

4.1 Identification of High-Risk Individuals for Intervention: Click4Care and MEDai

Examples of data-based approaches to population health management can be found in the practices of relatively new health information management companies such as Click4Care and MEDai. These companies use data and information technology applications to stratify defined populations and identify those individuals predicted to be responsible for the highest future medical care costs. This combined approach permits individual identification based on both healthcare utilization and threshold information.

Based in Boston, Click4Care (2002) provides technology and software applications to help with the medical care management process. Their proprietary program screens clinical information from inpatient claims and outpatient encounters to identify individuals most likely to benefit from targeted care management interventions. Over time, this company has developed a series of over 1,000 sophisticated algorithms to analyze claim and encounter data and provide risk stratification information. This strategy is used to identify those 15 percent of the defined population who are predicted to be responsible for the highest future medical costs.

Interventions appropriate for this targeted 15 percent of the population are delivered by the client healthcare or vendor organization. Workflow automation applications are also offered to clients to help facilitate population health management in practice. Claim and encounter data are monitored on an ongoing basis to ensure that all appropriate individuals that could be triggered for intervention are identified promptly and accurately by the Click4Care system. Outcomes measurement and reporting provide evidence of support for program results. Insurance companies, disease management companies, and provider groups are all clients of Click4Care, giving this organization access to over 7,000,000 individuals across the United States.

Another proprietary strategy has been developed by Medical Artificial Intelligence, or MEDai. This computer information services and software company is based in Florida, and uses computer-aided artificial intelligence in its approach. By using computer intelligence information, MEDai purportedly strives to improve healthcare outcomes while reducing healthcare costs. Clients include providers, MCOs, insurers, employers, and disease management companies who are interested in measurement and management of healthcare quality, efficiency, disease severity, and outcomes (MEDai 2002).

The MEDai products include a clinical decision support profiling tool for inpatient providers, a high risk predictor software tool, and a clinical information system product to help meet guidelines from the Joint Commission on Accreditation of Healthcare Organizations (JCAHO). With their prediction tool, MEDai has developed a set of algorithms by which it claims to be able to identify the sickest 2 percent of a healthcare organization's population that is likely to be responsible for cost increases of over \$2,000 in the coming year. By identifying these high-risk individuals, population health management interventions can be targeted to help improve outcomes and lower costs for both those individuals and the defined population overall.

Click4Care. 2002. [On-line information; retrieved 2/10/02.] <http://www.click4care.com>.

Medical Artificial Intelligence (MEDai). 2002. [On-line information; retrieved 3/2/02.] <http://www.click4care.com/2.html>.

4.2 ITG Asthma Short Form

I. ITG Asthma Short Form

These statements describe the way in which asthma (or its treatment) affects some people. Please select the response to each statement that most closely applies to you over the **past 4 weeks**.

1. I have been troubled by a cough.

Not at all

Mildly

Moderately

Severely

Very severely

2. Asthma has limited my performance at work, school or other activities.

Not at all

Mildly

Moderately

Severely

Very severely

3. I have worried about my present or future health because of asthma.

Not at all

Mildly

Moderately

Severely

Very severely

4. I have been troubled by episodes of shortness of breath.

Not at all

Mildly

Moderately

Severely

Very severely

5. I have been restricted in walking up hills or doing heavy housework because of my asthma.

Not at all

Mildly

Moderately

Severely

Very severely

6. I have felt frustrated with myself.

Not at all

Mildly

Moderately

Severely

Very severely

7. I have felt congested.

Not at all

Mildly

Moderately

Severely

Very severely

8. I have felt that asthma is controlling my life.

Not at all	Mildly	Moderately	Severely	Very severely
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. I have felt tired or a general lack of energy.

Not at all	Mildly	Moderately	Severely	Very severely
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. I have felt sad or depressed.

Not at all	Mildly	Moderately	Severely	Very severely
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. I have been limited in going to certain places because they are bad for my asthma.

Not at all	Mildly	Moderately	Severely	Very severely
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12. I have been troubled by wheezing attacks.

Not at all	Mildly	Moderately	Severely	Very severely
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13. I have felt that asthma is preventing me from achieving what I want in life.

Not at all	Mildly	Moderately	Severely	Very severely
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14. I have felt anxious, under tension or stressed.

Not at all	Mildly	Moderately	Severely	Very severely
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15. I have been unable to breathe.

Not at all	Mildly	Moderately	Severely	Very severely
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QualityMetric Incorporated. 2002. "ITG Asthma Short Form." [On-line information; retrieved 3/2/02.] <http://www.qualitymetric.com/marketplace/detail.cgi?pid=LIC-001##available>. Lincoln, RI: QualityMetric Incorporated.