

2004 CAH SURVEY NATIONAL DATA

August 2004



With funding from the federal Office of Rural Health Policy (PHS Grant No. U27RH01080), the Rural Health Research Centers at the Universities of Minnesota, North Carolina, and Southern Maine are cooperatively conducting a performance monitoring project for the Medicare Rural Hospital Flexibility Program (Flex Program). The monitoring project is assessing the impact of the Flex Program on rural hospitals and communities and the role of states in achieving overall program objectives, including improving access to and the quality of health care services; improving the financial performance of critical access hospitals (CAHs); and engaging rural communities in health care system development.

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I. INTRODUCTION

As part of our monitoring efforts for the Medicare Rural Hospital Flexibility Program (Flex Program), the Flex Monitoring Team conducted a national telephone survey of 500 CAH administrators between January and April 2004. The purpose of the survey was to document the program-related experiences of CAHs over the past two years, in order to help shape public policy to improve the effectiveness of the Flex Program and CAHs. The Flex Monitoring Team is using the national survey results to prepare a series of reports and policy briefs on changes in the scope of services provided by CAHs, CAHs' organizational relationships, quality improvement and patient safety activities, access to capital, and the community impact of the Flex program.

The Team also is providing aggregate state data for use in state Flex planning and evaluation activities to states with five or more CAH survey respondents through a series of state reports. The five CAH threshold was chosen to maintain the confidentiality of individual CAH data while providing as many states as possible with state-specific data. Caution should be exercised in comparing state and national survey results, especially in states with a small number of responding CAHs, since large percentage differences in responses may or may not reflect meaningful policy differences.

II. CAH SURVEY METHODOLOGY

The CAH survey was developed by Flex Monitoring Team members at the Universities of Minnesota, North Carolina, and Southern Maine and fielded by the Survey Research Center in the Division of Health Services Research and Policy at the University of Minnesota. A random sample of 500 CAHs was selected for the survey, stratified into two groups: 1) CAHs that were certified by the Center for Medicare and Medicaid Services as of May 1, 2001 that had

responded to our previous survey of CAHs conducted in 2001 and 2) CAHs that were certified after May 1, 2001 and no later than December 1, 2002 (based on certification dates provided by the Center for Medicare and Medicaid Services).

The 500 CAHs in the sample represent approximately two-thirds of all CAHs that were certified as of December 1, 2002. All of the hospitals in the sample had at least one year and up to four years of CAH operational experience before they were surveyed. One CAH closed prior to being surveyed, and two others were removed from the sample because their CEOs reported being certified after December 1, 2002, reducing the sample to 497 CAHs. A total of 474 CAHs responded to the survey, yielding a response rate of 95%.

The survey respondents were located in 45 states. Thirty-one states had five or more CAH survey respondents (see Appendix A). The respondent numbers reflect the national distribution of CAHs during the time periods used for stratifying the sample.

III. RESULTS

Key national survey results are presented below, organized by major topic area within the survey. National data trends are summarized in each area.

A. Scope of Services

Each CAH was asked about the types of inpatient, outpatient, support and long term care services provided by the hospital and how they have changed over the last two years (Figures 1 - 21). Options included the service was never provided, was added, was dropped, stayed the same, was significantly expanded, or was significantly limited. Significantly expanded or limited was defined as involving a major change in the availability of staff, physical space, and/or infrastructure (e.g., equipment, technology, and support services) to deliver a service. The CAHs were also asked how many inpatient and outpatient surgeries they performed during the last year,

how many licensed swing beds they had, and how many swing bed days they had during the last year (Tables 1-3).

National Data Trends

- Nationally, CAHs reported significant expansions in a wide range of services over the past two years, including inpatient and outpatient rehabilitation, emergency, outpatient surgery, specialty clinic, rural health clinic, radiology, lab, pharmacy, and swing bed services.
- Few CAHs reported discontinuing services over the past two years, with the exception of obstetrical and home health services, which were dropped by more than 5% of CAHs.
- Swing bed services have been a large growth area for CAHs over the past two years, and the vast majority of CAHs now provide swing bed services.

