increases, and mobility becomes a more challenging issue. Although people over 60 currently represent between 12 to 18% of the total population in developed countries, they consume about half of all prescription medicines, which is equivalent to almost three times that of someone in the general population (Sabaté, 2003). In Europe, the population will increasingly shift towards this older demographic as 36 M more people will join those aged over 65 in the next 20 years, which will make up 23.6% of the total population in 2030 (Konstantinos, 2010).

Governments in Europe are also experiencing a time of austerity, and as the stakeholder who has to pay the lion's share of the final medical bill, there is huge irreversible pressure to contain drug costs while improving public access to medicines. The greatest impact of these changes will be borne by the pharmaceutical industry, which will need to adapt to the changing economics of the business. Pharmaceutical manufacturers have traditionally relied on R&D and marketing to churn out innovative products. However, as future cash flows increasingly shrink from not only governmental regulation but also from the rise of generic competition, a products-only view will limit the long term viability of many operations.

In response to these challenges, innovations and improvements in the pharmaceutical supply chain can help stem the tide for manufacturers and open up new markets and opportunities. Distribution models such as Direct to Pharmacy and Direct to Hospital are already gaining a foothold in many markets as manufacturers try to circumvent wholesalers and the traditional supply chain. In this analysis, however, the emphasis is more on service-oriented models where pharmaceutical companies can make an impact directly on the end consumer. Two of these models are Home Delivery and HomeCare, and while these concepts are not new in

the general sense, for the majority of pharmaceutical manufacturers, they represent greenfield opportunities and a chance to truly respond to the changing needs of healthcare.

### HomeCare & Home Delivery

Currently, 74% of all pharmaceuticals are distributed through wholesalers in Europe; on top of the governmental pressures manufacturers face, wholesalers and pharmacies are consolidating to further squeeze margins (Bünthe et al., 2007). The practice of delivering drugs and/or services directly to the home, called Home Delivery and HomeCare, respectively, may be a way for manufacturers to gain some control and visibility in the value chain. Standalone mail-order / Internet pharmacies are already quite popular, and well-established HomeCare companies from the UK and the Netherlands are expanding their reach in continental Europe. A further description of these models follows:

	Home Delivery	HomeCare
<i>Key Value Proposition</i>	- Lower cost to payors and patients	- Patient focused care
<i>Other benefits</i>	- Better availability and access to medication for patients	- Alleviates strain on the hospital system - Often lower costs to the payor vs. hospital care
<i>Common Benefits</i>	- Improved patient compliance - Increased privacy - Convenience for the patient (e.g., reduced patient travel time)	
<i>Key Hurdles</i>	- Widespread regulation prohibiting sale and distribution of prescription by mail order - Assured resistance from wholesaler and pharmacy associations	- Gaining acceptance and approval from physicians and patients - Ensuring cost savings can be achieved versus traditional hospital care

To address the feasibility and potential for a pharmaceutical manufacturer to start a Home Delivery and/or a HomeCare business, the questions *Where?* and *How?* need to be answered. For this purpose, a simulation model was developed to more finely evaluate the economic potential for a particular basket of drugs in specific markets.

### Ideal Potential and Feasible Markets

A prioritization process was designed taking two main dimensions into consideration: potential and feasibility. Potential is defined as the opportunity of capturing new business through the implementation

of novel business models given the characteristics of a certain market, such as the pharmaceutical market, income per capita, demographic profile, and the amount of public medical coverage.

Feasibility, on the other hand, is related to the likelihood for a certain model to be successful, considering the development and restrictions imposed by regulations and the political environment, logistical and healthcare infrastructure, and urban density.

The results of this process yielded five top countries that scored well on both dimensions. Further importance given to the market environments narrowed the choice countries to Germany, Switzerland, and The Netherlands.

### Three Scenarios

From a further in-depth study of the selected countries, including their current pharmaceutical distribution, market forces and regulatory requirements, two different alternatives for the implementation of a Home Delivery and HomeCare model to deliver goods from manufacturers directly to patients were introduced. A baseline was also established to benchmark the performance of the designed scenarios. Performance was evaluated from both a financial and operational perspective

