

## Research Article

# Specialty Physician Attitudes and Beliefs about Medicaid Patients

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## Abbreviations

ACA: Affordable Care Act; CMS: Colorado Medical Society; OBGYN: Obstetrics/Gynecology

## Introduction

Medicaid, the largest United States health coverage provider, insures more than 1 in 5 Americans. In states expanding Medicaid, Medicaid and Children's Health Insurance Program enrollment increased nearly 39% under the Affordable Care Act (ACA) as of May, 2017 [1]. Colorado is among the trend leaders with only 2 states surpassing its 76% enrollment increase as of May, 2017 [2].

There is currently little understanding of how Medicaid patients are viewed by physicians. Do physicians view this patient population positively and welcome them into their practices? Or do negative beliefs predominate, with potential implications for lowered quality of care and reduced willingness to improve access? In national healthcare debates, a common critique of Medicaid centers around lower practice acceptance of Medicaid patients [3], heightening the relevance of these questions.

The importance of answering these questions is further underscored by a growing body of evidence on bias in health care, mostly with regard to racial bias [4]. These studies showed that many physicians had negative attitudes that favored whites over minority groups [5,6]. Furthermore, these attitudes were reflected in worse interactions with minority patients [7-9], and in some cases may have affected medical decision-making [10-12].

To date, most investigations of physician bias have focused on

## Abstract

Using a cross-sectional statewide survey, we described specialist attitudes and beliefs about Medicaid patients and characteristics associated with negative beliefs. 804 physician members of the Colorado Medical Society providing adult specialty care in Colorado (1600 eligible) endorsed 14 positive and negative characteristics about Medicaid patients on a Likert Scale from which we created a "favorable" versus "unfavorable" attitude outcome. 86% of respondents had unfavorable attitudes towards Medicaid patients. In an adjusted model, unfavorable attitudes were associated with physician characteristics of income highly dependent on productivity (versus little/no dependence  $p=.01$ ; versus some dependence,  $p=.07$ ), an independent practice (versus employed by large organization,  $p=.03$ ), and being in a surgical or hospital-based specialty (versus a medical specialty  $p=.05$  and  $p<.01$ , respectively). Given the potential for negative bias to affect access to and quality of care, more research is needed into the contributors to and effects of this bias.

**Keywords:** Medicaid; Access; Bias; Vulnerable Populations

general attitudes – overall positivity or negativity without regard to underlying beliefs. Such attitudes revealed general propensities to behave more positively or negatively, but did not provide information about specific issues that may be of concern [13]. For example, a belief that a patient group is dangerous would imply different reactions than a belief that the group is lazy, although both are negative. The goal of the current study was to examine specialty physicians' attitudes and beliefs about Medicaid patients. We further investigated practice and physician characteristics associated with negative attitudes. We focused on specialty rather than primary care because Medicaid patients experienced worse specialty care access compared to Medicare and privately insured patients [14].

## Methods

### Population surveyed

To obtain a wide sample across the state, we partnered with the Colorado Medical Society (CMS) for physician recruitment. CMS is the largest organization of physicians in Colorado, with over 7,500 members across all specialties and employment settings. After passage of the ACA, CMS identified access to specialty care as a strategic priority, leading to organizational support of this member survey. Physicians were excluded if retired, still in training, primarily in pediatric practice or focused on general medical care including family medicine, general internal medicine or emergency medicine. From the resulting pool of 3,266 adult specialist CMS members for recruitment, 1,800 were randomly selected to receive a solicitation letter with a \$2 bill included. Of letter recipients, 200 were subsequently found to be ineligible (e.g., deceased, met exclusion criteria or invalid contact information), leaving 1600 for recruitment. Between April

