Perspective: Case Study – Emerging Care Management Models in Developing Countries

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In This Perspective
This IDC Health Insights Case Study focuses on emerging models of care management, especially in developing countries. Over the next couple of years, care management aimed at high-risk patients will emerge as a reality in the Asia/Pacific region. IDC Health Insights believes that:

- Developing countries will benefit from this trend largely promoted by the payer and the life science industries, as the governments in these countries continue to grapple with providing universal healthcare and improving basic health outcomes.

- Care management will require clear policies around workflow and rules functionality, clinician and patient engagement, and communication tools. Mere data access is not enough. It needs to be presented in a consumable format that fits into the physician workflow.

- The ultimate success of care management plans will depend on the consumer/patient. Consumer buy-in is a key component for the success of any such collaborative healthcare provision plans. To achieve this, the healthcare industry needs to take into account patient's individual character, lifestyle, and health experiences.

Methodology
The goal of this case study is to provide an overview of a functional care management model in India. MSD SPARSH Healthline is an online patient support initiative aimed at diabetes management, developed by MSD Pharmaceuticals in India, which is a subsidiary of Merck and Co. Inc. USA. This study is intended to present the implementation of the patient support program, examine the business issues behind the implementation and the IT approach, the business goals and ROI from the project, and provide insight into the lessons learned from the implementation.
During the course of this study, IDC Health Insights conducted several interviews with key persons within MSD India and also held briefings with HCL, the service provider (SP). IDC Health Insights has previously conducted primary and secondary research on care management models. This case study presents the challenges, experiences, and benefits associated with care management models, especially in developing countries.

**Situation Overview**

With the shifts in the population trends and the disease burden, there is a need for a collaborative model of healthcare provision involving various stakeholders in different care settings. Information sharing at the point-of-care, whether within the walls of the hospital, or outside, including the patient's home, becomes imperative. Involving people with chronic disease conditions in their own wellness management programs will be the key for better utilization of healthcare dollars. Several stakeholders will benefit from such initiatives. Governments and healthcare providers will be able to better manage healthcare costs, which are rising faster than the funding levels. The payer community will benefit from keeping its members away from expensive hospitalization costs. The life science industry will benefit as the efficacy of the drugs will increase the healthier the lifestyle and the closer people are monitored.

The governments in mature countries in the region like New Zealand, Australia, and Singapore are actively looking at care management models for proper utilization of healthcare dollars. This trend is also on the rise in developing countries, promoted largely by the payer and life science industries. The urban, health-conscious population will increasingly take ownership of their own health in countries like India, Indonesia, Thailand, and Malaysia, especially where there is disenchantment about the public system, and private healthcare is accessible at a cost.

Global trends, led by the United States, will also see an increase in participation of the payer community in patient care management. The Patient Protection and Affordable Care Act (PPACA) not only focuses on reducing the number of uninsured in the United States but also on actively decreasing healthcare costs. The Act also requires payers to submit data on the proportion of premium spent on clinical services and quality improvement. By the Medical Loss Ratio (MLR) rules, payers are mandated to spend at least 80% of premium dollars on medical care. This requires the payer community to introduce measures that prevent premium rebates, and keeps premiums from escalating over the years.
A care management program would be beneficial to the payer community as it is required increasingly to collaborate with the provider community with an emphasis on accountable care organizations (ACOs). It can also assist the payers in dealing with the inquiries around PPACA, and the implications for the members. Customized care management programs directed at high-cost diseases like diabetes, chronic respiratory conditions, cardiac diseases, and chronic pain would empower the payer community with a holistic view required to initiate corrective action.

**Business Challenges and Needs**

Merck, known as MSD outside the United States and Canada, is one of the leading global life science companies, and continues to focus its research on diseases such as Alzheimer's, diabetes, and cancer. It also has a strong presence in the vaccines and biologics market. In India, the company is performing robustly, registering a growth of 18% in 2012, over that in the previous year. MSD focuses on growing its revenue in the emerging markets with India as a key contributor. India has emerged as a significant destination for life science companies, given the relatively low labor and setup costs, a huge and diverse population base, and the strong presence of a skilled pharmaceutical workforce.

The strategies for emerging markets for MSD are different from the strategies in mature economies. There is a stronger market for vaccines and follow-on biologics in these markets, given the focus on eradication and treatment of infectious diseases. Price differentiation is another key strategy for MSD. It currently sells Januvia, its diabetes-control drug for a fraction of the cost in the United States.

According to the International Diabetes Federation, in 2011, 61.3 million people in India suffered from diabetes, with the number projected to increase to 101.2 million by 2030. Diabetes-control medication also has a high long-term dependence rate. As a consequence, India is considered a key market for diabetes-control drugs. Sales promotion of Januvia and Janumet, MSD's diabetes-control offerings, is a key component of MSD's sales promotion initiatives. MSD takes a holistic patient-centric philosophy to adopt a solution-based approach, to improve a patient's entire disease management plan.

MSD's objectives for implementing a patient support program for diabetics include:

- **Improve response to therapy.** Diabetes is a challenging disease for clinicians as glycaemic control requires a certain amount of self-management on the part of the patients. Apart from medication, a healthy diet, regular exercise, weight management,
home blood glucose testing are all essential elements of diabetes control.

