



Healthcare Quality Reporting Program

STEERING COMMITTEE

1/27/14, 3-4:30pm

Department of Health, Room 401

Facilitation: Rosa Baier, MPH and Samara Viner-Brown, MS

Recorder: Ann Messier

Voting Members

- | | | |
|---|--|--|
| <input type="checkbox"/> Ted Almon | <input type="checkbox"/> Michael Fine, MD (<i>Chair</i>) | <input type="checkbox"/> Nicholas Oliver, MPA, CAE |
| <input type="checkbox"/> David Ashley, MD | <input type="checkbox"/> Neal Galinko, MD, MS, FACP | <input type="checkbox"/> Paula Parker, LCSW |
| <input type="checkbox"/> Rep. David Bennett | <input type="checkbox"/> Diane Gallagher | <input type="checkbox"/> Donna Policastro, NP, RCN |
| <input type="checkbox"/> Virginia Burke, Esq. | <input type="checkbox"/> Deidre Gifford, MD, MPH | <input type="checkbox"/> Louis Pugliese |
| <input type="checkbox"/> Tracey Cohen, MD | <input type="checkbox"/> Linda McDonald, RN | <input type="checkbox"/> Gina Rocha, RN, MPH |
| <input type="checkbox"/> Bradley Collins, MD | <input type="checkbox"/> Jim Nyberg | |

Agenda

- 3:00pm **Open Meeting**
Michael Fine, MD, Chair
- Welcome and meeting objectives
 - 2014 meeting dates
 - Previous meeting's action items:
 - Improve healthcare worker flu vaccination data collection (Rosa/Emily)
 - Work with HAI and NH subcommittees to publish Summary Reports (Rosa/Emily)
 - Share 2014 HIT Survey with the committee (Rosa/Emily)
 - Web analytics (see handouts)
- 3:05pm **HIT Survey**
Rosa Baier, MPH, Facilitator
Emily Cooper, MPH, Facilitator
- Changes to process:
 - Connection to Licensure
 - Process for alternating years
 - Survey periods for physicians, PAs and APRNs
 - Discussion of revisions:
 - Which stakeholders participated in the revision process?
 - What changes did we incorporate?
 - How do the changes affect this year's public report?
 - What additional changes will occur if we receive Medicaid matching funds?
 - Next steps

3:25pm Nursing Home Reporting*Rosa Baier, MPH, Facilitator**Emily Cooper, MPH, Facilitator*

- Capabilities survey:
 - Intent and key data elements
 - ED and hospital case manager guide (from Healthcentric Advisors)
- Reports:
 - Summary Report (see handout)
 - My InnerView's Satisfaction Summary (see handout)
- Next steps

3:55pm Treatment Equality Measures*Rosa Baier, MPH**Emily Cooper, MPH*

- Program's charge: To publish comparative information (quality measures or satisfaction) about facilities or physicians to inform patient decision making
- Background information:
 - Institute of Medicine report from Dr. Fine (attachment)
 - AHRQ state snapshot: <http://nhqrnet.ahrq.gov/inhqrdr/state/select>
 - AHRQ data query: <http://nhqrnet.ahrq.gov/inhqrdr/data/query>
- Discussion of reporting inequality:
 - How should we define treatment inequality or disparities?
 - How can inequality further the program's goals?
 - What measure(s) could we report at the facility or physician level?
 - What data source(s) exist to support reporting?
 - How should we prioritize reporting inequality relative to existing reports?
 - Could we relate inequality to healthcare-acquired infections (the CDC funding)?
 - What should we *cease* reporting if we were to add a new report?

4:15pm Other Business/Announcements*Rosa Baier, MPH**Emily Cooper, MPH**Samara Viner-Brown, MS*

- Program updates:
 - All-Payor Claims Database meeting
 - Hospital Summary Report (see handout)
 - Hospital Hand Hygiene Survey and Report
 - Nursing Home Resident and Family Satisfaction Report
- Open Forum
- Action items
- **Next meeting: 3/24/14**

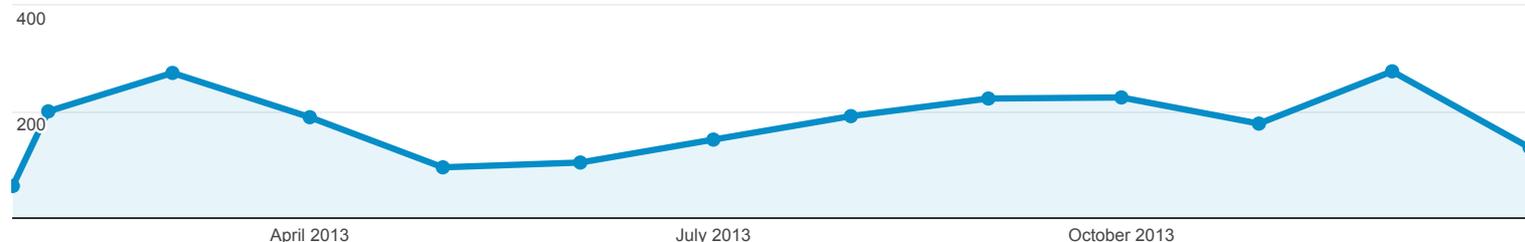
Main Page

Jan 24, 2013 - Jan 23, 2014

All Visits
0.06%

Report Tab

Pageviews



Month of Year	Pageviews	Unique Pageviews	Avg. Time on Page	% Exit	Bounce Rate
	2,292 % of Total: 0.06% (3,555,748)	1,511 % of Total: 0.06% (2,383,411)	00:00:50 Site Avg: 00:01:45 (-52.23%)	22.69% Site Avg: 36.25% (-37.41%)	51.49% Site Avg: 49.23% (4.58%)
1. 201301	60	46	00:00:27	18.33%	28.57%
2. 201302	200	142	00:00:28	15.00%	42.86%
3. 201303	272	165	00:00:57	19.85%	40.58%
4. 201304	189	125	00:00:21	20.11%	51.43%
5. 201305	95	75	00:00:29	27.37%	54.55%
6. 201306	104	70	00:00:49	19.23%	33.33%
7. 201307	147	99	00:00:54	24.49%	66.67%
8. 201308	191	121	00:00:53	26.18%	56.25%
9. 201309	224	122	00:00:49	18.30%	38.64%
10. 201310	226	149	00:00:54	20.35%	36.17%
11. 201311	177	110	00:01:24	15.25%	31.03%
12. 201312	275	195	00:00:50	44.00%	77.42%
13. 201401	132	92	00:01:15	15.15%	30.00%

Rows 1 - 13 of 13

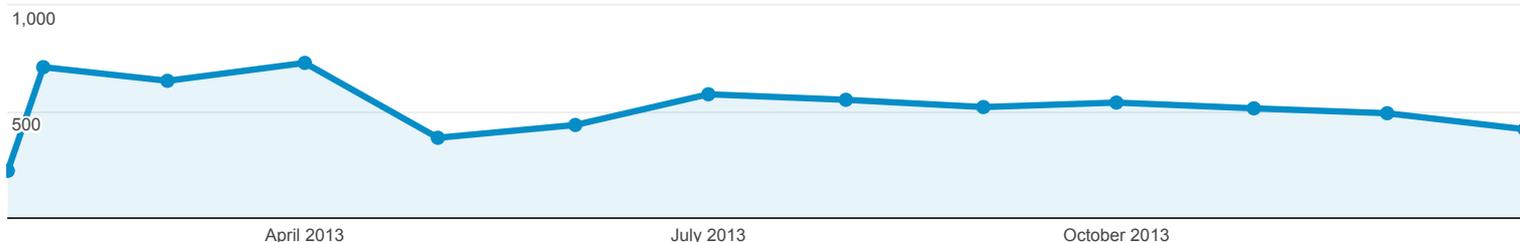
Nursing Home Quality

Jan 24, 2013 - Jan 23, 2014

All Visits
0.19%

Month

Pageviews



Month of Year	Pageviews	Unique Pageviews	Avg. Time on Page	% Exit	Bounce Rate
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1. 201301	221	116	00:01:51	36.20%	52.31%
2. 201302	707	373	00:02:07	34.94%	54.23%
3. 201303	643	377	00:01:38	41.21%	56.11%
4. 201304	727	400	00:01:31	37.55%	55.28%
5. 201305	376	222	00:01:51	42.02%	55.46%
6. 201306	436	272	00:02:01	40.60%	48.18%
7. 201307	580	366	00:02:16	44.14%	55.14%
8. 201308	554	358	00:02:25	45.31%	57.14%
9. 201309	520	312	00:02:00	40.58%	48.34%
10. 201310	541	319	00:02:16	43.81%	53.29%
11. 201311	514	319	00:02:35	46.50%	56.41%
12. 201312	491	291	00:02:29	41.75%	50.66%
13. 201401	416	241	00:01:47	43.03%	64.06%

Rows 1 - 13 of 13

Home Health Reports

Jan 24, 2013 - Jan 23, 2014

All Visits
0.03%

Report Tab



Month of Year	Pageviews	Unique Pageviews	Avg. Time on Page	% Exit	Bounce Rate
	990 % of Total: 0.03% (3,555,748)	621 % of Total: 0.03% (2,383,411)	00:01:14 Site Avg: 00:01:45 (-29.77%)	28.89% Site Avg: 36.25% (-20.30%)	55.81% Site Avg: 49.23% (13.37%)
1. 201301	46	17	00:00:34	6.52%	50.00%
2. 201302	77	41	00:01:18	27.27%	77.78%
3. 201303	102	59	00:01:08	22.55%	35.29%
4. 201304	76	46	00:01:21	26.32%	75.00%
5. 201305	58	41	00:01:10	24.14%	42.86%
6. 201306	71	52	00:00:35	36.62%	35.71%
7. 201307	70	54	00:01:29	34.29%	66.67%
8. 201308	85	55	00:01:12	28.24%	45.00%
9. 201309	123	73	00:01:28	30.08%	50.00%
10. 201310	72	48	00:01:50	36.11%	61.54%
11. 201311	109	68	00:01:42	33.03%	72.73%
12. 201312	48	34	00:00:44	31.25%	66.67%
13. 201401	53	33	00:00:41	32.08%	42.86%

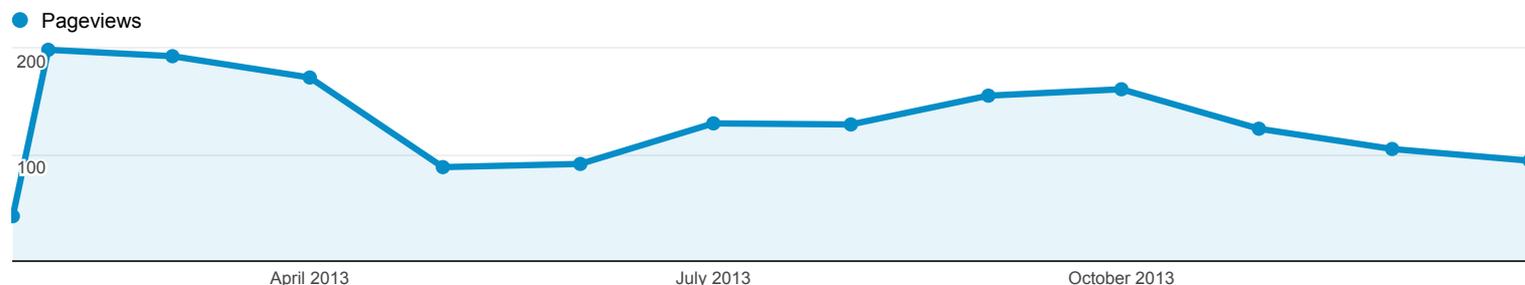
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Hospital Reports

Jan 24, 2013 - Jan 23, 2014

All Visits
0.05%

Report Tab



Month of Year	Pageviews	Unique Pageviews	Avg. Time on Page	% Exit	Bounce Rate
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1. 201301	42	28	00:00:24	26.19%	50.00%
2. 201302	198	146	00:01:11	42.42%	68.60%
3. 201303	192	133	00:00:56	34.38%	53.62%
4. 201304	172	120	00:00:46	36.63%	53.62%
5. 201305	88	67	00:01:06	48.86%	69.77%
6. 201306	91	65	00:00:45	35.16%	65.79%
7. 201307	129	97	00:00:59	42.64%	68.00%
8. 201308	128	93	00:00:31	46.88%	66.67%
9. 201309	155	101	00:00:52	29.03%	72.97%
10. 201310	161	106	00:01:01	32.92%	54.17%
11. 201311	124	87	00:01:43	37.10%	63.41%
12. 201312	105	80	00:01:42	42.86%	65.12%
13. 201401	94	63	00:00:55	29.79%	52.00%

Rows 1 - 13 of 13

RHODE ISLAND

2013

EXECUTIVE SUMMARY

Prepared by



My InnerView by
NATIONAL RESEARCH
Corporation

This report provides information needed to initiate quality improvement efforts, track referral sources, improve staff recruitment and retention, and evaluate outcomes of previous initiatives.

Includes:

RESIDENT SATISFACTION

FAMILY SATISFACTION

Published date: December 17, 2013

FOREWORD

This Executive Summary Report presents aggregate, i.e., *statewide* measures of customer satisfaction for Rhode Island nursing facilities. Results are displayed for resident and family satisfaction surveys conducted by My InnerView in 2013, with comparisons to similar data reported for 2012 and 2011. All licensed nursing facilities in the state contract for these surveys as a requirement of state law.

My InnerView conducts these surveys each year in collaboration with Healthcentric Advisors as part of the Rhode Island Health Care Reporting Program administered by the RI Department of Health. This report is a companion to a satisfaction ratings report of individual nursing facilities in the state. Both reports and further information about these surveys and how they are conducted can be viewed at <http://www.health.ri.gov/nursinghomes/about/quality/> .

National Research Corporation (NASDAQ: NRCIB) is the nation's largest provider of performance measurement and benchmarking in the senior services sector. My InnerView (MIV) from National Research currently conducts regular customer and staff satisfaction surveys in nearly half of the nation's long term care facilities, and possesses the largest private database of nursing home performance in existence. These surveys and other My InnerView evidence-based performance tools and programs are designed to assist service providers, government policy makers, and consumers in their common efforts to enhance the quality and value available to the growing number of Americans who need reliable and affordable health and supportive services in nursing homes and other residential settings.

My InnerView produces other state-based reports and a national report each year on nursing home customer and employee satisfaction levels. The 2013 National Research Report: [Empowering Customer-Centric Healthcare for the Post-Acute Providers](#) and previous national reports can be viewed at <http://www.myinnerview.com>.

Satisfaction Survey Participation in 2013 –Rhode Island Nursing Facilities

Survey Type	# Facilities participating	est. % of State nursing facilities	# Survey respondents	Response rate	MIV national response rate*
Resident	88	100%	2,345	70%	55%
Family	89	100%	1,913	35%	34%

*most recent 12 month averages

DISTRIBUTION: Each participating facility provided My InnerView with the number of resident and family surveys needed. Individually sealed packets containing a self-addressed, postage-paid return envelopes were sent to residents, family members or other

responsible parties as identified. The survey process was designed to communicate and ensure that response was voluntary, anonymous and confidential.

QUALITY ASSURANCE: Responses are electronically compiled into a database, analyzed for integrity, and subjected to a variety of statistical analyses.

RESULTS: Each facility has access to its satisfaction survey and other performance results on My InnerView's Web site. The results provide benchmark information enabling the facility to compare its performance to the average performance of all participating Rhode Island facilities and to My InnerView's nationwide database. For individual facilities, MIV provides a Priority Action Agenda that highlights from the satisfaction surveys those areas of performance that represent priority opportunities for quality improvement. A comparable Priority Action Agenda is included with this report based on the aggregate satisfaction survey results for all participating Rhode Island facilities.

RESIDENT AND FAMILY SATISFACTION SURVEY DOMAINS: These surveys included items grouped in four areas: (1) Global Satisfaction, (2) Quality of Life, (3) Quality of Care and (4) Quality of Service.

KEY FINDINGS

Global (Overall) Satisfaction Domain, Percentages Excellent or Good

My InnerView has recorded resident and family satisfaction levels in Rhode Island since 2007. The perceptions of direct users of nursing home care provide important guidance for continued quality improvement and examination of factors influencing their levels of satisfaction. These data have enabled the RI Department of Health to provide public performance ratings for nursing homes, assisting consumers with vital information drawn from the primary and unique experiences of actual customers.

- More nursing home residents participated in satisfaction surveys in 2013 than in any previous year. Ninety percent (91%) of resident survey respondents in 2013 gave an overall rating of "excellent" or "good," while the same percentage rated their willingness to recommend their facility to others as either excellent or good. Resident global ratings during the period remained at high levels reported in recent years, and exceeded the My InnerView national benchmarks for resident satisfaction when percentages of excellent and good ratings are combined.
- Ninety-two percent (92%) of family survey respondents gave an overall rating of excellent or good, with 91% indicating a strong willingness to recommend to others the facility where their loved one was receiving care and services. These rating percentages include a significantly higher proportion of "excellent"

responses as compared to contemporaneous My InnerView national and benchmarks. Moreover, the overwhelming majority of family survey respondents are individuals who frequently visit the nursing home where their relatives are in residence.

Users of this report will find value in noting both the similarities and differences between resident and family member respondents in their perceptions of areas of strength and weakness in the performance of the facilities. See the Quadrant Analysis in Chart 3 in both the resident and family report sections.

