



An Oracle White Paper  
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# The Oracle Health Management Platform

Supporting Healthcare Organisations  
and Citizens in the Transformation  
from Episodic to Longitudinal Care

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## Executive Summary

Europe's Health Systems are under intense pressure. The prevalence of chronic disease is rising, the population continues to age, new advances are creating new cost pressures and patients are become more demanding.

It is increasingly apparent that "doing more with less" is not a sustainable response to these pressures. Instead, a transformational change is needed. Taking cues from other industries and working closely with several large health organisations, Oracle has developed a unique Health Management Platform (HMP) to enable healthcare organisations and groups of organisations to deliver this transformation.

## Introduction

Healthcare providers and payers across Europe are acutely aware that a crisis is imminent. A rapidly ageing population, higher prevalence of long-term chronic diseases, constrained budgets and fewer working-age people to provide – and fund – care mean that European healthcare systems cannot continue to operate as they have done traditionally.

Rather than focusing the bulk of their attention on delivering and reimbursing care at the point of the most urgent, and thus most costly, need – hospitalisations, surgery visits, unforeseen courses of treatment – they must broaden their reach and engage with citizens at every stage of their journey through life. By providing education, support and information outside of traditional clinical settings, healthcare organisations can reduce the need for emergency care as patients become healthier and better able to manage their own conditions.

This approach is already being pioneered by forward-thinking healthcare organisations across Europe, including the regional government of Andalucía in Spain and CNAM-ts in France. It has been proven to deliver considerable benefits for patients, who receive better healthcare and enjoy a better quality of life, for providers, as dangerously overstretched workloads are reduced, and for payers, whose costs and liabilities decrease as a result.

However, any transformation from episodic to longitudinal care must be supported by appropriate technologies. Historically, healthcare IT systems have been geared to administering, treating and reimbursing episodes of acute care: with the focus on the episode rather than on the individual patient. But as chronic diseases such as cancer, diabetes, heart disease and stroke become more prevalent, a system is needed that can manage patient relationships over the long term. Such technology allows chronic conditions to be detected earlier or prevented altogether, and enables patients and their carers to manage better by themselves, reducing the need for professional intervention.

To enable healthcare organisations to make the necessary transformation, Oracle has developed a software platform – Oracle Health Management Platform (HMP) – that allows providers and payers alike to manage relationships with citizens over the long term, providing information, support and continuity of care outside of traditional clinical settings.

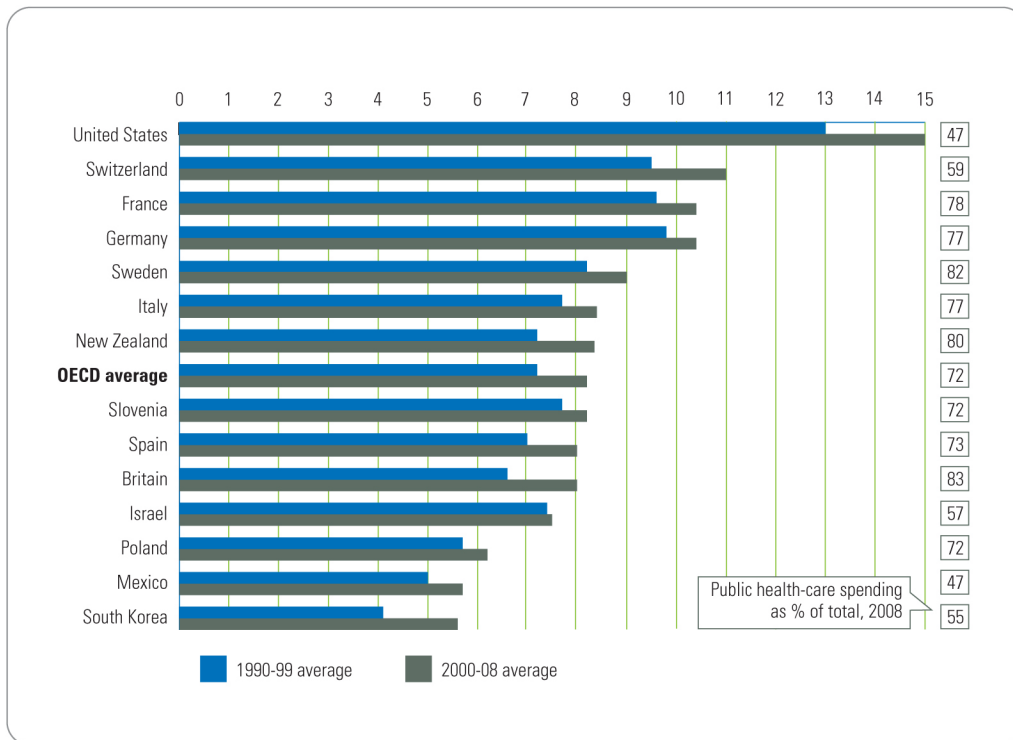
This paper provides an introduction to Oracle HMP, its features, capabilities and benefits. It also contains examples of how European healthcare organisations are using Oracle HMP to improve patient satisfaction and wellbeing, reduce instances of hospitalisation, and avoid unnecessary operational costs.

