Accreditation of Medi-Cal, Healthy Kids and Healthy Families Program.

Words to the Wise Patient: Measuring Effects of Doctors' Instructions About Diet, Nutrition and Exercise on Patients' Health Literacy, Self-Reported Health Status, and Ratings of Care Quality, Among Low-Income Patients in a Large and Diverse Medicaid Health Plan, 2011-2014

Session: **4067.0 Prevention and Intervention Strategies Across Health Disciplines**

Section: **Public Health Education and Health Promotion**

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L.A. Care HEALTH PLAN

Presenter Disclosures

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(1) The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

I am employed as the Director of the Health Education, Cultural and Linguistic Services department at L.A. Care Health Plan – the Local Initiative Health Authority of Los Angeles County, California.

L.A. Care is a public entity competing with commercial insurers in the Medicaid and S-CHIP markets in L.A. County.

Notes:

CAHPS® is a registered trade name of the Agency for Healthcare Research and Quality (AHRQ).
HEDIS® is a registered trade name of the National Committee for Quality Assurance (NCQA).

Outline

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I. Learning Objectives

1. Describe five fundamental categories of advice that doctors provide to patients on health practices and behaviors of healthy living.
2. Identify which category of doctors' advice is most associated with patients' self-reported health status.
3. Compare the percent of Medicaid patients who recall receiving physician advice on diet, nutrition, and exercise, versus the percent who report receiving no such advice.
4. Identify which demographic groups (age, gender, language, ethnicity) are most or least likely to report getting instruction from doctors on healthy living.
5. Describe one indicator of health literacy that relates to doctors' instructions on health practices.
6. Identify two measures of health service quality that are logically associated with doctors' instructions to patients on healthy living.

Main finding:

- *Conventional wisdom: "Patients don't like being told to change diet/weight/exercise."*
- *Our finding: Doctors who give such advice, are getting noticeably higher ratings.*
- Administrators may resource health education better if they know it impacts ratings.

II. Background – L.A. Care Health Plan

Large, diverse membership in Los Angeles, California:

- Mostly Medicaid, urban, 1/2 pediatric, often Spanish-speaking.
- Roughly 18% of Medicaid managed care population in California.
- Roughly 3% of Medicaid managed care population in the U.S.
- Almost 1-in-5 L.A. County residents is an L.A. Care member.
- Mostly Medicaid, Dual-eligible, and special programs.
- Serves 11 distinct language concentrations ("threshold languages"): Spanish, English, Arabic, Armenian, Korean, Cambodian, Chinese, Russian, Vietnamese, Farsi, Tagalog.
- Mostly urban and suburban; 1 semi-rural region in the high desert.

III. Introduction: Importance of Doctors Advice To Patients on Health Practices in Daily Living

Much of modern health care is aimed at activating patients to adopt healthy diets, exercise, and avoid harmful substances.

If “an ounce of prevention is worth a pound of cure”, health advice from doctors constitutes front line preventive care, aimed at modifying behaviors before they have adverse health outcomes.

Modest expectations at low cost:

- The bad news: Modifying patient behavior through education is not cheap, requiring high-touch and repeated contacts, tailored to each individual patient.
- The good news: Many patients recall their doctors actively giving advice on healthy living.
- Entry costs into a member- and provider-education process are fairly low, if using touch-points that health plans already have and use to communicate with patients and providers: Newsletters, webinars, websites, portals.
- Tracking the implementation annually using CAHPS, is relatively cheap/simple.
- There is likely a synergistic value in health education, if used to reinforce the other quality improvement interventions that regulations encourage or require.

Behavioral Underpinnings of Health Outcomes

Health care is increasingly focused on diseases for which patients' adherence to prevent and well-care guidelines drives outcomes.

- Patients' choices, behavior, and adherence drive the disease process, and the delivery and efficacy of treatment in major diseases:
  - Hypertension, heart disease, diabetes, obesity, etc.
- Treatment plans increasingly recognize the patient as partner to the doctor:
  - Diet, exercise, rest, smoking cessation.
  - *Self-testing, administering therapies, injecting medications,* sometimes deciding dosage within doctors' guidelines.
- Failure to engage patients to be adherent, drives *outcomes* and *costs*.
- The pressing policy reality for most health plans and agencies using CAHPS:
  - CMS, NCQA, state agencies, and large employers *use and trust HEDIS (quality of care measures) and CAHPS (quality of services rated by patients)* to rank and select providers and health plans.
  - Those ratings assume patient compliance is *endogenous* (driven by payers and doctors).
  - ***Performance-based reimbursement will increasingly expect payers to hold clinicians accountable to influence patients' behavior.***

IV. Analytic Objective: Assessing the Prevalence of Health Practices Advice-Giving by Providers

This study uses patients' recollections of receiving doctors' advice on health practices to examine the prevalence of such advice to Medicaid members in a large and diverse urban population in the southwest U.S.