Weighted Average Scores, All Domains and Items

This report also displays weighted average scores for global satisfaction as well as for all other survey domains and items within the domains. These scores account for all respondent ratings, whether excellent, good, fair, or poor, on a scale of 100. Weighted average scores for any item correspond significantly to the percentages of respondents who give excellent ratings on that item.

Weighted average resident and family satisfaction ratings for Rhode Island nursing homes have been stable at a relatively high level over the last three years, and continue to exceed national benchmarks on all four of the survey's topical domains and on a large majority of individual survey items.

Geographic Differentiations

This report contains tables which separate weighted average satisfaction levels based on whether facilities were located in rural, suburban, or urban areas. While Rhode Island ratings do not vary widely by location, satisfaction levels for nursing home residents and families were lowest in urban communities. This pattern is consistent with survey findings in many other states.

Detailed charts included in this report provide item-specific results and comparisons pointing to priority areas for further improvement, and display benchmarked results against the My InnerView skilled nursing facility database numbering approximately 7,000 facilities in 2013.

WHAT'S INSIDE

RESIDENT SATISFACTION

CHART
NUMBER:

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ITEMS RANKED BY PERCENT "EXCELLENT" FOR 2013	2
QUADRANT ANALYSIS: STRENGTHS AND OPPORTUNITIES	3
ITEMS RANKED BY PERCENT "EXCELLENT" FOR 2011, 2012 AND 2013	4
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SKILLED NURSING RESIDENT SATISFACTION SURVEY REFERENCE

FAMILY SATISFACTION

CHART
NUMBER:

GLOBAL SATISFACTION AND RATINGS BY DOMAIN FOR 2013	1
ITEMS RANKED BY PERCENT "EXCELLENT" FOR 2013	2
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SKILLED NURSING FAMILY SATISFACTION SURVEY REFERENCE

RHODE ISLAND

RESIDENT SATISFACTION

	2013	2012	2011
RESPONSE RATE	70%	62%	65%
FACILITIES SURVEYED	88	85	84
SURVEYS RECEIVED	2,345	2,223	2,040

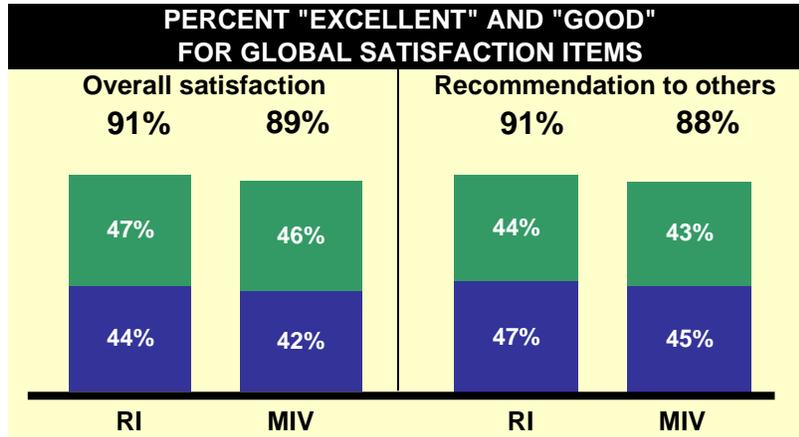


My InnerView by
NATIONAL RESEARCH
Corporation

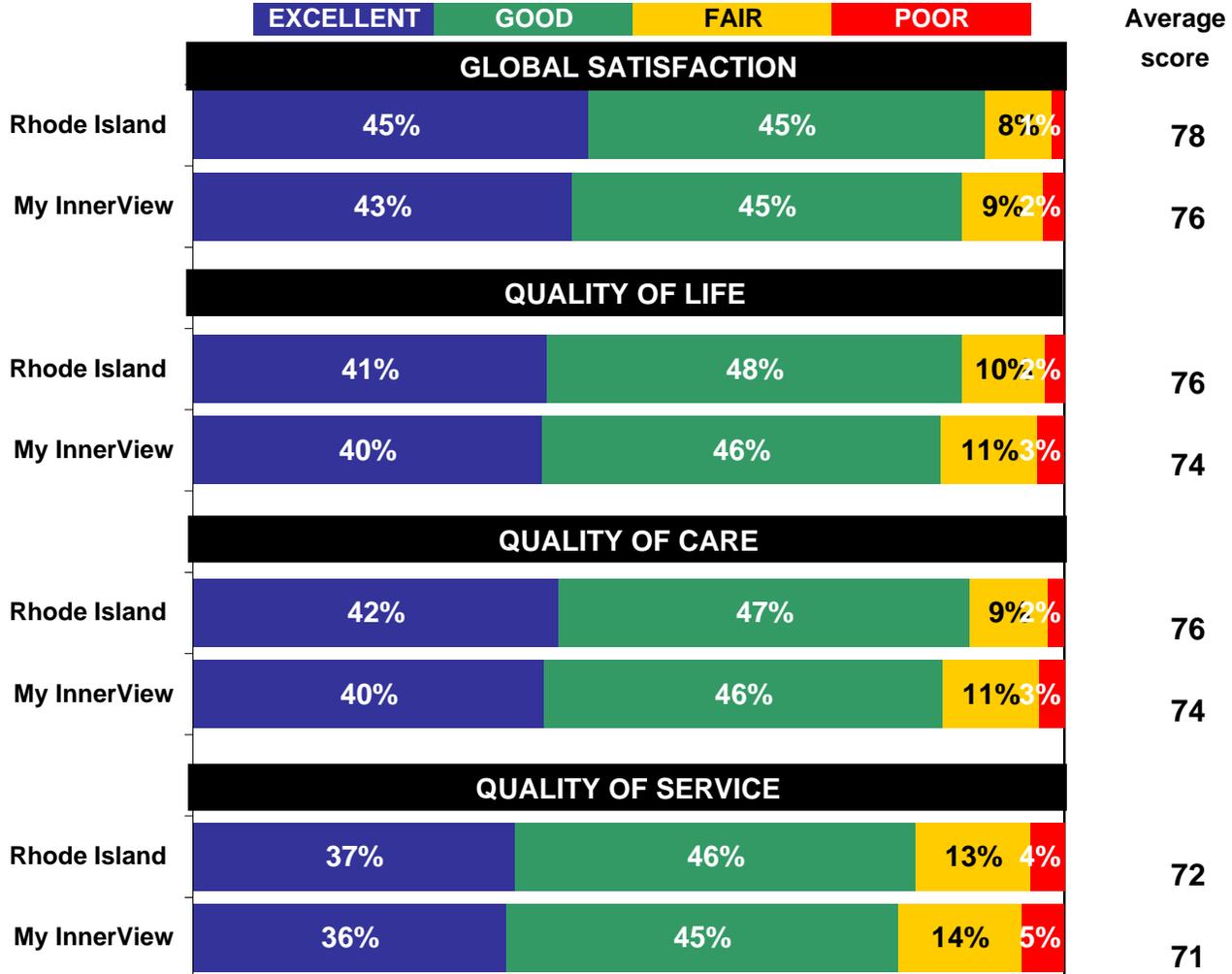
RHODE ISLAND

RESIDENT SATISFACTION

GLOBAL SATISFACTION AND RATINGS BY DOMAIN FOR 2013



(The total percentage listed may be higher or lower than individual rating totals due to rounding)



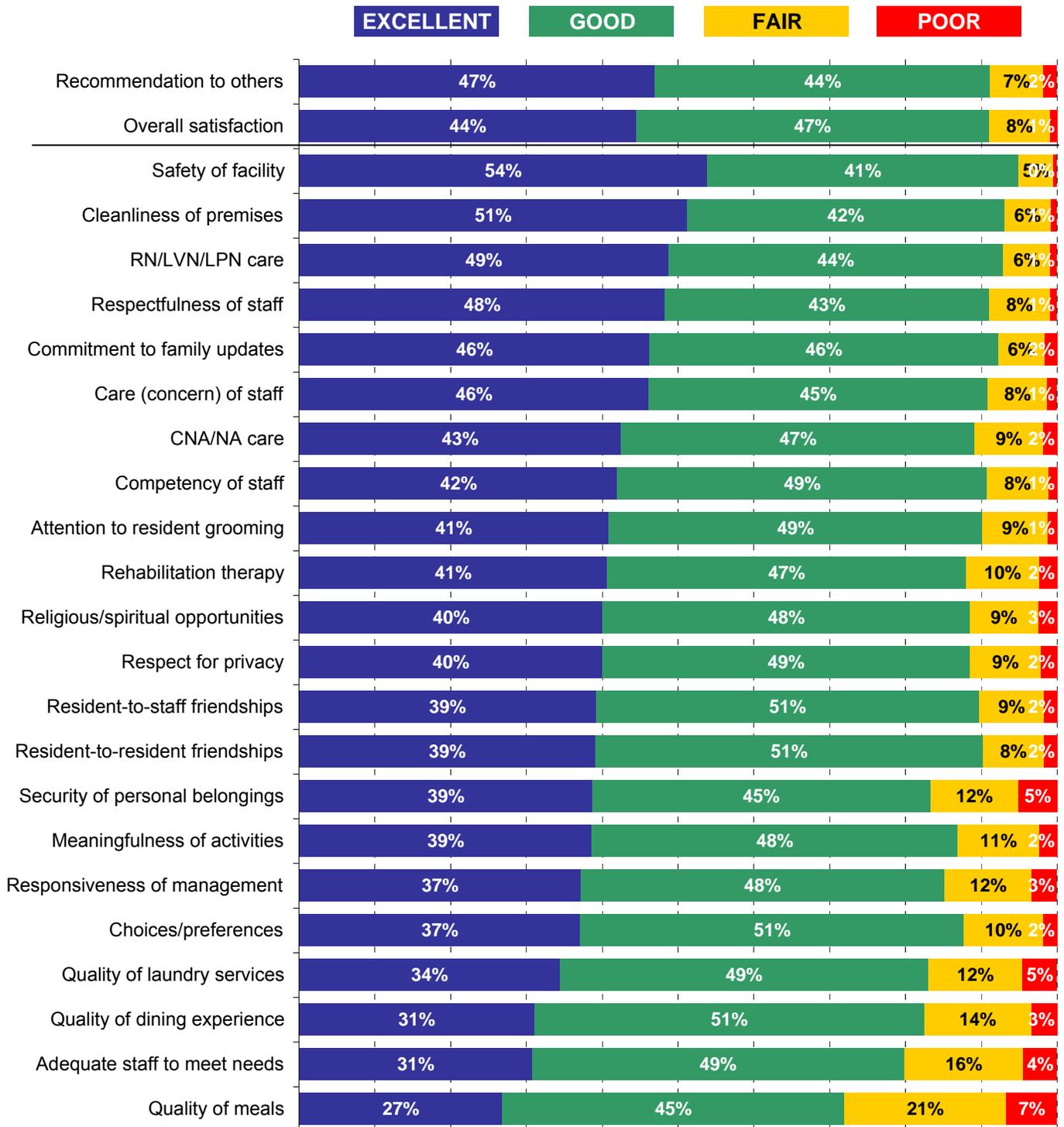
(May not total 100% due to rounding.)

RHODE ISLAND

RESIDENT SATISFACTION

ITEMS RANKED BY PERCENT "EXCELLENT" FOR 2013

2



Items are ranked from highest to lowest on the percent of responses rated "Excellent." The percentages reflect averages survey respondents. (May not total 100% due to rounding.) See chart 4 for comparison to prior years.

RHODE ISLAND

RESIDENT SATISFACTION

QUADRANT ANALYSIS: STRENGTHS AND OPPORTUNITIES

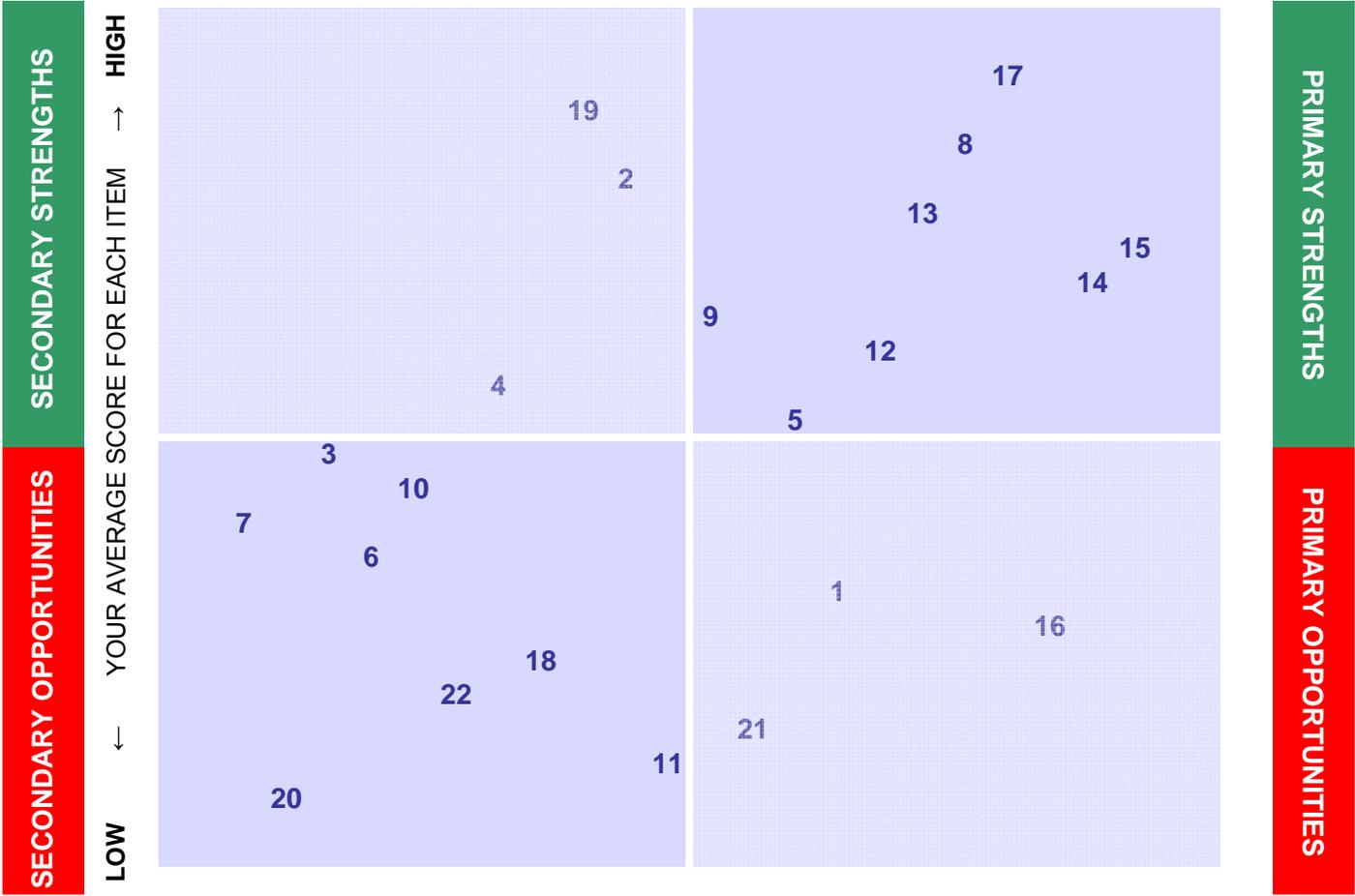
3

A

Quadrant A shows items of *lower* importance to "Recommendation" with a *higher* average score

Quadrant B shows items of *higher* importance to "Recommendation" with a *higher* average score

B



C

LOW ← IMPORTANCE TO RECOMMEND THIS FACILITY TO OTHERS → HIGH

D

Quadrant C shows items of *lower* importance to "Recommendation" with a *lower* average score

Quadrant D shows items of *higher* importance to "Recommendation" with a *lower* average score

The quadrant analysis plots the percentile rank of the average score on the satisfaction items against the percentile rank of the average "importance" score of each item and the question **What is your recommendation of this facility to others?** Items in the lower right quadrant are those that are most important to "Recommendation" but received the lowest scores.

See actual satisfaction items and report labels at end of section

RHODE ISLAND



SECONDARY STRENGTHS

Items with average scores above the midline but not as important to "Recommendation"

- 4 Resident-to-resident friendships
- 2 Respectfulness of staff
- 19 Cleanliness of premises



PRIMARY STRENGTHS

Items with average scores above the midline and more important to "Recommendation"

- 14 Competency of staff
- 15 Care (concern) of staff
- 5 Resident-to-staff friendships
- 12 Attention to resident grooming
- 13 Commitment to family updates
- 8 RN/LVN/LPN care
- 9 CNA/NA care
- 17 Safety of facility



SECONDARY OPPORTUNITIES

Items with average scores below the midline but not as important to "Recommendation"

- 11 Adequate staff to meet needs
- 18 Security of personal belongings
- 22 Quality of laundry services
- 20 Quality of meals
- 6 Meaningfulness of activities
- 10 Rehabilitation therapy
- 3 Respect for privacy
- 7 Religious/spiritual



PRIMARY OPPORTUNITIES

Items with average scores below the midline and more important to "Recommendation"

These are areas that represent a good opportunity for improvement.

