Overcoming Communication Barriers in the Care of Diverse Patients: The IDEALL Project

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Improving Diabetes Efforts Across Language & Literacy

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Supported by The Commonwealth Fund, The California Endowment, AHRQ, California Health Care Foundation, and the SF Department of Public Health
Health systems place high literacy and language demands on patients

Growing body of evidence linking communication barriers to outcomes

Interactive communication can affect outcomes

Little is known about the extent to which population-based approaches can successfully engage high-risk patients with diabetes

Public-sector settings rarely have systematic disease mgmt programs tailored to vulnerable populations
Health Literacy Level Associated with Diabetes Outcomes

(Tight Control: HbA1c ≤ 7.2%) (Poor Control: HbA1c > 9.5%)

Adjusted OR=0.57, p=0.05
Adjusted OR=2.03, p=0.02

Schillinger JAMA 2002
Diabetes Patients with Limited Health Literacy Experience Lower Quality Communication

- Doctor Use Words Not Understood (Often/Always)
  - Inadequate FHL: 32%
  - Adequate FHL: 13%
  - OR = 3.2; p < 0.01

- Give You Test Results w/o Explanation (Often/Always)
  - Inadequate FHL: 26%
  - Adequate FHL: 13%
  - OR = 3.3; p = 0.02

- Confused About Medical Care (Often/Always)
  - Inadequate FHL: 21%
  - Adequate FHL: 13%
  - OR = 2.4; p = 0.02

- Doctor Understand Problems Doing Rx (Never/Rarely/Sometimes)
  - Inadequate FHL: 33%
  - Adequate FHL: 20%
  - OR = 1.9; p = 0.04
Framework for Limited Health Literacy & Poor Health Outcomes

ACCESS
- Insurance
- Provider availability
- Navigation of health bureaucracy

BARRIERS
- Power/advocacy
- Trust in health system
- Environmental:
  → Nutrition
  → Air quality
  → Physical activity
  → Safety
  → Occupational risks
- Poverty/scarcity
- Poor adherence
- Inadequate self-care
- Poor self-management
- Poor problem-solving skills
- Low self-efficacy
- Inability to navigate system

COMMUNITY-LEVEL FACTORS
- Ineffective visit-based clinician-patient communication
- Ineffective home-based monitoring & clinical support

WORSE CLINICAL OUTCOMES
WORSE FUNCTIONAL OUTCOMES
HIGHER UTILIZATION OF SERVICES

Schillinger, IOM 2004
Aims

- Develop, implement and evaluate diabetes self-management support strategies tailored to the literacy and language needs of patients in a public delivery system
- Focus on self-care and patient-generated action plans using one of two models:
  - **Assistive Technology Model**: Automated Telephone Disease Management (ATDM)
  - **Interpersonal Model**: Group Medical Visits (GMV)
- Describe patient engagement with the process and activities generated by each approach
Automated Telephone Disease Management (ATDM)

- Interactive touch tone response technology
- 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
Group Medical Visits (GMV’s)

- 6-10 patients in monthly group meetings (9 months)
- In patients preferred language (English, Spanish, or Cantonese)
- Facilitated by a bilingual health educator and a primary care provider
- A pharmacist present at end of each group visit
- Encourage patients to become active in self-care through participatory learning and peer education
Randomize Patients w/HbA1c>8.0 & Administer Baseline Questionnaires (n= 399)

- 6-10 Patients
- Health Educator
- Primary Care Physician

- Weekly Interactive Technology (n= 133)
  - Weekly ATDM
  - Nurse Care Manager

- Usual Care (n= 133)
  - Primary Care Physician

- Monthly Group Medical Visits Clinic (n= 133)
  - English-Speaking Group
  - Spanish-Speaking Group
  - Cantonese-Speaking Group
  - 6-10 Patients
  - Health Educator
  - Primary Care Physician

Administer Follow-Up Questionnaires (Satisfaction, Self-Care, Self-Efficacy, Functional Status, Glycemic Control, Utilization)
Preliminary Research Questions

- To what extent do ATDM and GMV’s engage patients?
- To what extent do these self-management support interventions generate activities that could improve clinical outcomes?
- Can a patient-activated telephonic surveillance system identify threats to patient safety and promote safer practice?
Methods

- Documentation of clinical interactions via standardized electronic records
  - Clinical database review performed
- Compare rates of Patient Engagement and Activities Generated by the ATDM callbacks and GMV’s, overall and stratified.
  - Unit of analysis = individual patient
- Review ATDM records to quantify and describe potential adverse events identified
  - Unit of analysis = individual ATDM encounter
Preliminary Results – 8/2004

- 554 patients approached
  - 71 refused to participate
  - 89 ineligible for study
  - 27 deferred enrollment
  - 47 still “in the pipeline”

- 293 patients enrolled and randomized
  - Only 15% “non-Hispanic white”
  - 55% with limited health literacy
  - 58% with limited English proficiency
  - Mean HbA1C = 9.8%
Measures of Engagement

ATDM
- Returned ≥1 Call: 87%
- Calls completed: 59%
- Generated callbacks: 57%

GMV
- Attended ≥1 Session**: 72%
- Attended GMV: 58%
- “Moderate”/ “Full” Participation: 89%
Literacy*, Language, and Engagement

*Literacy was only assessed among English and Spanish speakers
Activities Generated

- Made Action Plans
- Achieved Action Plans
- Had Med Changes
- Counseled--Coping/Stress Reduction
- Counseled--Sx hypo/hyper-glycemia
- Counseled--Nutrition
- Counseled--Glucose Monitoring
- Counseled--Exercise
- Counseled--Meds

GMV
ATDM

% of Patients
Promoting Patient Safety – ATDM sample

- Can a patient-activated telephonic surveillance system identify threats to patient safety and promote safer practice among vulnerable patients?

- 10 patients x 9 months
  - 34 disclosures of potentially unsafe situation
  - 30 potentially adverse events prevented
Preliminary Conclusions

- Both self-management support interventions:
  - generate significant levels of patient engagement and clinical activity
  - Patients with limited health literacy and/or limited English proficiency appear more likely to engage
  - May be useful adjuncts to improve the care of high risk patients in a public health setting
- Levels of engagement and kinds of activities generated may vary by type of intervention,
  - Pharmacological management
  - Psychosocial concerns
- ATDM may serve an additional surveillance function to promote patient safety
Next Steps

- Continue enrollment and expand to other sites in San Francisco:
  - Chinatown and Silver Avenue Health Centers
- Examine effects of ATDM and GMV on:
  - patient satisfaction and self-efficacy
  - self-management activities
  - glycemic control
  - relative resource use
- Expand descriptive study of patient safety
- Examine contextual factors associated with patient engagement and effectiveness, both quantitatively and qualitatively