Mobile Health

Mobile Health in the Pharmaceutical Industry

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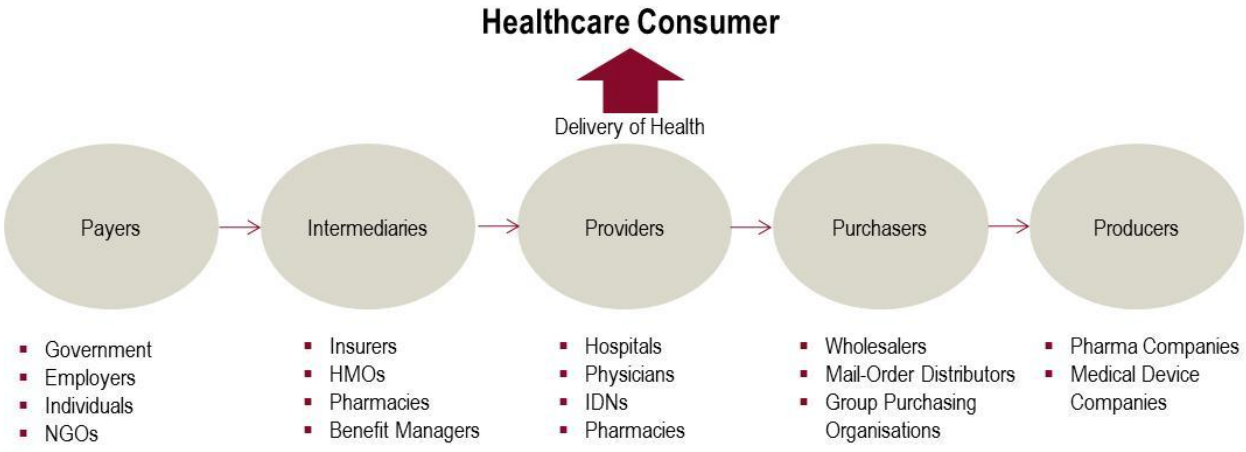
Overview

The structure of how healthcare is delivered varies greatly between countries, depending on the financing arrangements and national primary healthcare concerns. However, the basic components and stakeholders are broadly similar, as are global concerns of containing spiralling healthcare costs and improving and optimising access to care and services. This overview examines the extent to which mobile applications can support the pharmaceutical sector. It will examine why these applications have largely not been driven by the mobile industry, and identifies the potential role for MNOs if they want to take on a larger portion of this sector.

The players supporting the health value chain

Fig 1 shows all the players within the health value chain and how funding moves from one player to the next to support the providers which deliver healthcare to the consumer.

Fig 1: Funding movement along the health value chain



Source : The Wharton School Study of the Health Value Chain, 1999

- Payers are the originator of funds for healthcare - ranging from individuals and employers (through premiums to insurers), to governments (which raise money from individuals through taxation).
- Financial Intermediaries like insurers and HMOs, receive funds from payers, and in turn allocate funds to providers. In state-run systems this is a function which is kept within the government itself.
- Providers have the primary responsibility to deliver healthcare to the healthcare consumer, and are funded by intermediaries. They use the funds to run the hospital and clinic system, as well as to pay organisations that purchase medical supplies and drugs from the producers.
- Purchasers aggregate demand for medical supplies and negotiate bulk contracts with producers. This function is sometimes played by provider or provider groups themselves.
- Producers are the net suppliers to the health value chain, and include suppliers of drugs, devices and medical supplies.

Differences in health systems primarily arise from where the burden of payment lies (i.e. who are the main payers), and where the responsibility of allocating healthcare dollars falls (who plays the financial intermediary role).

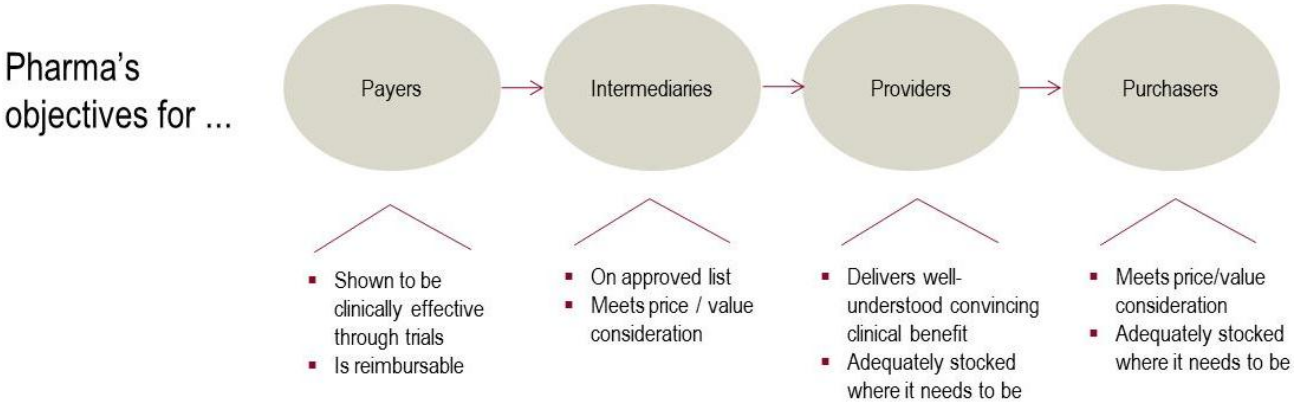
Understanding the challenges and needs of each of these players will be key in developing products and services for them. In this overview we focus on the pharmaceutical industry and the extent to which their specific concerns may or may not be addressed through the application of mobile health technology.