PRIORITY ACTION AGENDA TM

The top FIVE items in Quadrant D (*Primary Opportunities*) comprise your Priority Action Agenda and provide a focus for improving willingness to recommend your facility to others.

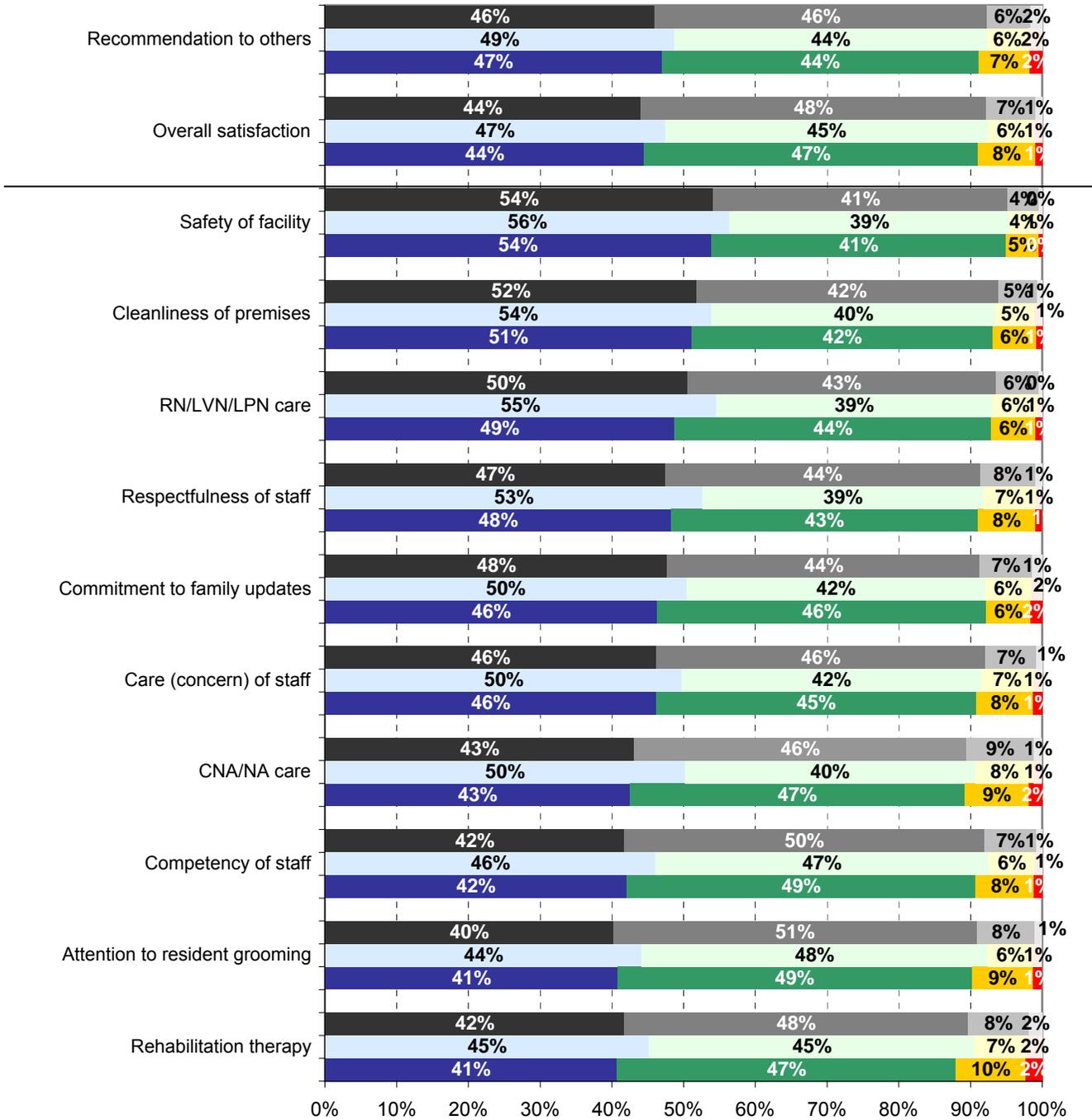
If Quadrant D has less than five items, the Priority Action Agenda will list only those items in the quadrant.

- 16 Responsiveness of management
- 21 Quality of dining experience
- 1 Choices/preferences

RESIDENT SATISFACTION

ITEMS RANKED BY PERCENT "EXCELLENT" FOR 2011, 2012 AND 2013

Year	EXCELLENT	GOOD	FAIR	POOR
2011	EXCELLENT	GOOD	FAIR	POOR
2012	EXCELLENT	GOOD	FAIR	POOR
2013	EXCELLENT	GOOD	FAIR	POOR

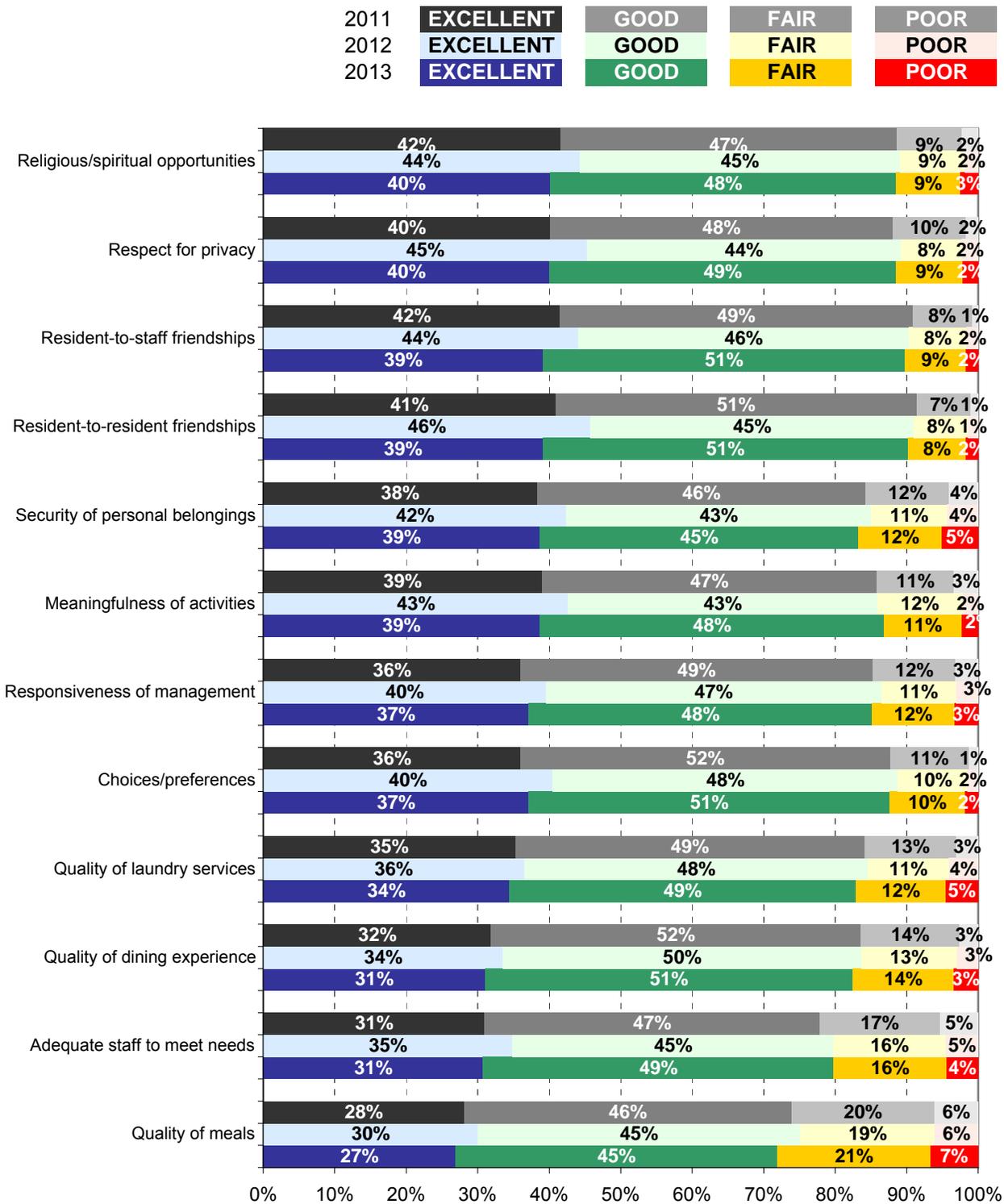


Items are ranked from highest to lowest on the percent of responses rated "Excellent" for the most recent year. (May not total 100% due to rounding.)

RHODE ISLAND

RESIDENT SATISFACTION

ITEMS RANKED BY PERCENT "EXCELLENT" FOR 2011, 2012 AND 2013



Items are ranked from highest to lowest on the percent of responses rated "Excellent" for the most recent year. (May not total 100% due to rounding.)

RHODE ISLAND

RESIDENT SATISFACTION

ITEMS RANKED WITHIN DOMAIN BY AVERAGE SCORES FOR 2013

5

		2012	2011	2013 MIV
Recommendation to others		80	79	77
Overall satisfaction		80	78	76
QUALITY OF LIFE	Safety of facility	84	83	81
	Respectfulness of staff	81	79	78
	Resident-to-resident friendships	78	77	76
	Resident-to-staff friendships	78	77	76
	Respect for privacy	77	75	75
	Religious/spiritual opportunities	77	76	75
	Meaningfulness of activities	75	74	73
	Choices/preferences	76	74	73
	Security of personal belongings	74	73	71
	Quality of dining experience	71	71	67
QUALITY OF CARE	RN/LVN/LPN care	82	81	79
	Commitment to family updates	80	79	77
	Care (concern) of staff	80	79	77
	Competency of staff	79	78	75
	CNA/NA care	80	77	75
	Attention to resident grooming	78	77	73
	Rehabilitation therapy	78	77	76
	Adequate staff to meet needs	70	68	65
QUALITY OF SERVICE	Cleanliness of premises	82	82	78
	Responsiveness of management	74	73	71
	Quality of laundry services	72	72	71
	Quality of meals	66	65	63

RHODE ISLAND

RESIDENT SATISFACTION

AVERAGE SCORES BY ITEM BY LOCATION TYPE FOR 2013

6

		Rhode Island	Rural	Suburban	Urban
QUALITY OF LIFE	Recommendation to others	79	76	81	79
	Overall satisfaction	78	76	80	77
	Safety of facility	83	81	85	82
	Respectfulness of staff	79	78	81	79
	Resident-to-resident friendships	76	75	77	76
	Resident-to-staff friendships	76	74	77	75
	Respect for privacy	75	74	76	76
	Religious/spiritual opportunities	75	76	76	74
	Choices/preferences	74	73	75	74
	Meaningfulness of activities	74	73	76	73
	Security of personal belongings	72	70	74	71
	Quality of dining experience	70	71	72	68
	QUALITY OF CARE	RN/LVN/LPN care	80	79	81
Commitment to family updates		79	77	81	78
Care (concern) of staff		79	77	80	78
CNA/NA care		77	76	78	76
Attention to resident grooming		77	74	78	76
Competency of staff		77	76	78	76
Rehabilitation therapy		75	73	78	74
Adequate staff to meet needs		69	63	70	70
QUALITY OF SERVICE	Cleanliness of premises	81	80	83	80
	Responsiveness of management	73	71	75	72
	Quality of laundry services	71	68	74	69
	Quality of meals	64	67	64	62

All scores represent average scores across survey respondents. Each item was measured on a four-point scale:

Poor = 0 Fair = 33.3 Good = 66.7 Excellent = 100

Items are listed by domain as they appear in the survey. The shading in the Rural, Suburban and Urban columns reflects a comparison to the state average: Green = higher than the state average; yellow = same as the state average; red = lower than the state average.

RHODE ISLAND

RESIDENT SATISFACTION

DEMOGRAPHICS AND BACKGROUND INFORMATION FOR 2013

7

RESIDENT

Gender of resident		Age of resident	
Female	71%	19 or under	0%
Male	29%	20 to 29	0%
		30 to 39	0%
		40 to 49	1%
		50 to 59	5%
		60 to 69	11%
		70 to 79	19%
		80 to 89	39%
		90 or older	25%

FACILITY CHOICE

Homes visited		Reason for choosing		Length of stay	
None	41%	Convenient location	22%	Less than 1 month	0%
Only this one	27%	Good reputation	28%	1 to 3 months	3%
Two	22%	Doctor or hospital	22%	3 to 6 months	5%
Three	6%	Relative or friend	15%	6 months to 1 year	16%
Four	2%	Insurance requirement	1%	1 to 3 years	42%
Five or more	2%	Other reason	11%	3 or more years	34%

VISITOR

Person visiting most		How often visited	
Spouse	7%	Less than once a year	1%
Child	53%	Once a year	2%
Brother or sister	14%	Once every 3 months	6%
Grandchild	2%	Once a month or more	20%
Friend	10%	Once a week or more	51%
Another person	14%	Almost daily	20%

Assistance with survey

By myself	20%
With facility staff	56%
With family or friend	16%
With another resident	0%
With another person	8%

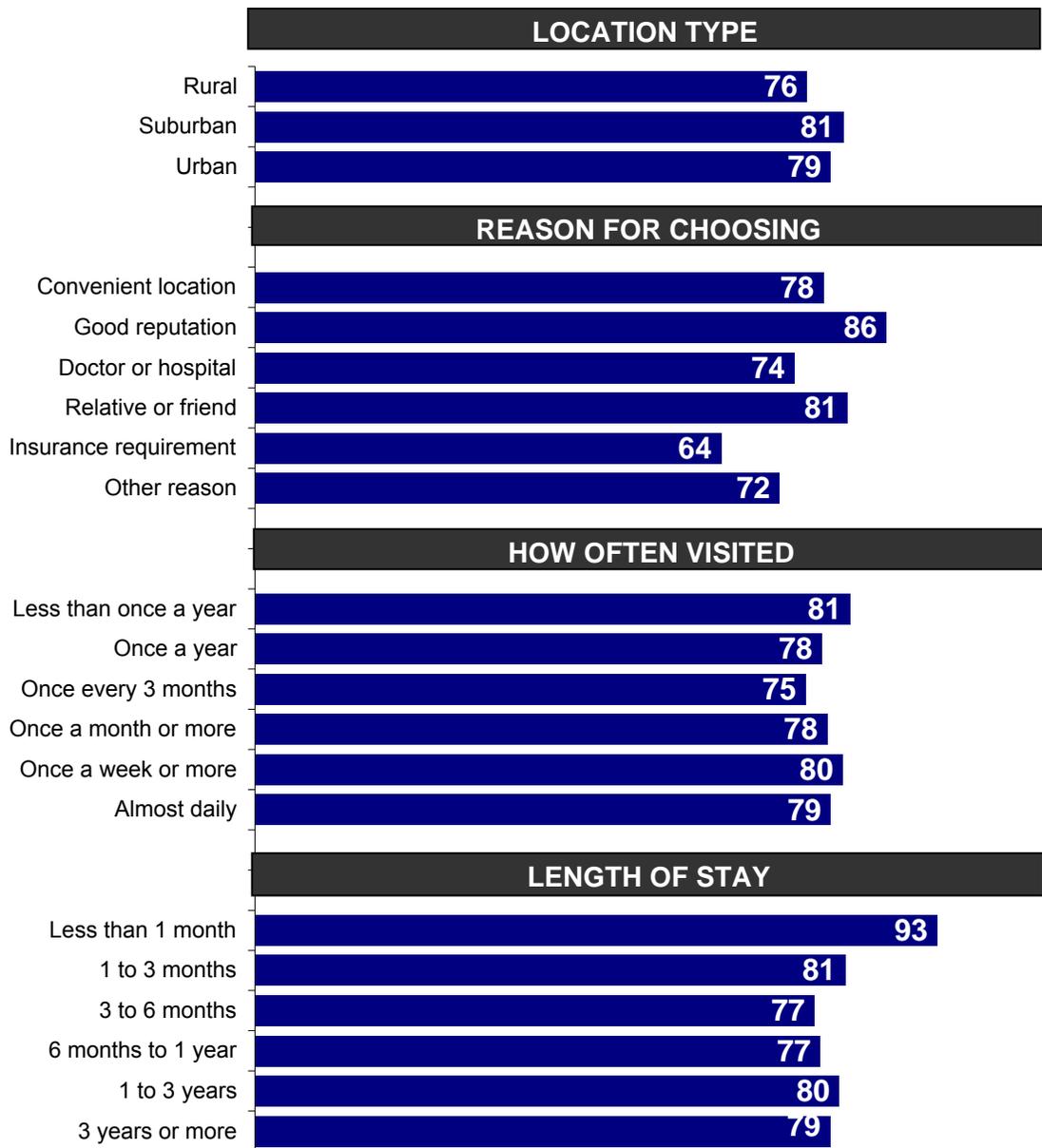
(May not total 100% due to rounding.)