Figure 1

**Changes in Inpatient Surgical Services Provided by CAHs
During the Past Two Years
(n=474)**

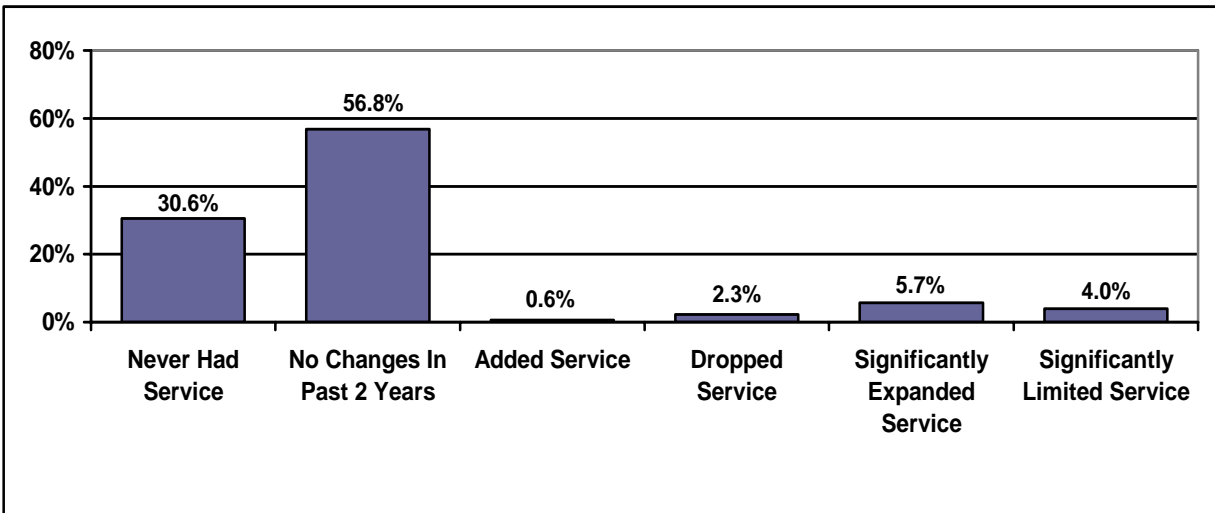


Figure 2

**Changes in Obstetrical Services Provided by CAHs
During the Past Two Years
(n=474)**

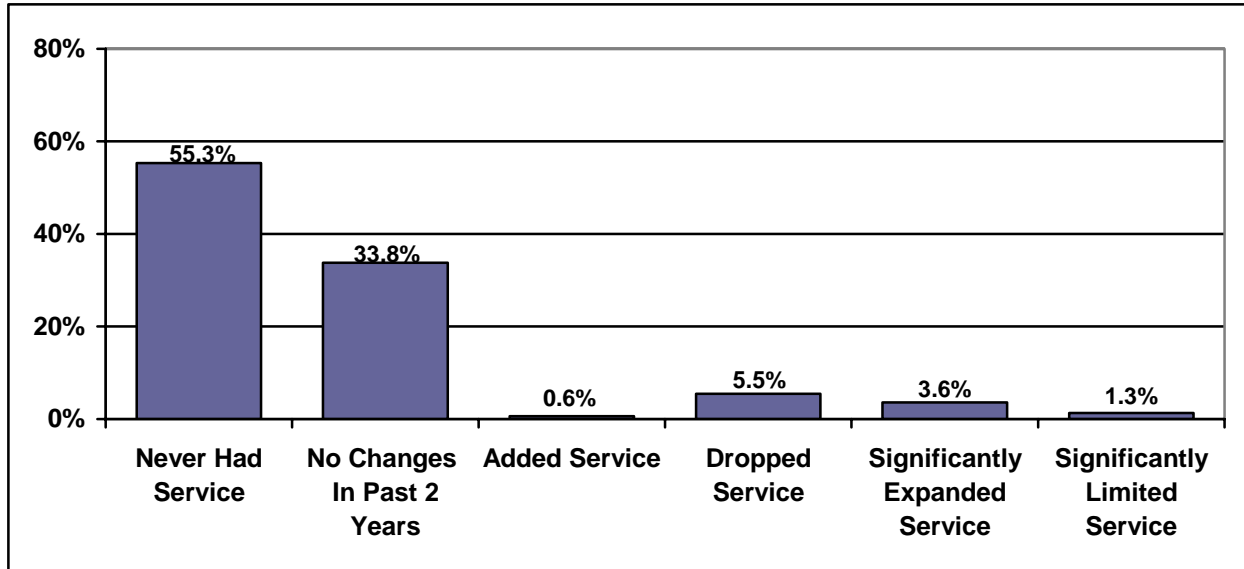


Figure 3

**Changes in Inpatient Rehabilitation Services Provided by CAHs
During the Past Two Years
(n=474)**

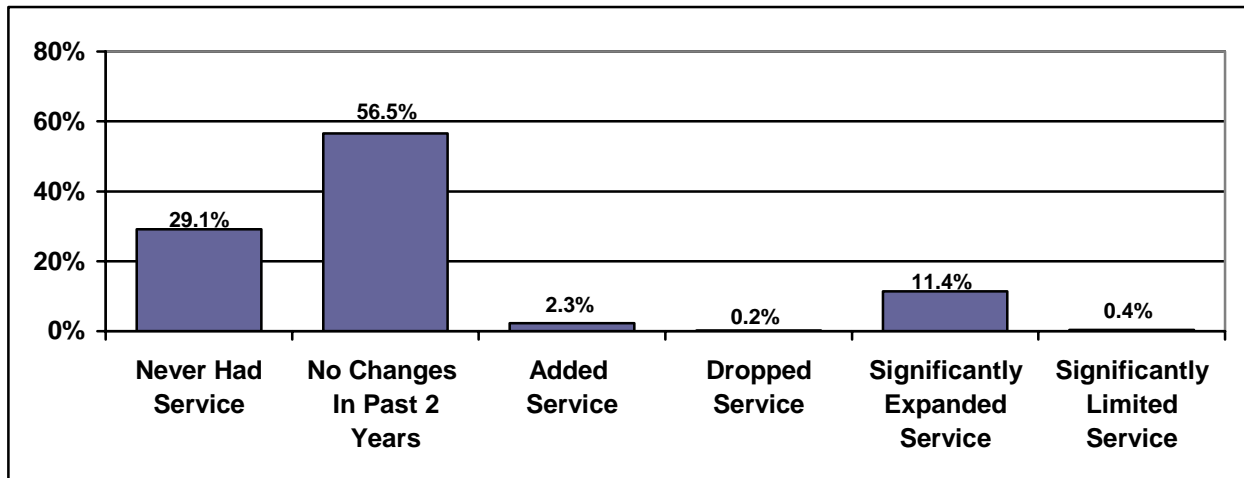


Figure 4

**Changes in Inpatient Psychiatric Services Provided by CAHs
During the Past Two Years
(n=473)**

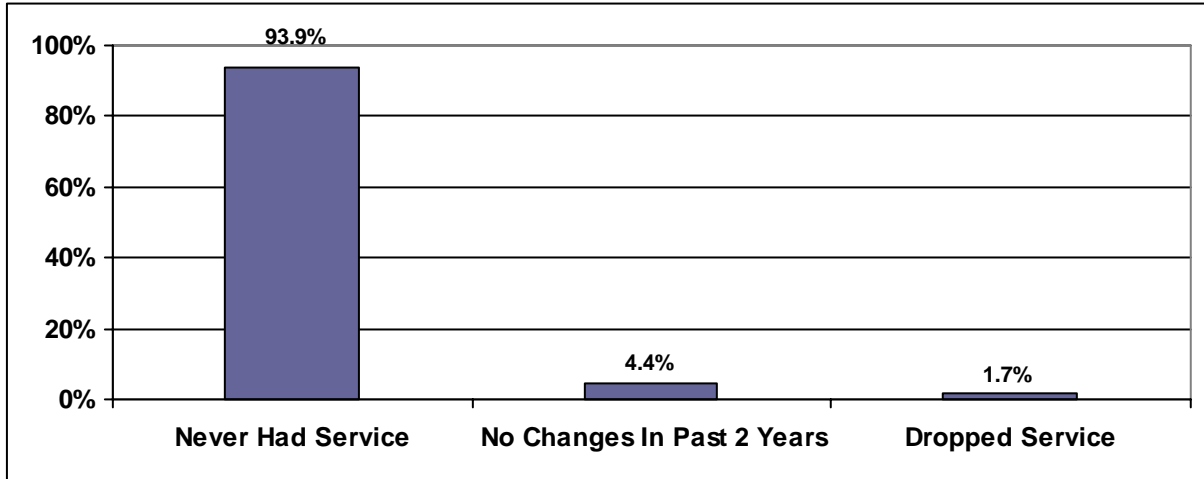


Figure 5

**Changes in Emergency Room Services Provided by CAHs
During the Past Two Years
(n=474)**

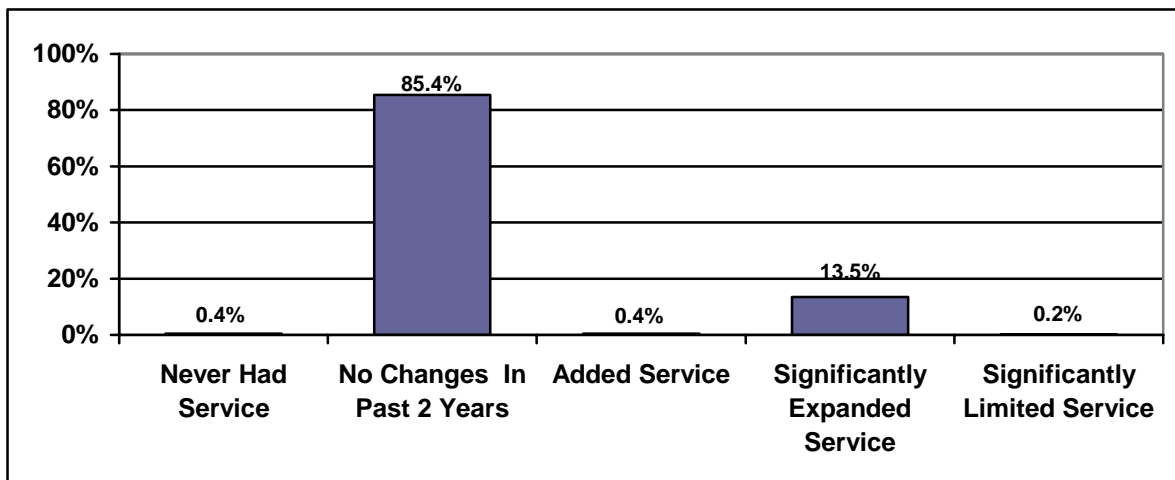


Figure 6

**Changes in Ambulance/EMS Services Provided by CAHs
During the Past Two Years
(n=474)**

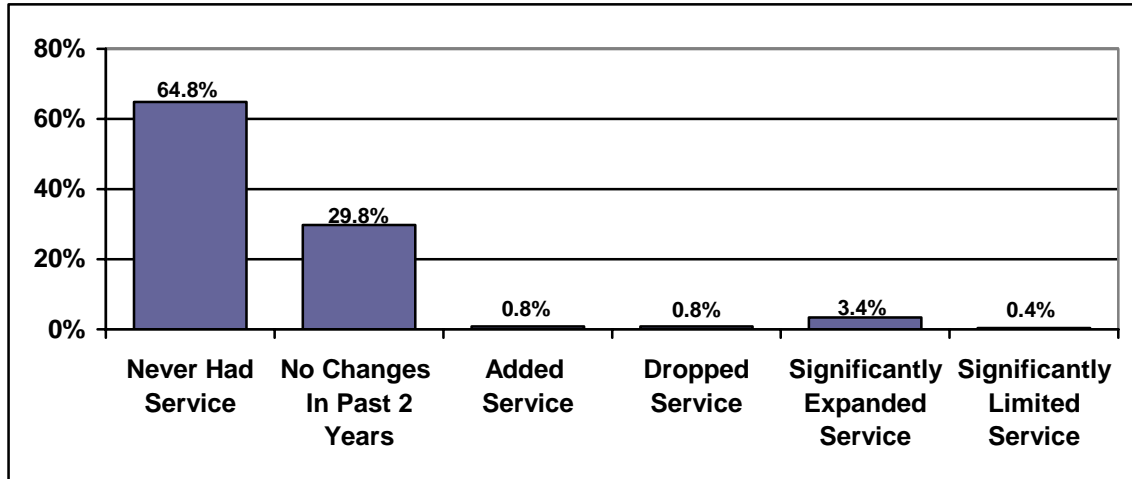


Figure 7

**Changes in Urgent Care Services Provided by CAHs
During the Past Two Years
(n=474)**

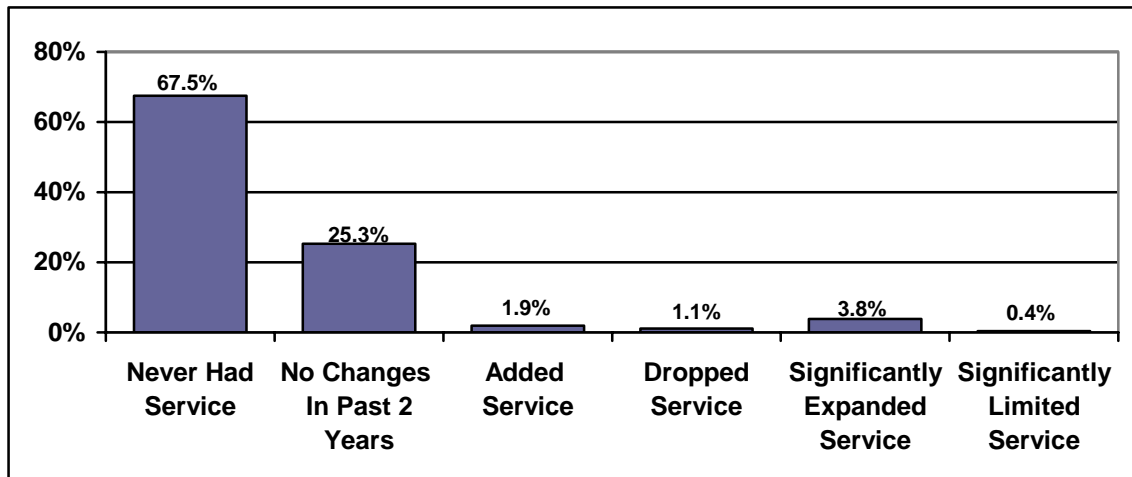


Figure 8

**Changes in Outpatient Surgery Services Provided by CAHs
During the Past Two Years
(n=474)**

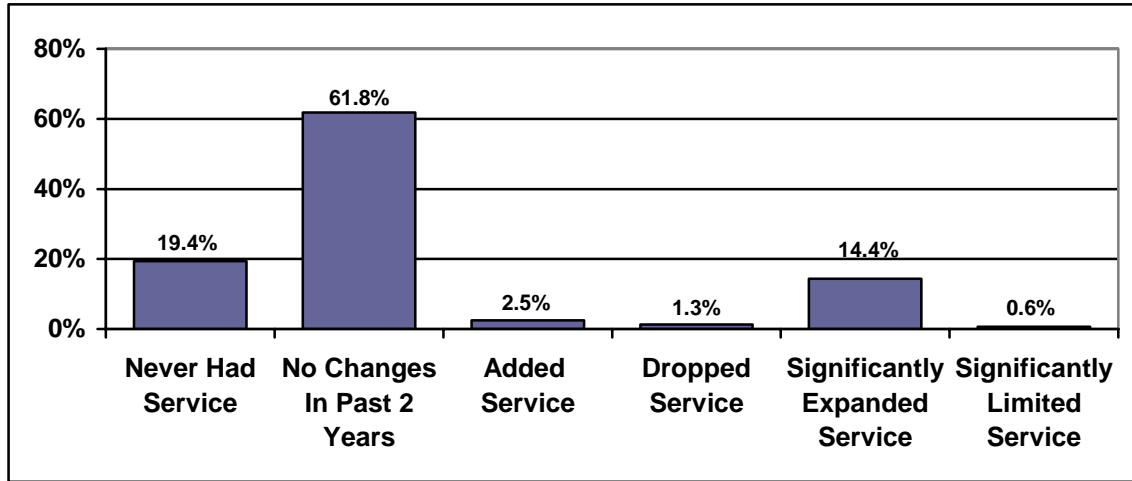


Figure 9