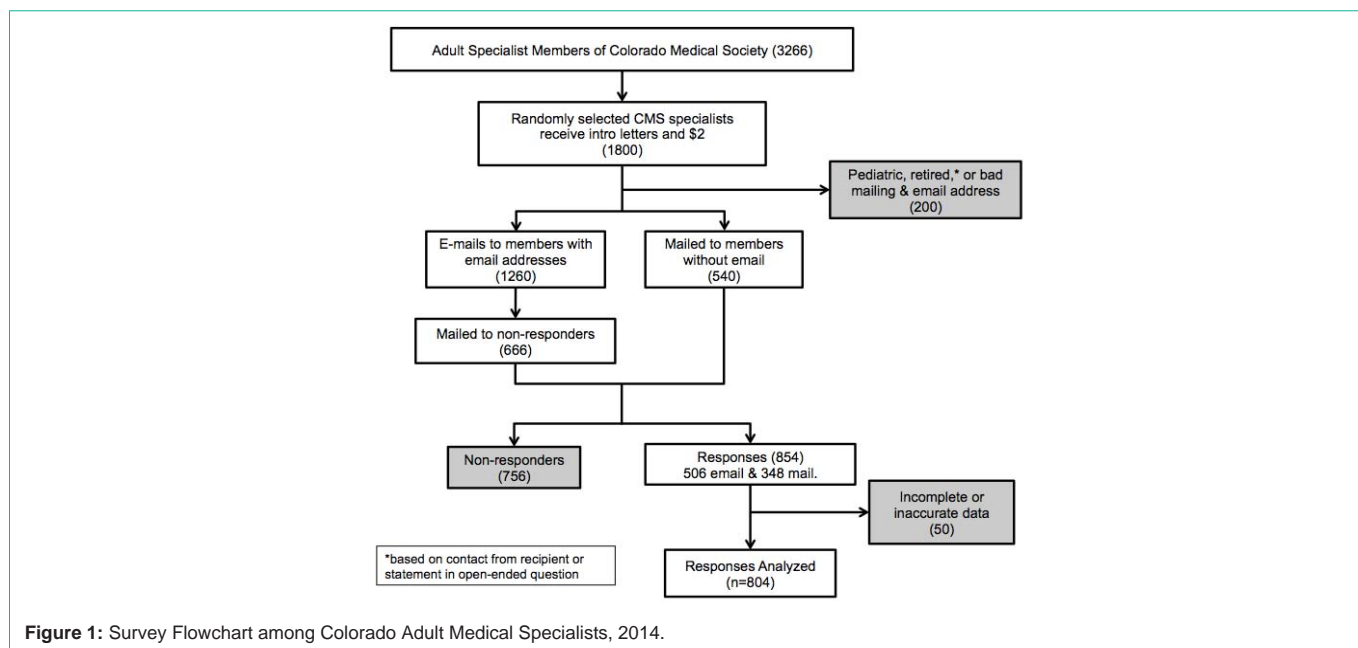


Figure 1: Survey Flowchart among Colorado Adult Medical Specialists, 2014.

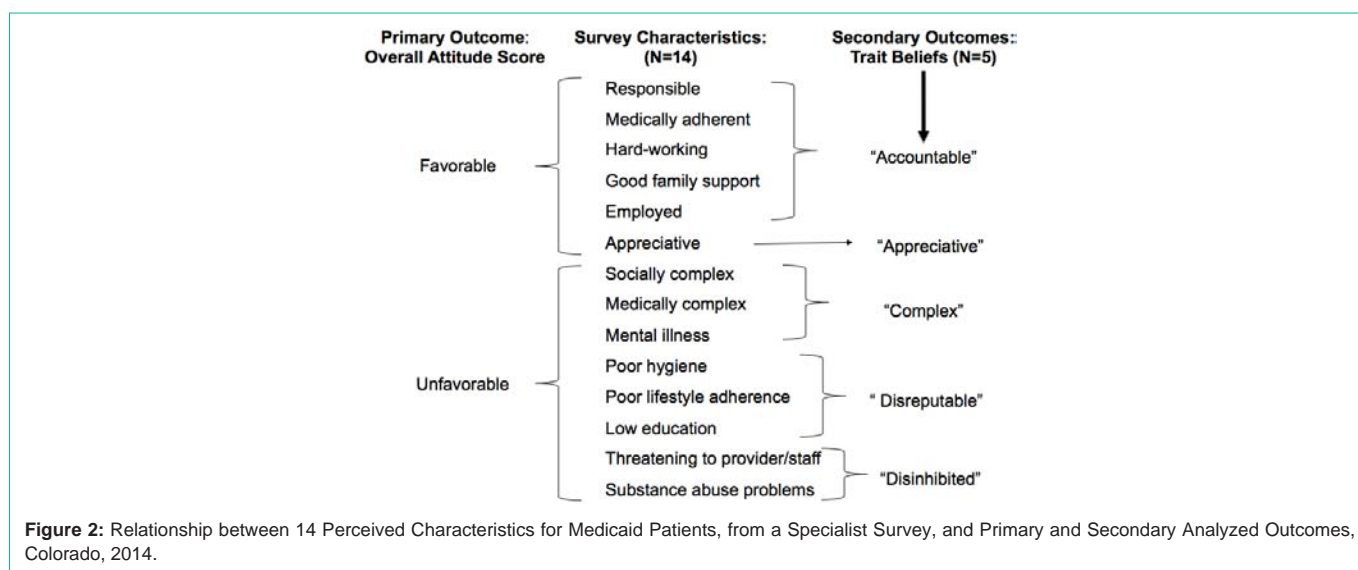


Figure 2: Relationship between 14 Perceived Characteristics for Medicaid Patients, from a Specialist Survey, and Primary and Secondary Analyzed Outcomes, Colorado, 2014.

and June of 2014, physicians with email addresses known to CMS (70%) were sent up to 5 electronic requests to participate in the survey through a secure website, followed by a printed survey if no response. Physicians with unknown email address were mailed printed surveys twice (Figure 1). The Colorado Multiple Institutional Review Board approved the study.