RHODE ISLAND

RESIDENT SATISFACTION

AVERAGE SCORES FOR "RECOMMENDATION TO OTHERS" BY DEMOGRAPHICS FOR 2013

8



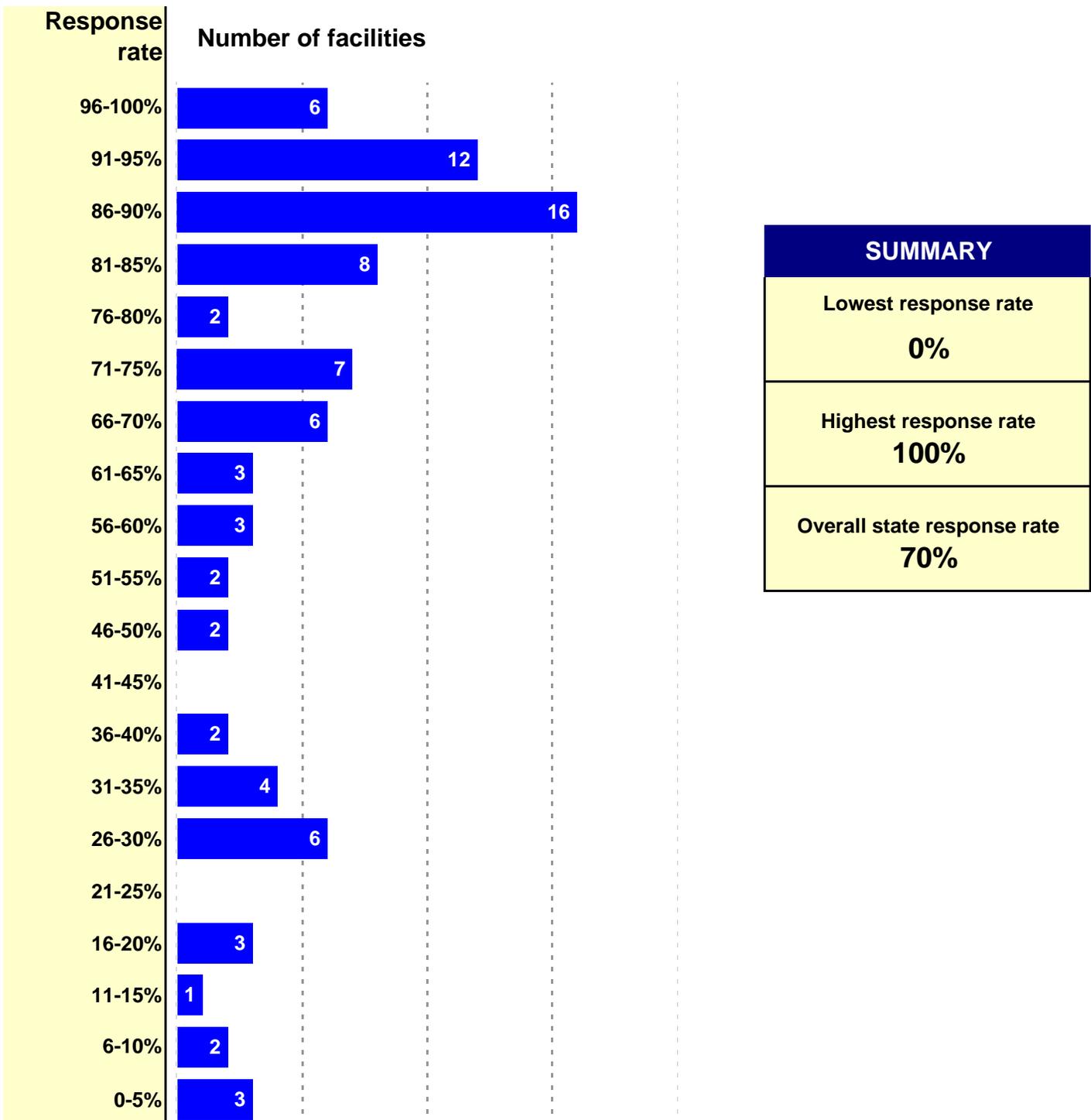
RHODE ISLAND

RESIDENT SATISFACTION

DISTRIBUTION OF RESPONSE RATES FOR 2013

9

Results are for 88 participating facilities.



RHODE ISLAND

RESIDENT SATISFACTION

SKILLED NURSING RESIDENT SATISFACTION SURVEY REFERENCE

ITEM NUMBER/LABEL	ORIGINAL SURVEY STATEMENT
GLOBAL SATISFACTION DOMAIN	
23 Overall satisfaction	How would you rate your overall satisfaction with this facility?
24 Recommendation to others	What is your recommendation of this facility to others?
QUALITY OF LIFE DOMAIN Rate this facility on ...	
1 Choices/preferences	Meeting your choices and preferences
2 Respectfulness of staff	The respect shown to you by staff
3 Respect for privacy	Meeting your need for privacy
4 Resident-to-resident friendships	Offering you opportunities for friendships with other residents
5 Resident-to-staff friendships	Offering you opportunities for friendships with staff
6 Meaningfulness of activities	Offering you meaningful activities
7 Religious/spiritual opportunities	Meeting your religious and spiritual needs
17 Safety of facility	How safe it is for you
18 Security of personal belongings	The security of your personal belongings
21 Quality of dining experience	How enjoyable your dining experience is
QUALITY OF CARE DOMAIN Rate this facility on ...	
8 RN/LVN/LPN care	The quality of care provided by the nurses (RNs/LVNs/LPNs)
9 CNA/NA care	The quality of care provided by the nursing assistants (CNAs/NAs)
10 Rehabilitation therapy	The quality of rehabilitation therapy (occupational, physical, speech)
11 Adequate staff to meet needs	Providing an adequate number of nursing staff to meet care needs
12 Attention to resident grooming	Meeting your grooming needs
13 Commitment to family updates	Keeping you and your family informed about you
14 Competency of staff	The competency of staff
15 Care (concern) of staff	The staff's care and concern for you
QUALITY OF SERVICE DOMAIN Rate this facility on ...	
16 Responsiveness of management	Management's responsiveness to your suggestions and concerns
19 Cleanliness of premises	The cleanliness of your room and surroundings
20 Quality of meals	The quality of the meals
22 Quality of laundry services	The quality of laundry services
DEMOGRAPHICS AND BACKGROUND INFORMATION	
25 Length of stay	How long have you lived at this facility?
26 Person visiting most	Who visits you most often?
27 How often visited	How often does this person visit the you?
28 Homes visited	How many nursing homes did you (or your family) visit before choosing this facility?
29 Reason for choosing	What is the most important reason you (or your family) chose this facility?
30 Gender of resident	What is your gender?
31 Age of resident	What is your age?
32 Assistance with survey	How is this survey being completed?

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FAMILY SATISFACTION

	2013	2012	2011
RESPONSE RATE	35%	36%	39%
FACILITIES SURVEYED	89	86	85
SURVEYS RECEIVED	1,913	1,900	1,948

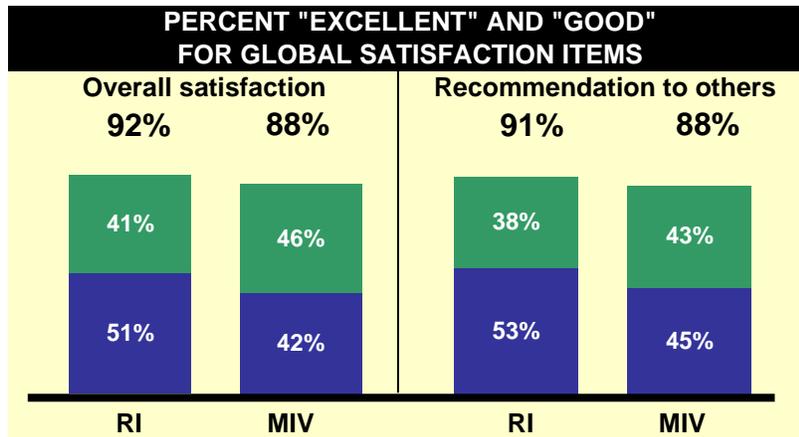


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RHODE ISLAND

FAMILY SATISFACTION

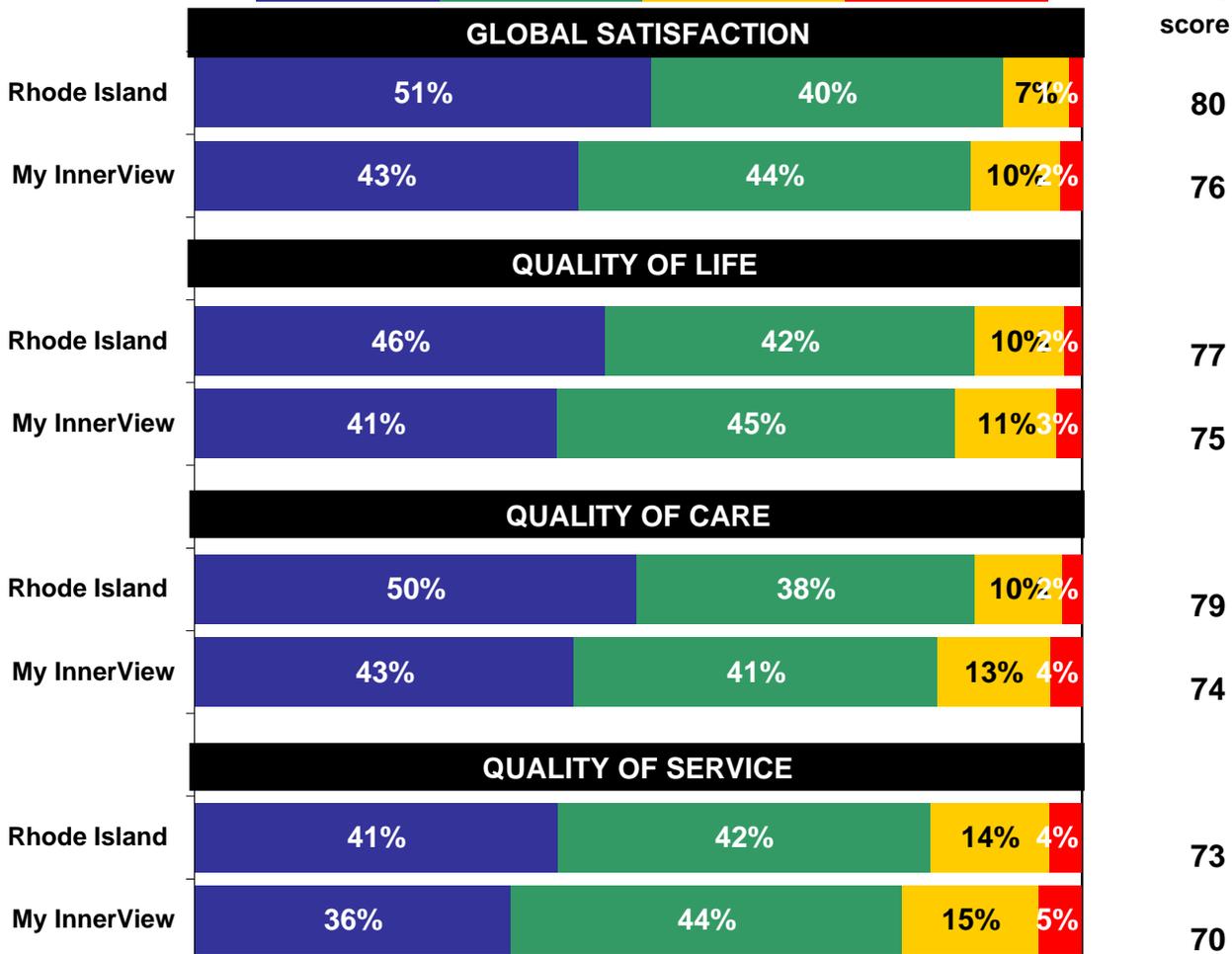
GLOBAL SATISFACTION AND RATINGS BY DOMAIN FOR 2013



(The total percentage listed may be higher or lower than individual rating totals due to rounding.)



Average score



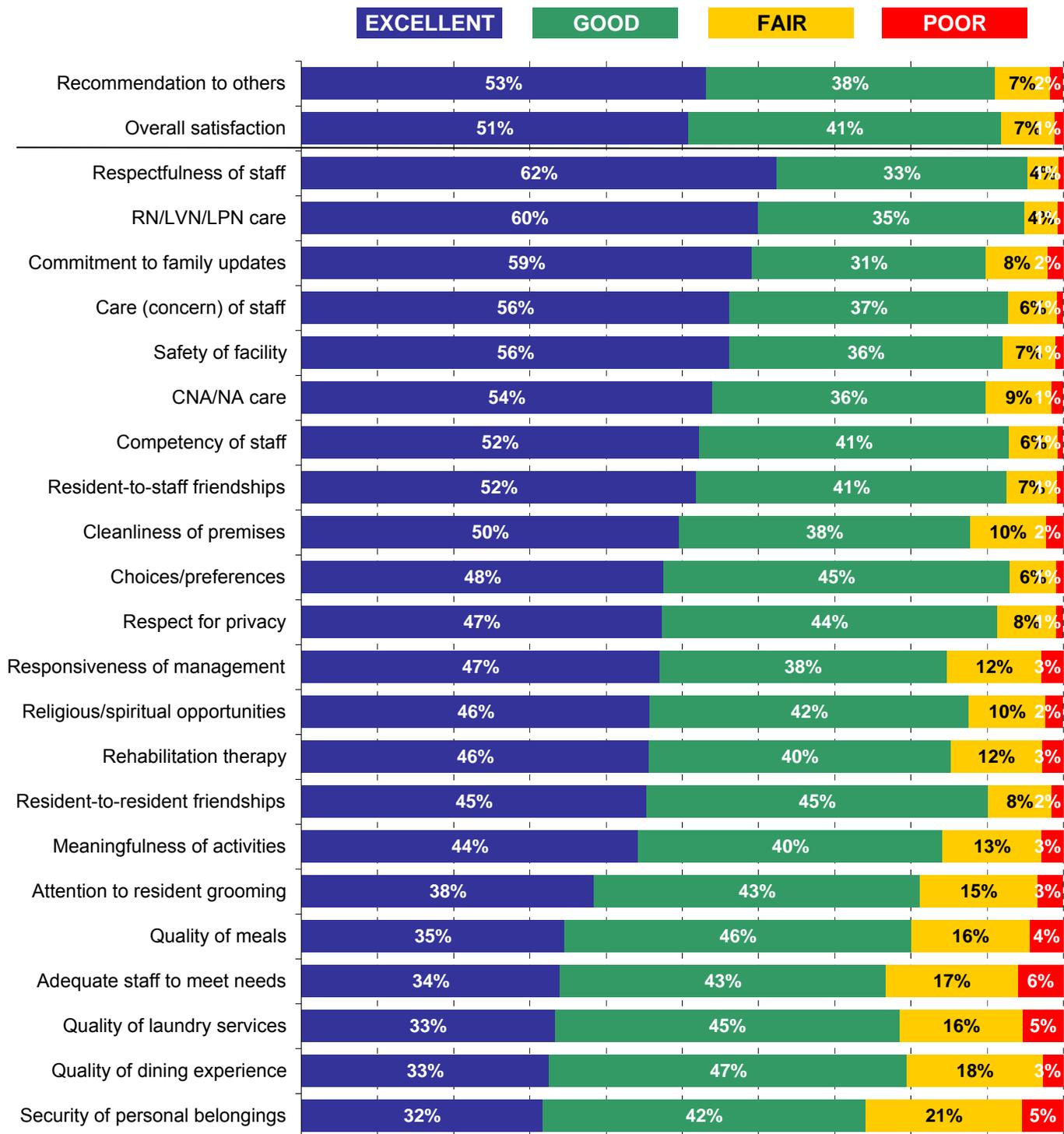
(May not total 100% due to rounding.)

RHODE ISLAND

FAMILY SATISFACTION

ITEMS RANKED BY PERCENT "EXCELLENT" FOR 2013

2



Items are ranked from highest to lowest on the percent of responses rated "Excellent." The percentages reflect averages across survey respondents. (May not total 100% due to rounding.) See chart 4 for comparison to prior years.