**Changes in Outpatient Psychiatric Services Provided by CAHs
During the Past Two Years
(n=474)**

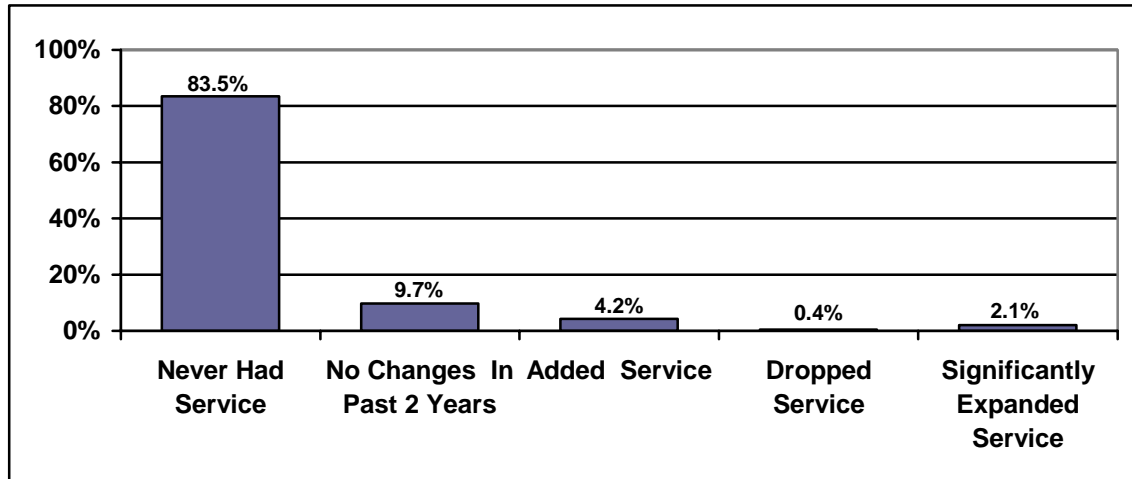


Figure 10

**Changes in Outpatient Rehabilitation Services Provided by CAHs
During the Past Two Years
(n=474)**

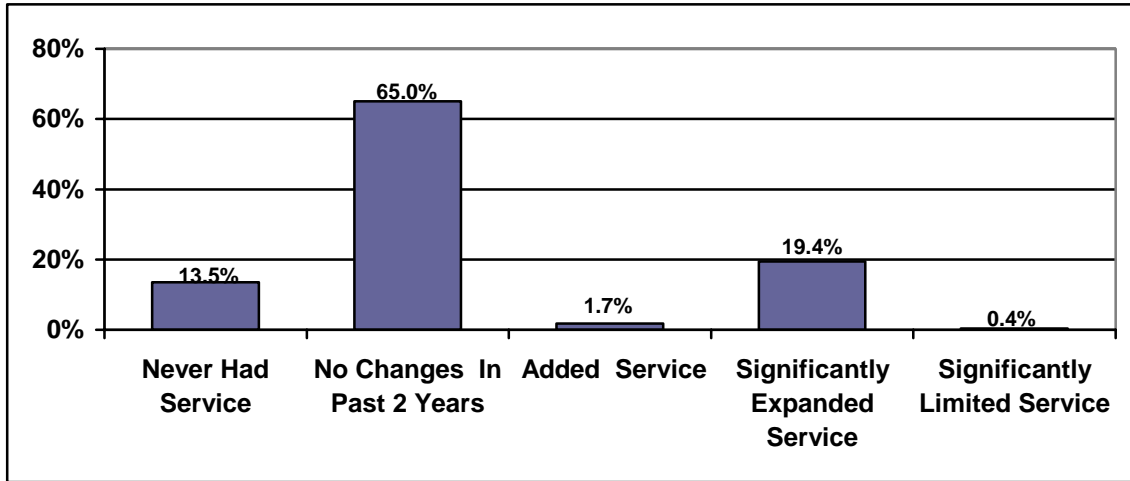


Figure 11

**Changes in Specialty Clinic Services Provided by CAHs
During the Past Two Years
(n=474)**

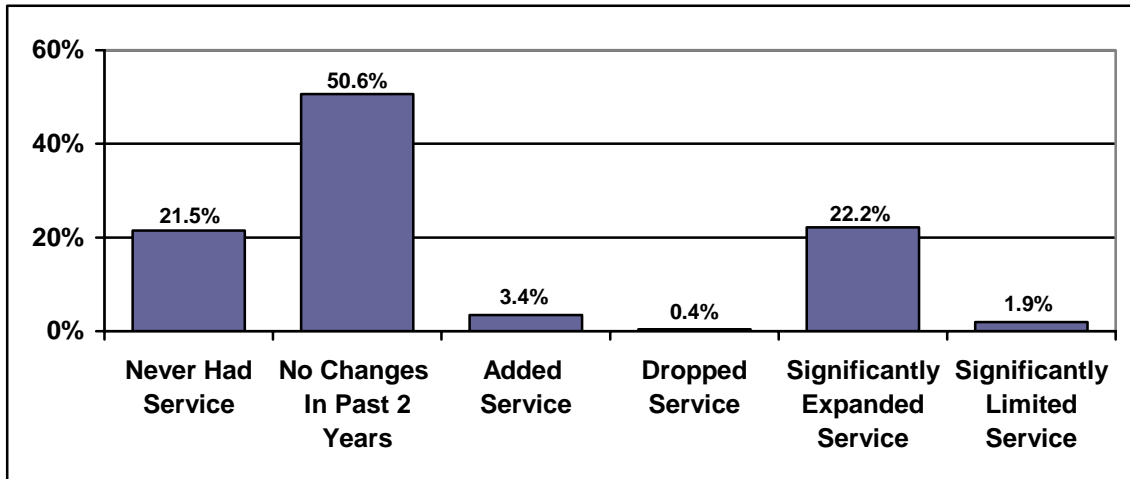


Figure 12

**Change in Rural Health Clinic Services Provided by CAHs
During the Past Two Years
(n=474)**

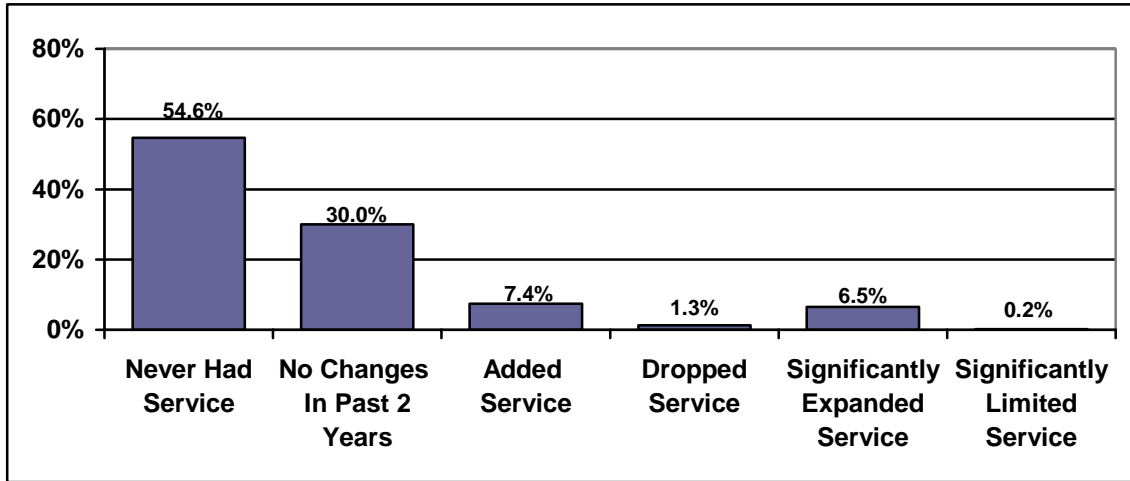


Figure 13

**Changes in Federally Qualified Health Center (FQHC) Services Provided by CAHs
During the Past Two Years
(n=474)**

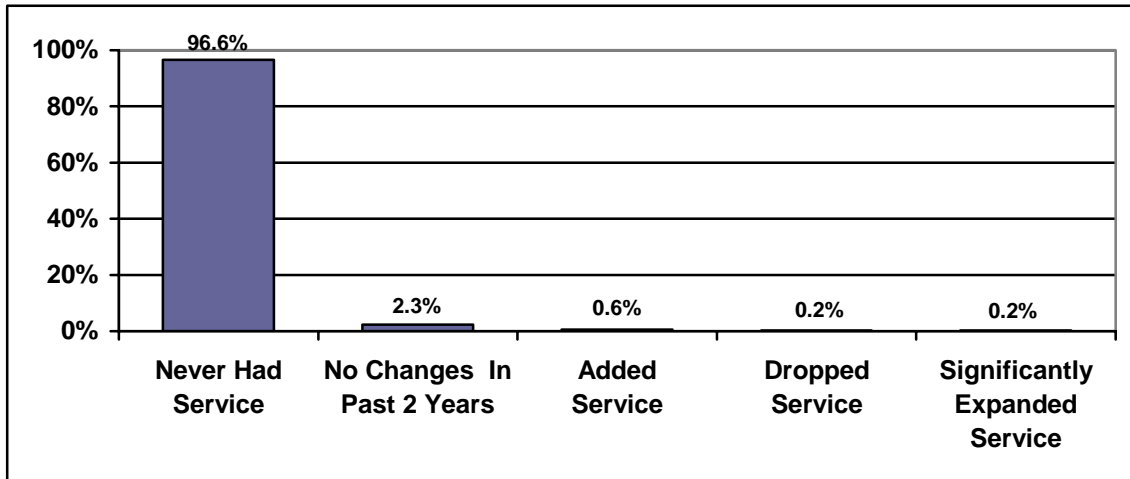


Figure 14

**Changes in Radiology Services Provided by CAHs
During the Past Two Years
(n=474)**

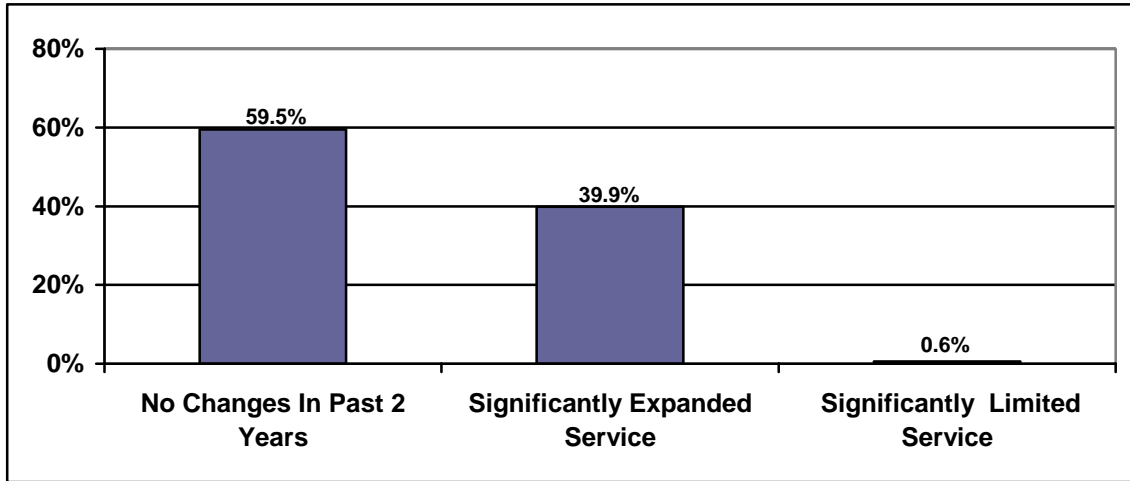


Figure 15

**Changes in Laboratory Services Provided by CAHs
During the Past Two Years
(n=474)**

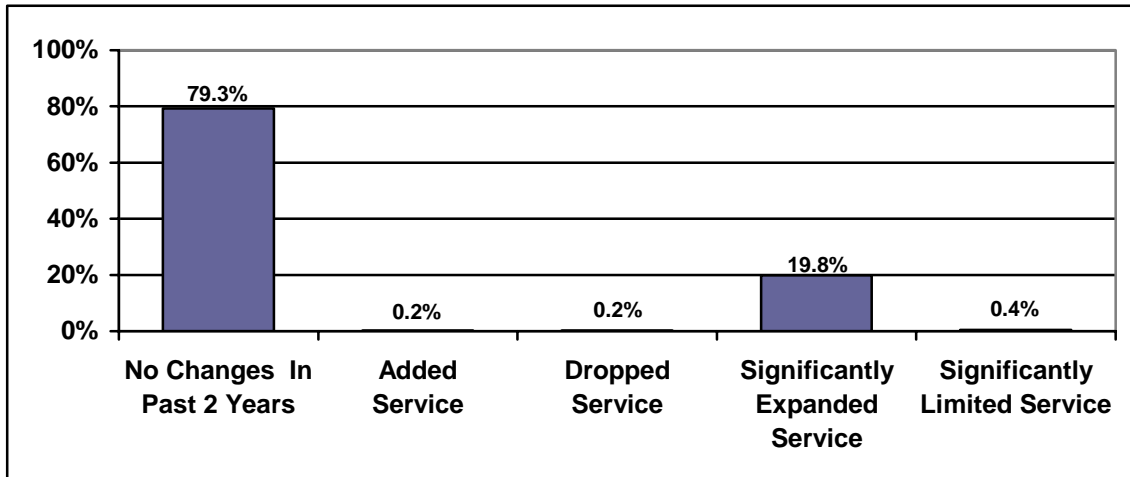


Figure 16

**Changes in Pharmacy Services Provided by CAHs
During the Past Two Years
(n=474)**

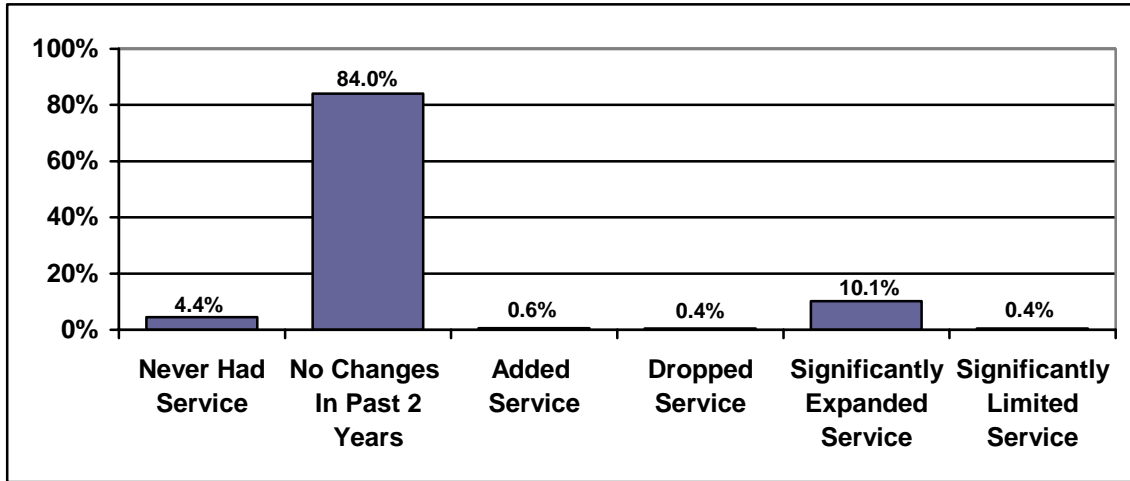


Figure 17