From 29 specialties reported by participants, 4 categories were grouped for analysis: medical specialties (e.g., endocrinology, cardiology, or neurology), hospital-based specialties (e.g., anesthesia, pathology or radiology), surgical specialties (e.g., general surgery, orthopedic surgery, or neurosurgery) and obstetrics/gynecology (OBGYN). OBGYN was kept separate due to specific patient demographics and large representation among survey respondents.

### Survey development and content

In the absence of validated surveys addressing provider attitudes

and beliefs about Medicaid patients, our team developed a survey using the Dillman tailored design method [15]. This methodology outlines fundamental research-based guidelines for survey development and implementation to maximize validity, reliability, and response rate. Survey development included multidisciplinary review by physicians of multiple specialties, public health professionals, and CMS leadership. Further survey refinement followed pilot survey response review, including open-ended responses from a group of specialty physicians. These procedures resulted in 14 characteristics (Figure 2) chosen to represent possible views of Medicaid patients, with some positive and some negative characteristics (consensually defined). Using a 5-point Likert-scale ranging from strongly disagree (-2) to strongly agree (+2), participants were asked to indicate whether each of the 14 characteristics described a “typical adult Medicaid patient”. Immediately following these ratings, a single open-ended question asked participants for additional thoughts regarding any issues

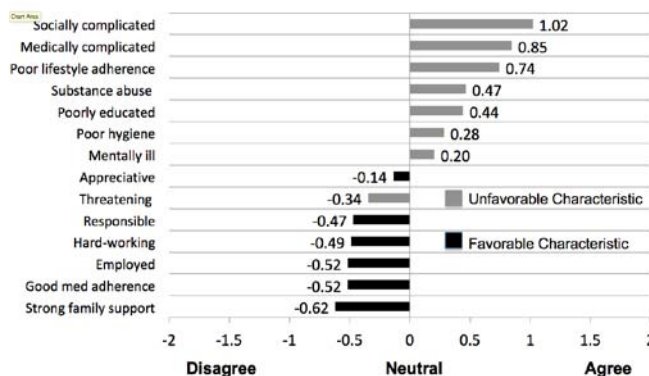


Figure 3: Average Respondent Agreement with Individual Characteristics of a "Typical Adult Medicaid Patient".

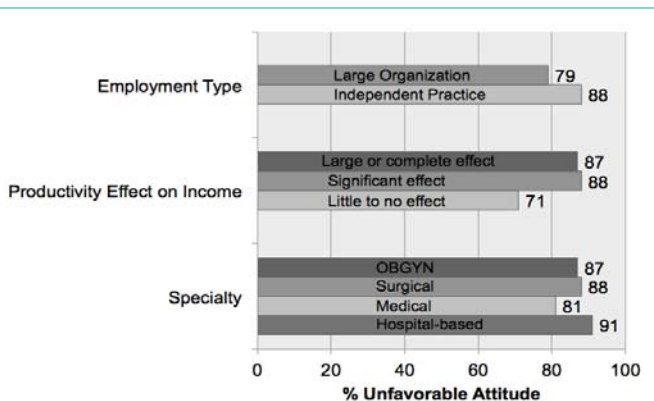


Figure 4: Percentage of specialty physicians with an unfavorable attitude by employment, income and specialty type, in adjusted analysis, Colorado, 2014.

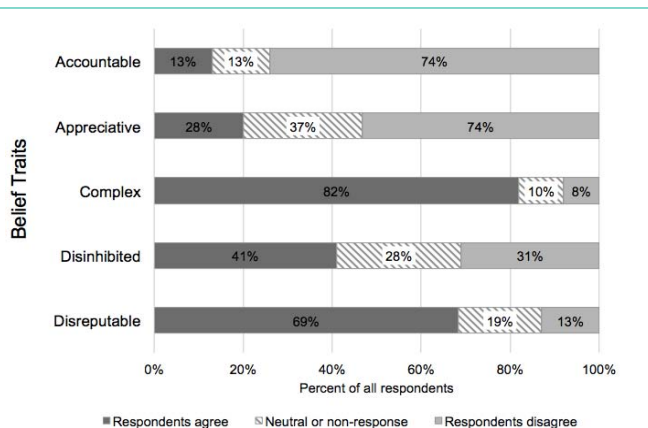


Figure 5: Distribution of adult specialty physician respondents' agreement with 5 belief traits describing Medicaid patients, Colorado, 2014.

addressed in the survey thus far. In a separate section of the survey, participants were asked to report on characteristics of themselves and their practices (9 items, Table 1).

Although the survey did not ask participants for income information, national data [16] were used to impute an average annual salary for each specialty. Each participant was then assigned a salary quartile based on their stated specialty.

**Data analysis**

The primary outcome was specialists' overall attitude (general favorability or unfavorability) toward Medicaid patients. An attitude score was created for each participant by averaging his/her agreement with the 8 unfavorable characteristics and separately averaging agreement with the 6 favorable characteristics; the unfavorable average was then subtracted from the favorable average, such that higher scores indicated more favorable attitudes (possible range -4 to 4). Descriptive analytics were performed on this attitude score after dichotomizing to favorable (score >0) or unfavorable (score ≤0).