RHODE ISLAND

FAMILY SATISFACTION

QUADRANT ANALYSIS: STRENGTHS AND OPPORTUNITIES

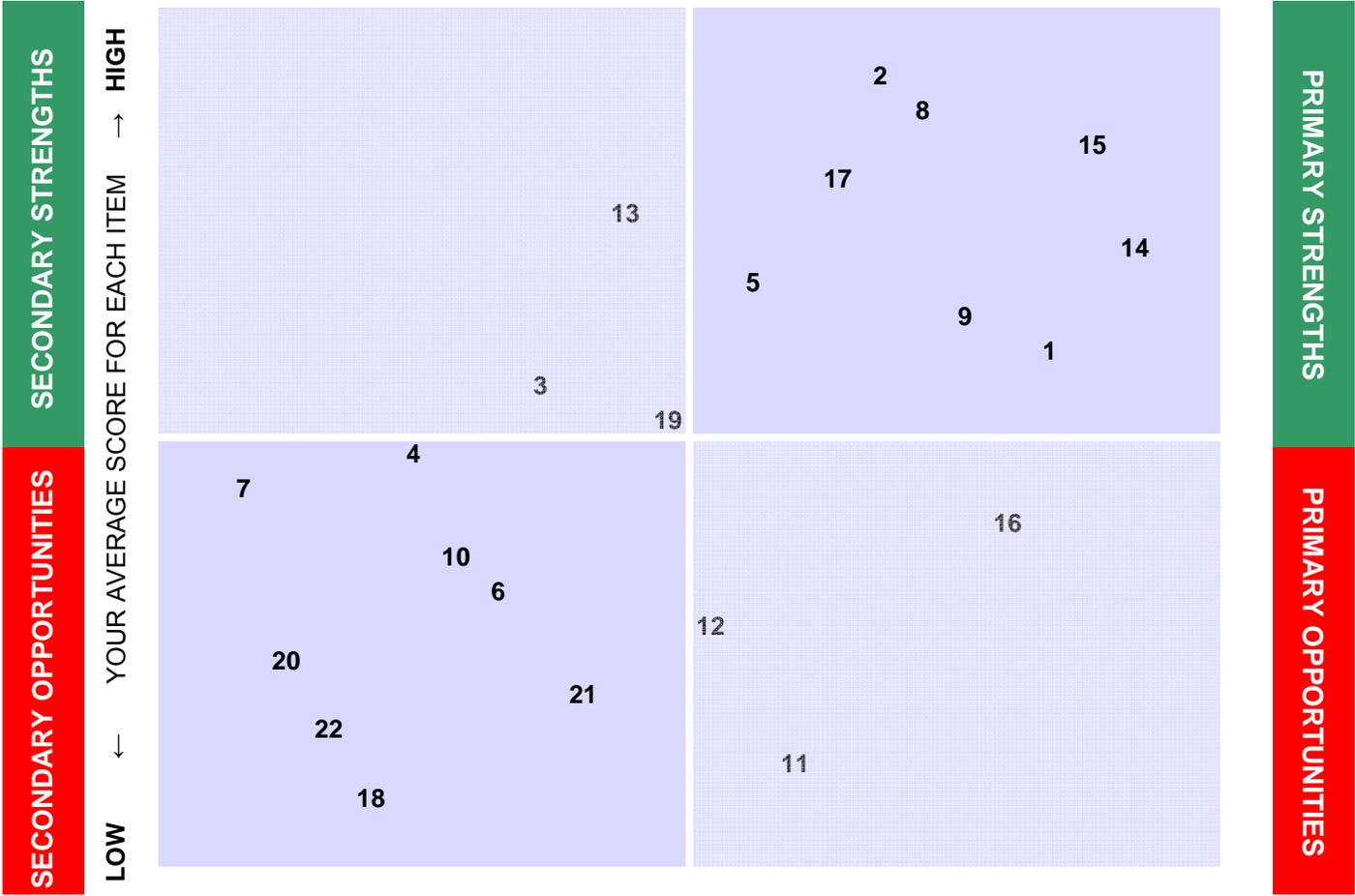
3

A

Quadrant A shows items of *lower* importance to "Recommendation" with a *higher* average score

Quadrant B shows items of *higher* importance to "Recommendation" with a *higher* average score

B



C

LOW ← IMPORTANCE TO RECOMMEND THIS FACILITY TO OTHERS → **HIGH**

Quadrant C shows items of *lower* importance to "Recommendation" with a *lower* average score

Quadrant D shows items of *higher* importance to "Recommendation" with a *lower* average score

D

The quadrant analysis plots the percentile rank of the average score on the satisfaction items against the percentile rank of the average "importance" score of each item and the question **What is your recommendation of this facility to others?** Items in the lower right quadrant are those that are most important to "Recommendation" but received the lowest scores.

See actual satisfaction items and report labels at end of section

RHODE ISLAND



SECONDARY STRENGTHS

Items with average scores above the midline but not as important to "Recommendation"

- 19 Cleanliness of premises
- 3 Respect for privacy
- 13 Commitment to family updates



PRIMARY STRENGTHS

Items with average scores above the midline and more important to "Recommendation"

- 1 Choices/preferences
- 14 Competency of staff
- 9 CNA/NA care
- 15 Care (concern) of staff
- 5 Resident-to-staff friendships
- 8 RN/LVN/LPN care
- 17 Safety of facility
- 2 Respectfulness of staff



SECONDARY OPPORTUNITIES

Items with average scores below the midline but not as important to "Recommendation"

- 21 Quality of dining experience
- 18 Security of personal belongings
- 6 Meaningfulness of activities
- 22 Quality of laundry services
- 10 Rehabilitation therapy
- 20 Quality of meals
- 4 Resident-to-resident friendships
- 7 Religious/spiritual opportunities



PRIMARY OPPORTUNITIES

Items with average scores below the midline and more important to "Recommendation"

These are areas that represent a good opportunity for improvement.

PRIORITY ACTION AGENDA™

The top FIVE items in Quadrant D (*Primary Opportunities*) comprise your Priority Action Agenda and provide a focus for improving willingness to recommend your facility to others.

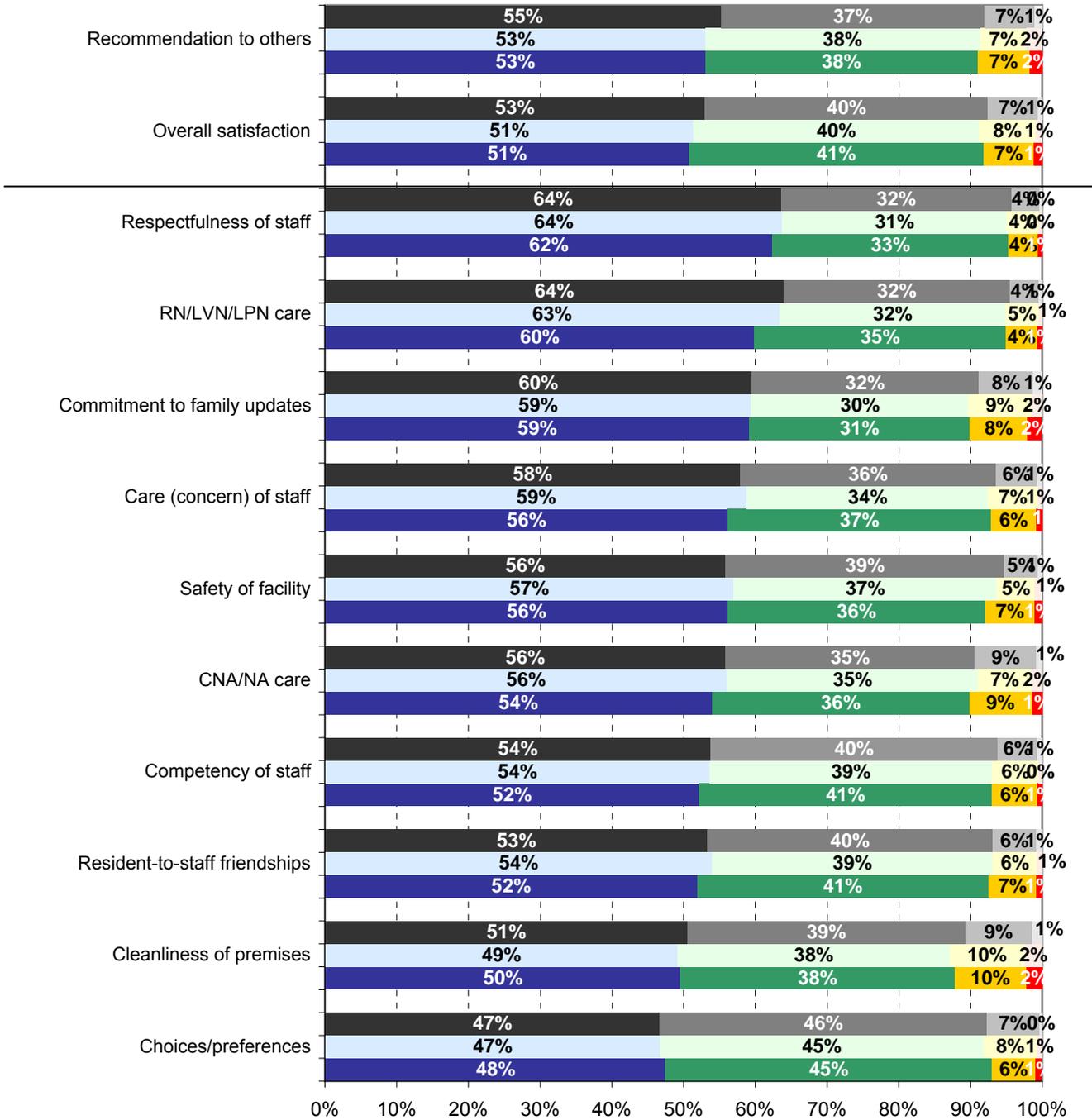
If Quadrant D has less than five items, the Priority Action Agenda will list only those items in the quadrant.

- 11 Adequate staff to meet needs**
- 16 Responsiveness of management**
- 12 Attention to resident grooming**

FAMILY SATISFACTION

ITEMS RANKED BY PERCENT "EXCELLENT" FOR 2011, 2012 AND 2013

Year	EXCELLENT	GOOD	FAIR	POOR
2011	EXCELLENT	GOOD	FAIR	POOR
2012	EXCELLENT	GOOD	FAIR	POOR
2013	EXCELLENT	GOOD	FAIR	POOR



Items are ranked from highest to lowest on the percent of responses rated "Excellent" for the most recent year. (May not total 100% due to rounding.)

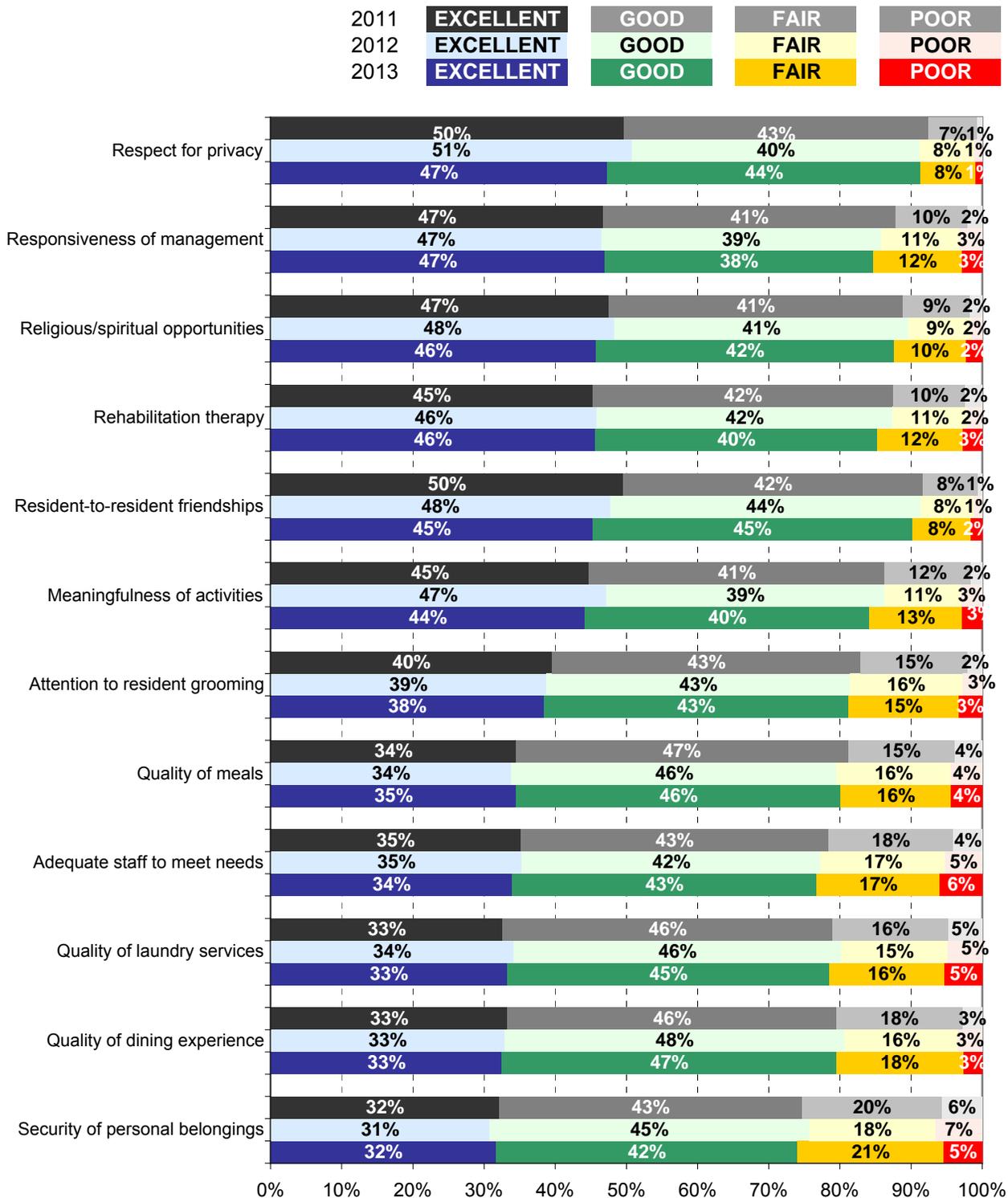
RHODE ISLAND

FAMILY SATISFACTION

ITEMS RANKED BY PERCENT "EXCELLENT" FOR 2011, 2012 AND 2013

4

CONTINUED



Items are ranked from highest to lowest on the percent of responses rated "Excellent" for the most recent year. (May not total 100% due to rounding.)

RHODE ISLAND

FAMILY SATISFACTION

ITEMS RANKED WITHIN DOMAIN BY AVERAGE SCORES FOR 2013

5

		2012	2011	2013 MIV
Recommendation to others		81	82	77
Overall satisfaction		80	82	76
QUALITY OF LIFE	Respectfulness of staff	86	86	81
	Safety of facility	82	83	79
	Resident-to-staff friendships	81	82	78
	Choices/preferences	80	79	75
	Respect for privacy	79	80	77
	Resident-to-resident friendships	78	79	77
	Religious/spiritual opportunities	77	78	75
	Meaningfulness of activities	75	77	73
	Quality of dining experience	70	70	66
	Security of personal belongings	67	67	65
QUALITY OF CARE	RN/LVN/LPN care	85	86	80
	Care (concern) of staff	83	84	78
	Commitment to family updates	82	83	79
	Competency of staff	81	82	77
	CNA/NA care	81	82	76
	Rehabilitation therapy	76	77	75
	Attention to resident grooming	72	72	67
	Adequate staff to meet needs	68	69	63
QUALITY OF SERVICE	Cleanliness of premises	78	79	74
	Responsiveness of management	76	77	72
	Quality of meals	70	71	67
	Quality of laundry services	69	69	67

RHODE ISLAND

FAMILY SATISFACTION

AVERAGE SCORES BY ITEM BY LOCATION TYPE FOR 2013

6

		Rhode Island	Rural	Suburban	Urban
QUALITY OF LIFE	Recommendation to others	81	82	82	78
	Overall satisfaction	80	82	81	78
	Respectfulness of staff	86	87	86	84
	Safety of facility	82	83	83	81
	Resident-to-staff friendships	81	83	81	80
	Choices/preferences	80	82	80	78
	Respect for privacy	79	79	80	78
	Resident-to-resident friendships	78	78	79	77
	Religious/spiritual opportunities	77	79	78	74
	Meaningfulness of activities	75	76	77	72
	Quality of dining experience	70	70	71	68
	Security of personal belongings	67	67	68	65
	QUALITY OF CARE	RN/LVN/LPN care	85	86	85
Care (concern) of staff		83	85	83	80
Commitment to family updates		82	84	84	79
CNA/NA care		81	82	82	78
Competency of staff		81	83	82	79
Rehabilitation therapy		76	78	76	75
Attention to resident grooming		72	74	72	70
Adequate staff to meet needs		68	71	69	65
QUALITY OF SERVICE	Cleanliness of premises	78	81	79	75
	Responsiveness of management	76	78	77	74
	Quality of meals	70	72	71	68
	Quality of laundry services	69	70	70	67

All scores represent average scores across survey respondents. Each item was measured on a four-point scale:

Poor = 0 Fair = 33.3 Good = 66.7 Excellent = 100

Items are listed by domain as they appear in the survey. The shading in the Rural, Suburban and Urban columns reflects a comparison to the state average: Green = higher than the state average; yellow = same as the state average; red = lower than the state average.