## Section 1: Demographic Challenges Require a New Approach to Healthcare

### The Demographic Timebomb

Across Europe, a rapidly ageing population has resulted in a sharp rise in the cost of providing healthcare. The Organisation for Economic Co-operation and Development (OECD) has calculated that expenditure on healthcare is now more than 10% of GDP in several developed countries including the United States, Switzerland, France and Germany (see graph).

### Healthcare Costs are Rising Worldwide



Healthcare spending as a percentage of GDP, 1990-1999 and 2000-2008. Source: OECD

The trend is set to continue as populations get older and birth rates fall. Many governments feel they face a stark choice: reduce quality of care or raise taxes to compensate. Private healthcare organisations are struggling with the cost of providing high-quality care at an affordable price, while payers must find ways to reduce costs and liability or risk increasing premiums to unaffordable levels.

Much of the rise in healthcare expenditure can be attributed to the increasing prevalence of chronic conditions, ranging from cancer to dementia, particularly among older people. Described by the World Health Organization (WHO) as “diseases of long duration and generally slow progression”, these conditions tend to incur frequent requirements for clinical treatment over a period of many years.

To stop healthcare costs spiralling out of control, providers and payers must urgently seek to reduce the amount of clinical intervention required by patients with chronic diseases. In effect, this means that healthcare organisations must shift their operational focus from episodic treatment to long-term support.

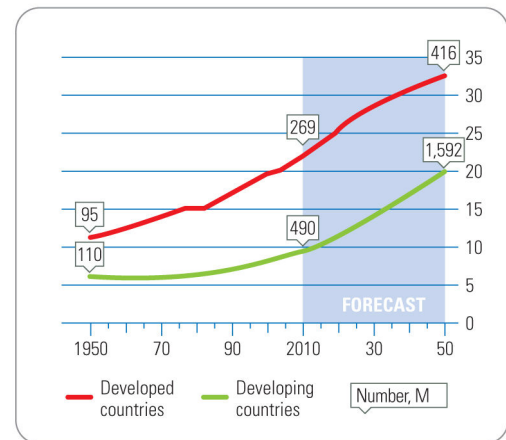
### New Capabilities Required

In its 2010 report *Tackling Chronic Disease in Europe: Strategies, Interventions and Challenges*, the European Observatory on Health Systems and Policies identifies four key strategies for managing chronic diseases in order to improve quality of life and longevity for citizens, and to reduce the economic burden resulting from an ageing population requiring frequent and expensive medical intervention .