Chi-square test of proportions was used to test associations between dichotomized attitudes and physician and practice characteristics. Characteristics associated with a p-value ≤0.20 were retained for multivariable modeling. Backward elimination was used to select the most parsimonious multivariable logistic regression model [17]. All analyses were performed using SAS (SAS v9.3, SAS

Institute, Cary, NC).

Secondary outcomes were specialists' underlying trait beliefs about Medicaid patients. Although the 14 individual characteristics in our survey were intended to closely identify our participants' views in different domains, our goal was to understand the foundational beliefs driving those answers. Exploratory factor analysis allows us to do this by determining the smallest number of factors that best describe the data. We used principal components analysis with varimax rotation, examining both eigenvalues (>1) and the interpretability of the factors for final selection. This approach revealed 13 of 14 characteristics fitting into four factors (Figure 2). Based on their content, we labeled them, "accountable" (5 items), "complex"(3 items), "disreputable" (3 items), and "disinhibited" (2 items). The characteristic "appreciative" did not align with any of the other four factors, and was kept as a fifth single item. After these five trait beliefs were identified, each participant was assigned a score for each one by calculating his/her average rating within that belief (e.g., Complex = [medical complexity + social complexity + mental health complexity ratings]/3). Descriptive analytics were performed after dichotomization to agree (score >0) versus disagree (score ≤0) on each trait belief. Chi-square test of proportions tested associations between dichotomized belief scores and physician and practice characteristics. For characteristics with a p-value ≤0.05, a referent category was selected and unadjusted logistic regression was

performed to quantify differences between groups.

We examined participants' responses to the open-ended question inviting them to further comment on the survey. These qualitative data were used to enrich or explain any unfavorable beliefs found in the quantitative results. For each of the five trait beliefs, we identified participants whose scores were clearly unfavorable (score over 1 in agreement with unfavorable beliefs, or <-1 with favorable beliefs) and used Atlas.ti (Atlas.ti v.7.5, GmbH, Berlin) to review their open-ended responses. Using codes created by an initial reviewer, a second reviewer (blinded to first reviewer's coding) coded responses, and a third independent reviewer served as "tie-breaker" for discrepant coding between the first 2 reviewers.

### Results and Discussion

Of the 1600 specialist physicians we attempted to recruit, 804 (50%) returned surveys with completed responses on key variables. Both non-responders and responders were 76% male and both groups' average age was 53. As shown in Table 1, responders (participants) predominantly self-identified as white non-Hispanic (82%), in practice for <20 years (53%), and had ownership interest in their practices (72%). The majority of participants had some decision-making power around practice Medicaid acceptance (72%) and a majority reported accepting limited or no Medicaid patients (52%). Additional participant characteristics are shown in Table 1.

#### Attitude outcome

Analysis of overall attitude scores showed that 86% of participants had an unfavorable attitude toward Medicaid patients. Average characteristic scores showed agreement with 7 of 8 unfavorable characteristics (with exception of "threatening to provider or staff"), and disagreement with all 6 favorable characteristics describing Medicaid patients (Figure 3). Respondents most strongly agreed that Medicaid patients were socially complicated, medically complicated, and have poor adherence to lifestyle recommendations. Respondents most strongly disagree that Medicaid patients have strong family support.

Note that raw characteristic data is scored on a -2 to 2 scale, however the calculation for the primary attitude outcome (average score on favorable characteristics – average score on unfavorable characteristics) yields a -4 to 4 scale. For example, a respondent fully agreeing with all favorable characteristics (average=2) and fully disagreeing with all negative characteristics (average=-2), would have an attitude score of 2-(-2)=4.

Unadjusted analysis of the dichotomized attitude score revealed significant associations between an unfavorable (<0) attitude score and 10-20 years in practice (p=0.02), independent solo or group practices (p<0.01), level of income dependence on individual productivity (p=0.02), and specialty type (p=0.02) (Table 1). In multivariable analysis, associations remained between unfavorable attitudes and independent practice(p=0.03), income highly dependent on productivity (versus little/no dependence p=0.01; versus some dependence, p=0.07), and surgical or hospital-based versus medical specialty, (p=0.05 and p<0.01, respectively). For these three practice characteristics, independently associated with unfavorable attitudes, Figure4 shows the proportion of participants with unfavorable attitudes in the multivariable analysis.

**Table 1:** Adult Specialty Physician Survey Respondent Characteristics and Overall Attitude (%) about Medicaid Patients, Colorado, 2014.