The objectives are threefold:

1. Infer the prevalence of such advice from patient recall.
2. Infer the prevalence of such advice for different demographic groups.
3. Determine if recalling such advice has an impact on measures of the quality of health care services.

V. Approach and Methodology

This study reports results from several Medicaid CAHPS patient experience surveys (Adult and Child versions).

The primary analysis is from CAHPS Clinician & Group surveys:

- CAHPS Clinician and Group Survey v. 2 (hereafter CG CAHPS 2014).
- Fielded 05/21/2014 and 08/14/2014, in English and Spanish, by mail and phone.
- Initial mail-out to 69,234 patients ("members w/visits"), n=22,199 completed surveys, with a 32.1% response rate (typical for the population surveyed).

Some comparisons from:

- Patient Assessment Survey 2011 (closely related to CG CAHPS v2.0).
- Fielded 08/03/2011 through 11/01/2011 in English and Spanish, by mail and phone.
- Initial mail-out to 49,549 patients ("members w/visits"), n=16,288 completed surveys, with a 32.9% response rate.

- Limitations:
  - Not all Doctors' Health Advice questions appeared on all surveys.
  - The CGC AHPS 2014 and PAS 2011 surveys are sampled to represent provider groups, not the whole health plan.
  - Ancillary analysis found that weighting by provider group did not produce systematically different results for the primary ratings on the survey.

VI. Descriptive Statistics: Doctors' Advice on Diet & Weight

- Most members recalled receive doctors' advice on diet and weight.
- 2011: Adults were much less likely to recall getting that advice.
- 2011 to 2014 decline in advice for children:
  - Impact of Medicaid Expansion: More patients using a finite provider network?

"In the last 12 months, did [you / you or your child] and [the named provider] talk about a healthy diet, healthy eating habits, and keeping a healthy weight? 1=Yes, definitely 2=Yes, somewhat 3=No"

Adult 2011	Child 2011	Adult 2014	Child 2014	Response text
49.4% n=1,428	60.3% n=4,553	48.5% n=4,110	49.3% n=6,330	(a) Yes, definitely.
26.4% n=764	23.7% n=1,794	27.3% n=2,311	28.4% n=2,311	(b) Yes, somewhat.
24.2% n=699	**16.0%** n=1,206	**24.2%** n=2,045	**22.3%** n=2,045	(c) No.
100.0% n=2,891	100.0% n=7,553	100.0% n=8,466	100.0% n=12,831	

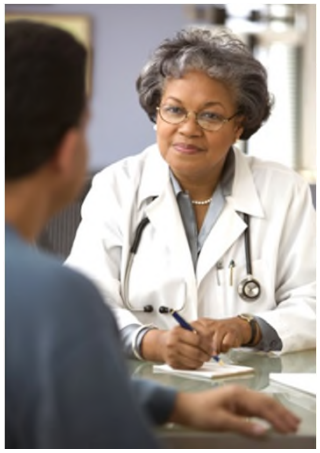
Bold = Adult vs Child difference of proportions test is statistically significant, two-tailed, a=0.05.

Descriptive Statistics: Doctors' Advice on Exercise

- Most members recalled receiving doctors' advice on exercise.
- Adults were 3.2% less likely to recall receiving that advice.
- (Peer-to-peer advice may be more awkward than advice for a child.)
- The practical difference is small, but improvements can accumulate over time.

"In the last 12 months, did [you / you or your child] and [the named provider] talk about the exercise and physical activity that [you get / your child gets]?
1=Yes, definitely 2=Yes, somewhat 3=No"

Adult 2011	Child 2011 [a]	Adult 2014	Child 2014	Response text
48.2% [b]		**44.0%**	**47.7%**	(a) Yes, definitely.
n=1,395		n=3,702	n=6,108	
25.7%		27.6%	27.1%	(b) Yes, somewhat.
n=742		n=2,326	n=3,465	
26.1%		**28.4%**	**25.2%**	(c) No.
n=754		n=2,390	n=3,234	
100.0%		100.0%	100.0%	
n=2,891		n=8,418	n=12,807	



[a] This supplemental question was not on the PAS 2011 survey used by L.A. Care due to limited space.