These four strategies are as follows:

- Prevention and early detection
- New provider qualifications and settings
- Disease Management Programmes for specific conditions
- Integrated care programmes

### The Ageing Population



Citizens aged 60 or over as a % of total population. Source: *World Population Prospects*, United Nations, 2009.

Each of these strategies requires new capabilities and new ways of operating that are only now starting to be adopted by European healthcare providers and payers. Traditionally, these organisations have focused on delivering and reimbursing medical care at the point of acute need. In order to manage chronic disease over the long term, however, this focus needs to expand to cover the patient’s needs both before and after any episode of acute treatment, as well as



during it (see diagram overleaf).

By engaging with citizens in a consistent and effective way throughout the entire journey, healthcare organisations can:

- Delay or prevent the contraction of chronic diseases by encouraging healthier lifestyles
- Identify the onset of conditions earlier, leading to timelier intervention and better outcomes
- Ensure patients receive consistent and appropriate treatment inside and outside clinical settings
- Empower individuals to take greater control of their own health needs through self-care
- Improve adherence to courses of medication and therapy to prevent acute episodes recurring
- Boost patient satisfaction and loyalty by actively improving their quality of life and care
- Significantly reduce the costs of delivering medical care and processing claims

To help healthcare organisations to make this transformation, Oracle has developed a comprehensive Health Management Platform that can be implemented and used alongside existing IT systems. The next section will introduce Oracle HMP and outline its powerful capabilities for providers and payers alike.

## Section 2: Introducing the Oracle Health Management Platform

Drawing on its long experience of working with the healthcare industry worldwide and its history of developing innovative information management systems, Oracle has introduced a software system that enables healthcare providers and payers to implement the four strategies identified by the European Observatory on Health Systems and Policies.

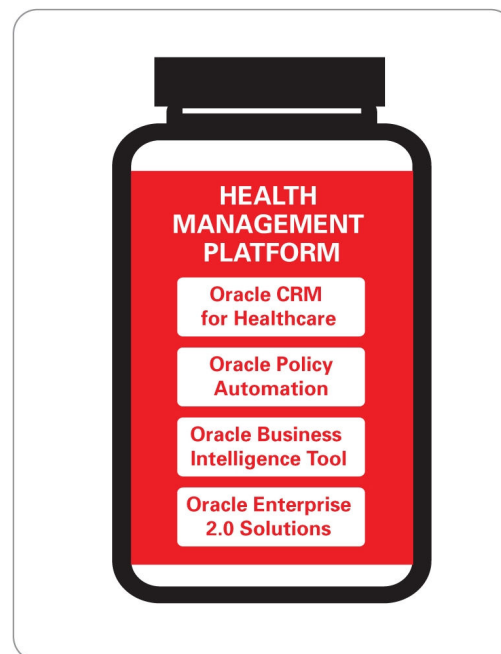
The Oracle Health Management Platform is a complete, integrated and open patient-centric platform that can be implemented as a single system or incrementally in modules, depending on the needs and budgets of the customer organisation. It consists of four powerful core components, which are already delivering benefits to healthcare organisations, patients and citizens worldwide.

Oracle CRM for Healthcare provides a multi-channel interaction centre with sophisticated case management functionality for health care providers and insurers. The interaction centre can be used in many different ways to improve healthcare delivery, reduce costs and ensure patient satisfaction. To give just three examples, it can be staffed by medical professionals to provide advice without the patient needing to see a primary care giver. It can be used as an outbound resource to remind patients of appointments, thereby reducing non-attendance. Or it can be used to provide a one-stop source of information and support for a specific disease or condition.

Oracle Policy Automation allows health professionals to construct and deploy auditable rules and decision trees to ensure that patients are accurately and consistently treated at every stage in the 'patient journey'. For example, information such as eligibility for a form of treatment or the rationale for an individual decision can be quickly determined and incorporated into the patient's record. In contrast to many policy management systems in use today, rules can be entered in everyday business language, enabling them to be defined and maintained by business users without recourse to IT.