**Changes in Skilled Nursing Facility Services Provided by CAHs
During the Past Two Years
(n=474)**

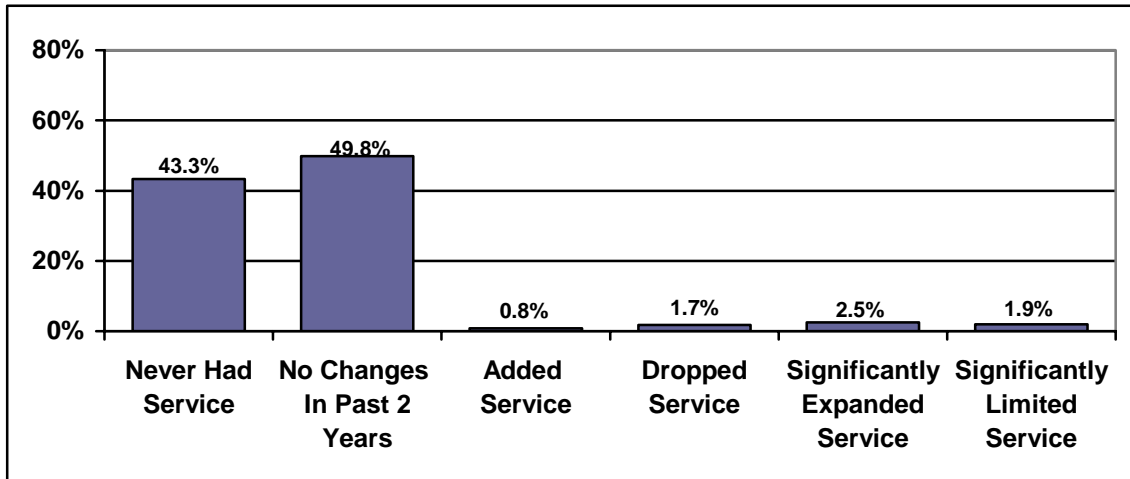


Figure 18

**Changes in Swing Bed Services Provided by CAHs
During the Past Two Years
(n=473)**

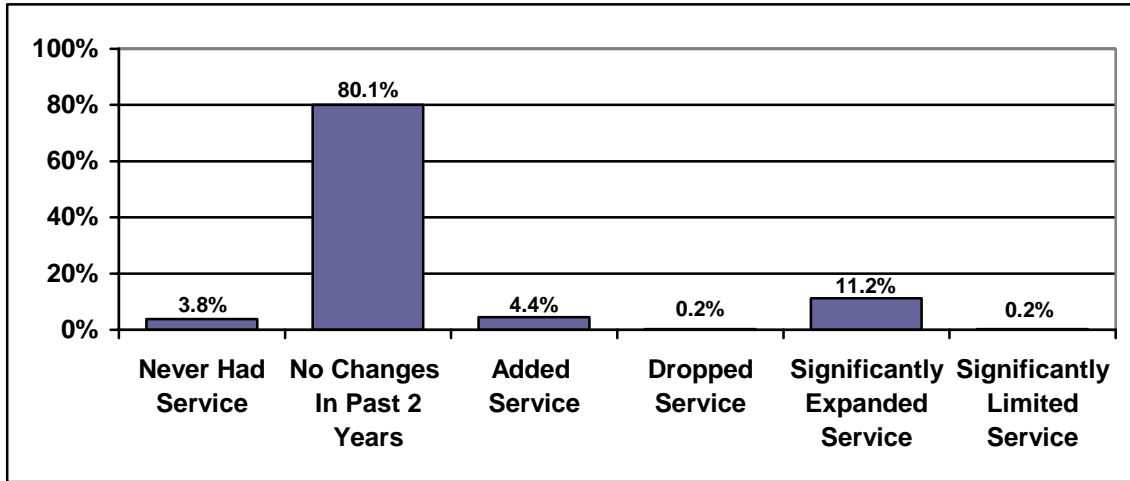


Figure 19

**Changes in Home Health Services Provided by CAHs
During the Past Two Years
(n=474)**

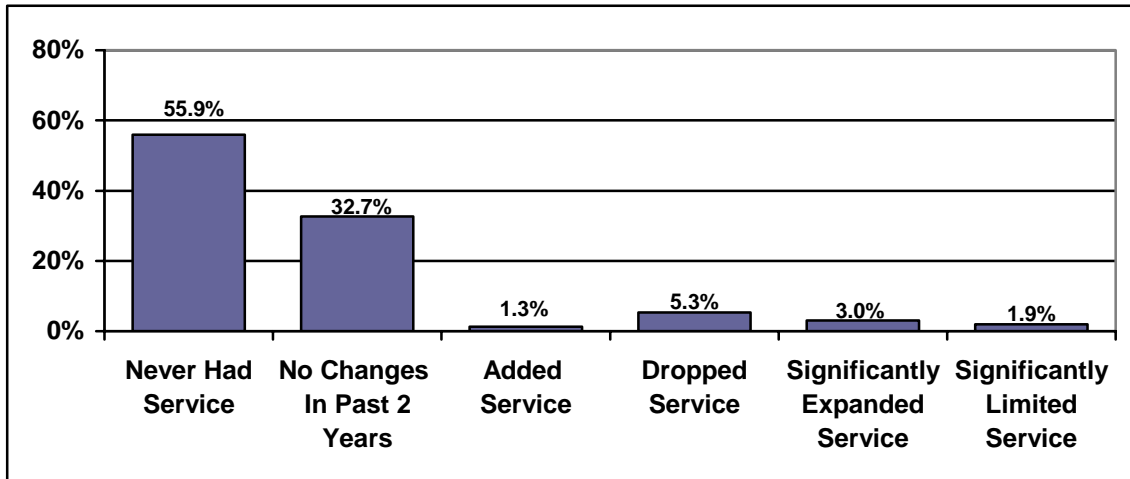


Figure 20

**Changes in Assisted Living Services Provided by CAHs
During the Past Two Years
(n=474)**

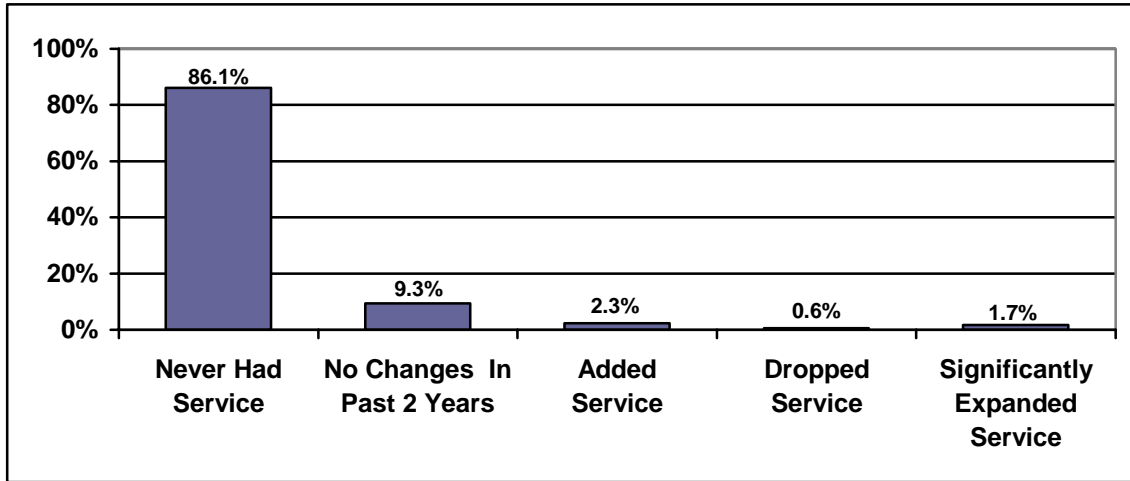


Figure 21

**Changes in Hospice Service Provided by CAHs
During the Past Two Years
(n=474)**

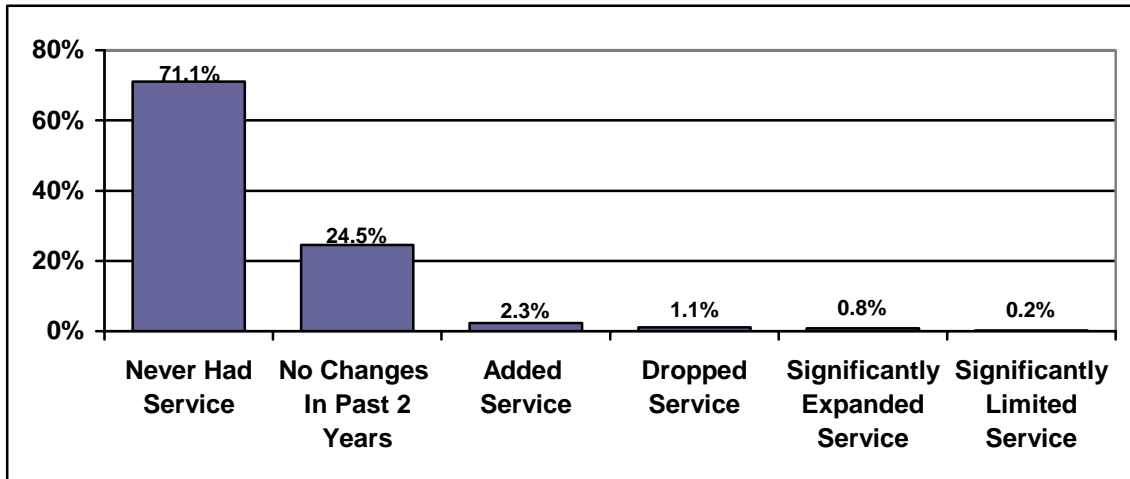


Table 1

**Inpatient Surgery Provided by CAHs During the Past Year
(n=314)**

Number of inpatient surgeries	
Mean	87.3
Standard Deviation	101.5

Table 2

**Outpatient Surgery Provided by CAHs During the Past Year
(n=373)**

Number of outpatient surgeries	
Mean	380.3
Standard Deviation	401.2

Table 3

**Swing Beds and Swing Bed Days Provided by CAHs
During the Past Year
(n=452)**

Number of Licensed Swing Beds	
Mean	15.7
Standard Deviation	7.7
Number of Swing Bed Days	
Mean	961.8
Standard Deviation	1095.0

