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MedEncentive®: An Independent Evaluation of a Cost Containment/Information Therapy Tool

Agenda

- Introductions
- Background
- Description of Evaluation Methods
- Findings
- Questions

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Our independent analysis of the claims data aims to validate the findings of MedEncentive's Five Year Report...

(available online at www.medencentive.com)


Celebrating Five Years of Success

Examining a groundbreaking solution for controlling health care costs using financial incentives to invoke doctor-patient mutual accountability

First Edition

By Jeff Greene
November 2009

Abstract

Our nation is in the midst of an important debate on health care. The issues revolve around affordability, accessibility, quality and funding. Of these issues, the one that all experts agree must be resolved for the good of the country is the high cost of healthcare.

Supported by years of testing and overwhelming empirical evidence by independent research, the MedEncentive Program has surfaced as a real breakthrough in resolving the issue of healthcare affordability. This report presents the findings from five years of testing and the independent research that validates the program's efficacy and its underlining design principles.

Background - From 1997 through 2007, a small group of innovators consisting of practicing physicians, a medical academician, a self-insured business owners, a medical practice management consultant and a health insurance executive sought to find ways to align the interests of healthcare consumers, providers and insurers. After years of studying the issues, the group concluded that the single most pressing problem in healthcare was affordability. Understanding that the majority of healthcare costs are driven by people's poor health habits and medical providers' variable practice patterns, the group focused on using incentives to align these stakeholders' interests to improve both health behaviors and practice patterns. The thought process led to the development of what would become a web-based incentive system called MedEncentive.

In August 2004, the first installation of the MedEncentive healthcare cost containment program was launched with the municipal government in Duncan, Oklahoma. This unique web-based incentive system functioned as designed and the City of Duncan realized significant cost savings in the very first year of installation. Two studies[1] were published that attributed these cost savings to the adoption of the MedEncentive Program.

Since that time, there have been a number of important developments that support the initial Duncan findings and offer evidence that MedEncentive could be a real breakthrough in making healthcare better and more affordable. These developments include the following:

- After five years of testing, the City of Duncan continues to benefit from the MedEncentive Program, continuing the first year's cost containment results.
- The original Duncan trial has been joined by 6 subsequent installations of the Program with employers in the states of Oklahoma, Kansas and Washington. The total population has grown to approximately 7,000 enrolled health plan members. The results of the subsequent installations have corroborated the Duncan findings.
- Numerous independent studies of health literacy and wellness program offer overwhelming empirical evidence that substantiates the MedEncentive design.
- Extensive patient surveys provide a deeper understanding of why MedEncentive is effective at controlling healthcare costs.
- An important development during the past five years has been the ability to more vividly describe the Program's key components. Terms such as "information therapy," "practice-guided, interactive financial incentives," "doctor-patient mutual accountability," and "triangulation" are helping to convey the Program's novel characteristics.

Key Findings - The seven separate installations have provided an excellent opportunity to conduct concurrent analysis of what works best in terms of Program adaptation. The key findings are as follows:

- City of Duncan costs for the most recent year was 8.6% less than five years ago prior to implementing the Program, which is 34.8% less than the projected costs. The resultant four year savings equates to an 8:1 return on investment.

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MedEncentive
Rewarding better health

NOTE: This current study was internally funded by the KU School of Medicine-Wichita Office of Research, with Kansas Bioscience Authority (KBA) support.

NOTE: Our other studies have been gratis with a business arrangement with MedEncentive, so that claims records could be merged with identified data.

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Investigation Team

Research Team

- Amy Chesser, PhD; Health Communication
- Nikki Woods, PhD(C); Applied Behavioral Science
- Douglas Bradham, DrPH; Health Economist
- Philip Twumasi-Ankrah, PhD; Biostatistician

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City of Duncan
Study Background

- Background
- Description of Site
- Description of Evaluation Methods
- Findings

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Economic Case Study of City of Duncan

(in south-central Oklahoma)

MedEncentive's original and longest running demonstration 2004-2011

1. **Duncan's population was 22,505 in 2000 census.**
2. **The City of Duncan enrolled an average of 527 health plan members, in study period, 2004-2008.**

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Methods

- Study Population
  - Employees of City of Duncan (and dependents)
- Control Population
  - N/A
- Data Sources
  - Claims data provided by: TPA
  - Self-reported survey data provided by: MedEncentive
- Data Analysis
  - Participation rate of employees and health plan claimants
  - Utilization of health services (frequency of visits and costs

City of Duncan Employer's Return on Investment

on the validated non-catastrophic and total claims

- MedEncentive's annual ROIs ranged from:
  - **$3.1 to $14.5 saved for each $1 invested** (e.g., patient/physician rewards and fees), when claims costs were compared against the Bureau of Labor Statistics MCPI inflation for claims.
  - **$5.9 to $17.7 saved for each $1 invested** (e.g., patient/physician rewards and fees), when claims costs were compared against the Kaiser/HRET inflation for family coverage premiums.

