

Technology to Enhance Communication: Primary care and Health Counseling

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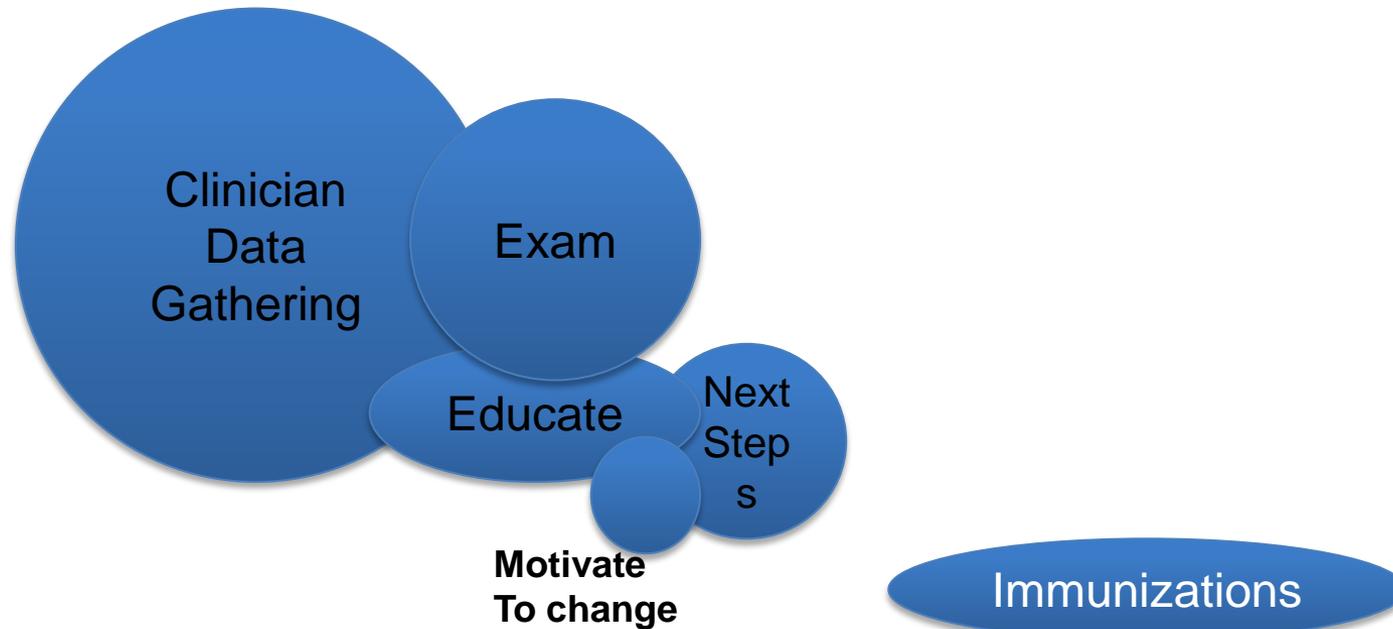
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Issues

Too much to address in health risk counseling

Balance of how time is spent in health visit



Counseling to change Health Risk Behaviors

- Too much advice
- Advice on empty ears
- Not tailored to patient/parent priorities
- Key health risks of harm to patient not addressed
- Primary care clinicians rarely trained in effective approaches for health behavior counseling

Challenges in real practices

- EMR increases clinician data gathering burden
- Patient portal options rarely part of EMR and interface with clinical record poor
- Limited space
- Limited IT support in small ambulatory care sites

Key Functions of front line IT to enhance Health Counseling

- Inexpensive
- Flexible use at point of care
- Confidential
- Address the full range of issues that are part of child or adolescent health visit
- Data summarized for easy clinician determining priorities and agenda setting
- Dual function of screening for health risks and issues and guiding clinician health counseling

CECH Solutions

- Partnership with clinicians to develop screening tool
- Test and refine in primary care practice sites
- Tool for screening patients pre-visit and also for clinician use during the visit
- Point of service handheld computers:
 - Obesity risk counseling for well visits ages 4-10 years
 - Adolescent health visit counseling for multiple risks

Healthy Families PDA

- Designed to enhance consistency of counseling about obesity risks in children at well visit
 - More efficient care that addresses all key issues
- Prompt clinician to tailor counseling to family issues, interests in making change
- Provide clinicians with data about their entire population of children

Content

- 1) Parent concerns about development, behavior, school, and common health issues;
- 2) Safety topics, parental tobacco use, depression, social issues;
- 3) Obesity related topics: screen time, child/family diet and activity,
- parental interest, perceived importance and confidence in changing child's eating and physical activity,

Healthy Families Screener

Parent screen examples

On a TYPICAL WEEKDAY how many times does your child

Eat serving of vegetables: ▼ Select...