B. Organizational Relationships

The CAHs were asked if they are currently part of a health care system, a formal rural health network, a management contract, or have other important organizational arrangements

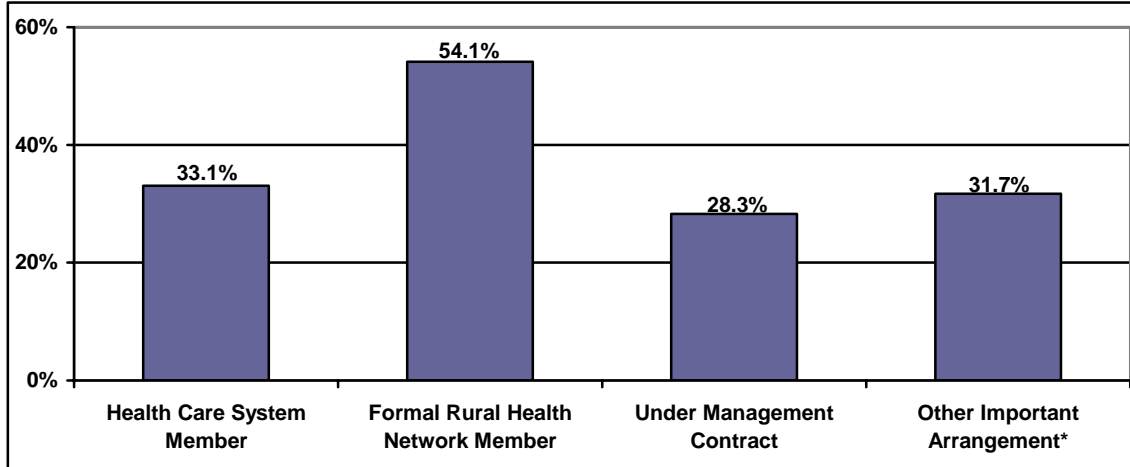
(Figure 22, Table 4). They were asked to identify which arrangement has been the most important in improving the hospital's overall performance, and to rate the helpfulness of the arrangement in several performance-related areas, on a 1-5 scale where 1 was not helpful and 5 was very helpful (Figures 23-30, Table 5). The CAHs were also asked to identify their support hospital and rate the helpfulness of their support hospital relationship for the operational and financial performance of the CAH (Figure 31).

National Data Trends

- The majority of CAHs are involved in one or more organizational relationships. Over half of CAHs report being in a formal rural health network and one-third are members of a health care system. One-quarter of CAHs are involved in both a network and a system or contract management relationship.
- CAHs tend to rate their most important organizational arrangement highly in terms of helping them in improving operational efficiencies, obtaining technical assistance, improving quality assurance/quality improvement processes and outcomes, and acquiring new technologies/equipment. Areas where these arrangements could be more helpful include access to specialty services, staff recruitment and retention, and obtaining access to capital.
- There is considerable variation in CAHs' ratings of the helpfulness of their support hospital relationship.

Figure 22

**CAHs' Current Organizational Relationships
(n=474)**



*(e.g. group purchasing arrangements; consortium to provide administrative support; local community agencies providing safety net services)

Table 4

**Groupings of CAHs' Current Organizational Relationships
(n=474)**

Health care system/management contract only	24.9%
Formal rural health network only	28.7%
Combination (system/contract and network)	25.3%
No system/contract or network relationship	21.1%

Table 5

**CAHs' Organizational Arrangement That is Most Important
in Improving Hospital's Overall Performance
(n=466)**

Most important arrangement	
Health care system	25.1%
Formal rural health network	29.6%
Management contract	17.0%
Other important arrangement	15.5%
None	12.9%
Support hospital is part of most important arrangement	65.4%

