The economics of health service transformation: a business model of care coordination for chronic condition patients in UK and US

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June 17, 2015
Focus On Healthcare And Life Sciences

- **Key industry focus**
  - Healthcare and Life Sciences

- **Rich mix of business-aligned solutions, infrastructure and next-gen technology services**
  - Industry Software and Solutions
  - Application Services
  - Consulting
  - Infrastructure
  - Cloud
  - Cybersecurity
  - Big Data

- **Global Clients**

- **Key statistics**
  - $50B US MEDICAID CLAIMS HANDLED ANNUALLY
  - 100M PATIENT RECORDS MANAGED
  - 10M US DOD PATIENTS’ PHARMACY TRANSACTIONS
  - 1M HEALTH PLAN ENROLMENTS
  - 15,000 PHARMA PRODUCT APPROVALS MANAGED
  - 6,000 PROFESSIONALS SERVING CLIENTS
  - 5,000 CLINICAL SYSTEM INSTALLATIONS
<table>
<thead>
<tr>
<th>Credentials</th>
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<tbody>
<tr>
<td><strong>National Health Service</strong></td>
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<tr>
<td>England</td>
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<tr>
<td>Services and systems which reach over 500,000 registered users and support in excess of 25 million patient records.</td>
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<td><strong>Ministry of Health</strong></td>
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<td>New Zealand</td>
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<td>Country-wide medication management system which will help all hospitals in New Zealand reduce patient harm.</td>
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<td><strong>Cabrini Health</strong></td>
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<td>Australia</td>
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<td>Streamlined access to real-time clinical information through a single, mobile interface designed for iPad and iPhone.</td>
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<tr>
<td><strong>SLL</strong></td>
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<tr>
<td>Sweden</td>
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<td>'Pre-hospital' system including patient records and control systems in emergency departments, and vehicles.</td>
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<td><strong>New York Dept. of Health</strong></td>
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<td>U.S.</td>
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<td>State healthcare exchange, providing a marketplace to help people compare options and enrol in health insurance coverage.</td>
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<tr>
<td><strong>New York Presbyterian</strong></td>
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<td>U.S.</td>
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<td>Technology which allows multiple IT systems to exchange critical information in real time, supporting efficient workflow and coordinated care.</td>
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<td><strong>Pfizer</strong></td>
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<td>Global</td>
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<td>Applications management for Pfizer's HR Business Technology function, supporting 91,000 employees across 95 countries.</td>
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<td><strong>Intermountain Healthcare</strong></td>
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<tr>
<td>U.S.</td>
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<tr>
<td>Cybersecurity advisory and managed security services, teleservices consultancy, and large scale applications management.</td>
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</table>
Demographic Trends and Chronic Condition Incidence

Sources: The Lancet, DoH, US Census, ONS of UK
In total, 7 out of every 10 dollars/pounds of the total healthcare spend in the US/UK is attributed to caring for people with CCs.

Less than 30% of the population account for 70% of the spend.

Sources: NHS, CMS
Chronic Condition Kaiser Pyramid

Highly Complex – Case Management

High Risk – Disease Management

Low Risk - Supported Self-Care

- Patients with 2+ CCs - 20%
- One poor CC 10%
- Patients with one well-managed CC - 65%
- Population wide prevention

Highest risk 4-5%

Sources: NHS, University of Birmingham
The Six Pillars of Chronic Care Management Strategy

- Build Patient Care Coordination Units
- Measure Outcomes & Costs Per Patient
- Expand Services Across Geography
- Pay for Year-of-care Care Cycles
- Coordinate Care Delivery Across Providers
- Build Enabling IT Platform

Sources: Michael Porter, Richard Kaplan
The Chronic Care Management Business Model

Patients with the same Chronic Condition

Customized to local healthcare environment and demographic profile

Based on a year-of-care payment cycle

CC Portfolios

Disease Management & Support

Hospital/Acute Care Management

Post-Acute Care Management

Social Care & Community Services

Continuum of care

Source: CSC
Patient Care Coordination Centre (UK)

Governance

CCG Management Board, Patient Forum, Development Board, Governance Board, Medical Director

Source: CSC
Chronic Condition Management Center (US)

Communication Methods
- Phone,
- Video Conferencing
- Text Messaging,
- Email/Postal Services
- Patient Portal

Services
- New Patient/Physician Onboarding
- Monthly/Season Automated Reminders (email, portal, Postal) Chronic Disease and Procedure based educational materials

Agent based follow-up
- Appointments, Prevention/Wellness, Procedures,
- Prereqs for services (labs, fasting, etc.),
- Meds Reconciliation and Prescriptions fill/refill,
- Discharge instructions and follow-ups,
- Transitions of Care (SNF, Homecare, Hospice, Home, Nursing Visits),
- Durable Medical Equipment needs,
- Social Services (Transportation, Meals on Wheels, etc.)
- Crisis Event Call/Contact Transition to Physicians

Clinical/Education Content
- Data Acquisition & Aggregation
- Consent & Registration
- Care Plan Creation
- Monthly CCM Delivery
- Monthly Billing
- Monthly Invoicing

CSC Call Center Solutions

Data Exchange
- Clinical Data
- CCD’s
- Consents
- Communications
- Care Plans

Patient Portal 24 x 7 access

Care Plan

Patients & Circle of Care

Physicians

24 x 7 access

Consent Care Plan Educational Materials Reminders/Notifications Question/Response

CSC Call Center Solutions

Source: CSC
## Sources of Provider and Societal ROI for CCM

<table>
<thead>
<tr>
<th>Component</th>
<th>Disease Management &amp; Support</th>
<th>Hospital/Acute Care</th>
<th>Post Acute Care Management</th>
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</thead>
<tbody>
<tr>
<td>Goal</td>
<td>Self-management guidance, out-of-hospital treatment, prevention</td>
<td>Move hospital patients through an acute hospital admission safely and efficiently</td>
<td>Prevent readmission and complex transitions and facilitate continuity of care</td>
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<tr>
<td>Target Population</td>
<td>CC patients who require hospital admission for specific diagnoses amenable to care at home</td>
<td>Patients age 70 and older and those with serious or life-threatening illness</td>
<td>Patients likely to require post-acute care services</td>
</tr>
<tr>
<td>Provider ROI</td>
<td>- Reduce admissions - Increase hospital capacity targeting high-margin admissions</td>
<td>- Reduce LoS, cost per day - Reduce ED crowding - Reduce penalties - Increase satisfaction scores</td>
<td>Reduce readmissions</td>
</tr>
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<td>Societal ROI</td>
<td>Care in the appropriate setting, eliminate/improve transitions</td>
<td>- Improve patient outcomes and reduce complications - Reduce ED crowding and time on divert status</td>
<td>Reduce fragmentation and improve continuity of care</td>
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The Paradigm Shift: from Acute to Chronic Care Model

- UK and US governments are eager to improve the quality and efficiency of CC management - CCs drive the bulk of health spending

- Health systems are under increasing financial, market, and regulatory pressure to:
  - improve CC management
  - eliminate unnecessary costs
  - adhere to evidence-based medical guidelines, and
  - deliver high-quality, patient-centered care

- Care delivery and healthcare service transformation is critically important **TODAY**