Characteristics†	Total N=804	Overall Attitude		p-value*
		Favorable n=113	Unfavorable n=691	
Years in practice				
<10 yrs	155 (19.7)	23 (20.9)	132 (19.6)	0.016
10-20 yrs	255 (32.5)	23 (20.9)	232 (34.4)	
>20 yrs	374 (47.7)	64 (58.2)	310 (46.0)	
Gender				
Male	597 (75.9)	81 (73.0)	516 (76.3)	0.44
Female	190 (24.1)	30 (27.0)	160 (23.7)	
Practice Setting				
Urban	305 (38.8)	40 (36.4)	265 (39.1)	0.14
Suburban	379 (48.1)	61 (55.5)	318 (47.0)	
Rural	103 (13.1)	9 (8.2)	94 (13.9)	
Employer				
Large organization employee	132 (18.2)	28 (27.7)	104 (16.7)	0.0077
Independent practice Ownership Interest	592 (81.7)	73 (72.3)	519 (83.3)	
Yes	579 (72.7)	77 (67.5)	502 (73.5)	0.19
No	218 (27.4)	37 (32.5)	26.5 (18.1)	
Income Affected by Productivity				
Little or no effect	102 (12.8)	24 (21.2)	78 (11.5)	0.015
Significant effect	183 (23.1)	22 (19.5)	161 (23.7)	
Large or complete	507 (64.0)	67 (59.3)	440 (64.8)	
Specialty Type‡				
Hospital-based	152 (19.7)	13 (12.3)	139 (20.9)	0.024
Medical	218 (28.2)	42 (39.6)	176 (26.4)	
Surgical	280 (36.2)	35 (33.0)	245 (36.8)	
OBGYN	122 (28.7)	16 (15.1)	106 (15.9)	
Avg Specialty Salary, by quartile				
Bottom quartile	214 (27.7)	34 (32.1)	180 (27.0)	0.55
Lower middle quartile	168 (21.7)	24 (22.6)	144 (21.6)	
Higher middle quartile	191 (24.7)	26 (24.5)	165 (24.8)	
Top quartile	199 (25.7)	22 (20.8)	177 (26.6)	
Medicaid patients in training				
Many	626 (80.5)	88 (78.6)	538 (80.8)	0.59
Few or none	152 (19.5)	24 (21.4)	128 (19.2)	

Notes: \*P-value for chi-square test of proportion of favorable versus unfavorable attitude for each characteristic variable. † Race/ethnicity breakdown not included in analysis due to low number of non-Caucasian groups. ‡ Specialty type groupings were Hospital-based (anesthesiology, pathology, radiology), Medical (allergy/immunology, cardiology, dermatology, endocrinology, gastroenterology, hematology/oncology, infectious disease, nephrology, neurology, psychiatry, pulmonary/critical care, rheumatology, sports medicine), Surgical (colorectal surgery, general surgery, gynecologic oncology, neurosurgery, obstetrics/gynecology, oral/maxillofacial surgery, ophthalmology, orthopedic surgery, otolaryngology, plastic surgery, thoracic surgery, urology, vascular surgery) and OBGYN (obstetrics and gynecology).

#### Beliefs outcome

Of the 5 beliefs, *complex* was most strongly endorsed (82%), followed by *disreputable* (69%), and *accountable* was most strongly rejected (74%). The beliefs that Medicaid patients are *appreciative* and *disinhibited* were more evenly distributed between endorsement and rejection (Figure 5).

Separate analyses tested physician and practice characteristics associated with each of the 5 beliefs. Chi-square tests found no significant difference in endorsement of any of the 5 beliefs by number of Medicaid patients seen daily, whether the specialist saw Medicaid patients during training, and whether the specialist has influence over the practice's policy regarding Medicaid acceptance. A referent was chosen for independent variables found to be significantly associated with any of the 5 beliefs at p<0.05. Odds ratios with confidence

**Table 2:** Unadjusted Odds Ratios (CI) for Adult Specialty Physician Beliefs about Medicaid Patient by Physician and Practice Characteristics, Colorado, 2014.