[b] Significantly different from Adult 2014 score, difference of proportions test, two-tailed, a=0.05.

Bold = Adult vs Child difference of proportions test is statistically significant, two-tailed, a=0.05.

VII. Disparities Analyses By Demographic Group:

Advice on Diet and Weight -- By Demographic

- Young adults report less advice (small but significant effect).
  - Does advice begin at the onset of health effects, not the onset of habits?
- Adult women are slightly less likely than men to report getting advice.
- Effect size: Phi φ is comparable to Pearson *r* and interpreted similarly.

Adult (2014)	Pediatric (2014)	Demog.	Proportion getting served: Under	Over
***X*=127.5355** **p<0.0001** **φ=0.1227**	***X*=12.1257** **p=0.0023** φ=0.0307	**Age**	**18-36** **0-6.9, 7-12**	**56+**
***X*=62.5468** **p<0.0001** φ=0.0860		**SPD/ABD** (Aged, Blind, Disabled, Non-SPD)	**Non-SPD**	**Aged**
***X*=22.6774** **p<0.0001** φ=0.0518	*X*=0.4207 p=0.5166 φ=0.0057	**Gender**	**Female**	**Male**
X=2.4171 p=0.4905 φ=0.0169	*X*=1.1527 p=0.7644 φ=0.0095	Ethnicity (White, Hispanic, Black, Other/Missing)	(No signif. differences.)	

Bold = statistically significant.

Effect size (phi φ) is context-dependent. These are meaningful here: 0.1=small, 0.3=medium, 0.5=large.

Age categories: Child: 0-6.9, 7-11.9, 12-17.9. Adult: 18-35.9, 36-55.9, 56+.

Advice on Exercise -- By Demographic

- Young adults report less advice on exercise (small but signif. effect).
  - Children 12+ report advice slightly more than younger children.
- Hispanic children got slightly more exercise advice than other groups.
- Adult women are slightly less likely than men to report getting advice.

Adult (2014)	Pediatric (2014)	Proportion getting served: Demog.	Under	Over
***X*=123.8420** **p<0.0001** **φ=0.1213**	***X*=35.3479** **p<0.0001** φ=0.0525	**Age**	**18-36** **0-6.9, 7-12**	**56+**
***X*=55.8635** **p<0.0001** φ=0.0815	*X*=1.4367 p=0.4876 φ=0.0106	**SPD/ABD** (Aged, Blind, Disabled, Non-SPD)	**Non-SPD**	**Aged**
***X*=22.4225** **p<0.0001** φ=0.0516	*X*=3.0225 p=0.0821 φ=0.0154	**Gender**	**Adult Fem.**	**Adult Male**
X=2.4469 p=0.4850 φ=0.0170	***X*=20.2127** **p=0.0002** φ=0.0397	**Ethnicity** (White, Hispanic, Black, Other/Missing)	**White, Other** (Adult: No signif. differences.)	**Hispanic**

Effect size (phi φ) is context-dependent. These are meaningful here: 0.1=small, 0.3=medium, 0.5=large.

Age categories: Child: 0-6.9, 7-11.9, 12-17.9. Adult: 18-35.9, 36-55.9, 56+. **Bold** = statistically significant.

VIII. Analyzing Impact of Health Practices Advice On CAHPS Ratings of Quality of Services

Domains of Service Measured in CAHPS:

- **Ratings** are single-question measures rating services on a scale from 0 (worst) to 10 (best) services possible:
  - Health Plan
  - Health Care Received
  - Personal Doctor (Primary Care Physician)
  - Specialist Seen Most Often.
- **Composites** are indices calculated from multiple questions:
  - Getting Needed Care (primarily authorizations);
  - Getting Care Quickly (speed of access to urgent and non-urgent care);
  - Provider Communication;
  - Health Plan's Customer Service;

(Other CAHPS composites exist but aren't currently scored in NCQA Accreditation.)

Conventional wisdom: "Patients don't like being told to change diet/weight/exercise."
Our finding: Doctors who give health practices advice, are getting higher ratings.

Health plan administrators and regulators care about CAHPS quality ratings.

- Administrators may resource health education better if it impacts ratings.

