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Comparative Domestic and International EHR Adoption

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Review of ...

- 1. Connected IT Health**
- 2. Market Trends**
- 3. Market Findings**
- 4. EMR Adoption Trends**
- 5. Lessons Learned – Guiding Principles**

Connected Health IT Definition

The Connected Health IT market is currently very fragmented, but evolving rapidly, globally



- **Commoditization of basic EMR functionality**
- **Diversifying and decentralized approaches to data collection through EMRs and PHRs, along with other clinical and administrative systems**

- **Commoditization of core HIE**
- **Structured data**
- **Higher quality**
- **Better accessibility**
- **Promise of greater breadth at patient and population levels**

- **Business intelligence to improve decision making and clinical quality**
- **HIT/HIE enabled care transformation to maximize value from improved outcomes and reduced costs**
- **HIE leveraged as a platform to enable new models of collaborative care**
- **HIE leveraged as a platform to enable virtual care**
- **New opportunities for directly monetizing data assets**

Market Trends: United States and Canada

- Fragmented interactions across Patients, Providers, Payers, Public Health organizations, etc.
- Funding and guiding the development of HIE programs in states, provinces and territories
- Many different systems and organizations to integrate
- Increasing role of the patient/consumer
- With 5,800 hospitals, EMR adoption is beginning to accelerate due to ARRA incentives and penalties
- Shortage of clinical IT specialist will shift EMR maintenance and support strategies to outsourcing and cloud based solutions - i.e. Canada requires 36,000 clinical IT workers to sustain projects through 2014

Market Trends: Europe, Africa and Latin America

- Telemedicine and homecare market are one of the most potential e-health application markets in the EU currently
- Initiatives by regulatory bodies such as i2010 - European Information Society initiative by the European Commission, would ensure that universal adoption of e-health application occur by 2020
- EU will define the global Standards and guidelines to develop a global European EHR by 2020 - each country will develop their own solution before to that time
- Estimates also depict that the global e-health market could add up to a turn over of about 60 billion Euros
 - Europe accounting for 18 billion Euros
 - Market will grow at 6.6 percent through 2013 driven by government incentives and refresh of EMR systems

Market Trends: Australia, China, Hong Kong, Japan and Singapore

- Building the foundations for/ rolling-out and integrated national Electronic Health Record (EHR) system is a priority for government organizations
- Accelerating e-health adoption and driving e-health progression are priorities for public health organizations
- Regional/ Provider-network EMR and Clinical Information systems are a priority for regional and private providers across the five target markets

Key International EMR Market Findings

Key Trends

1. Most trends impacting international EMR markets are driven by local healthcare systems & country-specific cultural standards / laws:

- As an example, cultural standards in each country
- Each target country has a unique healthcare system with its own set of rules (e.g., payment structure, policies)
- Many markets are primarily served by small local EMR vendors and service providers

2. Nearly all target international EMR markets are planning for the labor shortage

- International EMR markets are identifying the need for additional resources with both IT and Clinical skills to support future use of EMR systems
- International markets will have to improve the use of technology or consider alternative delivery models to cope with the shortage

3. Emerging and technologically advanced markets are seeking cloud-based solutions to manage costs and improve use of EMR

- Hospitals in countries with small budgets may invest in EMR may lean towards cloud-based solutions to keep costs manageable
- Emerging markets, such as China and India, have the opportunity to reach maturity quickly with cloud-based solutions

4. Some countries (e.g., Spain and Australia) are driving regional and national EMR programs, attempting to integrate EMR systems across larger geographic areas

- Regional models create a small number of buyers (regions or states) that select EMR solutions for large number of hospitals and ambulatory sites
- Implementation and integration of EMR across a region or nation create large-scale opportunities for long-term projects