Sample Characteristics (N=804)	Unfavorable			Favorable	
	Complex	Disreputable	Disinhibited	Accountable	Appreciative
Years in practice					
<10 yrs	1.1 (0.6,1.9)	0.8 (0.5,1.2)	1.0 (0.7,1.6)	0.8 (0.4,1.5)	<b>1.6 (1.0,2.6)</b>
10-20 yrs	Ref	Ref	Ref	Ref	Ref
>20 yrs	0.7 (0.5,1.1)	1.1 (0.8,1.6)	0.9 (0.6,1.2)	1.3 (0.8,2.1)	<b>1.6 (1.1,2.4)</b>
Gender					
Male	Ref	Ref	Ref	Ref	Ref
Female	<b>1.9 (1.1,3.0)</b>	0.9 (0.7,1.3)	0.9 (0.6,1.2)	1.1 (0.7,1.8)	1.2 (0.8,1.7)
Practice Setting					
Urban	Ref	Ref	Ref	Ref	Ref
Suburban	1.0 (0.7,1.4)	0.9 (0.7,1.2)	0.8 (0.6,1.1)	0.9 (0.6,1.4)	0.9 (0.7,1.3)
Rural	1.4 (0.8,2.7)	<b>1.9 (1.1,3.3)</b>	<b>1.3 (0.8,2.1)</b>	0.8 (0.4,1.6)	0.6 (0.4,1.1)
Employer					
Large organization	Ref	Ref	Ref	Ref	Ref
Independent practice	0.7 (0.4,1.2)	1.3 (0.9,2.0)	<b>1.6 (1.1,2.5)</b>	<b>0.5 (0.3,0.8)</b>	<b>0.6 (0.4,1.0)</b>
Ownership Interest					
Yes	Ref	Ref	Ref	Ref	Ref
No	1.2 (0.8,1.7)	1.1 (0.8,1.5)	0.9 (0.7,1.3)	1.3 (0.8,2.0)	<b>1.6 (1.2,2.3)</b>
Income affected by productivity					
Little or no effect	Ref	Ref	Ref	Ref	Ref
Significant effect	1.8 (1.0,3.3)	1.0 (0.6,1.7)	1.6 (0.9,2.6)	0.7 (0.4,1.4)	<b>0.6 (0.3,1.0)</b>
Large/complete effect	1.5 (0.9,2.4)	0.99 (0.6,1.6)	1.3 (0.8,2.0)	<b>0.5 (0.3,0.8)</b>	<b>0.5 (0.3,0.8)</b>
Specialty Type					
Medical	Ref	Ref	Ref	Ref	Ref
Hospital-based	0.7 (0.4,1.2)	1.4 (0.9,2.2)	<b>2.1 (1.4,3.3)</b>	<b>0.4 (0.2,0.8)</b>	<b>0.3 (0.2,0.5)</b>
Surgical	<b>0.6 (0.4,0.9)</b>	<b>1.6 (1.1,2.3)</b>	<b>1.9 (1.3,2.8)</b>	<b>0.6 (0.4,1.0)</b>	<b>0.5 (0.4,0.8)</b>
OBGYN	1.2 (0.6,2.3)	<b>2.0 (1.2,3.4)</b>	<b>1.9 (1.2,3.0)</b>	0.9 (0.5,1.7)	0.9 (0.6,1.4)
Avg specialty salary, by quartile					
Bottom quartile	Ref	Ref	Ref	Ref	Ref
2nd quartile	0.7 (0.4,1.1)	1.0 (0.7,1.6)	1.1 (0.7,1.6)	1.1 (0.7,2.0)	0.7 (0.5,1.1)
3rd quartile	0.8 (0.5,1.3)	1.1 (0.7,1.7)	1.4 (0.9,2.1)	<b>0.5 (0.3,0.9)</b>	<b>0.5 (0.3,0.8)</b>
Top quartile	0.7 (0.5,1.3)	1.2 (0.8,1.8)	1.4 (0.9,2.0)	0.7 (0.4,1.3)	0.7 (0.4,1.0)

**Bold** highlights variables with confidence intervals not crossing 1.

intervals for these significant associations are shown in Table 2. The most consistent associations were found with employment (specialists in independent practice were more likely to endorse disinhibited, and less likely to endorse accountable and appreciative) and specialty type (hospital-based and surgical specialists were more likely to endorse disinhibited, and less likely to endorse accountable and appreciative; surgical and OBGYN specialists were also more likely to endorse disreputable).

### Qualitative results

Open-ended comments were provided by 26% of the participants. There were 339 participants who strongly endorsed unfavorable beliefs (score>1) or strongly rejected favorable beliefs (score<-1) about Medicaid patients. Of these, 29% (100) left comments (see Table 3 for examples by type of belief). Review of these comments showed that 37% used patient-blaming language, 35% used system-blaming language, and 38% specifically cited reimbursement problems. Examples of patient blaming language include “They are the toughest, most non-compliant, most litigious, least appreciative patient population.” Some comments (21%) were emotionally charged: “It is so simple and obvious. They are like coddled spoiled children who refuse to grow up, and their behavior is encouraged by the state. Why do you need a survey to tell you this? It is common sense.”

### Discussion

In this adult specialty physician survey, a vast majority of

participants had unfavorable attitudes toward Medicaid patients, believing them to be complex, disreputable, disinhibited, unappreciative, and unaccountable.

Variability in specialty physician attitudes and beliefs about Medicaid patients is expected. However, this variability across specialties and practice cultures, in the presence of concomitant bias, may adversely affect quality or access. The culture of individual specialties and how physicians self-select into them may contribute to differential beliefs and attitudes. As medical students and trainees self-select, cultural and structural differences by specialty may promote certain behaviors and beliefs, with training and practice enhancing those differences. Beyond differences by specialty, we found systematic attitude and belief differences associated with employment type and income dependence on productivity.

Several studies have shown differences between Medicaid patient populations and other insured groups that may fuel this bias. Medicaid patients were less likely to follow through on specialty referrals [18] and more likely to miss appointments [19,20]. Individuals with Medicaid were typically of lower socioeconomic class, more medically complicated, more likely to have concomitant mental health diagnoses, and more likely to face barriers to health and healthcare access [21]. Population-level characteristics such as these might influence physicians' views on Medicaid patients. Physicians may inappropriately generalize these population differences to all Medicaid patients, though our study cannot determine the presence of this behavior. Further, specific behavioral differences, such as

**Table 3:** Exemplary quotes among adult specialty physician respondents with unfavorable beliefs about Medicaid patients, Colorado, 2014.