Oracle Enterprise 2.0 solutions encompass Web 2.0 Portals, Collaboration and Content Management. Today's citizens and professional users expect far more from websites than just information; they want them to be interactive, collaborative, personalised and easy to maintain. Oracle's integrated, secure and personalised portal and collaboration capabilities allow

### The Oracle Health Management Platform: Core Components



healthcare organisations to give employees and citizens the high quality of online service that they need. At the same time, Oracle Content Management provides a full suite of content authoring, review and publication capabilities to enable content owners to manage and deliver crucial information online to patients, health professionals and carers.

Oracle Business Intelligence Enterprise Edition and Oracle Essbase together represent a powerful analytical layer that can drive a better understanding of individual patients and the patient population as a whole. Sophisticated analytics are crucial to identifying which patients may be at risk of developing specific chronic conditions, for example, enabling payers and providers to take proactive steps to avoid or delay the onset of those illnesses.

Oracle HMP delivers two essential overarching benefits to healthcare providers and payers:

**Increased patient satisfaction:** Oracle HMP allows healthcare organisations to improve the patient experience, leading to better quality of life and care for patients and improving their satisfaction and loyalty (where a choice exists) to their chosen healthcare provider or payer.

**Effective management of chronic diseases:** Oracle HMP provides a robust platform to support chronic disease management programmes, leading to a reduction in healthcare costs and an increase in patients' wellbeing, adherence to treatment programmes and ability to manage their condition at home without the need for clinical intervention.

#### Improving the Patient Experience

As patients become more active players in their own healthcare choices and decisions, their expectations of healthcare organisations are rising. Today's citizens expect the same or even better levels of service from their healthcare providers and insurers as they receive from banks, shops and other commercial services they frequent. These expectations range from immediate attention and 24/7 service to the availability of relevant, personalised information and the ability to interact with a provider via a multitude of channels. In situations where patients can choose between providers, the ability of the provider to meet these expectations is increasingly becoming a deciding factor.

Oracle HMP provides an elegant solution to the growing need to provide consistent, personalised, multi-channel, round-the-clock service. Its Oracle CRM for Healthcare component enables the rapid implementation of multi-channel interaction centre that can be used at a national or regional level (e.g. in the case of Salud Responde, see case study below) or by an individual provider or payer to improve and extend patient relationship management.

Oracle HMP can also be used to implement and manage more targeted case management initiatives such as individual health campaigns or ongoing disease management programmes (see CNAM-ts case study in the 'Health Coaching' section below).

***Patient Experience Case Study: Salud Responde (Andalucía, Spain) \****

The Andalusian Healthcare Service is responsible for 38 hospitals, 8 ambulatory centres and 370 primary health care centres serving the 7.9 million inhabitants of the Andalucía region of southern Spain. It currently employs more than 80,000 healthcare professionals.

Andalucía needed to provide outstanding healthcare to a growing and ageing population without losing control of costs. One solution was to help citizens to manage their own health and take greater control of their own healthcare needs. To do this it has used Oracle CRM for Healthcare to implement a single regional contact centre, Salud Responde, accessible 24/7 via phone, email, internet, SMS, fax and IVR.

Salud Responde delivers a wide range of health services, including public health alerts and campaigns, appointment and immunisation reminders, medical advice and second opinions, issue-specific helplines, outreach to patients leaving hospital, Living Will registry, and waiting list guarantees. It provides a historical view of the customer to allow service to be personalised over time, and to allow citizen healthcare data to be analysed to inform future improvements to the service itself and to healthcare delivery in the region, as well as to provide insight into large-scale health trends.

Since implementation, Salud Responde has enabled 400 administrative staff located at the region's healthcare institutions to be redeployed to frontline patient care; improved service to citizens by reducing call response times from minutes or hours to less than three seconds; and increased levels of patient satisfaction with the appointments booking process by 100%.