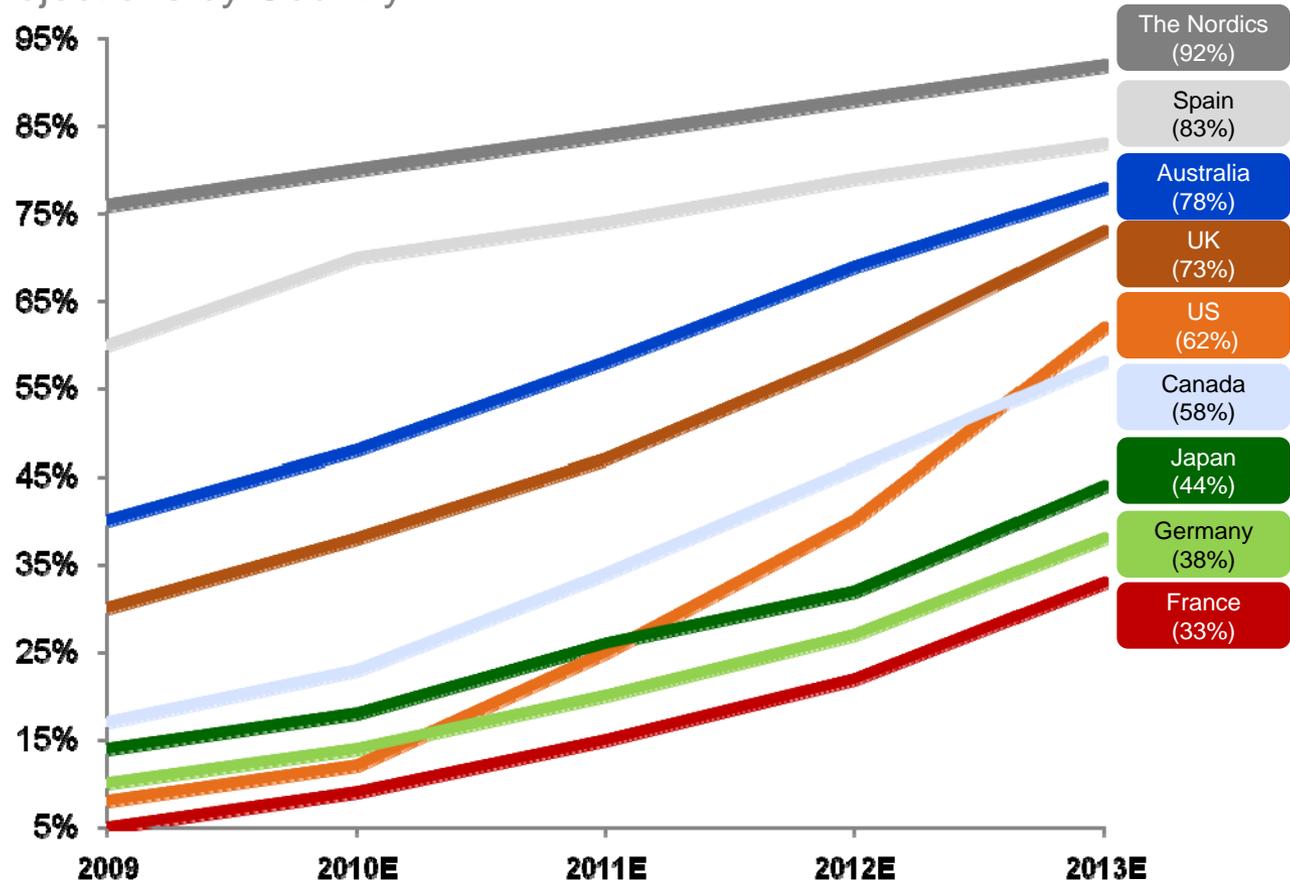
International EMR Market Overview

The Nordics, Spain and Australia have the highest current adoption rates, while nearly all international markets are ahead of the US.

Directional EMR Adoption Projections by Country

- Global EMR markets are at different levels of EMR adoption and uptake
- The Nordic countries are the clear leader in hospital-based EMR adoption