Trait Belief	Exemplary Quotes*
(not) Accountable	<ul style="list-style-type: none"> <li>• “Scheduling is a nightmare, with <i>frequent no-shows</i>. We commonly discharge them for <i>noncompliance</i> and no-show rates. Even if the reimbursement was the same as Medicare rates, our practice would pass on care for them.”</li> <li>• “they don’t bring their <i>copays</i>! most have more financial support than they admitted - <i>smoke/nice jewelry</i> and clothes, etc. Fed/state pays better than working - why should they work? Many offer to pay cash - which, of course, we can’t do (where do they get the money if they’re indigent enough to be on Medicaid)”</li> </ul>
(not) Appreciative	<ul style="list-style-type: none"> <li>• “They are always asking for ‘favors’... Always very difficult, <i>self-entitled</i> and threatening.”</li> <li>• This population... is typically very <i>demanding</i> and tends to assume no... <i>personal responsibility</i> for care or consequences. They tend to be late, or miss appointments regularly. Quite simply, the Medicaid patients... should be charged for their care so they assume responsibility for it. If something is free, you don’t value it.”</li> </ul>
Complex	<ul style="list-style-type: none"> <li>• “I hope this survey is a sign of things to come - better care coordination; a central place we can call; improved <i>mental health</i> so that all these depressed, substance-abuse patients have a place to go; and a care manager they like...”</li> <li>• “Medicaid patients are often very <i>complicated medically</i>, and have much fewer resources in terms of finances, <i>social support</i>. It makes a difficult situation extremely difficult”</li> </ul>
Disinhibited	<ul style="list-style-type: none"> <li>• “The only patients I have had steal from my office have been Medicaid patients. They berate and insult my staff if they don’t get what they want. I get <i>disability requests</i> for trivial conditions. Even if reimbursement rises I would see very little b/c of these issues.”</li> <li>• “I find that almost all of them want narcotics and have a history of opioid or other substance (ie, benzos) abuse. They are very unpleasant and can get really <i>abusive verbally</i> when you won’t give them more narcotics which we should not have to put up with... a lot of these patients don’t want to have a PCP because then their narcotics are monitored. They ‘doctor shop’ to get more drugs thinking that doctors don’t communicate... They also don’t want to get better oftentimes, and think that at age 25 they should be on permanent disability for something minor which is ridiculous. I don’t know how they all became this entitled and drug addicted but it’s awful and I refuse to play into it. Then they complain and we get written up.”</li> </ul>
Disreputable	<ul style="list-style-type: none"> <li>• “It is very difficult to care for patients who have no ‘skin in the game’...who are noncompliant, feel entitled. Take much more time to care for due to numerous medical problems. Who often <i>cause their problems</i> by smoking, drinking, drugs, and ignoring recommendations? They are exhausting for doctors to care for, and the pay is terrible.”</li> <li>• “The most difficult to take care of and the most unreliable and demanding. And <i>litigious</i> and <i>unemployed</i>”</li> </ul>

\*Quotes taken from sample of respondents with scores >1 in the unfavorable direction for stated belief trait. *Italics* authors’ emphasis – highlight themes recurring in qualitative data.

missed appointments, may be generalized to negative underlying traits such as “irresponsible” [22].

These results partially mirrored those of a prior survey of primary care physicians [23]. In that study, the primary care physicians identified high complexity of patient needs and limited patient acceptance of treatment options as barriers to providing care for Medicaid patients. Unfortunately, beyond these specific questions, no prior study has investigated physicians’ attitudes and beliefs about Medicaid patients. Nonetheless, a handful of studies indicated that physicians may have biases (overall negative attitudes) toward individuals with low socioeconomic status (SES), as reported by patients [24,25] or shown in assessments of physician attitudes [26-29].

Although the subject of this study was Medicaid patients, research on other physician biases still may inform these findings. In this study, physician responses offered evidence of explicit (intentional or deliberate) negative attitudes and beliefs about patients who carry Medicaid insurance, a marker for low SES. Given the evidence on healthcare provider SES bias [24,27,30], Medicaid populations may experience *quality* of care problems, also similar to those found in provider racial bias studies. Evidence exists correlating physician-patient relationships, clinical decision-making, patient adherence, and even patient symptoms with provider racial bias [4,28,31-34]. Researchers are also increasingly looking at implicit bias because explicit racial or ethnic bias is very low among physicians [26,28,30,35]. It is significant that the current study revealed very strong explicit bias toward Medicaid patients, suggesting more explicit actions may follow.