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Summary of MedEncentive's Independent Cost Impact Analysis – City of Duncan

Outcomes:	Aggregate Level	Per-Person Level
Overall Healthcare Costs Reduced?	Yes!	Yes!
Average Employee Healthcare Costs Reduced?	--na--	Yes!
Return on Investment Positive?	Yes!	--na--
Info. Therapy & Incentives Reduce HC Costs/year?	--na--	Yes!
Info. Therapy & Incentives Reduce Adms/year?	--na--	Yes!
Info. Therapy & Incentives Reduce Visits/year?	--na--	Yes!

Note: These are preliminary results. We have further analyses to conduct. Future implementations need to collect objective clinical outcomes, too!

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Wichita Clinic
Study Background

- Wichita Business Coalition on Health Care
- MedEncentive Program Developers
- Wichita Clinic Intervention
- Funding
- Research Instruction Opportunity
- Findings

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Wichita Clinic

An innovative, patient-centered & multi-specialty model 1947 to 2011 – "The 10 founders of Wichita Clinic were established physicians who changed their lives in mid-career to pioneer a new type of medical practice in Kansas. Their vision began in the early 1940s as these individuals talked in the halls of Wichita hospitals, discussing the prospect of combining their talents, experience and education into a multi-specialty group practice. All 10 physicians pledged that the welfare of the patient needed to come first."

(Now part of Via Christi Health Systems, an Ascension Health facility…)

NOTE: Wichita Clinic's Employee population would probably be a difficult environment for Ix to make a positive impact, given the number of employees who are clinically knowledgeable.

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Methods

- Study Population
  - Employees of Wichita Clinic
- Control Population
  - Data prior to implementation of MedEncentive
- Data Sources
  - Baseline data: Claims data provided by: TPA
  - Intervention data: Claims data provided by: Wichita Clinic
  - Self-reported survey data provided by MedEncentive
- Data Analysis
  - Participation rate of physicians and health plan claimants
  - Utilization of health services (frequency of visits and costs)

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University of Kansas School of Medicine
"Does MedEncentive Work?"
Presented at North American Primary Care Research Group
Seattle, Washington - November 2010

WESLEY Medical Center — Intensive Caring

Does MedEncentive Work?
An Assessment of the Utilization of a Web-based Software Program to Deliver Information Therapy in the Primary Care Setting

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Aaron A. Davis, DO[1]; Caleb Bowers, MD[1]; Amy Chesser, PhD[1,2]; Traci Hart, PhD[2]; Nikki Keene, MPH, MA[2];Douglas D. Bradham, DrPH[2]; Robert Kenagy, MD[3]; Rick Kellerman, MD[1]

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Background:

This investigation assesses MedEncentive®, a web-based software program that issues "information prescriptions".

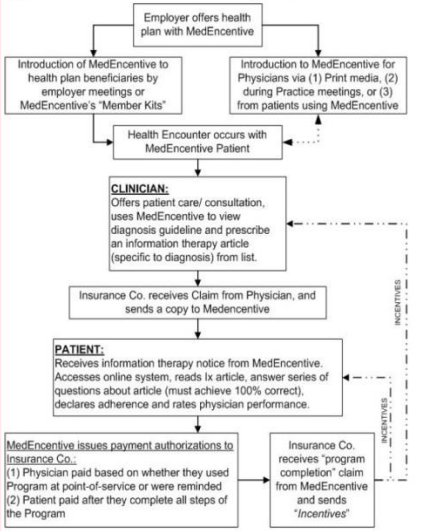
"Information prescriptions" are a form of information therapy, a tool for primary care physicians that might improve patient knowledge, patient compliance, health outcomes, and reduce healthcare costs.

Problem Statement: High costs from medical noncompliance and inappropriate emergency room use is a significant issue affecting patients, physicians, government, and third party payers.

Objectives:

1. Determine provider & patient participation.
2. Determine if patients consuming information had improved pharmaceutical adherence and compliance with evidence-based care guidelines.
3. Analyze the potential impact on health encounters and office related costs per person.

Figure 1: MedEncentive® Information Therapy Process



Methods:

Human Subjects Review: Issued by the KUSM-W Internal Review Board approval level f(5) as an expedited study.

Design: A retrospective cohort was created from employee health claims and self-report data for secondary analysis.

Setting: The intervention was implemented in a large community, ambulatory, multi-specialist medical group with a large primary care employee base.