- **Increase therapy adherence and persistence.** Diabetes-control medication have several common adherence challenges like cost of the prescription medication, adverse reactions, poor monitoring and follow-up, remembering dosage and dosage changes, and, obtaining regular refills.

- **Promote a "patient first philosophy.** India has emerged a promising market for diabetes-control drugs, and there are multiple options for patients to choose from. Empowering the patients to take control of their disease management is in line with MSD's "patient first" approach.

**The Solution**

MSD found several gaps in the way diabetes control is managed in India, with a lack of targeted interventions that counsel patients to adopt therapeutic lifestyle changes, particularly around diet, exercise, lifestyle change, and home monitoring. MSD envisaged a patient support program (PSP). MSD SPARSH Healthline was launched in 2008, in consultation with diabetologists and endocrinologists, with a third party SP managing the patient services.

MSD focused on building a robust technology tool exclusively for this program on an enterprise customer relationship management (CRM) platform. HCL was brought in to maintain and manage the system in 2009 and, in 2012, an end-to-end management of both technology platform and the entire suite of patient services including patient onboarding, care pathways, and program evaluation and analytics was entrusted to HCL.

HCL leverages its global network of offices in 31 countries and multi-service delivery in key industry verticals including financial services, manufacturing, consumer services, public services, and healthcare. It has consolidated its service line into five different segments, helping it focus on client requirements and working as a business partner. A key differentiating aspect of HCL is its balanced service line portfolio, with around 21% of revenue coming from enterprise applications; 19% coming from engineering and research and development (R&D) services, while the custom applications segment continues to have the largest share among the five, accounting for around 32% of HCL's revenue.

HCL has emerged as a key player in the healthcare industry, especially in life science, and its proven track record in several pharmaceutical functionalities like R&D, clinical development, manufacturing, supply chain management (SCM), as well as sales and marketing gave it an edge over other SPs considered.
HCL sees patient support service as a potential growth area over the next five years, especially as these services integrate medical devices, mobile applications, and smartphones into the service lines to start the global drive to regulatory rigor around treatment data, and a consumer-centric approach to disease management and wellness. MSD was looking to deploy a sustainable, cost-effective, and scalable delivery solution for its patient support program.

MSD SPARSH Healthline is a complementary diabetes management support program that delivers non-pharmacological therapeutic lifestyle support to patients. Enrolled patients receive counseling on diabetes care, the complications associated with the disease, and equip patients with skills for adopting therapeutic lifestyle changes. The program aims to enhance the quality of life for patients with diabetes through patient education about therapy adherence, lifestyle and behavioral modifications, drug compliance, regular monitoring, individualized action plans, and frequent physician consultations.

The solution provides the services demonstrated in Figure 1.
FIGURE 1

The Patient Support Program Process Overview

**Patient Enrollment**
- Multichannel enrollment for patients prescribed with MSD diabetes-control drugs, Januvia and Janumet
- Patient acquisition through pharmacy and physician referral
- Direct enrollment after obtaining patient consent over the phone

**Patient Counseling**
- A pool of qualified counselors like nurses, pharmacologists, life science graduates and dieticians are made available to counsel individual patients, provide disease education on support improvements on multiple factors of diabetes control, including diet and exercise
- Suggested diet plans are made available over 2 calls at the end of the 1st month
- Patient education over phone is complemented with patient education material and Sparsh diabetes management website

**Ongoing Care**
- Ongoing education on management, and adverse reactions is provided through monthly calls over a period of 12 months
- Ethics compliance is maintained in not giving advice outside the expertise of the counselor
- Adherence to drug is monitored

**Evaluation & Reporting**
- Daily, monthly and annual reports given to MSD on patient enrollment by localities, adherence, adverse reactions reported, counselor performance and so on
- Reports generated on request for assessment of sentiments
- HIPAA and ethics compliance maintained in anonymizing patient demographics before reporting to MSD
- Physicians can access online CRM portals where data is entered by counselors

Source: IDC Health Insights, 2013
A key focus area is to derive real-world evidence through patient-centric data, in order to evaluate therapeutic lifestyle changes from baseline to program exit. So far, HCL has reported around 10,000 active patients enrolled into the MSD SPARSH program.

**End-to-End Solution**

SPARSH was originally deployed in 2008 through local third-party SPs on an Oracle CRM-on-demand platform. Since 2012, HCL has been providing the end-to-end solution, through several Oracle offerings as well as customized in-house solutions, as depicted in Figure 2.