Value of the pharmaceutical industry

The pharmaceutical industry is probably the largest and most important single sub-sector in the health producer sector, with drugs accounting for almost 80% of global consumable spend (the rest include medical devices and consumables). The global pharmaceutical industry is worth almost US$1.7 Trillion annually.

While their key commercial interactions are with the purchasing organisations (which are part of the provider group themselves in many instances), the pharmaceutical industry needs to create relationships with all parties in the value chain and indeed has specific objectives for each of them (see Fig 2).

Fig 2: Objectives of the pharma industry in relation to other stakeholders



Source : GSMA Analysis

These relationships are required in order to enable the drug to move to the health consumer, by ensuring that the drug is approved by the authorities, marketed at the correct price point for a specific condition, and shown as having clinical value to both prescribers and patients.

The degree to which mobile health can support the pharmaceutical industry depends on the extent to which mobile health initiatives can help pharmaceutical organisations achieve their main objectives. Some examples are explored in the following sections.

Mobile health addresses key challenges in the pharma industry

In recent years, the industry has been facing the following challenges:

a) Drug development productivity and market differentiation

A pharmaceutical company enjoys patent protection on a drug it develops for approximately 15 years. During this time it typically gets almost full margin on the drug, which is necessary to recoup the investment to develop the drug. After the patent expires, other companies are free to manufacture generic versions, which typically sell for a fraction of the cost, and margins fall dramatically. There is then a secondary process for companies to develop interesting new formulations and alternative delivery mechanisms (new doses, new types of coatings, etc.). The number of high yield patent-protected drugs reaching the end of their life cycle have been, and will continue to be significant in coming years, with not many new drugs replacing them.

The mobile health value proposition:

Mobile health can be used to create a differentiated product. For example, it can be packaged as part of a drug regime to improve medication compliance (e.g. through reminders, notifications of missed doses, etc.), which can improve outcomes. Mobile technology can also be used in the administration of clinical trials and collection of real-time data on the efficacy of drugs under trial.

b) Effectiveness of marketing

Marketing a drug is becoming increasingly difficult for pharmaceutical companies all over the world. On one hand, pharma marketing guidelines have been tightening globally, while on the other there are many more channels of marketing, as well as availability of generic drugs and alternative therapies for the same condition. Return on investment in marketing has been falling across the industry.

The mobile health value proposition:

Mobile health can help create a powerful direct to consumer channel previously unavailable to pharma marketers. The ability to reach out and solicit feedback directly from both consumers and healthcare professionals, paired with increasing sophistication of smartphone capabilities, is invaluable in an environment of increasing regulation and marketing "noise".

c) Supply chain failure

In emerging economies and some developing countries, there is the added problem of counterfeit drugs (and to a lesser extent illegal parallel importing), which can cause significant detrimental impacts on medical outcomes and loss of revenue. Pharma companies are increasingly turning to strategies that can effectively regulate and police the sale of counterfeit medicine.