Figure 23

**Helpfulness of CAHs' Most Important Organizational Arrangement in Improving
Operational Efficiencies
(n=405)**

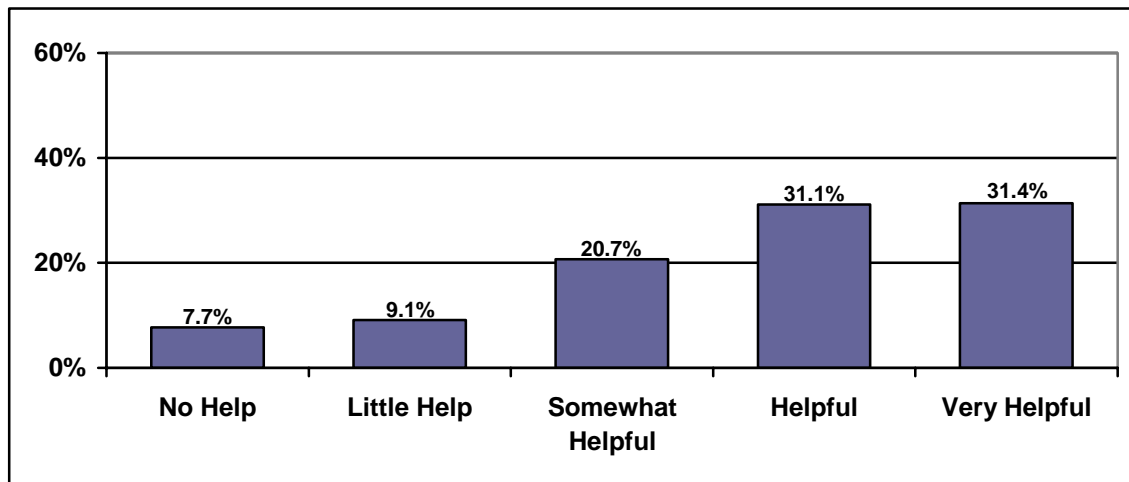


Figure 24

**Helpfulness of CAHs' Most Important Organizational Arrangement in
Access to Specialty Services
(n=403)**

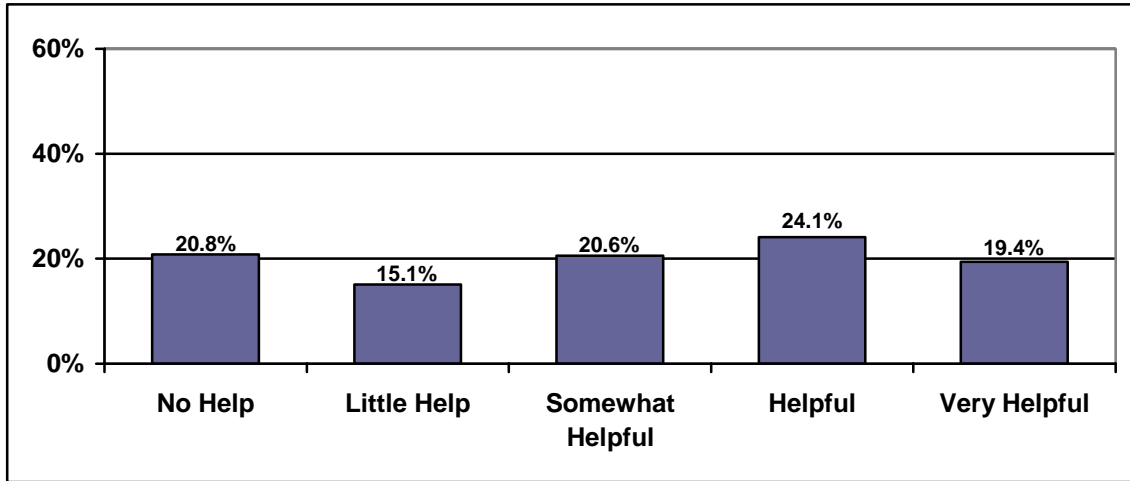


Figure 25

**Helpfulness of CAHs' Most Important Organizational Arrangement in
Obtaining Technical Assistance
(n=404)**

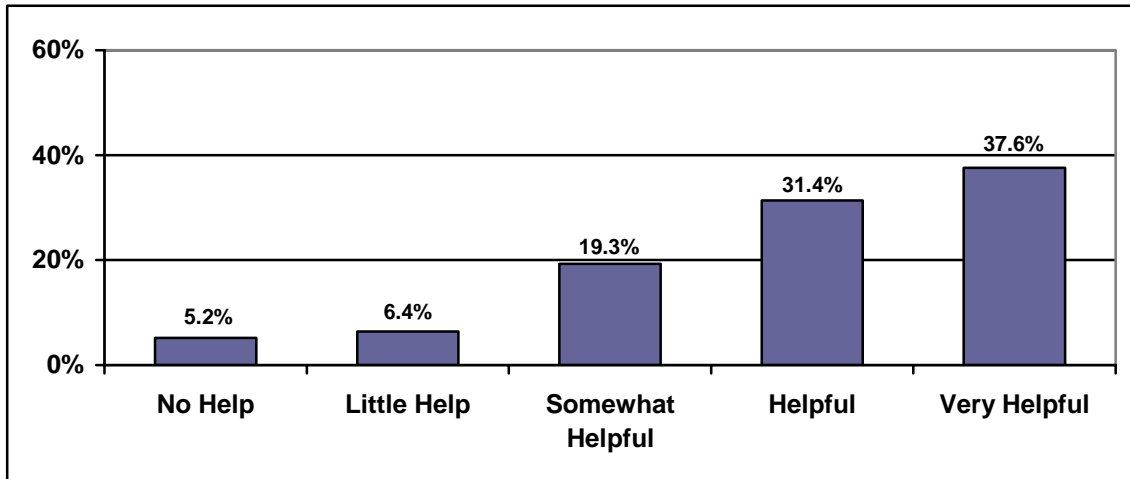


Figure 26

**Helpfulness of CAHs' Most Important Organizational Arrangement in Improving QA/QI Process and Outcomes
(n=403)**

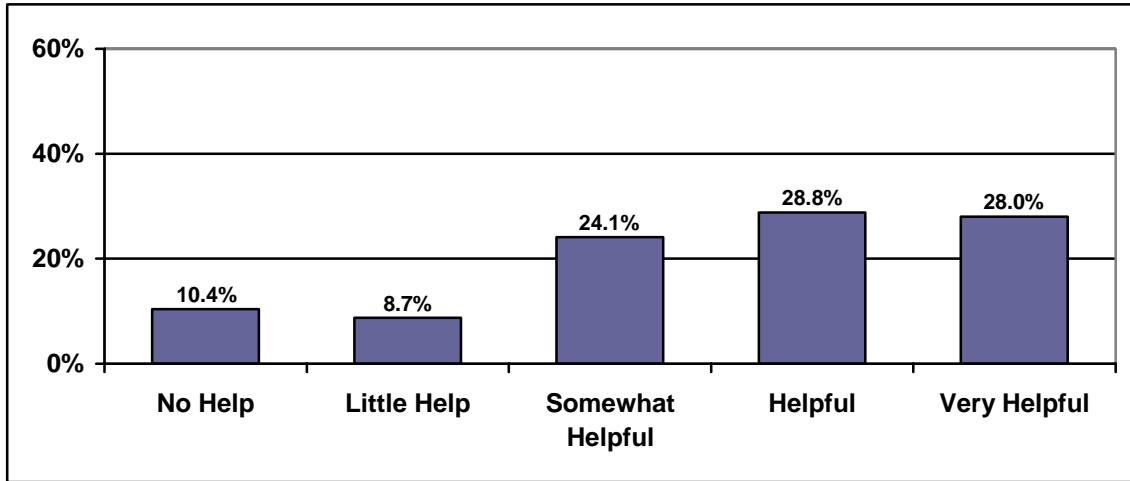


Figure 27

**Helpfulness of CAHs' Most Important Organizational Arrangement in Improving Staff Recruitment and Retention
(n=398)**

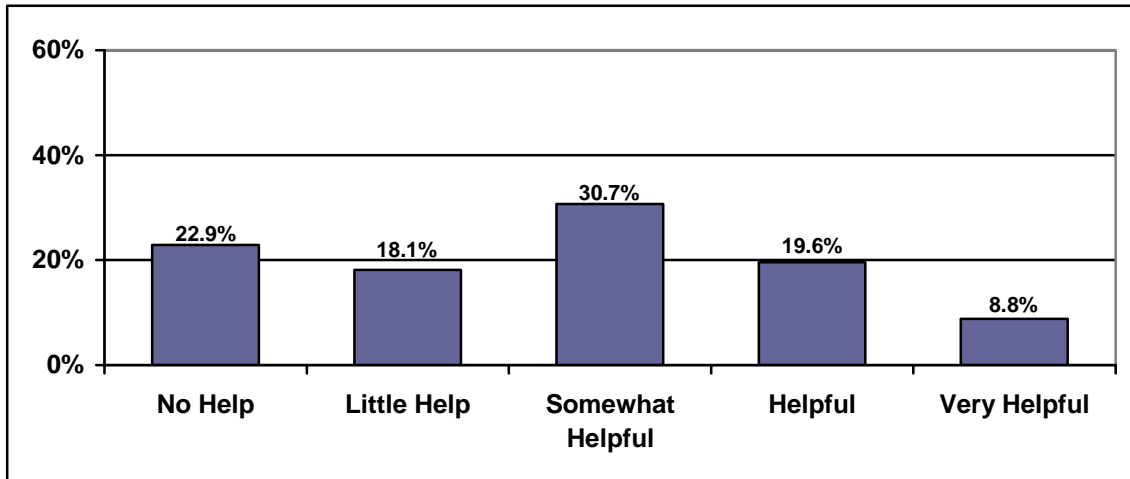


Figure 28

**Helpfulness of CAHs' Most Important Organizational Arrangement in
Acquiring New Technologies/Equipment
(n=403)**

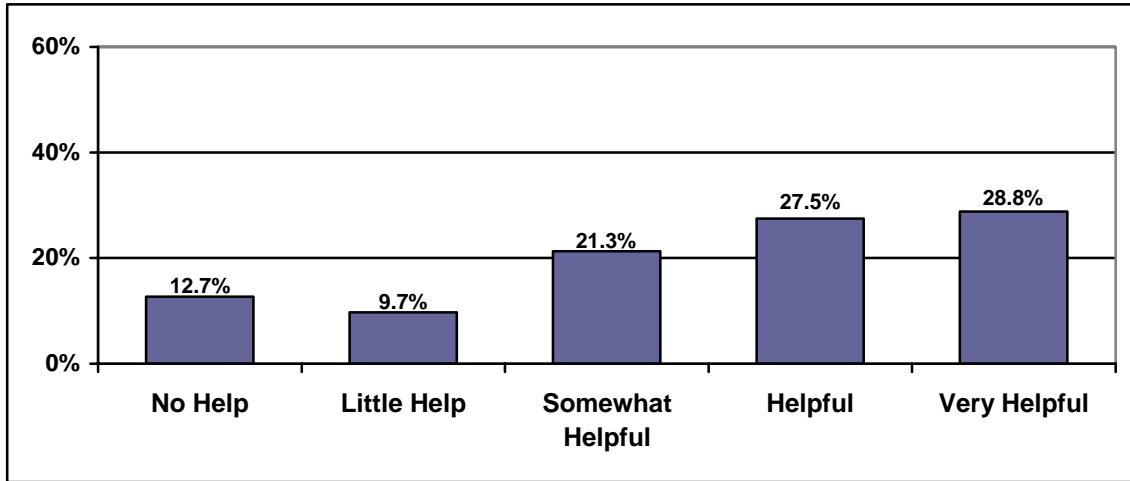


Figure 29

**Helpfulness of CAHs' Most Important Organizational Arrangement in
Obtaining Access to Capital Resources
(n=402)**

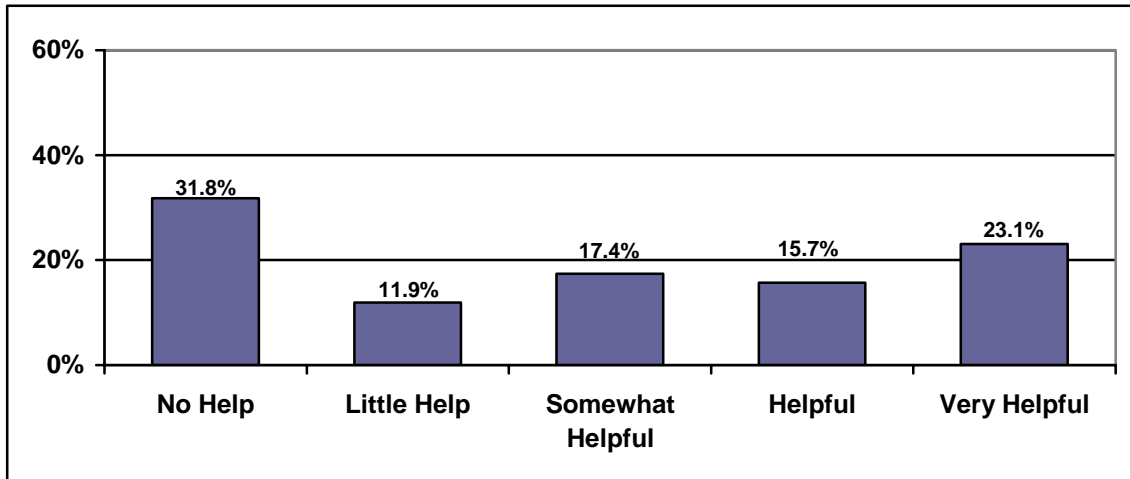


Figure 30

**Helpfulness of CAHs' Most Important Organizational Arrangement in Strengthening Overall Market Position
(n=401)**

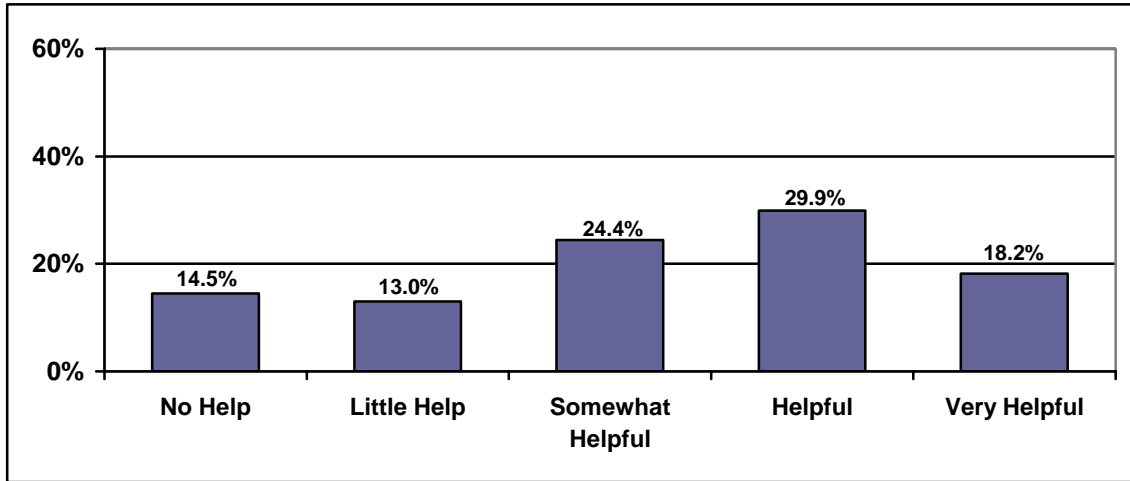
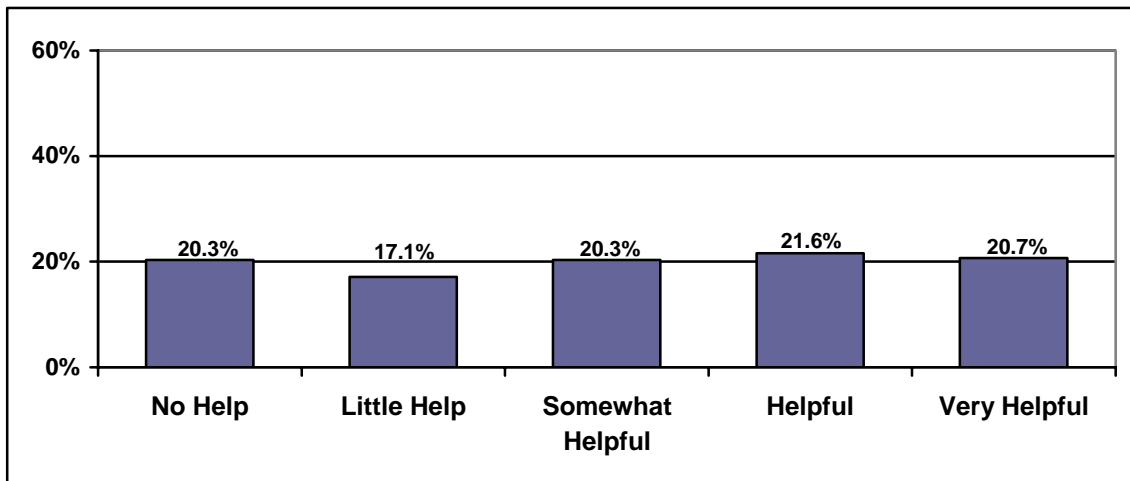


Figure 31

**Helpfulness of CAHs' Support Hospital Relationship
(n=473)**



C. Quality and Patient Safety

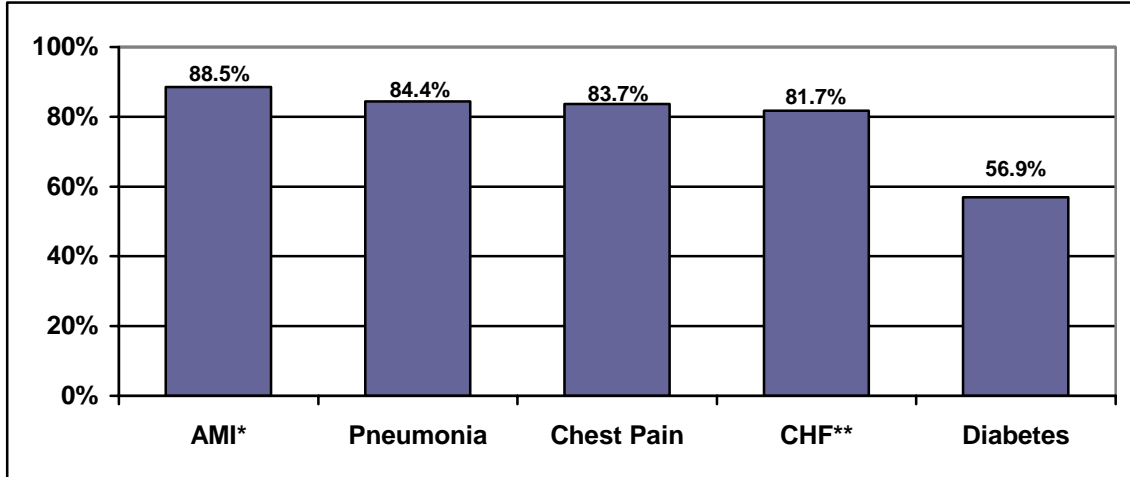
CAHs were asked about their activities and experiences in the area of quality improvement and patient safety, including their use of standardized protocols or clinical guidelines for the treatment of patients with several conditions, collection and use of quality-related data, and assistance to support quality improvement activities from their Medicare QIO, state hospital association, and support hospital (Figures 32-34, Tables 6-8). The CAHs were also asked about their implementation of patient safety initiatives, pharmacist staffing, and use of computer software to improve medication safety (Figure 35, Tables 9-12).