#### 1) Base Model (As-Is Scenario)

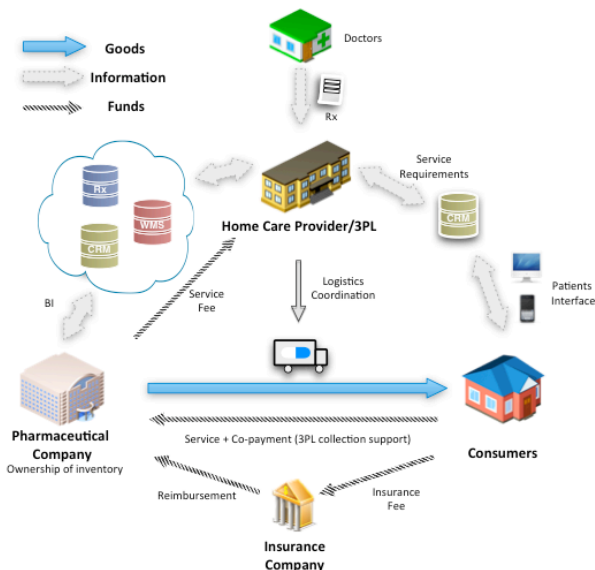
The base model is built on the dominant “As-Is” situation of the traditional pharmaceutical supply chain. Goods and their ownership will transfer through the manufacturer to the wholesaler to the pharmacies and then finally to the patient. Other key stakeholders where information and funds are transferred include the insurance funds, doctors and the pre-wholesalers with the latter usually operating as an LSP for the manufacturer.

#### 2) Fully Managed Supply Chain (FMSC) Scenario

In FMSC, the manufacturers keep ownership of the inventory until it is shipped directly to the patients. Depending on the product classification and customer requirements, the package provided could range from a basic home delivery of product with no additional services to a comprehensive HomeCare scheme encompassing product delivery, nursing, follow up on care plan, and so on.

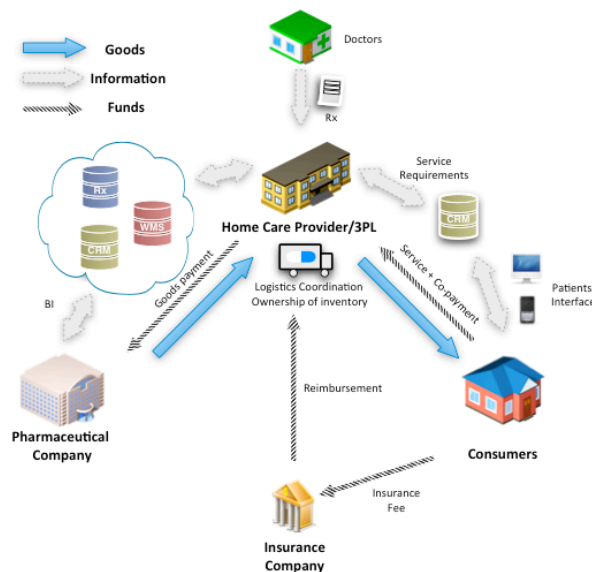
In this scenario, a third-party company, such as a HomeCare specialized service provider or a logistics operator, would provide services related with the actual pick-up and delivery of goods and support

services, administration of patients information, scheduling of appointments, provision of pre- and post-sales support and assistance in the accounts receivable process by collecting payment, among others.



### 3) Outsourced Supply Chain (OSC) Scenario

In OSC, the ownership of inventory is transferred from the producer to the third-party. In addition to the functions performed in the “fully managed supply chain” scenario, the third-party will be the holder and owner of inventory at their locations. Manufacturers would no longer be involved in invoicing final customers or in the reimbursement processes, which now would be the responsibility of the third-party. Different from a wholesaler role, the third-party would act as an intermediary, adding value to the product by encompassing it in Home Delivery or HomeCare services to patients.



### Six Products

The pharmaceutical products selected for the simulation were mainly based on whether they treat an age-related disease or not, as these would represent ideal products for either Home Delivery or HomeCare. The government generally fixes margins, and so the products also needed to have a high ex-factory price to be able to warrant adding the additional services provided by HomeCare and Home Delivery. In addition, a representation of drugs with different product attributes were sought after that would be used as the basis for segmenting whether the drug would be more suitable for Home Delivery or Home Care. For instance, a drug that requires the assistance of another person to administer (e.g., drugs that are delivered by IV) would be weighted more towards HomeCare.