Advice on Diet and Weight – Impact on Quality Ratings

- Advice on health practices is positively associated with CAHPS ratings, and the finding is statistically significant.
- Effect sizes are small-to-medium, indicating that doctors' advice may be a way for health plans to improve performance scores.
- However, effects might not be additive across measures.
- Multivariate modeling is warranted next, to isolate each measure's effect.

Adult (2014)	**Pediatric (2014)**	**Service Quality Measure**
***X*=267.3247** **p<0.0001 φ=0.1806**	***X*=295.0575** **p<0.0001 φ=0.1530**	Rating of Health Plan
***X*=426.3201** **p<0.0001 φ=0.2326**	***X*=626.0062** **p<0.0001 φ=0.2242**	Rating of All Health Care Received
***X*=502.3915** **p<0.0001 φ=0.3659**	***X*=509.3018** **p<0.0001 φ=0.2763**	Rating of Personal Doctor
***X*=339.8338** **p<0.0001 φ=0.2718**	***X*=380.2887** **p<0.0001 φ=0.2505**	Rating of Specialist

Bold = statistically significant.
Effect size (phi φ) is context-dependent. These are meaningful here: 0.1=small, 0.3=medium, 0.5=large.

Advice on Diet & Weight – Linkage To Dr./Patient Communication

- The association on Doctor/Patient Communication is similarly signif.
- Effect sizes for Provider Communication are noticeably larger than for Ratings, Access, and Office Staff Customer Service.
- Effect sizes for adults are strongest; but are still present for children.

Adult (2014)	Pediatric (2014)	Service Quality Measure
***X*=426.3640** **p<0.0001 φ=0.3358**	***X*=480.3167** **p<0.0001 φ=0.2679**	Doctor explained things well.
***X*=354.3483** **p<0.0001 φ=0.3441**	***X*=258.6008** **p<0.0001 φ=0.2305**	Dr. answer patient's concerns well.
***X*=497.8652** **p<0.0001 φ=0.3631**	***X*=370.2635** **p<0.0001 φ=0.2351**	Doctor listened carefully.
***X*=589.3525** **p<0.0001 φ=0.3953**	***X*=413.8179** **p<0.0001 φ=0.2497**	Dr. knew patient's medical history.

Bold = statistically significant.
Effect size (phi φ) is context-dependent. These are meaningful here: 0.1=small, 0.3=medium, 0.5=large.

Advice on Exercise – Linkage To Dr./Patient Communication

- The association on Doctor/Patient Communication is similarly signif.
- Effect sizes for Provider Communication are noticeably larger than for Ratings, Access, and Office Staff Customer Service.
- Effect sizes for adults are strongest; but are still present for children.

Adult (2014)	Pediatric (2014)	Service Quality Measure
***X*=381.9163** **p<0.0001 φ=0.3187**	***X*=480.3167** **p<0.0001** φ=0.2679	Doctor explained things well.
***X*=329.5267** **p<0.0001 φ=0.3327**	***X*=258.6008** **p<0.0001** φ=0.2305	Dr. answer patient's concerns well.
***X*=403.2446** **p<0.0001 φ=0.3276**	***X*=370.2635** **p<0.0001** φ=0.2351	Doctor listened carefully.
***X*=450.4413** **p<0.0001 φ=0.3466**	***X*=413.8179** **p<0.0001** φ=0.2497	Dr. knew patient's medical history.

Bold = statistically significant.
Effect size (phi φ) is context-dependent. These are meaningful here: 0.1=small, 0.3=medium, 0.5=large.

XI. Recap of Learning Objectives

1. Describe five fundamental categories of advice that doctors provide to patients on health practices and behaviors of healthy living.
    1. Healthy diet and nutrition.
    2. Exercise and rest.
    3. Maintaining healthy weight.
    4. Stop smoking.
    5. Moderation regarding alcohol and stimulants.
2. Identify which category of doctors' advice is most associated with patients' self-reported health status.

    Neither type of advice (diet/weight vs exercise) had a noticeable relationship for adults. Doctors' advice and health status had a significant inverse relationship for children.

    Diet/weight advice was slightly more associated than exercise, but neither had a remarkable effect size.

    Further analysis should control for duration of time with the provider giving the advice, to see if the advice (a) is more noticeable to sick patients, and if (b) impacts perceived health status over time.

Recap of Learning Objectives (Cont.)