National Data Trends

- The majority of CAHs report using standardized protocols or clinical guidelines for the care of patients with acute myocardial infarction, pneumonia, chest pain, and congestive heart failure. About half report using protocols for care of patients with diabetes, which is more commonly treated in ambulatory care settings.
- The majority of CAHs report collecting data on quality measures or indicators and using this data internally to improve care. Over half of CAHs report using their quality data for public reporting. This trend has positive implications for CAH participation in the National Voluntary Hospital Reporting Initiative, although sample size and measurement issues remain concerns for many small rural facilities.
- CAHs are receiving quality improvement assistance through relationships with Medicare Quality Improvement Organizations, state hospital associations, and support hospitals.
- The majority of CAHs are implementing patient safety initiatives to reduce the risk of health care-acquired infections, eliminate wrong-site/patient/procedure surgery, improve the safety of using high-alert medications and improve the effectiveness of communication among caregivers.
- The majority of CAHs (63%) have a pharmacist on site for less than 40 hours per week. CAHs use a variety of resources for after-hours consultation with a pharmacist when needed.

Figure 32

**CAHs' Use of Standardized Protocols/Clinical Guidelines
(n=471)**

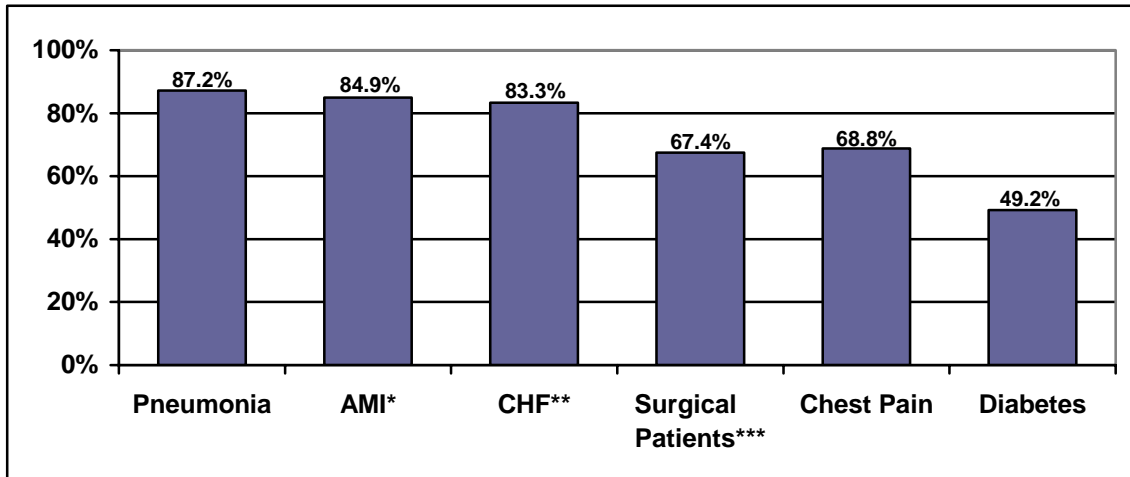


*Acute Myocardial Infarction/Heart Attack

**Congestive Heart Failure

Figure 33

**CAHs' Collection of Data on Quality Measures/Indicators
(n=467)**



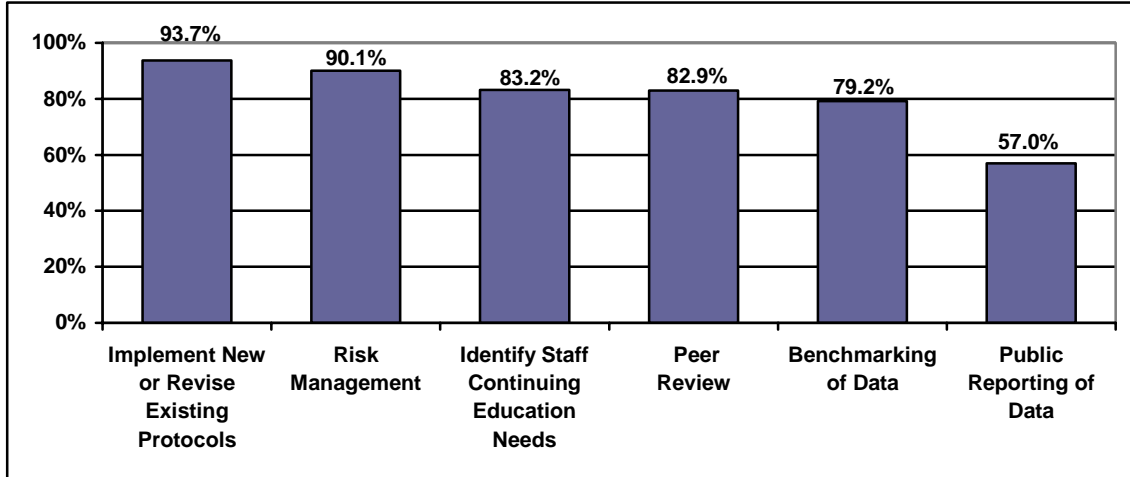
*Acute Myocardial Infarction/Heart Attack

**Congestive Heart Failure

*** (e.g. appropriate antibiotic prophylaxis) – This question was only asked of CAHs that provide surgical services.

Figure 34

**CAHs' Uses of Quality Measurement Data
(n=447)***



*CAHs that did not report collecting any quality data were not asked about their uses of the data.

Table 6

**Quality Improvement Assistance Provided to CAHs by
Medicare Quality Improvement Organizations (QIOs)
(n=463)**

Guidelines/Protocols	81.1%
QI continuing education for staff	76.0%
Assistance with data collection and analysis	73.0%
Help implementing specific interventions to improve patient care	48.0%
A forum for working with other CAHs on quality improvement	42.6%
Peer review	40.4%

Table 7

**Quality Improvement Assistance Provided to CAHs by
State Hospital Associations
(n=472)**

QI continuing education for staff	74.2%
Assistance with data collection and analysis	66.3%
A forum for working with other CAHs on quality improvement	65.6%
Guidelines/Protocols	47.2%
Help implementing specific interventions to improve patient care	32.8%

Table 8

**Quality Improvement Assistance Provided by CAHs' Support Hospitals
(n=473)**

QI continuing education for staff	55.6%
Guidelines/Protocols	54.3%
Help implementing specific interventions to improve patient care	45.7%
Assistance with data collection and analysis	42.5%
A forum for working with other CAHs on quality improvement	36.2%

Table 9

**CAHs' Implementation of Patient Safety Initiatives in
Joint Commission on Accreditation of Healthcare Organizations (JCAHO)
National Patient Safety Goal Areas
(n=473)**

Improving effectiveness of clinical alarm systems	55.4%
Improving accuracy of patient identification	64.1%
Improving safety of using infusion pumps	68.4%
Improving effectiveness of communication among caregivers	74.0%
Improving safety of using high-alert medications	76.8%
Eliminating wrong-site/patient/procedure surgery	77.8%
Reducing risk of health care-acquired infections	87.5%

* This question was only asked of CAHs that provide surgical services.

Table 10

**Factors That Limit, Support or Have No Impact on CAHs' Ability to
Implement Patient Safety Interventions
(n=473)**

Factors	Limit	Support	No Impact
Financial resources	55.3%	17.9%	26.8%
Staff time	53.8%	19.2%	26.8%
Technology needed to implement patient safety interventions	52.1%	29.1%	18.4%
Staff technical expertise	38.6%	27.9%	33.5%
Information on effective interventions for rural hospitals	27.3%	26.6%	46.1%

Figure 35

**Pharmacist Hours Per Week on Site at CAH
(n=472)**

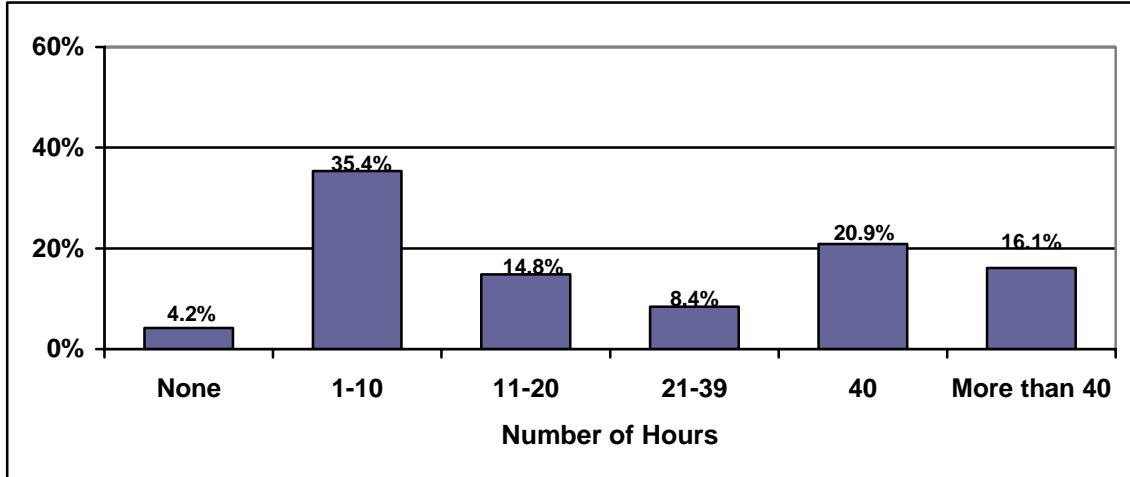


Table 11

**CAHs' Resources for After-Hours Consultation with Pharmacist
(n=474)**

Staff pharmacist on call	65.0%
Retail pharmacist in community	49.4%
Pharmacist at another hospital	47.7%
Other resources (e.g., contract/consultant pharmacist, retail pharmacist in another community)	10.2%

Table 12

**CAHs' Use of Pharmacy Computer Software
(n = 435)**

To determine appropriate medication doses	52.6%
To screen for potential adverse drug events	61.2%

D. Access to Capital

CAHs were asked about their capital needs to address fire and life safety code issues and their other immediate capital needs with a cost of at least \$250,000 that are essential for maintaining safe and efficient operations (Tables 13-14). They were also asked about their attempts over the last two years to obtain funding for major hospital projects, including public and/or private loan funds and non-loan-related capital such as grants, contributions, fund raising, gifts, or municipal support (Tables 15-16).

National Data Trends

- Nationally, 29% of CAHs need capital to address fire and life safety code issues. The most frequently reported needs are for suppression systems, general physical plant, detection systems, and structural barriers.
- 42% of CAHs have other immediate capital needs. The most frequently reported needs are to remodel or expand the hospital plant or clinic, and for clinic equipment.
- CAHs’ capital needs to address fire and life safety code issues and other immediate capital needs total over \$822 million.
- Since conversion, 42% of CAHs have attempted to secure one or more loans for capital needs. The majority (96%) of these CAHs succeeded in obtaining a loan.