Bias, based on Medicaid/SES, may limit specialty care access for patients. Insurance coverage increases have been encouraging; however, access gaps for Medicaid patients remain, due in part to many providers refusing to accept Medicaid in their practices. In

2011, before the ACA, 31% of office-based physicians declined new Medicaid patients [3], and many more practices accepted Medicaid in limited numbers. While federal regulations prohibit discrimination in provision of emergency healthcare, these laws have limited application to outpatient healthcare access. (Hill-Burton Act: Hospital Survey and Construction Act, 1946; Emergency Medical Treatment & Labor Act, 1986) Physicians with unfavorable attitudes and beliefs about Medicaid patients may choose not to accept Medicaid insurance in their practices, or not to advocate for acceptance with their clinic or institution administration. Reimbursement and system concerns may be the overt or stated reason for a practice to limit or deny Medicaid access and certainly contribute heavily [21,36-39], however physician attitudes and beliefs about Medicaid patients may contribute to limited practice acceptance and the widening specialty access gap, as supported in some provider statements found in Table 3.

This study focused on specialists not in primary care because of a dearth of research on bias in specialty care for Medicaid patients. Primary care providers cite lack of specialty care access as a problem and even a reason they limit Medicaid patient care [23,40]. Studies reveal early Medicaid expansion increased outpatient care demand with evidence that specialty care access fared worse than primary care access during this demand increase [41-46]. Despite this, existing research on Medicaid access problems is largely limited to the primary care setting, and does not substantially consider the role of bias [38,47-49].

Among the existing research on quality gaps between Medicaid and other insured patients, it is difficult to distinguish the causative factors. Studies of self-reported quality and satisfaction from Medicaid patients have varied results [14,50,51], however this is far from a comprehensive measure of quality of care. In cases where patients experienced stigma based on insurance status, this translated to experience of poor quality care, decreased access and changed patient

behavior that affected the continuity of care considered foundational to good care [51]. Multiple studies have shown worse outcomes in Medicaid patients in surgical quality measures [52-54], quality indicators for patients receiving non-surgical medical treatment [55], as well as delayed diagnosis, under treatment and significantly worse survival for multiple types of cancer [56-61]. A portion of these outcomes can be attributed to socioeconomic determinants of health, however if treating providers harbor negative attitudes about patients, other factors may contribute to worse outcomes.

In recent years, a prominent national conversation has swelled around the sweeping effects of social bias in our society. Blaming specialists or physicians more generally for this unfavorable bias and the patient health ramifications will not change the reality. However, acknowledgement that a spectrum of bias exists among medical professionals is an important first step.

Understanding how bias affects population health must follow, starting with defining the connection between provider bias and the Medicaid access and quality gaps. Many unfavorable beliefs or perceptions identified in this study correlate directly to social determinants of health and barriers experienced primarily by those in lower SES classes. For example, Medicaid patients' higher "no-show" rate is often due to barriers such as childcare and transportation problems [20]. Higher prevalence of diagnosed psychiatric disease is a barrier to medical adherence [21], especially when psychiatric disease is inadequately treated [62,63]. Supporting patients through system resources such as care coordinators, social workers, and mental health professionals could modify provider experience and perception, while improving the patient experience. Multidisciplinary approaches such as these will be essential in addressing the drivers of provider bias.

## Limitations

Physicians self-report may not correlate perfectly with actual attitudes, beliefs or behavior. Our methods were designed to assess explicit (intentional or conscious) attitudes and beliefs only. Surveys on attitudes and beliefs are vulnerable to social favorability bias, although the presence of this bias would likely result in understating of our findings. Use of factor analysis requires the investigators to identify underlying belief patterns that may or may not reflect the respondents' intent. Further research is merited into implicit (unintentional or unconscious) bias among specialists. Self-selection into CMS membership may result in limited generalizability to all specialists, due to sampling bias. However, the large CMS membership and absence of another accessible database of specialist physicians made this a unique resource. We considered the significant influence on practice policy reported by respondents as an asset given our broad interest in Medicaid specialty access. The attitude score reflects an intermediate outcome and future studies should look beyond attitudes and beliefs to provider willingness to care for Medicaid patients, actual proportion of patients seen, patient experiences, and both patient and provider outcomes. This survey was performed shortly after Medicaid expansion and views may change with more time post expansion. Finally, we acknowledge that respondents may have generalized endorsements to a class or socioeconomic bias, from which we are unable to separate bias specific just to Medicaid patients.

## Conclusions

With broad Medicaid expansion, the healthcare system is challenged to provide comprehensive specialty care access and quality. The evolving national conversation around the role of Medicaid in our health system increases the need for clearer understanding of specialty physician beliefs and attitudes toward Medicaid and its insured population. In this first survey of the specialty workforce perspective on Medicaid patients, beliefs about those patients were notably negative. Future research is needed to determine whether these beliefs are associated with access and quality disparities for Medicaid patients in certain situations. Moving forward, acknowledging, addressing, and ultimately overcoming these negative attitudes and beliefs may be necessary for successful and equitable health care access through expanded Medicaid coverage.

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