\*The Oracle snapshot for Salud Responde, Andalucía, Spain

"Oracle CRM for Healthcare has allowed us to develop a one-to-one relationship with each patient, to better serve their healthcare needs and ensure they are being treated according to their rights. We have seen customer satisfaction double since the introduction of the service."

Wilfredo Lopez, Centro de Informacion y Servicios Salud Responde, Junta de Andalucia

## Five Building Blocks for Chronic Disease Management

Chronic disease management programmes will be key to containing the currently unsustainable rise in healthcare costs. Oracle HMP supports a transformational shift towards managing chronic disease across the entire lifespan of each individual citizen.

Oracle has identified five 'building blocks' for effective chronic disease management, each of which can be deployed using the Oracle Health Management Platform.

### Five Building Blocks for Chronic Disease Management



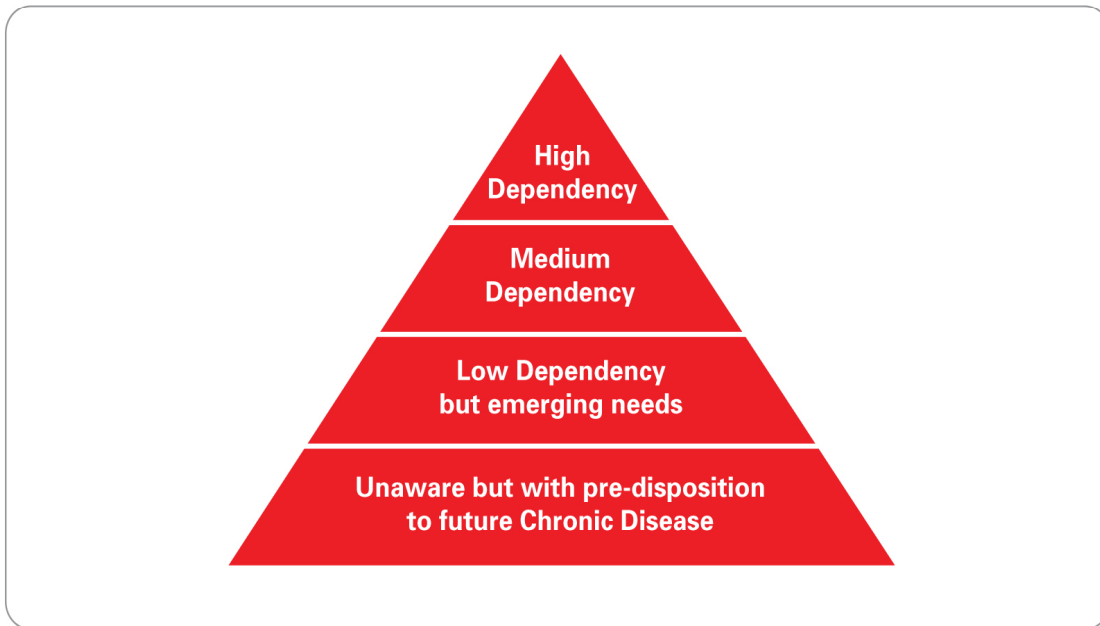
### Population Stratification

The European Observatory on Health Systems and Policies has identified 'prevention and early detection' of chronic conditions as a critical strategy for reducing the economic impact of providing healthcare to an ageing population.

Oracle HMP enables clinicians and other healthcare professionals to conduct such analyses without any specialist IT knowledge, greatly speeding up the process. The resulting information can then be used to develop and deploy targeted campaigns aimed at lifestyle modification, such as stopping smoking or eating more healthily, to delay or prevent the onset of serious disease.

It can also act as an early warning system to alert primary care givers to a patient's predisposition to a particular condition, which can contribute to earlier detection of the disease and thus better outcomes for the patient and reduced need for emergency interventions.