RHODE ISLAND

FAMILY SATISFACTION

DEMOGRAPHICS AND BACKGROUND INFORMATION FOR 2013

7

RESIDENT

Gender of resident		Age of resident	
Female	76%	19 or under	0%
Male	24%	20 to 29	0%
		30 to 39	0%
		40 to 49	0%
		50 to 59	2%
		60 to 69	5%
		70 to 79	10%
		80 to 89	40%
		90 or older	43%

FACILITY CHOICE

Homes visited		Reason for choosing		Length of stay	
None	31%	Convenient location	26%	Less than 1 month	1%
Only this one	13%	Good reputation	40%	1 to 3 months	3%
Two	27%	Doctor or hospital	11%	3 to 6 months	5%
Three	16%	Relative or friend	10%	6 months to 1 year	16%
Four	8%	Insurance requirement	2%	1 to 3 years	38%
Five or more	6%	Other reason	11%	3 or more years	37%

61%

75%

SURVEY RESPONDENT

Relationship to resident	
Spouse	12%
Child	63%
Brother or sister	7%
Grandchild	1%
Friend	2%
Other relationship	14%

VISITOR

Person visiting most		How often visited	
Spouse	13%	Less than once a year	0%
Child	62%	Once a year	0%
Brother or sister	9%	Once every 3 months	3%
Grandchild	2%	Once a month or more	11%
Friend	3%	Once a week or more	50%
Another person	11%	Almost daily	35%

85%

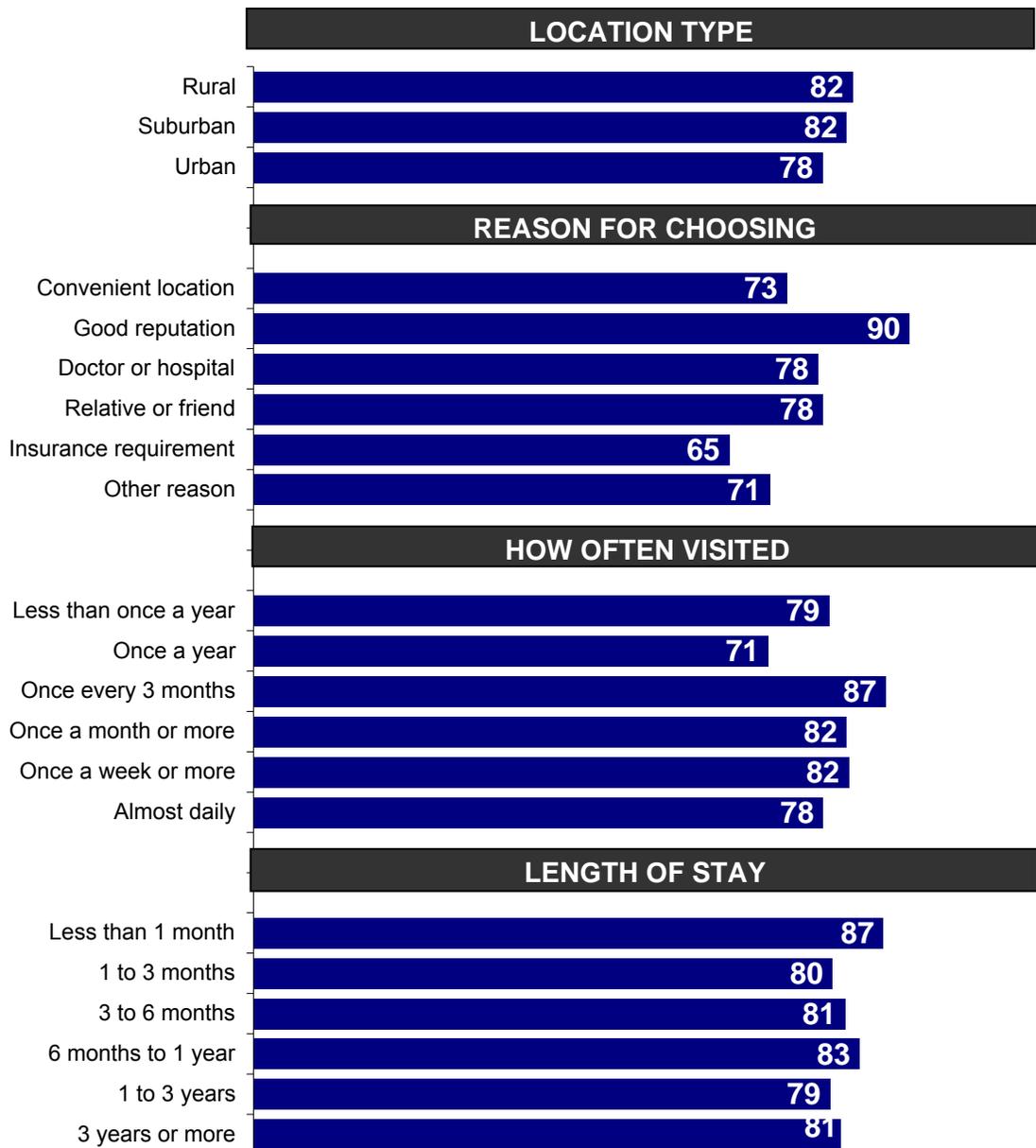
(May not total 100% due to rounding.)

RHODE ISLAND

FAMILY SATISFACTION

AVERAGE SCORES FOR "RECOMMENDATION TO OTHERS" BY DEMOGRAPHICS FOR 2013

8



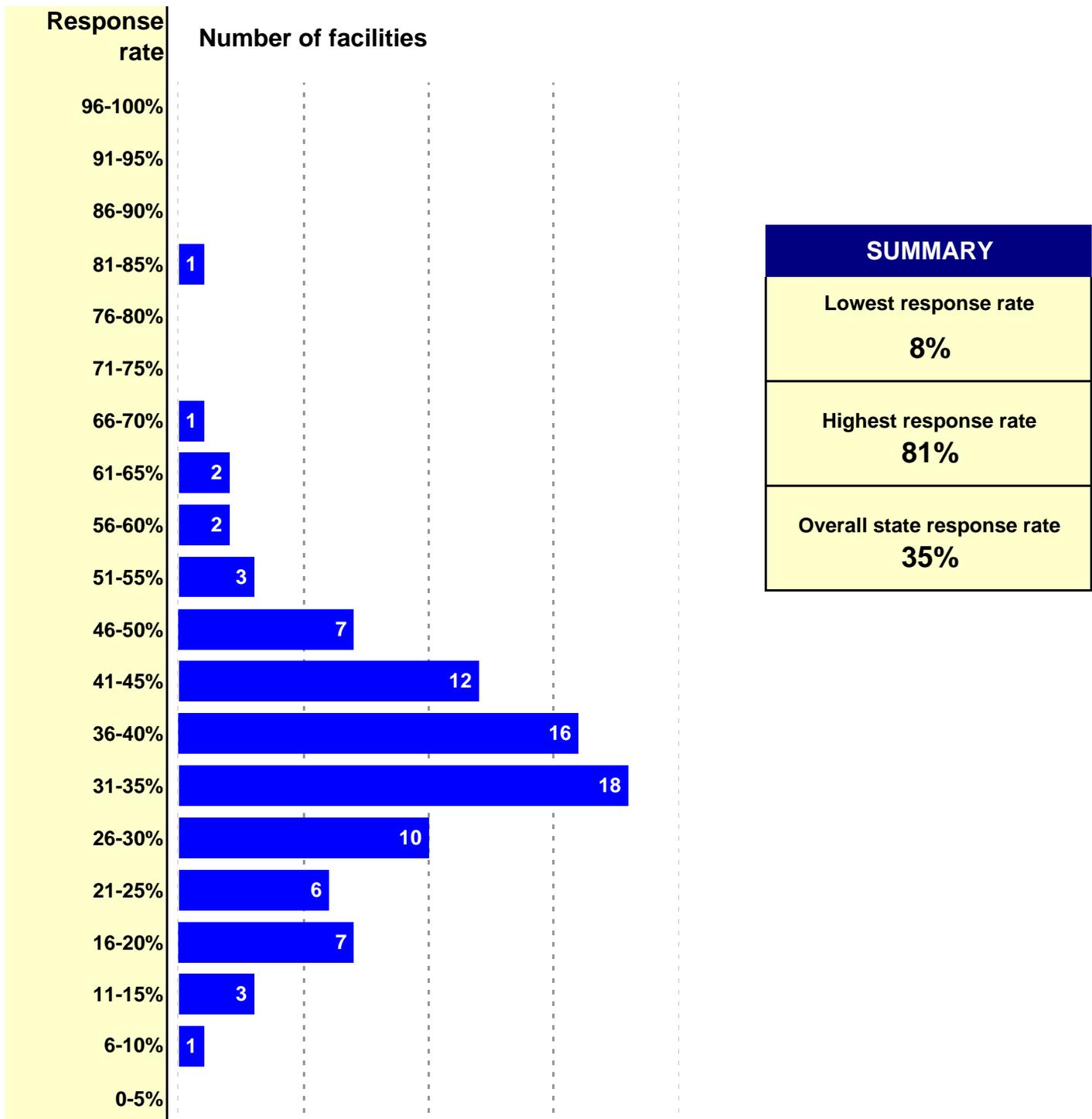
RHODE ISLAND

FAMILY SATISFACTION

DISTRIBUTION OF RESPONSE RATES FOR 2013

9

Results are for 89 participating facilities.



RHODE ISLAND

FAMILY SATISFACTION

SKILLED NURSING FAMILY SATISFACTION SURVEY REFERENCE

ITEM NUMBER/LABEL	ORIGINAL SURVEY STATEMENT
GLOBAL SATISFACTION DOMAIN	
23 Overall satisfaction	How would you rate your overall satisfaction with this facility?
24 Recommendation to others	What is your recommendation of this facility to others?
QUALITY OF LIFE DOMAIN	
	Rate this facility on ...
1 Choices/preferences	Meeting the resident's/patient's choices and preferences
2 Respectfulness of staff	The respect shown to the resident/patient by staff
3 Respect for privacy	Meeting the resident's/patient's need for privacy
4 Resident-to-resident friendships	Offering the resident/patient opportunities for friendships
5 Resident-to-staff friendships	Offering the resident/patient opportunities for friendships with staff
6 Meaningfulness of activities	Offering the resident/patient meaningful activities
7 Religious/spiritual opportunities	Meeting the resident's/patient's religious and spiritual needs
17 Safety of facility	How safe it is for the resident/patient
18 Security of personal belongings	The security of the resident's/patient's personal belongings
21 Quality of dining experience	How enjoyable the dining experience is for the resident/patient
QUALITY OF CARE DOMAIN	
	Rate this facility on ...
8 RN/LVN/LPN care	The quality of care provided by the nurses (RNs/LVNs/LPNs)
9 CNA/NA care	The quality of care provided by the nursing assistants (CNAs/NAs)
10 Rehabilitation therapy	The quality of rehabilitation therapy (occupational, physical, speech)
11 Adequate staff to meet needs	Providing an adequate number of nursing staff to meet care needs
12 Attention to resident grooming	Meeting the resident's/patient's need for grooming
13 Commitment to family updates	Keeping you and your family informed about the resident/patient
14 Competency of staff	The competency of staff
15 Care (concern) of staff	The staff's care and concern for the resident/patient
QUALITY OF SERVICE DOMAIN	
	Rate this facility on ...
16 Responsiveness of management	Management's responsiveness to your suggestions and concerns
19 Cleanliness of premises	The cleanliness of the room and surroundings
20 Quality of meals	The quality of the meals
22 Quality of laundry services	The quality of laundry services
DEMOGRAPHICS AND BACKGROUND INFORMATION	
25 Length of stay	How long has the resident/patient lived at this facility?
26 Person visiting most	Who visits the resident/patient most often?
27 How often visited	How often does this person visit the resident/patient?
28 Homes visited	How many nursing homes did you (or your family) visit before choosing this facility?
29 Reason for choosing	What is the most important reason you (or your family) chose this facility?
30 Gender of resident	What is the resident's/patient's gender?
31 Age of resident	What is the resident's/patient's age?
32 Relationship to resident	What is your relationship to the resident/patient?

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defined by cultural heritage, sociodemographic characteristics, geography (e.g., a state or a region), or diagnosis. It recognizes that such individuals will include the most vulnerable, whether the source of vulnerability is economic, the rarity or severity of the health problem, physical frailty, or physical or emotional impairment. (Institute of Medicine, 1999a; emphasis in text).

The study committee defines *disparities* in healthcare as racial or ethnic differences in the quality of healthcare that are not due to access-related factors or clinical needs, preferences,¹ and appropriateness of intervention (Figure 1-1). The committee's analysis is focused at two levels: 1) the operation of healthcare systems and the legal and regulatory climate in which health systems function; and 2) discrimination at the individual, patient-provider level. Discrimination, as the committee uses the term, refers to differences in care that result from biases, prejudices, stereotyping, and uncertainty in clinical communication and decision-making. It should be emphasized that these definitions are not legal definitions. Different sources of federal, state and international law define discrimination in varying ways, some focusing on intent and others emphasizing disparate impact.

Finally, in defining *racial and ethnic minority groups*, the committee uses the definitions provided by the federal Office of Management and Budget in its proposed Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity (Office of Management and Budget, 2001). The revised standards (see Box 1-1) establish five categories for "racial" groups (American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or other Pacific Islander, and White), and two categories for "ethnic" groups (Hispanic or Latino and Not Hispanic or Latino).² It should be noted that these definitions have been subject to considerable criticism, including:

¹The committee defines patient *preferences* as patients' choices regarding healthcare that are based on a full and accurate understanding of treatment options. As discussed in Chapter 3 of this report, patients' understanding of treatment options is often shaped by the quality and content of provider-patient communication, which in turn may be influenced by factors correlated with patients' and providers' race, ethnicity, and culture. Patient preferences that are not based on a full and accurate understanding of treatment options may therefore be a source of racial and ethnic disparities in care. The committee recognizes that patients' preferences and clinicians' presentation of clinical information and alternatives influence each other, but found separation of the two to be analytically useful.

²Consistent with the OMB classification scheme, the terms "African American" and "black" are used interchangeably throughout this report, as are the terms "Hispanic" and "Latino."

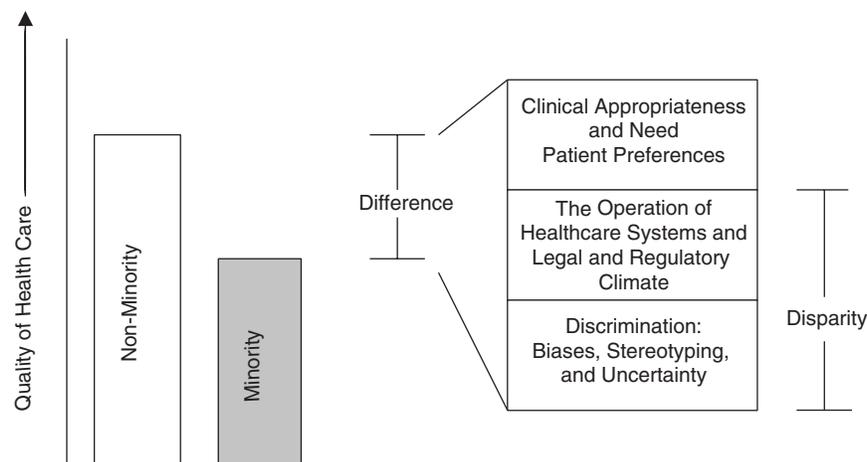


FIGURE 1-1 Differences, disparities, and discrimination: Populations with equal access to healthcare. SOURCE: Gomes and McGuire, 2001.

- reinforcement of the concept of “race” as reflecting genetic or biologic differences between population groups;
- failure to reflect the fluid and dynamic nature of sociopolitical identity, and
- failure to reflect the way many Americans choose to define themselves (Institute of Medicine, 1999b).

Nonetheless, the committee adopts these racial and ethnic definitions because they are commonly accepted among researchers, and most federally funded research utilizes these terms. Further, as will be noted below, access to and the allocation of healthcare resources differ with striking consistency across these population groups, making them useful in tracking disparities in care.

To summarize, racial and ethnic minorities are less likely than whites to possess health insurance (Collins, Hall, and Neuhaus, 1999), are more likely to be beneficiaries of publicly funded health insurance (e.g., Medicaid [The Henry J. Kaiser Family Foundation, 2000b]), and even when insured, may face additional barriers to care due to other socioeconomic factors, such as high co-payments, geographic factors (e.g., the relative scarcity of healthcare providers and healthcare facilities in minority communities), and insufficient transportation. These access-related factors are likely the most significant barriers to equitable care, and must be addressed as an important first step toward eliminating healthcare disparities. The

INSTITUTE OF MEDICINE

Shaping the Future for Health

UNEQUAL TREATMENT: WHAT HEALTHCARE PROVIDERS NEED TO KNOW ABOUT RACIAL AND ETHNIC DISPARITIES IN HEALTH- CARE

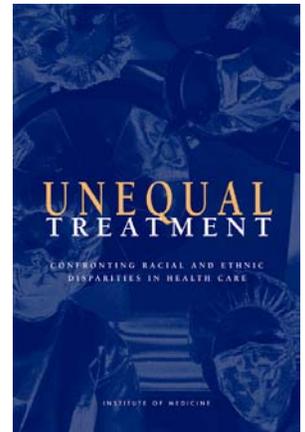
News accounts of the state of healthcare delivery seem to be full of bad news, including concerns about rising healthcare costs, patient safety and medical errors, and the growing numbers of uninsured Americans. To add to these problems, many recent news reports indicate that racial and ethnic minorities receive lower quality healthcare than whites, even when they are insured to the same degree and when other healthcare access-related factors, such as the ability to pay for care, are the same.

The Institute of Medicine (IOM) report, *Unequal Treatment: Confronting Racial and Ethnic Disparities in Healthcare*, added to the media fray when the IOM concluded that “(al)though myriad sources contribute to these disparities, some evidence suggests that bias, prejudice, and stereotyping on the part of healthcare providers may contribute to differences in care.”

This finding was alarming to many healthcare professionals, the vast majority of whom work hard under very challenging conditions to ensure that patients receive the best possible healthcare to meet their needs. How could bias, prejudice, and stereotyping contribute to unequal treatment, particularly given that healthcare providers are sworn to beneficence and cannot, by law, discriminate against any patient on the basis of race, ethnicity, color, or national origin? This brief summary of the IOM *Unequal Treatment* report addresses this question, and summarizes other relevant findings to help healthcare professionals meet the objective of providing high-quality care for all patients.

DO RACIAL AND ETHNIC MINORITIES RECEIVE A LOWER QUALITY OF HEALTHCARE?