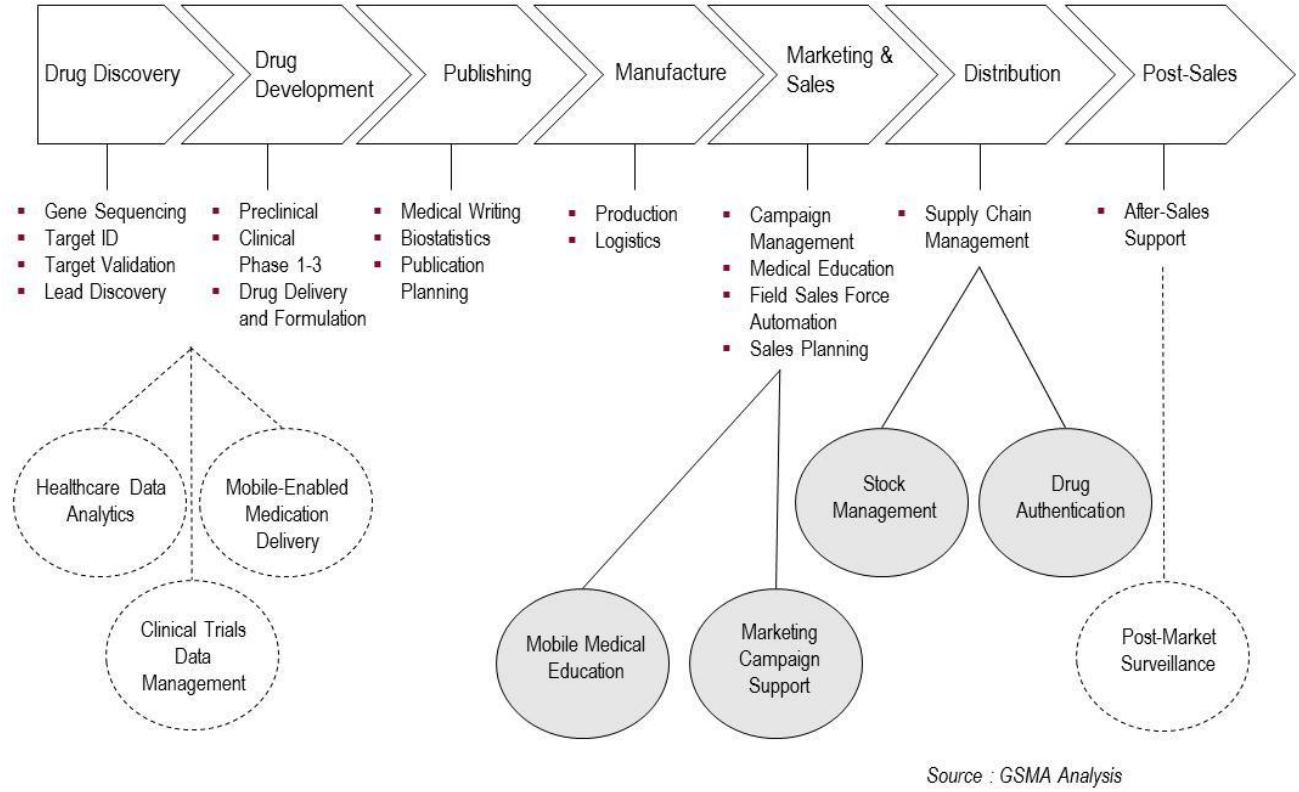
The mobile health value proposition:

Mobile health applications, such as drug authentication services help to stem the prevalence of counterfeit drugs in the market, as well as provide feedback to drug distributors (through GPS services) as to probable locations where counterfeit drugs are being exchanged.

Mobile health supporting the pharmaceutical internal value chain

Fig 3 shows a selection of the many applications that are currently in the market and have been developed to support functional processes within the pharmaceutical value chain (marked in grey). Additionally, there have been some new suggested applications, many of which are currently in trial or beta stage (marked in white).

Fig 3: Mobile health solutions supporting parts of the pharma value chain



The figure above demonstrates a wide range of applications for mobile health in supporting all components of the pharma business.

Role for MNOs in mobile health solutions specific to the pharmaceutical industry

The existence of a mobile health value proposition does not necessarily mean that this value proposition has been, or will be captured by mobile network operators.

In fig 3 above, solutions have been developed either by pharmaceutical companies or specialist pharma / healthcare niche players. Where value is created by the health content underlying the service, the party that owns the content typically drives the service. For example, for medical education, the content providers are the medical reference publishers or the pharma industry. For stock management and drug authentication, the underlying technology belongs to the suppliers of the supply chain solution.

However, there may be an opportunity for MNOs to play a more active role within some of the newer applications of mobile technology that are being explored, depending on the degree to which the MNO wishes to extend its current capabilities.

For example, MNOs (depending on market share) typically have significant assets that are of value to the pharmaceutical industry - the ownership of key consumer data, a customer base that is typically larger than that of a pharmaceutical company and a direct linkage to that consumer. If these relationships and data are linked to an ability to manage health-specific data, the resulting health data will be of great interest to the pharmaceutical industry.

CONCLUSION

This overview of mobile health in the pharmaceutical industry reveals key opportunities and challenges that MNOs should consider when exploring products and services for the pharmaceutical market. In summary,

- The pharmaceutical industry as new net corporate customers presents MNOs with a potentially significant revenue stream.
- Mobile health applications have the opportunity to address various business challenges for the pharma industry, ranging from increasing differentiation and improving medication compliance, to streamlining the marketing process and reducing the flow of counterfeit medicines.
- MNOs are not playing an active role in driving these mobile health opportunities at the moment. The extent to which MNOs can play a meaningful role in the pharma sector beyond infrastructure provision depends on the degree to which MNOs wish to extend their current core capabilities and asset base (i.e. to provide something the pharma companies want that they cannot develop themselves). This will be case specific and dependent on an appetite for risk and the regulatory environment.