Enabling Chronic Disease Care through Health IT

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Current team (partial list)

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My Doctor said "Only 1 glass of alcohol a day". I can live with that.
IDEALL Project:

Improving Diabetes Efforts Across Language and Literacy

- Community Health Network of SF/DPH
- AHRQ
- CMWF, TCE, CHCF
Automated Telephone Diabetes Self-Management (ATSM)

- Interactive health technology, touch tone response
- Weekly surveillance & health education (39 weeks=9 mos)
- In patients’ preferred language (English, Spanish or Cantonese)
- Generates weekly reports of out of range responses
- Live phone follow-up through a bilingual nurse -> behavioral action plans
### Key Findings of IDEALL Program

#### Estimating Public Health “Reach” of Programs

**Composite reach product**

<table>
<thead>
<tr>
<th></th>
<th>ATSM</th>
<th>GMV</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overall</strong></td>
<td>22.1</td>
<td>4.8</td>
</tr>
<tr>
<td><strong>English</strong></td>
<td>20.0</td>
<td>6.4</td>
</tr>
<tr>
<td><strong>Chinese</strong></td>
<td>22.0</td>
<td>2.7</td>
</tr>
<tr>
<td><strong>Spanish</strong></td>
<td>24.3</td>
<td>4.0</td>
</tr>
<tr>
<td><strong>Adequate Literacy</strong></td>
<td>15.6</td>
<td>7.6</td>
</tr>
<tr>
<td><strong>Limited Literacy</strong></td>
<td>28.0</td>
<td>3.6</td>
</tr>
</tbody>
</table>

Results:
Structure and Process Measures

PACIC

Self-Efficacy

Communication

Self-Management Behavior

*P<.05. Schillinger, in press Diabetes Care
Results: Functional Outcomes

**SF12 - Mental Health**

- UC: 58.8
- ATSM: 64.2
- GMV: 66.1

**SF12 - Physical Health**

- UC: 50
- ATSM: 56.7
- GMV: 57.1

**Diabetes Interference**

- UC: 13
- ATSM: 17
- GMV: 18

**Bed Days**

- UC: 3.9
- ATSM: 3.8
- GMV: 3.6

- Rate ratio 0.5 vs UC, 0.35 vs GMV

OR 0.37 vs UC

- UC: 6
- ATSM: *14*
- GMV: 18

*P<.05
Results: Physiologic Outcomes

SBP

UC: 139.6, 141.5
ATSM: 136.9, 137.1
GMV: 142.4, 138.9

pre | post
---|---
UC | ATSM | GMV

DBP

UC: 78.1, 78.5
ATSM: 75, 75.4
GMV: 78.1, 75.5

pre | post
---|---
UC | ATSM | GMV

HbA1c

UC: 31.2, 31.4
ATSM: 30.3, 30.7
GMV: 32.1, 32.4

pre | post
---|---
UC | ATSM | GMV

BMI

UC: 30.3, 30.7
ATSM: 30.3, 30.7
GMV: 32.1, 32.4

pre | post
---|---
UC | ATSM | GMV
ATSM as Surveillance Tool?

Automated Completed Calls
Patient-Nurse Encounters

CONSENSUS

AE
PotAE
No event

ATSM Data

Medical Record
Classification
- Preventability
- Primary Provider Awareness
Automated telephony provides safety surveillance function

- 111 participants, 54% inadequate health literacy
- 264 events among 93 participants (86%)
- 111 AE’s and 153 PotAE’s

Sarkar, Schillinger et al. 2008 JGIM
Clinician Survey Findings

- Responses from 87 of 113 (77%) physicians who cared for 245 of the 330 (74%) patients (mean, 2.8 per physician).
- Compared to UC, patients exposed to ATSM were perceived as more likely to be activated to create and achieve goals for chronic care (standardized effect size, ATSM vs. UC, +0.41, p=0.05).
- Over half of physicians reported that ATSM helped overcome 4 of 5 common barriers to diabetes care.
- Physicians rated quality of care as higher among patients exposed to ATSM compared to usual care (OR 3.6, p=0.003), and compared to GMV (OR 2.2, p=0.06).
- The majority felt ATSM should be expanded to more patients with diabetes (88%).
- A technology-facilitated SMS model was particularly effective for their patients and practice settings, suggesting that such programs should be disseminated and implemented more widely.