3. Compare the percent of Medicaid patients who recall receiving physician advice on diet, nutrition, and exercise, versus the percent who report receiving no such advice.

   Three-quarters of Medicaid members reported receiving doctors' advice on diet, weight, and exercise within the past year. However, an alternate form of the question got 1/4th lower percents.

4. Identify which demographic groups (age, gender, language, ethnicity) are most or least likely to report getting instruction from doctors on healthy living.

   Adults (18-35) were slightly less likely than adults (56+) to report receiving advice about diet, weight, and exercise. The effect size was small but noticeable.

   Parents of pediatric patients reported slightly less such advice than adults.

   Children 0-11.9 were less likely to receive such advice than children 12-17.9.

   Adult women were slightly less likely than men to receive such advice.

   Racial differences were not noted, except among Hispanic children, whose parents were slightly more likely to report getting advice on exercise, compared to parents of white or children with "Other/Unstated" ethnicity.

   Ancillary analysis was done by contracted Plan and by clinic setting serving Medicaid members. No significant differences were found by contracted Plan. Independent Safety Net Clinics were slightly more prone to give advice than County Clinics or private/commercial clinics.

Recap of Learning Objectives (Cont.)

5. Describe one indicator of health literacy that relates to doctors' instructions on health practices.

   Reporting that doctors advised on healthy living, could potentially reflect patients' awareness that such advice should be routine. Even if the measure is affected by recall bias, the recall rate implies that knowledge – hence indicates some degree of health literacy.

6. Identify two measures of health service quality that are logically associated with doctors' instructions to patients on healthy living.

   Doctors' advice on health practices were positively associated with all of the CAHPS measures used for NCQA Accreditation that were present on the CG CAHPS 2014 survey. (The exception is Health Plan Customer Service, which is not on the CG CAHPS survey of provider groups.

   Two CAHPS measures had noticeable associations – particularly for adult members: Rating of Personal Doctor and Provider Communication, with effect sizes over φ=0.3.

   In terms of practical effect – proxied by SUM(ABS("observed"–"expected"))/(4 * total sample) – the results are meaningful: ~3-5% lift in favorability.

   Caveats: (a) Association does not imply causation. The effects may be mediated through unknown factors. (b) Memorable advice-giving might not be a transferrable skill to doctors who lack it. (c) Changing doctors' behavior may be challenging. (d) The effects might be collinear, hence not fully additive across these measures.

IX. Discussion

The findings indicate that advice from doctors to Medicaid patients on health practices, is fairly common.

A few significant differences were found among demographic groups.

- The effect sizes were small, indicating that disparities in receiving advice, are not large.
- The only disparity that attained an effect size over phi=0.1, was for young adults (ages 18-35.9) – suggesting that advice on health practices is delayed health effects are manifest.

The two questions – diet/nutrition/weight and exercise – were strongly correlated, suggesting that the questions can be asked more efficiently.

(An experimental version of the health practices question found less prevalent advice-giving by doctors. The question format (multiple choice) may be impractical under CMS and NCQA rules in the future.)

XI. Practical Uses of the Findings

The principal value of this research is in helping administrators at health plans and agencies the quality of services.

- The study found: Most patients recall getting health practices advice.
- Only 1/4th to 1/5th of patients report no such advice. (Varies by survey.)
- Where a strong norm exists, the environment is suited to social norming – a technique called the Social Norms Method (SNM).
- Health practices advice clearly enjoys a strong group norm. Doctors not giving the advice may not realize the extent to which they are in the minority.
- Social norms messaging plays on the human tendency to conform to a strong group norm: most Medicaid doctors are giving health practices advice.
- The messaging reinforces doctors who give health practices advice, while anonymously emphasizing the isolation of those who don't practice the norm.

XII. Actionability: Opportunities Going Forward

No strong evidence here of disparities: No basis for a major intervention or corrective action plan.

- Resource-light informational activities are the appropriate level of effort given the evidence.
- In an environment of tight resources (staff, budgets), leverage existing mechanisms to message key information.
- Identify and use venues through which to encourage providers to educate patients on diet and exercise:
  - Use applicable findings in provider newsletters: Reinforce current trend, and plan resources
  - Member newsletters: Age at which diet/nutrition guidance applies for children.
  - Company and reliable community websites and member portals.
  - Further analysis: Identify lower-performing clinics and providers, and offer training on how to talk with diverse patients about health practices.
  - Propose interventions through internal/external committees.

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