Patients or Other Participants: MedEncentive was started in mid-year 2007. All employees and dependents covered under the health plan of the medical group were eligible for inclusion (n=1,275 average monthly enrollment). Patients were self-selected (N=1,347 for study period) if they participated in MedEncentive after a primary care office visit during the study period (2008-2009).

Intervention/Instrument: The intervention was MedEncentive® information prescription(s) including patient education and evidence-based recommendations for each patient's condition.

Figure 2: Number of Office and Hospital Encounters

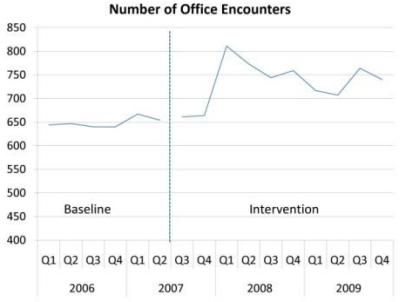


Table 1: Provider and Patient Participation

	Provider			Patient		
	Number of Physicians	Number Physicians in MedEncentive	Participation Rate	Number of Claimants Making at Least 1 Office Visit	Number of MedEncentive Survey Participants	Participation Rate
2008	214	169	80.0%	1248	887	71.1%
2009	208	194	93.3%	1201	916	76.3%

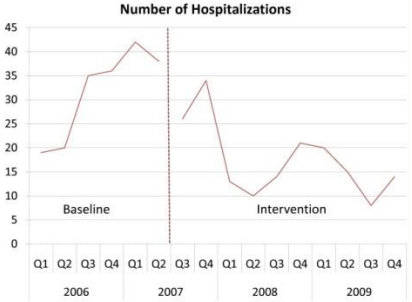
Table 2: Patient Self-Reported Adherence & Use of EBC Guidelines

Pharmaceutical Adherence		Compliance with Evidence-Based Care Guidelines	
2008	93.1%	2008	84.6%
2009	93.8%	2009	83.9%

Preliminary Results:

(1) Provider and patient participation rates increased from 2008 to 2009
(2) Number of office encounters increased by 113% and hospitalizations decreased by 55% on average from baseline to intervention years
(3) Patient self-reported pharmaceutical adherence and compliance with EBC guidelines remained high during both intervention years
(4) Cost analysis is still in-progress and results have not been concluded

Figure 3: Number of Office and Hospital Encounters



Limitations:

The data gathered from self-reported surveys has limited validity. Future analyses of MedEncentive program effectiveness should include other objective measures to assess pharmaceutical and EBC guideline compliance. It is not yet clear which, if any cofounders may have also influenced the number of hospital and office encounters.

Conclusions:

Preliminary analysis indicates the utilization of information prescriptions in the primary care setting positively impacts healthcare adherence and utilization.

Acknowledgements:

This project was funded by KUSM-W through an Institutional Pilot Seed Grant

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Summary of Research Poster

In the 2½ years after the Wichita Clinic implemented the MedEncentive Program:

- Office visits increased 13%
- Medication adherence reported at 94%
- **Hospitalizations decreased 55%**

Refer to University of Kansas School of Medicine research abstract and poster

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Summary of MedEncentive's Independent Cost Impact Analysis – Wichita Clinic

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Info. Therapy & Incentives Reduce HC Costs/year?	--na--	Yes!
Info. Therapy & Incentives Reduce Adms/year?	--na--	Yes!
Info. Therapy & Incentives Reduce LOS/year?	--na--	Yes!

Note: These are preliminary results. We have further analyses to conduct. Future implementations need to collect objective clinical outcomes, too!

*** Both per year and per quarter**

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Limitations

- Data sources
- Duration of the intervention period
- Integrated nature of Ix with incentives
- Data gathered from self-reported surveys has limited validity
- Lack of comparison population
- Lack of corroborating clinical data

Dissemination - Scientific Conferences

- Research Forum at the University of Kansas School of Medicine – Wichita (April 2010; resident oral presentations)
- Annual Health Literacy Research Conference (October 2010; faculty poster)
- North American Primary Care Research Group Conference (November 2010; resident poster)
- Research Forum at the University of Kansas School of Medicine – Wichita (April 2011; faculty oral presentations)
- Kansas Academy of Family Physicians (June 2011; resident poster)
- American Public Health Association Annual Conference (abstract submitted; research staff presentation)
- The Forum 10 and 11 of the Care Continuum Alliance (October 2010 and September 2011)

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Published Reports of Findings…

1. **Information Therapy (Ix) Overview…JPCCH, Nov 2010.**
2. ***Prescribing Information Therapy: Opportunities for Improved Patient – Physician Commn. & Health Literacy…* JPCCH, Aug 2011.**
3. ***Employer's Cost of Insurance & Cost of Care - A Case Study…***
4. ***New Methods for estimating Cost of Care with Bayesian Techniques …***

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Questions?

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