Eat serving of fruit: ▼ Select...

Eat sweets or high fat salty snacks: ▼ Select...

Drink a glass of water: ▼ Select...

Drink soda, sports drinks or other sweetened drinks: ▼ Select...

Drink fruit juice: ▼ Select...

Drink or eat milk products: ▼ Select...

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How important is changing your child's activities at this time (1 not important, 10 very important):

1 10

5

How confident are you that you can make changes in your child's activities (1 not confident, 10 very confident):

1 10

5

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Clinician's report: Summary of Positive Responses

DSC Report

H. N. (6) SCORE: 12 BMI:

# Health concerns (9)	0
# Family/Environ. (10-14)	1
# Nutrition (15-24)	5
# Physical Activity (25-30)	1
# Safety (31-38)	4
# Social Support (39-43)	1
Counseling cues for:	RDY
Counseling cues for:	NOT
Counseling cues for:	UNS

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Clinician taps line with stylus

* Alerts clinician at risk responses

DSC Report

H. N. (6) SCORE: 12 BMI:

15 Servings of vegs	*1
16 Servings of fruit	*1
17 Sweets/salty snacks	*1
18 Glass of water	1
19 Soda/sweet drinks	*2
20 Fruit juice	*3
21 Milk products	4
22 Making diet changes	Y!
23 Important diet changes	6

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Clinician prompts To access for MI Counseling tips for Level of motivation

Outcomes

- Does use of the PDA change the counseling during the visit? How?
- Are parents satisfied with our counseling?
- Are parents motivated to make changes after our counseling?



Results

Topics Discussed and Parent Satisfaction prior to and with Healthy Families PDA-based screener						
	Topics Discussed			Satisfaction* with Discussion if discussed		
	Pre- PDA	With PDA	p value	Pre- PDA	With PDA	p value
During the visit the provider talked about:						
What child eats and drinks	93.1% (190)	94.9% (93)	0.55	82.9%	91.4%	0.055
Home screen time	68.0% (136)	60.4% (61)	0.19	81.5%	90.5%	0.121
Child's exercise	78.2% (158)	91.1% (92)	0.01	87.9%	94.4%	0.100
If wt and ht are ok for age	90.2% (184)	98.0% (99)	0.02	88.6%	92.7%	0.275
Discipline or Behavior	64.2% (129)	52.5% (52)	0.05	80.6%	84.3%	0.564
Development or school performance	79.9% (159)	89.9% (89)	0.03	81.5%	90.4%	0.071
* <u>Very satisfied vs. somewhat</u> satisfied & somewhat /very dissatisfied						



Results

Univariate Model Predicting							
Parent View of likeliness of making change post visit*							
				Child age	Discussed	PDA use	Discussion/PDA
Because of today's visit how likely are you to make changes to:							
What your child eats and drinks				NS	0.02	NS	0.003
Your child's physical activity				NS	NS	NS	0.04
Time watching TV/DVD/Video/Games				NS	NS	NS	NS
Activities your family does together				NS	0.07	NS	0.03
Combined obesity behavior change score				NS	0.01	NS	0.03
*Scale 1 to 5; 1 very likely to 5 very unlikely							
Controlled for practice site. Practice site significant for exercise (p=.02) and combined behaviors (p=.01)							



Impact of Clinician Discussion* on Parent Intent to Change**

Linear regression analyses conducted separately
within PDA and non-PDA groups

PDA Enhanced Visit Beta = .32 p <.002

Usual Care Beta = .18 p <.02

*Clinician Discussion: Number of obesity related topics discussed

**Parent Intent to Change: Number of obesity related behaviors planning to change

Healthy Teens PDA

- Comprehensive Adolescent Health Screener
- Assesses teen motivational status when health risks are present
- Clinical tool
- Recruitment of population with specific risks for participation in clinical trial to enhance health behavior
- Practice level data base of patients screened
 - Access individual patient record
 - Review of patterns of risk of adolescents in the practice