Table 13

**CAHs’ Fire and Life Safety Code Issues and Mean Costs
(n=473)**

Have fire and life safety code issues	29.0%
Costs of addressing code issues	(n=129)
Mean	\$1.40 million
Range	\$50-\$20 million
Standard Deviation	\$3.80 million

Table 14

**CAHs' Other (Non-Fire and Life Safety Code)
Immediate Capital Needs and Mean Costs
(n=474)**

Have other immediate capital needs (e.g., general physical plant; clinical equipment; renovate/new clinic or administrative space; develop/expand long-term care capacity)	42.4%
Costs of addressing need #1	(n=199)
Mean	\$2.38 million
Range	\$250,000 - \$23 million
Standard Deviation	\$3.98 million
Costs of addressing need #2	(n=89)
Mean	\$1.86 million
Range	\$250,000 - \$16 million
Standard Deviation	\$2.99 million

Table 15

**CAHs' Loans to Meet Capital Needs Over Past Two Years
(n=474)**

Attempted to secure one or more loans	41.6%
Succeeded in securing one or more loans	(n=178) 95.5%
<u>Source of Loan #1</u>	(n=169)
Local lender	52.1%
State sponsored program	8.9%
Federal sponsored program	13.0%
Private source (outside the area)	20.7%
Health care system	5.3%
<u>Amount of Loan #1</u>	(n=168)
Mean	\$2.0 million
Range	\$11,000-\$26 million
Standard Deviation	\$3.49 million
<u>Source of Loan #2</u>	(n=50)
Local lender	50.0%
State sponsored program	8.0%
Federal sponsored program	6.0%
Private source (outside the area)	34.0%
Health care system	2.0%
<u>Amount of Loan #2</u>	(n=49)
Mean	\$836,245
Range	\$8,000 - \$7.0 million
Standard Deviation	\$1.23 million

Table 16

**Non-Loan Funds for Major Capital Projects of \$250,000 or More
(n=472)**

Obtained non-loan funds for major capital projects	22.3%
Type of funds	(n=105)
Grants	59.1%
Contributions/gifts	53.3%
City, town, county funds	22.1%
Other sources (e.g., state funds, general obligation bonds, reserves)	12.4%

E. Community Impact

CAHs were asked about the relationships between the hospital and its surrounding community and area providers, including community outreach activities, needs assessments, community services, the type of relationship with other local entities not owned by the hospital, and services for special populations (Figures 36-37, Tables 17-19). They were also asked about their provision of free care/bad debt and receipt of supplemental funding to support provision of free or reduced cost health care (Tables 20-21).

National Data Trends

- The majority of CAHs conduct community outreach activities, including health screenings, health information booths and community and/or worksite health promotion programs. One-fourth of CAHs have free clinics and just under one-third distribute free or reduced cost medications.
- CAHs have a wide range of relationships with local entities. Their most common formal relationships are with hospice agencies, rehabilitation services providers, and private practice physicians.
- The amount written off for free care and bad debt varies widely across CAHs. Supplemental funding to support this care is limited. Less than one-third of CAHs receive disproportionate share funds and just over one-quarter receive local, municipal, or county support.

Figure 36

**CAH Community Outreach Activities and Community Needs Assessment
(n=473)**

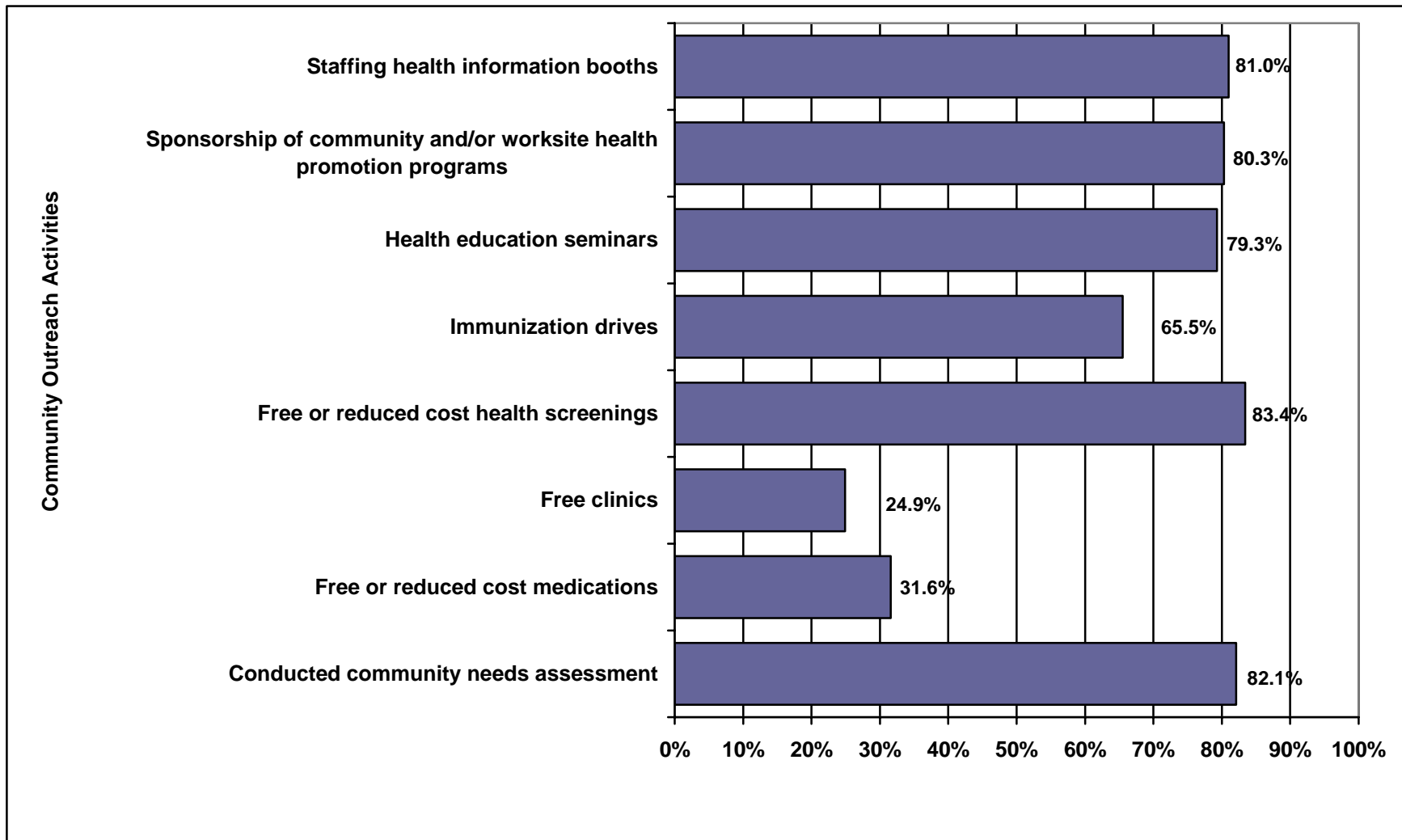


Figure 37

**CAHs' Provision of Community Services
(n=473)**

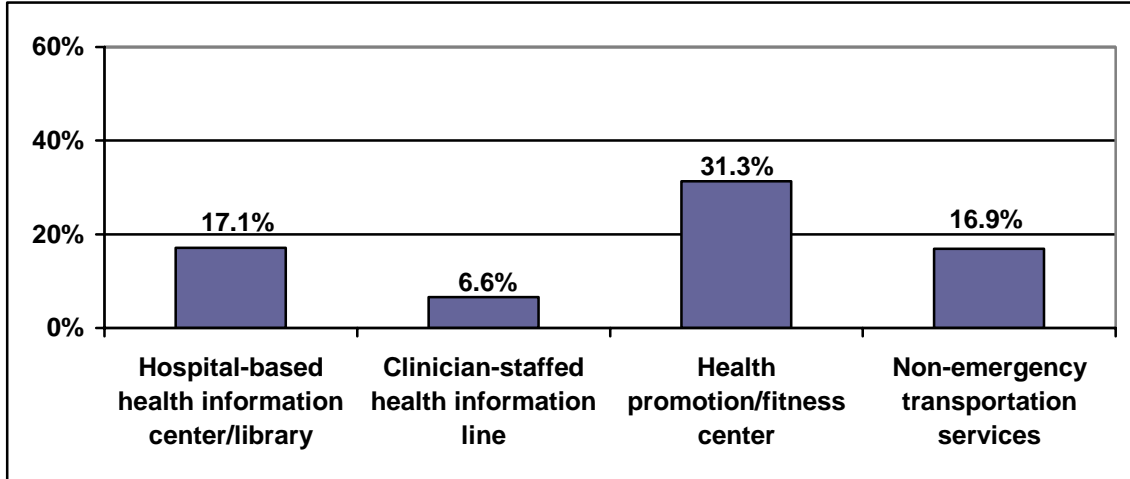


Table 17

CAHs' Relationships with Other Local Entities Not Owned by the Hospital (n=472)*					
	n	Formal Contract	Written Agreement	Informal Agreement	Not Linked
Hospice	401	56.4%	11.2%	7.7%	24.7%
EMS	375	25.1%	15.7%	31.5%	27.7%
Schools	472	20.6%	11.2%	32.6%	35.6%
Health department	457	23.0%	6.8%	32.6%	37.6%
Rehabilitation services	284	54.2%	5.6%	1.1%	39.1%
Mental health agency	456	21.9%	9.7%	20.4%	48.0%
Private practice physicians	444	36.7%	6.8%	6.1%	50.5%
Dentist	212	26.1%	10.6%	10.2%	53.2%
Home health agency	308	21.1%	8.1%	17.5%	53.3%
Social services agency	451	13.3%	6.0%	20.2%	60.5%
FQHC, CHC, RHC	269	12.3%	4.5%	10.0%	73.2%
United Way/equivalent	430	0.9%	1.2%	10.2%	87.7%
Head Start	434	3.7%	2.3%	5.5%	88.5%
Legal services	464	3.7%	1.9%	4.3%	90.1%

*CAHs did not respond to a question if the entity did not exist in the local area or was owned by the hospital.

Table 18

**CAH Services to Facilitate Caring for Specific Populations
(n=472)**

Language interpreters	75.4%
Translated printed materials	63.5%
Cultural/language competency training	18.1%
Other (e.g., sign language, TTY/TDD, AT&T phone interpreter line, bilingual staff)	18.1%

Table 19

**CAH Write-off for Free Care and Bad Debt in Last Fiscal Year
(n=461)**

Mean	\$588,418
Range	\$0 - \$5.0 million
Standard Deviation	\$684,404

Table 20

**CAHs' Receipt of Supplemental Funding to Support Provision
of Free or Reduced Cost Health Care
(n=471)**

Community/Migrant Health Center grants	0.6%
Other federal and state grants	6.4%
Disproportionate Share Hospital payments	30.3%
Local/Municipal/County support	25.7%
Private funding and grants	11.3%

Appendix A

CAH Survey Respondents by State

State	Number of CAHs	Percent	State	Number of CAHs	Percent
AL	1	0.21	NC	9	1.90
MA	1	0.21	OH	9	1.90
SC	1	0.21	OR	9	1.90
UT	2	0.42	WA	9	1.90
VA	2	0.42	AR	10	2.11
VT	2	0.42	CA	10	2.11
AK	4	0.84	MI	10	2.11
HI	4	0.84	KY	11	2.32
LA	4	0.84	OK	11	2.32
NH	4	0.84	ID	12	2.53
NM	4	0.84	CO	14	2.95
NV	4	0.84	WI	15	3.16
WV	4	0.84	GA	18	3.80
WY	4	0.84	MT	18	3.80
ME	5	1.05	SD	18	3.80
NY	5	1.05	IL	19	4.01
AZ	6	1.27	TX	19	4.01
FL	6	1.27	ND	21	4.43
MO	6	1.27	IA	27	5.70
PA	6	1.27	NE	35	7.38
TN	6	1.27	KS	36	7.60
MS	8	1.69	MN	36	7.60
IN	9	1.90	TOTAL	474	100.00