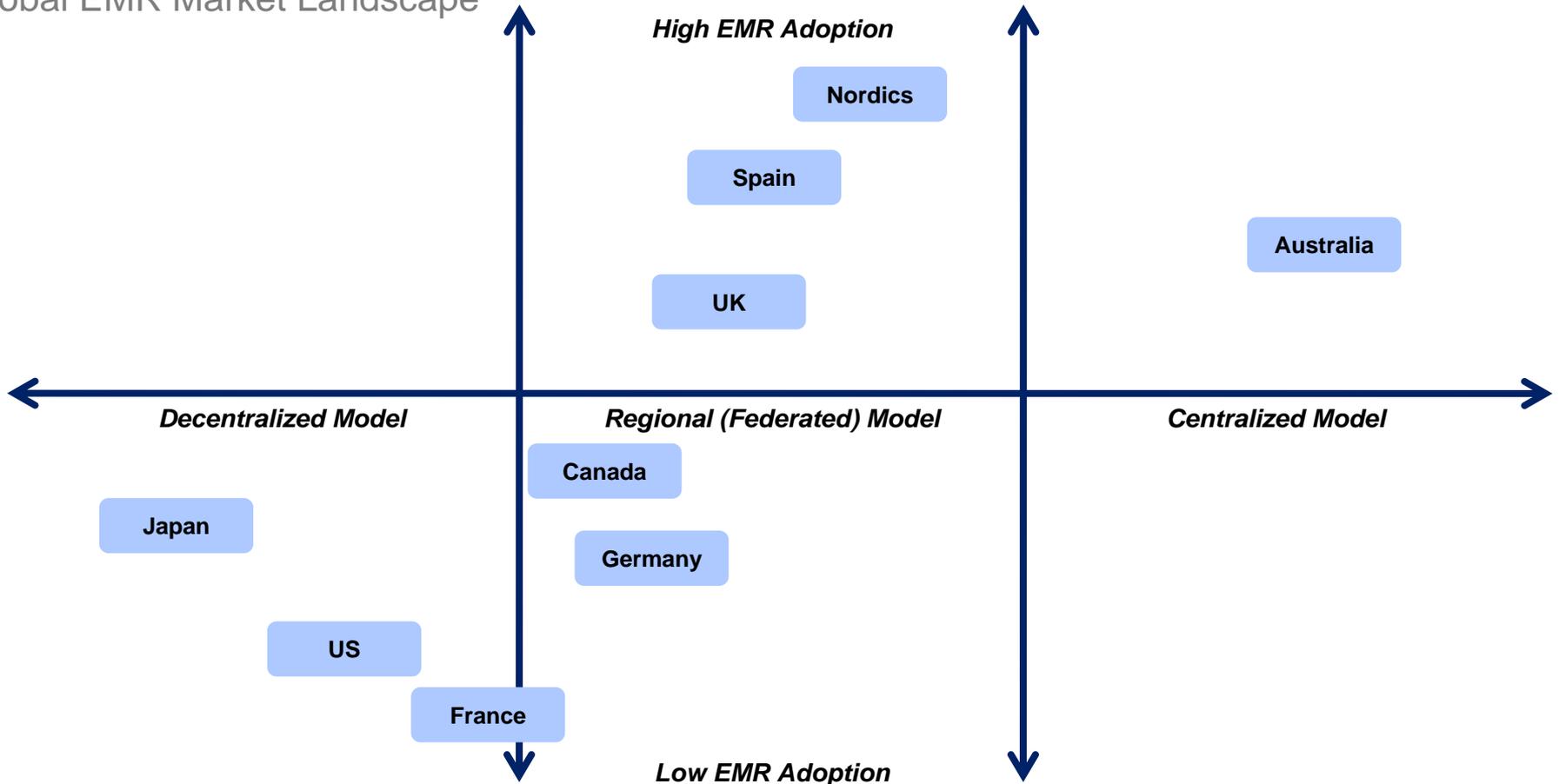
EMR Adoption projections are based on current and expected hospital adoption rates and reflective of hospitals use of advanced functionality, including CPOE.



Target International EMR Market Overview

Global markets are at varying stages of EMR adoption, often employing different models for driving EMR adoption across the country.

Global EMR Market Landscape



Lessons Learned – Guiding Principles

Distinct themes recognize the value can be clearly articulated ... to the clinicians, patients, payer and government stakeholders.

Guiding Principles for Implementing National, Regional and/or Provider EHR

- ✓ **Clinical Value:** EHR capabilities should have high clinical value. The identification of capabilities and priorities should be clinician led.
- ✓ **Pragmatism:** The foundations for EHR need to be built; capabilities need to be realistic for the timeframe of each release.
- ✓ **Staged development:** Evolve capabilities over time to achieve greater sophistication.
- ✓ **Balance risk and reward:** Manage the degree of difficulty in each release.