In 1999, Congress requested that the IOM assess the extent of racial and ethnic disparities in healthcare, assuming that access-related factors – such as insurance status and the ability to pay for care are the same; identify potential sources of these



...the IOM concluded that “(al)though myriad sources contribute to these disparities, some evidence suggests that bias, prejudice, and stereotyping on the part of healthcare providers may contribute to differences in care.”

disparities, including the possibility that overt or subtle biases or prejudice on the part of healthcare providers might affect the quality of care for minorities; and suggest intervention strategies.

To fulfill this request, an IOM study committee reviewed well over 100 studies that assessed the quality of healthcare for various racial and ethnic minority groups, while holding constant variations in insurance status, patient income, and other access-related factors. Many of these studies also controlled for other potential confounding factors, such as racial differences in the severity or stage of disease progression, the presence of co-morbid illnesses, where care is received (e.g., public or private hospitals and health systems) and other patient demographic variables, such as age and gender. Some studies that employed more rigorous research designs followed patients prospectively, using clinical data abstracted from patients' charts, rather than administrative data used for insurance claims. The study committee was struck by the consistency of research findings: even among the better-controlled studies, the vast majority indicated that minorities are less likely than whites to receive needed services, including clinically necessary procedures. These disparities exist in a number of disease areas, including cancer, cardiovascular disease, HIV/AIDS, diabetes, and mental illness, and are found across a range of procedures, including routine treatments for common health problems.

WHAT ARE THE SOURCES OF HEALTH CARE DISPARITIES?

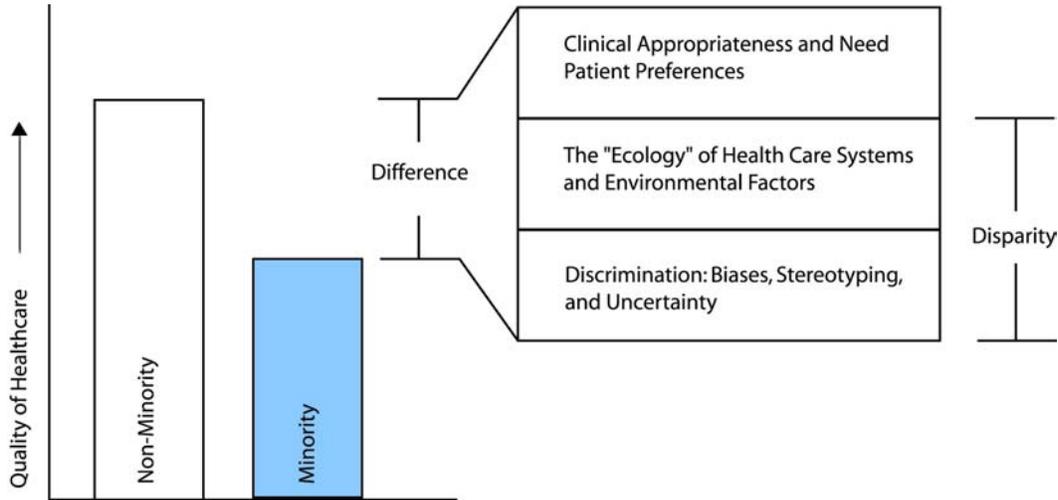
Many factors may contribute to the health care disparities observed in these studies. Some researchers suggest that there may be subtle differences in the way that members of different racial and ethnic groups respond to treatment, particularly with regard to some pharmaceutical interventions, suggesting that variations in some forms of treatment may be justified on the basis of patient race or ethnicity. In addition, patients vary in help-seeking behavior, and some racial and ethnic minorities may be more likely than whites to avoid or delay seeking care. However, the majority of studies find disparities in clinical services that are equally effective for all racial and ethnic groups. Further, the studies that the IOM reviewed suggest that racial differences in patients' attitudes, such as their preferences for treatment, do not vary greatly and cannot fully explain racial and ethnic disparities in healthcare. A small number of studies, for example, find that African Americans are slightly more likely to reject medical recommendations for some treatments, but these differences in refusal rates are generally small (African Americans are only 3-6% more likely to reject recommended treatments, according to these studies). It remains unclear why African-American patients are more likely to reject treatment recommendations. Are they refusing treatment because of a general mistrust of health care providers? Or do some decline treatment because of negative experiences in the clinical encounter or a perception that their doctor is not invested in their care? More research is needed to fully understand treatment refusal because the reasons for refusal may lead to different strategies to help patients make informed treatment decisions.

If minority patients' attitudes toward healthcare and preferences for treatment are not likely to be a major source of health care disparities, what other factors may contribute to these disparities? As shown in the figure below, the IOM study committee considered two other sets of factors that may be associated with disparities in healthcare, assuming that all populations have equal access to care. The first set of factors are those related to the operation of healthcare systems and the legal and regulatory climate in which they operate. These include factors such as cultural or linguistic barriers (e.g., the lack of interpretation services for patients with limited English proficiency), fragmentation of

The study committee was struck by the consistency of research findings: even among the better-controlled studies, the vast majority indicated that minorities are less likely than whites to receive needed services, including clinically necessary procedures.

Further, the studies that the IOM reviewed suggest that racial differences in patients' attitudes, such as their preferences for treatment, do not vary greatly and cannot fully explain racial and ethnic disparities in healthcare.

healthcare systems (as noted earlier, these include the possibility that minorities are disproportionately enrolled in lower-cost health plans that place greater per-patient limits on healthcare expenditures and available services), the types of incentives in place to contain costs (e.g., incentives to physicians to limit services), and where minorities tend to receive care (e.g., minorities are less likely to access care in a private physician's office, even when insured at the same level as whites).



Differences, Disparities, and Discrimination: Populations with Equal Access to Healthcare.
SOURCE: Gomes and McGuire, 2001

The second set of factors emerges from the clinical encounter. Three mechanisms might be operative in healthcare disparities from the provider's side of the exchange: bias (or prejudice) against minorities; greater clinical uncertainty when interacting with minority patients; and beliefs (or stereotypes) held by the provider about the behavior or health of minorities. Patients might also react to providers' behavior associated with these practices in a way that also contributes to disparities. Research on how patient race or ethnicity may influence physician decision-making and the quality of care for minorities is still developing, and as yet there is no direct evidence to illustrate how prejudice, stereotypes, or bias may influence care. In the absence of such research, the study committee drew upon a mix of theory and relevant research to understand how these processes might operate in the clinical encounter.

Clinical Uncertainty

Any degree of uncertainty a physician may have relative to the condition of a patient can contribute to disparities in treatment. Doctors must depend on inferences about severity based on what they can see about the illness and on what else they observe about the patient (e.g., race). The doctor can therefore be viewed as operating with prior beliefs about the likelihood of patients' conditions, "priors" that will be different according to age, gender, socioeconomic status, and race or ethnicity. When these priors are considered alongside information gathered in a clinical encounter, both influence medical decisions.

Doctors must balance new information gained from the patient (sometimes with varying levels of accuracy) and their prior expectations about the patient to make a diagnosis and determine a course of treatment. If the physician has difficulty accurately understanding the symptoms or is less sure of the "signal" – the set of clues and indications that

Any degree of uncertainty a physician may have relative to the condition of a patient can contribute to disparities in treatment.

physicians rely upon to make diagnostic decisions – then he or she is likely to place greater weight on “priors.” The consequence is that treatment decisions and patients’ needs are potentially less well matched.

The Implicit Nature of Stereotypes

A large body of research in psychology has explored how stereotypes evolve, persist, shape expectations, and affect interpersonal interactions. Stereotyping can be defined as the process by which people use social categories (e.g., race, sex) in acquiring, processing, and recalling information about others. The beliefs (stereotypes) and general orientations (attitudes) that people bring to their interactions help organize and simplify complex or uncertain situations and give perceivers greater confidence in their ability to understand a situation and respond in efficient and effective ways.

Although functional, social stereotypes and attitudes also tend to be systematically biased. These biases may exist in overt, explicit forms, as represented by traditional bigotry. However, because their origins arise from virtually universal social categorization processes, they may also exist, often unconsciously, among people who strongly endorse egalitarian principles and truly believe that they are not prejudiced. In the United States, because of shared socialization influences, there is considerable empirical evidence that even well-intentioned whites who are not overtly biased and who do not believe that they are prejudiced typically demonstrate unconscious implicit negative racial attitudes and stereotypes. Both implicit and explicit stereotypes significantly shape interpersonal interactions, influencing how information is recalled and guiding expectations and inferences in systematic ways. They can also produce self-fulfilling prophecies in social interaction, in that the stereotypes of the perceiver influence the interaction with others in ways that conform to stereotypical expectations.

Healthcare Provider Prejudice or Bias

Prejudice is defined in psychology as an unjustified negative attitude based on a person’s group membership. Survey research suggests that among white Americans, prejudicial attitudes toward minorities remain more common than not, as over half to three-quarters believe that relative to whites, minorities – particularly African Americans – are less intelligent, more prone to violence, and prefer to live off of welfare. It is reasonable to assume, however, that the vast majority of healthcare providers find prejudice morally abhorrent and at odds with their professional values. But healthcare providers, like other members of society, may not recognize manifestations of prejudice in their own behavior.

While there is no direct evidence that provider biases affect the quality of care for minority patients, research suggests that healthcare providers’ diagnostic and treatment decisions, as well as their feelings about patients, are influenced by patients’ race or ethnicity. Schulman et al. (1999), for example, found that physicians referred white male, black male, and white female hypothetical “patients” (actually videotaped actors who displayed the same symptoms of cardiac disease) for cardiac catheterization at the same rates (approximately 90% for each group), but were significantly less likely to recommend catheterization procedures for black female patients exhibiting the same symptoms. In another experimental design, Abreu (1999) found that mental health professionals subliminally “primed” with African American stereotype-laden words were more likely to evaluate the same hypothetical patient (whose race was not identified) more negatively than when primed with neutral words. Further, in a study based on actual clinical encounters, van Ryn and Burke (2000) found that doctors rated black patients as less intelligent, less educated, more likely to abuse drugs and alcohol, more likely to fail to comply with

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medical advice, more likely to lack social support, and less likely to participate in cardiac rehabilitation than white patients, even after patients' income, education, and personality characteristics were taken into account. These findings suggest that while the relationship between race or ethnicity and treatment decisions is complex and may also be influenced by gender, providers' perceptions and attitudes toward patients are influenced by patient race or ethnicity, often in subtle ways.

Medical Decisions Under Time Pressure with Limited Information

Indeed, studies suggest that several characteristics of the clinical encounter increase the likelihood that stereotypes, prejudice, or uncertainty may influence the quality of care for minorities. In the process of care, health professionals must come to judgments about patients' conditions and make decisions about treatment, often without complete and accurate information. In most cases, they must do so under severe time pressure and resource constraints. The assembly and use of these data are affected by many influences, including various "gestalts" or cognitive shortcuts. In fact, physicians are commonly trained to rely on clusters of information that functionally resemble the application of "prototypic" or stereotypic constellations. These conditions of time pressure, resource constraints, and the need to rely on gestalts map closely onto those factors identified by social psychologists as likely to produce negative outcomes due to lack of information, to stereotypes, and to biases (van Ryn, 2002).

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Patient Response: Mistrust and Refusal

As noted above, the responses of racial and ethnic minority patients to healthcare providers are also a potential source of disparities. Little research has been conducted as to how patients may influence the clinical encounter. It is reasonable to speculate, however, that if patients convey mistrust, refuse treatment, or comply poorly with treatment, providers may become less engaged in the treatment process, and patients are less likely to be provided with more vigorous treatments and services. But these kinds of reactions from minority patients may be understandable as a response to negative racial experiences in other contexts, or to real or perceived mistreatment by providers. Survey research, for example, indicates that minority patients perceive higher levels of racial discrimination in healthcare than non-minorities. Patients' and providers' behavior and attitudes may therefore influence each other reciprocally, but reflect the attitudes, expectations, and perceptions that each has developed in a context where race and ethnicity are often more salient than these participants are even aware of.

Little research has been conducted as to how patients may influence the clinical encounter.

WHAT CAN HEALTHCARE PROVIDERS DO TO HELP ELIMINATE DISPARITIES IN CARE?

Given that stereotypes, bias, and clinical uncertainty may influence clinicians' diagnostic and treatment decisions, education may be one of the most important tools as part of an overall strategy to eliminate healthcare disparities. Healthcare providers should be made aware of racial and ethnic disparities in healthcare, and the fact that these disparities exist, often despite providers' best intentions. In addition, all current and future healthcare providers can benefit from cross-cultural education. Cross-cultural education programs have been developed to enhance health professionals' awareness of how cultural and social factors influence healthcare, while providing methods to obtain, negotiate and manage this information clinically once it is obtained. Cross-cultural education can be divided into three conceptual approaches focusing on *attitudes* (cultural sensitivity/awareness approach), *knowledge* (multicultural/categorical approach), and *skills* (cross-cultural approach), and has been taught using a variety of interactive and experien-

Healthcare providers should be made aware of racial and ethnic disparities in health-care, and the fact that these disparities exist, often despite providers' best intentions.

tial methodologies. Research to date demonstrates that training is effective in improving provider knowledge of cultural and behavioral aspects of healthcare and building effective communication strategies.

Standardized data collection is also critically important in efforts to understand and eliminate racial and ethnic disparities in healthcare. Data on patient and provider race and ethnicity would allow researchers to better disentangle factors that are associated with healthcare disparities, help health plans to monitor performance, ensure accountability to enrolled members and payors, improve patient choice, allow for evaluation of intervention programs, and help identify discriminatory practices. Unfortunately, standardized data on racial and ethnic differences in care are generally unavailable, and a number of ethical, logistical, and fiscal concerns present challenges to data collection and monitoring, including the need to protect patient privacy, the costs of data collection, and resistance from healthcare providers, institutions, plans and patients. In addition, health plans have raised significant concerns about how such data will be analyzed and reported. The challenges to data collection should be addressed, as the costs of failing to assess racial and ethnic disparities in care may outweigh new burdens imposed by data collection and analysis efforts.

Many other strategies must be undertaken, in conjunction with the training and educational strategies described here, to eliminate racial and ethnic disparities in healthcare. As noted in the report, these include, for example, policy and regulatory strategies that address fragmentation of health plans along socioeconomic lines, and health systems interventions to promote the use of clinical practice guidelines and promote the use of interpretation services where community need exists. In short, a comprehensive, multi-level strategy is needed to eliminate these disparities. Broad sectors – including healthcare providers, their patients, payors, health plan purchasers, and society at large – must work together to ensure all patients receive a high quality of healthcare.

Many other strategies must be undertaken, in conjunction with the training and educational strategies described here, to eliminate racial and ethnic disparities in health-care.

GUIDE TO INFORMATION SOURCES

An increasing number of resources are available to healthcare providers and their patients to increase awareness of racial and ethnic healthcare disparities and means to improve the quality of care for racial and ethnic minorities. The following is only a partial list of some of these resources, and is not intended as an endorsement of the products or individuals and groups that produced them:

American Board of Internal Medicine. (1998). *Cultural Competence: Addressing a Multicultural Society: The ABIM Report 1997-1998*. Philadelphia: American Board of Internal Medicine.

American Medical Association. (1999). *Cultural Competence Compendium*. Chicago, IL: American Medical Association. Product Number OP209199/ Phone # 1-800-621-8335.

Betancourt JR, Like RC, and Gottlieb BR, eds. (2000). Caring for diverse populations: Breaking down barriers. *Patient Care*, Special Issue, May 15, 2000.

Lavizzo-Mourey R, and Mackenzie ER. (1996). Cultural Competence: Essential Measurements of Quality for Managed Care Organizations. *Annals of Internal Medicine* 124, pp. 919-21.

National Alliance for Hispanic Health. *Quality Services for Hispanics: the Cultural Competency Component*, Rockville, MD: U.S. Department of Health and Human Services, 2000.

In addition to these sources, the Henry J. Kaiser Family Foundation and the Robert Wood Johnson Foundation have recently joined forces to sponsor an initiative to increase dialogue among physicians regarding healthcare disparities. To learn more about this initiative, please visit the “Why the Difference?” website at www.kff.org/whythedifference.

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van Ryn M, Burke J. 2000. The effect of patient race and socio-economic status on physician's perceptions of patients. *Social Science and Medicine* 50:813-828.



For More Information...

Copies of *Unequal Treatment: Understanding Racial and Ethnic Disparities in Health Care* are available for sale from the National Academy Press; call (800) 624-6242 or (202) 334-3313 (in the Washington metropolitan area), or visit the NAP home page at www.nap.edu. The full text of this report is available at <http://www.nap.edu/catalog/10260.html>

Support for this project was provided by the U.S. DHHS Office of Minority Health, with additional support for report dissemination provided by the California Endowment and The National Academies. The views presented in this report are those of the Institute of Medicine Committee on Understanding and Eliminating Racial and Ethnic Disparities in Health Care and are not necessarily those of the funding agencies.