## Oracle Health Management Platform can help to segment patient populations.



### Health Campaigns

Educating populations about living healthier lifestyles and managing chronic conditions can significantly reduce the cost burden on healthcare providers and payers, while increasing quality of life and longevity for citizens. Increasingly, payers and providers are embarking on proactive campaigns to promote healthy living and to help those with chronic diseases to manage their condition themselves or with the help of one or more carers.

Oracle HMP supports health campaigns with a complete technological infrastructure for creating and delivering consistent, expert and personalised information over multiple channels – whether it's a personalised exercise chart to download from the web or a skilled health professional at the end of a phone line.

### Health Coaching

Non-adherence to treatment programs is a major cause of re-hospitalisation for patients with chronic diseases. The World Health Organization has discovered alarming rates of non-adherence, ranging from 28-70% worldwide for asthma to 98% in the United States for diabetes. Individual health coaching can be a highly effective way to ensure patients with chronic conditions adhere to their program of treatment. Some of the most successful adherence schemes have been contact centre-based, whereby patients are contacted by a telecarer, who, supported by a script, asks a patient how they are dealing with their condition and offers support and coaching on improving the patient's management of their condition.

### ***Health Coaching Case Study: CNAM-ts Sophia Programme (France)***

France's Caisse Nationale d'Assurance Maladie-Travailleurs Salariés (CNAM-ts) is a public health payer with more than 55 million beneficiaries, more than 1.3 million of whom have diabetes. According to an article in the online journal *Pharmaceutiques*, not only had CNAM-ts seen the cost of treating those patients double over five years, but the rate of non-adherence to treatment was also strikingly high – around 30%, according to the president of the French Diabetic Association (AFD) – resulting in many high-touch interventions that could have been avoided with better adherence.

To address these issues, in 2008 CNAM-ts introduced a pilot disease management programme (DMP) called Sophia, with 136,000 diabetic patients across the country. The objective of the programme is to improve adherence to treatment by supplementing the patients' regular clinical check-ups with ongoing one-to-one coaching delivered by phone from two contact centres by a staff of specially trained healthcare professionals. The phone support is augmented by information available over the internet.

Oracle CRM for Healthcare, a core component of Oracle Health Management Platform, has been used to manage the call centres and patient communications. To date, more than 40% of CNAM-ts diabetes patients have been enrolled in the Sophia programme. Patients have indicated that they are very satisfied not just with the way the programme is helping them to manage the disease, but also with the help they have received with other difficulties they encounter in their daily lives. A full analysis of the benefits of the programme is scheduled for 2011.

"Oracle CRM for Healthcare is a very efficient platform to develop patient awareness and education over the web, as well as to support CNAM healthcare professionals coaching chronic disease patients on the phone."

JM Aubert, CNAM

## Care Pathway Management

Patients with complex health needs frequently need help to “navigate” the health system. This could be help with choosing the best location for their health care, help with accessing information about different interventions and making an informed choice between them, or help with the delivery of home-based health and social services outside of the clinical environment. In short, the kind of ‘integrated care programme’ identified by the European Observatory on Health Systems and Policies as one of the four key strategies for tackling the burden of chronic disease.

Healthcare providers and payers alike are exploring the benefits of providing such patients with a single ‘trusted advisor’ who can liaise with the various institutions, carers and primary care providers to ensure the patient’s needs are being met and that they are receiving a consistent and beneficial continuum of care. Such a service also supports front-line staff by resolving routine issues for the patient, allowing face to face contacts to be focused on those with identified need for such services.

However, such an approach requires the support of a sophisticated management system. Structured assessment tools and treatment protocols are required, in order to enable consistent and auditable delivery of care pathway navigation. At the same time, advanced case management functionality is needed in order to ensure the patient is consistently and appropriately treated at all times, regardless of the institution or health professional delivering the care.

Oracle HMP supports a holistic approach to Care Pathway Management. It provides world-leading case management functionality from Oracle CRM for Healthcare, combined with Oracle Policy Automation’s ability to define standard, auditable processes and protocols. Providers and payers gain the ability to manage each patient ‘in the round’, ensuring personalised, appropriate and helpful care at all times.