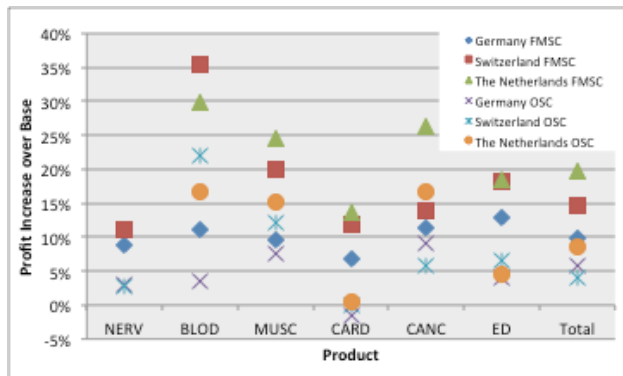
The final basket of six drugs was narrowed down by the availability of historic sales data. Drugs that treated cardiovascular (CARD), musculoskeletal (MUSC), nervous system (NERV), and blood disorder (BLOD) diseases as well as cancer (CANC) and erectile dysfunction (ED) were ultimately selected. The selected NERV drug is not commercialized in The Netherlands.

### Simulation Results

Overall, the proposed models improve the financial performance for the manufacturer, increasing its operational profits compared to the base scenario. For the FMSC scenario, all products generate incremental margins over the base case, ranging from a low of 6.9% for CARD in Germany to 35.5% for BLOD in Switzerland. Higher margin improvement is mainly associated with two factors: channel margin captured and distribution model used (either HomeCare or Home Delivery), due to the product’s attributes.

The OSC scenario generates lower profits in all cases, considering the benefit is now split between the manufacturer and a third party, which in this case, is a HomeCare provider. Because the HomeCare provider takes ownership of the inventory and handles the day-to-day operations, they can justifiably capture more of the overall margin from the manufacturer.

Operational areas like inventory management are also improved because of the reduction of the “bullwhip” effect generated by intermediaries, which translates into lower average days of inventory, between 10 and 25 days for all scenarios.



Strong linear relationships were detected between varying market capture, upsides and the final price with the profit increase/decrease. As far as the upsides are concerned, the FMSC model generates average incremental profit in the three years simulated for all products and countries analyzed in the realistic range of 4-11% upsides captured (Bates, 2008). The OSC model is more sensitive to upsides as a few products become unprofitable when upsides are in the lower end of the range.

The analysis of the impact on profits at different levels of market capture shows that small changes in the latter generate a significant effect on the former. This is valid for all three countries under both scenarios. In the FMSC scenario, an increase of 2% in market capture changes the incremental profits in approximately 24%, while for the OSC model the change is around 20%. With such a large impact, it is clear that successful implementation of the model will be driven by the ability of the manufacturers to shift demand from the traditional channels to the new proposals and will require significant effort and investment. Another outcome is the fact that a minimum threshold between 8-10% market capture is necessary to achieve a break-even point, varying from country to country and between products and both scenarios.

In either scenario, operational profits are highest for The Netherlands for the total basket of drugs. The same is true when full business cases are prepared and upfront investments of IT and other overhead are factored into a Discounted Cash Flow Analysis.

## Conclusions

The analysis shows that it is feasible for a manufacturer to initiate a HomeCare and Home Delivery channel in The Netherlands. Good economics, however, are only a small part of the equation to determine whether these models will be successful. Regulatory issues and powerful stakeholders could still block the way for any implementation. The key, therefore, is to present a business not as a means of capturing more margins

but offering a cost-effective solution to meet the ever growing healthcare needs.

Because The Netherlands has a liberal regulatory environment and some of the fewest restrictions for pharmaceutical distribution in all of Europe, a partnership with another powerful stakeholder could guarantee improved market access. The most important takeaway is to have an ally in the value chain to signal that the manufacturer is truly interested in improving the state of healthcare as a whole. In addition, since the manufacturers have little experience dealing with patients directly, a good intermediary that has been able to focus on patient customer service may be a key missing link.

The Netherlands would be an important stepping-stone in subsequently opening other operations in other countries (such as Switzerland and Germany) and having a wider international presence. It is possible to operate and manage across borders in the EU, and frequently the most stringent requirement is that the drugs themselves are originated locally.

HomeCare and Home Delivery are two important models that will enable governments, sick funds and citizens to decrease healthcare costs. Several manufacturers already operate these two models and have moved beyond simply selling products to offering complete healthcare solutions. The pharmaceutical industry can broaden its role and help to successfully improve the lives of patients afflicted with chronic diseases or elderly people who live at home alone. Facing a daunting challenge like aging baby boomers, pharmaceutical companies can leverage their resources and ability to play a central role in coordinating all of the stakeholders. This shared urgency can ensure a sustainable healthcare system for the future.

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