Issues covered with the PDA Screener

- Health Concerns, Social and Medical History
- Nutrition, Physical Exercise and Eating disorders
- School, Home Environment and Safety Issues
- Tobacco, Alcohol and Drug Use
- Sexuality and Relationships
- Mental Health, Abuse, and conduct issues

- 66 Questions
 - Up to 25 additional questions if have risks

Healthy Teens Screener: Adolescent screen view

TH Screener 15-19 Yrs

Have there been any changes in your family in the past year, such as:

- Marriage
- Separation/divorce
- Loss of job
- Moved Other
- New school No changes
- Births
- Serious illness/injury
- Deaths

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TH Screener 15-19 Yrs

Does anyone you live with smoke cigarettes/cigars, use snuff or chew tobacco?

Yes

No

Do any of your close friends smoke cigarettes/cigars, use snuff or chew tobacco?

Yes

No

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Healthy Teens Screener: Clinician Data Summary Screen

DS Reports - Result Print IR

CLIENT: A. A. (12) SCORE: 30

# Health concerns (8-17)	1
# Nutrition/Exercise (18-34)	5
# School/Family (35-44)	4
# Safety/Prevent. (45-49)	4
# Tobacco use (50-56)	3
# Alcohol use (57-64)	3
# Drug use (65-71)	2
# Sexual issues (72-80)	3
# MH/Psychosocial (81-93)	5

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Outcomes: Interaction with teen

More teens felt their discussion was confidential

- 84% with PDA vs. 61% prior to PDA*

More teens felt their provider listened very carefully to them during the visit

- 88% during PDA use vs. 63% before PDA* rated their provider as listening very carefully to them (1 on a 7 point likkert scale)

More teens were very satisfied overall with the visit

- 88% during PDA use vs. 64% before PDA* rated visit satisfaction as 1 on a 7 point scale

***p <.01**

Changes at Visit but Afterwards?



Changes in Teen Behaviors

- After the visit were more likely to list multiple nutrition/exercise changes they were planning
- After 6 months adolescents* who had a *Healthy Teens* visit using the PDA had significantly increased the number of days of exercise/week

*92 teens with usual care vs.136 teens with PPA use

Use of Technology to support counseling and change efforts

- Integration of both inexpensive point of service technology and post visit use of technology to change
 - 1) adolescent daily exercise
 - 2) tobacco use
- TXT ME AHRQ Health IT grant
 - Input of primary care clinicians
 - Consult of health behavior and social marketing experts
 - Teen advisors

Clinician Prompts to tailor counseling



Confidence

- What's upside to exercising more? Downside?
What will be different if exercise more?
What exercise have you enjoyed?
- Expand why exercise important to T.
What's upside of not changing?
Downsides if not exercise more?
Convey your belief that can do it.
Offer help when ready to change
- Praise desire to exercise more.
Help pick exercise -- when & where?
Help solve barriers to plan.
How can parents support?
- Praise prior attempts and successful changes
Convey your belief that can do it

Importance



Technology relevant to youth



TXT ME

- Messages to reinforce interest in changing health behavior
 - Phase one: exercise
 - Phase two: smoking
- Internet access to other peers trying to make changes
 - Facebook
 - Ning

Text Messaging Approach

- Developed by youth, social marketing consultant
- Content specific to gender
- Message frequency

- Algorithm of delivery
 - Priming for 3 days
 - 10 days building up exercise
 - Check if any changes by text
 - » Two week loop to get started again if no change
 - Four weeks of texts
 - One week preparing to maintain exercise habits

Message Framing

- Gain not loss framed
- Theme in messages throughout the day
- Address common barriers
- Use of humor
- Links to other exercise resources on internet
- Focused on short exercise routines, can fit into daily life

Stay Tuned for the results of our
clinical trial next year

Also available at our network website

- Individual practice data online with capacity to query and download data on individual or group of patients
- Brief PDA screener for 4 to 10 year old well child visit for parents
 - Covers concerns, development, safety, expanded questions re obesity risk behaviors

Software and information available at

<http://www.cancer.dartmouth.edu/cech/>

Palm PDAs can be purchased online from secondary vendors

Next year will have web based version available for use on netbooks, I touch and other platforms