## Telecare and Telehealth

Delivering healthcare services remotely can not only improve access to care for patients living in isolated locations, but can also reduce the cost of healthcare delivery while improving outcomes for all patients. Telehealth and telecare initiatives, such as remote monitoring of patients’ life signs using new networked devices, can be easily deployed using the Oracle Health Management Platform.

Additionally, Oracle HMP can be used to deliver advice and guidance remotely to patients at home, avoiding the need for them to make a doctor’s or hospital appointment. Such an approach is convenient for the patient and reduces costs for the provider.

## Oracle Health Management Platform – Benefits Summary

Oracle HMP delivers a wide range of benefits to providers, payers, patients and carers. The sections below summarise the main benefits for each constituency.

### **Benefits for Patients**

- Empowers individuals to take more active control of their health or long term condition and make more informed choices
- Links patients and carers with Health and Support Services to reduce patient anxiety, improve disease management and reduce risk of unscheduled visits to providers
- Gives patients access to information and services from a trusted source (their provider or payer)

### **Benefits for Payers**

- Cost savings through reduced instances of emergencies and complications, more efficient service delivery and the adoption of high-impact, low-cost channels to interact with patients
- Population management tools to support wellness and lifestyle improvement programmes
- Empowers patients to take more active control of their health or long-term condition and make more informed choices – reducing crises and incidence of avoidable complications
- Ability to commission or purchase community based support to reduce the incidence and cost of crisis admissions
- Higher patient satisfaction and loyalty arising from improved service delivery and the ability to standardize, monitor, audit and control the care delivered by providers

### **Benefits for Providers**

#### **Community Service Providers**

- Enables scarce and expensive field staff to be supported by a contact centre partner who helps to manage their caseload, e.g. maintaining contact with patients and actively managing their care
- Allows a chronic disease-focused approach, e.g. a contact centre-driven campaign to encourage adherence to therapy for patients with hypertension
- Ability to compete on quality of service rather than on price

### **Social Service Providers**

- Provides a single point of contact for the client, coordinating to inputs from a variety of social care staff and agencies
- Enables collaboration with health colleagues while maintaining separate record-keeping systems for sensitive data

### **Acute Service Providers**

- Improves customer loyalty and provides a platform for patient experience measurement
- Single point of contact for patients, driving internal efficiency and reducing rates of non-attendance
- Improves discharge process, ensuring that all required activities are completed and that additional goods or services are offered to patients before they leave hospital, or at home, and providing a more engaging way for patients to understand their condition and treatment plan before leaving to promote improved adherence to therapy.
- Broadens range of services offered as pressure to reduce admissions threatens revenues from the traditional activity
- Differentiates provider from competitors by becoming a more trusted source of information, goods and/or services
- Ability to compete on quality of service rather than on price

## **Why Oracle?**

Clear market leader with 50-80% market share in Technology across Europe, the Middle East and Africa and thousands of reference customers in Healthcare

Involved in a great number of eHealth projects across the globe

Committed to the Healthcare industry with more than 1000 dedicated Development, Marketing and Sales professionals

Actively supporting key standards and best practices development

A single source of open, integrated and complete industry-specific solutions encompassing applications, database, middleware, operating systems and hardware

## Conclusion

Healthcare organisations need to respond to the changing demands of a growing and ageing population by moving from delivering episodic care to managing the patient holistically. This means expanding their reach outside of the walls of their own organisation, so they can proactively maintain the wellness of populations as well as support self-care for patients with chronic conditions.

This transformation must be underpinned with a technology solution that can improve the patient experience, increase the effectiveness of patient self-care and streamline the way patients interact with healthcare organisations. The Oracle Health Management Platform provides a flexible, adaptable and extensible basis for patient-centred collaboration on improving health outcomes between payers and providers while still allowing each type of organisation to run its own business applications separately.



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