Bhandari, Schillinger SGIM 2008
Health System Findings: Cost-Effectiveness; Health Plans

• Based on functional improvements, we estimated that the cost per QALY for ATSM was:
  >$65,000 for both set-up and ongoing costs
  >$ 32,000 for ongoing costs only

• Cost effectiveness could be further improved with (a) scaling up or (b) metabolic outcomes improved

• A large majority of CA Medicaid health plans reported an interest in employing ATSM-like technology

Handley, Schillinger, in press Ann Fam Med 2008
Key Findings of IDEALL Program

• Reach significant, especially for lower literacy, non-English speaking, Medi-Cal, uninsured.
• Interactive health technology improves patient-centered care, health behaviors, functional status and promotes safety, due to
  • proactive nature
  • heirarchical logic
  • communication tailoring
• For physiologic effects to be achieved, need medication intensification
• Health plans and clinicians favorably inclined
• Probably too difficult for individual clinics to implement
“My question is: Are we making an impact?”
Current Project

• Partner with a local Medicaid health plan: San Francisco Health Plan
  • SFHP care managers will make ATSM response calls
• Test effectiveness when implemented in ‘real-world’
• Compare ATSM-ONLY with ATSM-PLUS (medication activation)
• ATSM-PLUS involves merging pharmacy claims data with ATSM data to enable care manager counseling
Design and Outcomes

• Wait List Design, with randomization among exposed participants. Total N=260
• Outcomes (wait-list vs. ATSM vs. ATSM-Plus):
  - communication
  - behavior
  - functional status
  - metabolic indicators
  - patient safety (prevalence and root causes)
Help is here.

Diabetes is an important health condition that requires careful monitoring.

We have a program that can help you control your diabetes. You will get information about diabetes and ways to better control it.

A nurse who speaks your language will be available to answer your questions and help you manage your diabetes.

The program is FREE and it can help you feel better!

We will be calling you in a few weeks to tell you more about this program.

If you have questions, you may call us at (415) 615-4522.

We look forward to speaking with you soon!
Spanish

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We look forward to speaking with you soon!

La ayuda esta aqui.

La Diabetes es un estado de salud importante que requiere monitoreo cuidadoso.

Tenemos un programa que puede ayudarle a controlar su diabetes.

Usted recibirá información sobre la diabetes y la mejor manera de controlarla.

Una enfermera quien habla su idioma estará disponible para contestar sus preguntas y ayudarle a controlar su diabetes.

¡El programa es GRATIS y puede ayudarle a sentirse mejor!

Estaremos llamándole en unas semanas para decirle más sobre este programa.

Si usted tiene preguntas, puede llamarnos al (415) 615-4522.

¡Esperamos hablar con usted pronto!
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我們可為您提供協助。

糖尿病是一種嚴重疾病，需要密切監控病情。

我們提供一項可協助您控制糖尿病的計劃，
您將獲得有關糖尿病及如何更好地控制病情的資料。

本計劃將安排一位能夠講您的語言的護士解答您的疑問，
並協助您控制糖尿病。

本計劃完全免費，並有助於您改善健康！

我們將在幾週內致電閣下，告訴您有關本計劃的詳情。
如有疑問，請致電 (415) 615-4522。

我們期待儘早與您交談！

Cantonese
SFHP Wallet-Size Card

English, Spanish and Cantonese

Diabetes Program
Help is here!

Important Contact Information
(415) 615-4522 San Francisco Health Plan
Diabetes Project Nurse
(877) 273-6027 Toll free weekly call in
(415) 206-3696 UCSF Research Team

Programa para la diabetes
¡La ayuda está aquí!
Información de contacto importante

(415) 615-4522 Enfermera del Proyecto de Diabetes del Plan de Salud de San Francisco
(877) 273-6027 Número gratuito para llamadas semanales
(415) 206-3696 Equipo de investigación de UCSF

糖尿病計劃
我們可為您提供協助。

重要聯絡資料
(415) 615-4522 糖尿病計劃護士
(877) 273-6027 每週免費電話
(415) 206-3696 UCSF 研究團隊
Care manager field
Potential Safety Event
Safety event assessment
Current Plans and Challenges

- Delays in implementation, successes in IT
- Initiate outreach and enrollment 9/08
- Overcome Member inertia/barriers to enrollment
- Develop MOUs with clinics for enrollment and coordination of care
- Finalize protocols re medication intensification/adherence promotion
- Finalize/shorten pre and post-questionnaires