**FIGURE 2**

SPARSH: End-to-End Solution

<table>
<thead>
<tr>
<th>Solutions</th>
<th>Business Process</th>
<th>Deployment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle CRM On Demand (CRMOD), Life Science Edition</td>
<td>Patient Registration Management</td>
<td>Configured</td>
</tr>
<tr>
<td></td>
<td>Call Management</td>
<td></td>
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<tr>
<td></td>
<td>Patient database management</td>
<td></td>
</tr>
<tr>
<td>Oracle Contact Center On Demand (COD)/ 3rd Party Call Center</td>
<td>Call management</td>
<td>Configured</td>
</tr>
<tr>
<td></td>
<td>Computer Telephony Integration</td>
<td></td>
</tr>
<tr>
<td>HCL Self-service Portal</td>
<td>Patient Data Access for physician</td>
<td>Custom solution</td>
</tr>
<tr>
<td>HCL PSP (Patient Support Program) Application</td>
<td>Applications for dynamic scripting, surveys and patient consent</td>
<td>Custom solution</td>
</tr>
<tr>
<td></td>
<td>Diet management application</td>
<td></td>
</tr>
<tr>
<td>HCL Integration Platform</td>
<td>Integration of all the modules through Web services</td>
<td>Custom solution</td>
</tr>
</tbody>
</table>

Source: IDC Health Insights, 2013

An end-to-end solution was preferred to enable seamless integration of all infrastructure components and reduce multiple vendor dependency. The "PSP in a box" is delivered through one strategic partner that is capable of taking care of the IT, the platform, as well as provide the multiple services required to deliver the desired business outcomes.
The Benefits

MSD SPARSH has clearly achieved its goal of creating product differentiation for MSD's diabetes control offerings. The initiative has resulted in benefits for MSD, physicians, as well as patients enrolled in the program.

● **For the pharmaceutical company.** MSD has reported several benefits from the program implementation:
  
  ○ **Promotion of a patient-centric philosophy.** MSD SPARSH is in keeping with MSD's holistic patient-centric approach for disease management and control. It focuses on improving the therapeutic lifestyle changes that contribute to better disease management.
  
  ○ **Improved physician disposition.** Empowering the physicians to track the patient lifestyle changes and therapy adherence enhances physician confidence and disposition toward the brand.

● **For the physicians.** Physicians have reported several benefits from the MSD SPARSH program:
  
  ○ **Better patient adherence to therapy.** Physicians find it challenging to manage diabetes, as it is largely dependent on patient self-management and not just medication. SPARSH's complimentary program helps patients stay on the diabetes management program longer, and helps physicians track adherence to modify the management regimen.
  
  ○ **Data usage at seminars.** Diabetologists and endocrinologists have also benefited from the structured reporting format on the physician portals to collate information to share with peers.

● **For the patients.** Patients have reported benefits from enrolling into the MSD SPARSH program:
  
  ○ **Better ownership of personal health and wellness.** The program increases patient awareness on the multi-pronged approach to diabetes management that involves diet, exercise, weight management, medication, and home monitoring. This has given the patients a better control over their health and wellness. Eventually, this will lead to a better quality of life, as well as decrease in long-term health costs from hospitalizations and other more expensive interventions.
Essential Guidance

Implementations like MSD SPARSH are the first step toward care management models in emerging economies. The life science and payer communities can contribute immensely in setting up such models for chronic disease management. A successful care management plan should consider the following:

- **Clear policies and workflows.** Care management will require clear policies around workflow and rules functionality, clinician and patient engagement, and communication tools. Eventually, what is required is a clear delineation of tasks and responsibilities, of the multiple stakeholders involved, with differential access to the patient records. Clinicians involved in care and disease management programs need an application to help them establish and manage the care plans for chronically ill patients. Functionality of workflow tools includes the ability to receive and send data to other applications, the ability to create a care plan and track progress, task lists, tickler files, and reminders. Mere data access is not enough. It needs to be presented in a consumable format that fits into the clinician workflow.

- **Choice of services and delivery methods.** Diabetes management needs a holistic approach and comprehensive support. However, experience with MSD's SPARSH shows that it is necessary to prioritize from among the plethora of services that patients may benefit from, keeping in mind scalability and capacity to deliver services with consistency. Understanding of which services require human resource participation (counseling, for example), which services require automation (reminder services, for example), and what level and depth of monitoring is necessary and will go a long way in having in place a robust, scalable, and effective support program.

- **Consumer buy-in.** The ultimate success of care management plans will depend on the consumer/patient. Consumer buy-in is a key component for the success of any such collaborative healthcare provision plans. To achieve this, the healthcare industry needs to take into account patient's individual character, lifestyle, and health experiences. The benefits of constant targeted health monitoring to combat a chronic condition have to be appreciated, in order to keep patients from acute care settings.

- **Strategic partnerships.** Multiple strategic partnerships are needed to implement a care management plan. While in mature economies, many of these initiatives are driven by the government and the provider community, developing countries will benefit from strategic partnerships with the payer and life science industries that are focused on ROI considerations.
The programs are often complicated IT projects and require high initial costs. Outsourcing the IT functions to an SP that is able to provide the end-to-end solution will enable seamless integration of all infrastructure components and reduce multiple vendor dependency.

- **Security and compliance.** Many of the developing countries do not have healthcare-specific data compliance laws. Issues around privacy, security, and access are however key to the success of a care management plan. In the absence of country-specific laws, solutions should have compliance stamps like HIPAA and other ethics compliance. Special care should be taken when working with the life science industry to anonymize patient data and to present findings to the life science partner as an aggregate.

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