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Addressing Health Care Disparities Using Public Reporting

American Journal of Medical Quality
27(4) 275–281
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sagepub.com/journalsPermissions.nav
DOI: 10.1177/1062860611424078
http://ajmq.sagepub.com



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Abstract

The literature highlights that disparities in health care performance exist. Publicly reporting data about disparities at an actionable level is needed. The Minnesota Health Care Disparities Report is designed to publicly report medical group health care performance rates for patients enrolled in state/federally funded programs. In addition, differences between patients enrolled in state-funded public programs and those in private or Medicare programs at statewide and medical group levels are presented. The endeavor is a cooperative one between Minnesota Community Measurement, an independent nonprofit community organization, and the Minnesota Department of Human Services, the state Medicaid agency. Public reporting makes transparent the gaps in the delivery of health care between patients enrolled in these programs at a medical group level and can facilitate quality improvement locally, where accountability lies and actions to address disparities can occur.

Keywords

health care public reporting, disparities, health care measurement, health care quality improvement

A large body of literature documents disparities that exist in the delivery of health care in the United States. Studies have examined the reasons for and consequences of racial, ethnic, sex, and socioeconomic disparities in utilization of health care services and the diagnosis and clinical management of many conditions.^{1–3} Among these factors, socioeconomic status (SES) emerges as a fundamental determinant of health.⁴ Patients of lower SES have higher rates of disease that are compounded by their inability to access and maintain continuity with health care providers.

Health disparities across levels of SES begin prenatally, with women of lower SES receiving less prenatal care to ensure a healthy delivery. Disparities in receipt of childhood immunizations and preventive care emerge at infancy. By preteen years, children of lower SES report lower health status and a higher incidence of risk behaviors that present disadvantages to life and health into adolescence and adulthood, where disparities in preventive health and health care outcomes become striking.^{1,4,5} Studies also show that persons of lower SES receive less ambulatory and hospital care.^{2,6} Whether measured by income, educational achievement, or occupational status, lower SES is associated with health care disparities such as fewer Papanicolaou tests, mammograms, childhood and influenza immunizations, asthma services, and diabetic eye examinations.^{1–8}

The literature highlights the need to directly and indirectly address disparities in health status and in health

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The authors declared the following potential conflicts of interest with respect to the research, authorship, and/or publication of this article: Ms Snowden and Ms Vetta are employed by Minnesota Community Measurement (MNCM). MNCM has a contractual relationship with the Minnesota Department of Human Services to produce the Health Care Disparities Report. MNCM subcontracts with Data Intelligence Consultants to conduct the data aggregation, rate calculations, and analyses included in the Health Care Disparities Report. Dr Carlson is a principle owner of Data Intelligence Consultants. Data Intelligence is a subcontractor of MNCM on the Health Care Disparities Report and other data management and analyses projects. Ms Kunerth and Dr McRae are employed by the Minnesota Department of Human Services. Their employer contracts with MNCM to produce the Health Care Disparities Report. As the funder of this report, they had the opportunity to review, comment, and provide input on the article. The authors disclosed no other potential conflicts of interest. The authors disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This work was supported by the Minnesota Department of Human Services (Contract Number B01113).

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care. Increasing accountability for these health and health care disparities is warranted because the evidence showing that low-income patients face barriers to obtaining high-quality health care continues to grow. For some quality indicators, the gaps between groups defined by SES and by race or ethnicity actually have grown.⁸ Health care providers at all levels (eg, clinics, medical groups, health systems) should examine health care performance data stratified according to insurance status, race, ethnicity, and SES in order to build a foundation for understanding and reducing disparities.^{3,9,10}

Numerous reports highlight health care quality measures at national and state levels from organizations such as the National Committee for Quality Assurance (NCQA) and, more recently, the Agency for Healthcare Research and Quality. Included in these reports are analyses of populations showing significant disparities. However, despite decades of reporting, health care quality has improved but access to high-quality care has not and disparities based on demographic factors such as SES persist. NCQA's reported rates of quality at a health plan level by payer type (commercial, Medicaid, Medicare) consistently show differences; these gaps have been present since at least the early 1990s. Disparities within the health care system are unacceptable.

Data at the national level do not offer the detailed information necessary for health systems or providers to recognize and address disparities within their own systems. The lack of adequate data at a local level has been identified as a key barrier to recognizing and acknowledging that patient populations within the same medical group/clinic may not be receiving the same rates of optimal care.¹¹ Health care personnel working daily within a medical group often have the best understanding of patients and system processes that will offer opportunities for improvement.¹¹ The motivation to improve is driven in part by public reporting that places a priority on medical group-level results and comparison to peers.

This article describes the development and release of the Minnesota Health Care Disparities Report,¹² which was designed to publicly report health care performance rates at a medical group level for 2 patient populations enrolled in Minnesota health plans: state/federally funded public programs and private/Medicare managed care programs. The state/federally funded public programs are called Minnesota Health Care Programs (MHCP). In general, enrollees in MHCP have lower SES and incomes than enrollees in private programs; disparities experienced by people with low incomes are likely to be experienced by those in MHCP. Most MHCP enrollees receive health care coverage through managed care; only those enrolled in managed care are included in the Health Care Disparities Report. This report compares rates between these 2 patient populations and makes transparent the gaps in care that exist between enrollees in MHCP and those enrolled in

private insurance programs at a medical group level (ie, 1 or more clinic sites operated by a single organization). Before this report became available, national and state-level reports of differences in care were dismissed as being either primarily because of patient factors and issues outside of medical group control or because of the perception that disparities existed elsewhere—other medical groups or health systems—“but not in my medical group.” This report supplies objective data and brings accountability to medical groups, allowing them to reflect on their own disparities and identify areas for improvement within their medical group.

Minnesota Community Measurement Annual Public Reporting

The Health Care Disparities Report is produced by Minnesota Community Measurement (MNCM), under contract with the Minnesota Department of Human Services (DHS). MNCM is an independent nonprofit community organization, whose mission is to accelerate the improvement of health by publicly reporting health care information. It strives to be the trusted source for performance measurement and public reporting of health care data that are used by providers to improve care and by patients to make better health care decisions. MNCM is a collaborative of community stakeholders (ie, medical groups, clinics, physicians, hospitals, health plans, employers, consumer representatives, quality improvement organizations) that work together on health care measurement and reporting. Their core vision is to drive change toward health care that is safer, more effective, patient-centered, timely, efficient, and equitable. MNCM's quality of care measures are supported by evidence-based standards of care developed by the Institute for Clinic Systems Improvement and endorsed by the National Quality Forum.

The Health Care Disparities Report has been produced annually since 2007. This “first in the nation” effort highlighted differences (both statewide and at a medical group level) in the degree to which best practices were achieved for patients enrolled in MHCP compared with patients enrolled in private and/or Medicare programs. All patients included in this report, both in MHCP and in private or Medicare programs, are enrolled in managed care programs. Performance measures are selected by DHS for their relevance to patients enrolled in MHCP. Some measures assess how well providers care for patients with chronic health care conditions (Living with Illness measures); another category reflects how well providers care for patients with common acute illnesses (Getting Better measures); a third category includes measures that reflect how well providers keep individuals healthy and identify disease at an early stage (Staying Healthy measures). Table 1 lists all measures by reporting year.

Table 1. MNMCM Health Care Disparities Report Performance Measures by Report Year

Measure	Category	Reporting Year
Optimal Diabetes Care	Living with Illness	2007, 2008, 2009
Controlling High Blood Pressure	Living with Illness	2008, 2009
Use of Appropriate Medications for People with Asthma	Living with Illness	2007, 2008, 2009
Treatment for Children with Upper Respiratory Infection	Getting Better	2007, 2008, 2009
Testing for Children with Pharyngitis	Getting Better	2007, 2008, 2009
Breast Cancer Screening	Staying Healthy	2007, 2008, 2009
Cervical Cancer Screening	Staying Healthy	2007, 2008, 2009
Colorectal Cancer Screening	Staying Healthy	2009
Chlamydia Screening in Women	Staying Healthy	2007 ^a , 2008 ^a , 2009 ^b
Childhood Immunization Status (Combo 3)	Staying Healthy	2007, 2008, 2009

Abbreviation: MNMCM, Minnesota Community Measurement.

^aChlamydia Screening in Women ages 16-25.

^bChlamydia Screening in Women ages 16-24.

Methods

Data for the Health Care Disparities Report originated from health plan administrative claims databases supplemented by medical record review for some measures that require clinical data. The data for most measures were collected by health plans using NCQA technical specifications for the Healthcare Effectiveness Data and Information Set (HEDIS). MNMCM developed the numerator specifications for the optimal Diabetes Care measure, an all-or-none composite measure.

Data reported in a calendar year reflect care delivered in the prior year. Health plans use 2 data collection methods to obtain data for reported measures. Some measures, referred to as administrative measures, are wholly derived from health plan claims data, and medical groups are publicly reported if at least 30 patients meet the measurement specifications. Measures that require clinical data are referred to as hybrid measures because health plans first use claims data to identify eligible patients and then use claims data and/or chart review to obtain clinical data on a random sample of patients. Sampling requires weighting to represent the eligible patients in the population. Because hybrid results are based on a sample, medical groups are publicly reported at a higher threshold of at least 60 patients.

The MNMCM sampling process begins with the sample of patients drawn by the health plan to meet HEDIS requirements. The HEDIS sample is supplemented with additional samples of patients at the medical group level to ensure that as many medical groups as possible meet the reporting threshold. The use of sampling requires that results for hybrid measures be adjusted (weighted) to reflect the larger eligible population from which the sample was drawn. The weighting method takes into account

3 sampling strata: health plan, health plan product (public or private), and medical group.

To calculate medical group rates, patients must be assigned to a medical group. MNMCM has developed an attribution logic that uses health plan claims data to assign a patient to the medical group visited most frequently during the measurement year. In the case of an equal number of visits, the patient is assigned to the medical group at which the most recent visit took place. This attribution logic is used for most measures; however, 2 measures (Appropriate Treatment for Children with Upper Respiratory Infection [URI] and Appropriate Testing for Children with Pharyngitis) focus on acute care needs and, therefore, a patient is assigned to the medical group where the acute service was delivered.

Rates and 95% confidence intervals (CIs) for measures are reported in the Health Care Disparities Report at the statewide and medical group levels. It is important to note that the statewide level reflects the total number of eligible persons enrolled in health plans submitting data to MNMCM and does not represent the entire population of Minnesota. Likewise, medical group rates are based on health plan public and private insured patients and do not reflect all patients seen at the medical group.

CIs are calculated using a recommended method for calculating the CI for a binomial proportion.¹³ A further discussion of this method and the formula for calculation of the CI can be found on the National Institute of Standards and Technology Web site.¹⁴ A complete description of the measures and the methods used by MNMCM for sampling, weighting, attribution, and public reporting also may be found in the 2009 Health Care Disparities Report posted on the MNMCM Web site (http://www.mnmc.org/site/?page=our_work&view=2).

The Student *t* test was applied to test the null hypothesis that the difference between the 2 proportions (Other Purchasers – MHCP) was zero (the working hypothesis being $P_{\text{Other Purchasers}} \neq P_{\text{MHCP}}$). Statistical significance was determined using a 2-tailed test with $P < .05$ indicating significance after adjusting for multiple tests. The difference (Other Purchasers – MHCP) was reported for each measure. Measures with 3 years of data were analyzed for improvement in performance rate over time using a general linear model. All statistical analyses were performed using SAS, version 9.2 (SAS Institute, Cary, NC).

Results

Because MNMCM's public reporting practices use standardized measure definitions, appropriate comparisons can be made by health care professionals and health care consumers. There have been performance rate differences between Other Purchasers and MHCP for every measure in every year that the report has been published. With the exception of the Chlamydia Screening measure, every measure shows significantly lower performance rates for MHCP patients at the statewide level.

The reports also show differences in performance rates at the medical group level and that there is wide variability in performance rates between medical groups. Although most medical groups have lower MHCP performance rates, there are medical groups achieving health care best practices for their MHCP patients at a higher rate than the statewide average, and the reports highlight these medical groups.

The fact that these reports are issued annually allows medical groups to see progress over time and continues to highlight the pressing need for improvement. In the 2009 Health Care Disparities Report, 7 of the 10 reported measures had statewide performance rates for MHCP and private/Medicare programs that could be compared over 3 years. Two measures could not be compared to previous years, and 1 measure could be compared for 2008 and 2009 only. Statewide performance rates for 6 measures improved over time for patients enrolled in both MHCP and private/Medicare insurance programs. Performance rates for all measures are displayed in Table 2.

Table 2 also displays gaps in the achievement of health care best practices for patients enrolled in MHCP compared with patients enrolled in private or Medicare programs for each reporting year. The gaps were calculated by subtracting the MHCP rate from the private/Medicare rate. In the table, a positive difference means that the private/Medicare rate was higher than the MHCP rate—physicians successfully achieved health care best practices in treating patients enrolled in private or Medicare programs more often than they did in treating patients enrolled in MHCP. A negative difference means that the

MHCP rate was higher than the private/Medicare rate—physicians successfully achieved health care best practices in treating patients enrolled in MHCP more often than they did in treating patients enrolled in private/Medicare programs. All but 2 of the 25 differences reported in Table 2 are positive, indicating a consistently higher quality of care, or at least adherence to the standards, for those in the private or Medicare programs.

Statewide trends in gaps can be reviewed for 7 measures. For 5 of these measures, the statewide gap narrowed over time, largely because improvement was greater for those in MHCP. The gap narrowed significantly ($P < .05$) for only 1 of these measures. The statewide gap widened for 2 measures, largely because improvement was greater for those in private or Medicare programs. The gap widened significantly ($P < .05$) for 1 of these measures.

In addition to reporting statewide performance rates and the gaps between MHCP and private/Medicare programs, the Health Care Disparities Report also includes this information at the medical group level, where increased accountability lies and actions to address disparities can occur. For all measures, performance rates are displayed from highest to lowest so that medical groups can compare their performance rate with that of their peers. There are 352 comparisons of performance in MHCP and private/Medicare programs within medical groups in the 2009 Health Care Disparities Report. About two thirds of these show greater adherence to the standards in the private/Medicare programs than in MHCP. Eliminating Chlamydia Screening in Women and Appropriate Treatment for Children with URI, which demonstrate greater compliance in MHCP, reveals that 83% of comparisons show greater compliance in the private/Medicare programs. In other words, the experiences of those enrolled in private or Medicare programs at the statewide level are also found within most medical groups for most measures.

The Health Care Disparities Reports include analyses that highlight the highest performing medical groups and those with the greatest improvement from the previous year. The reports also review medical group performance over time, identifying patterns of consistent improvements and declines from previous years. Printed reports are distributed to medical groups, health plans, the media, and legislators and also are posted on the MNMCM Web site (http://www.mncm.org/site/?page=our_work&view=2).

Discussion

The public reporting of medical group performance rates and the additional analyses comparing patients enrolled in MHCP and private/Medicare programs have made performance rate gaps visible to medical groups, health plans, and the wider community. Since its launch in February 2009, more than 3000 visitors have downloaded the 2009

Table 2. Statewide Performance Rates for MHCP Patients Over Time

Measure	Purchaser	Report Year			Progress Over Time (2007-2009)
		2007	2008	2009	
Optimal Diabetes Care	MHCP	6.5%	7.8%	9.9%	Gap widened ^a
	Private Purchasers	11.4%	13.7%	16.8%	
	Difference	4.9% ^b	5.9% ^b	6.9% ^b	
Controlling High Blood Pressure	MHCP	^c	62.2%	63.6%	Gap widened
	Private Purchasers		65.5%	69.9%	
	Difference		3.3% ^b	6.3% ^b	
Use of Appropriate Medications for People with Asthma	MHCP	88.1%	87.0%	87.6%	Gap widened
	Private Purchasers	92.6%	92.8%	92.8%	
	Difference	4.5% ^b	5.8% ^b	5.2% ^b	
Treatment for Children with Upper Respiratory Infection	MHCP	83.8%	85.3%	87.1%	Gap narrowed
	Private Purchasers	85.0%	86.1%	87.0%	
	Difference	1.2% ^b	0.8% ^b	-0.1%	
Testing for Children with Pharyngitis	MHCP	73.0%	78.9%	80.7%	Gap narrowed
	Private Purchasers	85.9%	86.7%	88.2%	
	Difference	12.9% ^b	7.8% ^b	7.5% ^b	
Breast Cancer Screening	MHCP	57.6%	60.1%	61.9%	Gap narrowed
	Private Purchasers	77.1%	77.4%	77.9%	
	Difference	19.5% ^b	17.3% ^b	16.0% ^b	
Cervical Cancer Screening	MHCP	71.9%	73.2%	71.0%	Gap narrowed
	Private Purchasers	79.0%	78.6%	76.8%	
	Difference	7.1% ^b	5.4% ^b	5.8% ^b	
Colorectal Cancer Screening	MHCP	^c	^c	39.2%	n/a
	Private Purchasers			68.0%	
	Difference			28.8% ^b	
Chlamydia Screening in Women	MHCP	^d	^d	56.1%	n/a
	Private Purchasers			44.8%	
	Difference			-11.3% ^b	
Childhood Immunization Status (Combo 3)	MHCP	68.2%	72.0%	74.7%	Gap narrowed ^a
	Private Purchasers	78.3%	79.8%	79.7%	
	Difference	10.1% ^b	7.8% ^b	5.0% ^b	

Abbreviation: MHCP, Minnesota Health Care Programs.

^aStatistical significance determined using a general linear trend model with $P < .05$ indicating significance.

^bStatistical significance determined using a 2-tailed test with $P < .05$ (with adjustment for multiple test error) indicating significance.

^cNot measured.

^dChange in measure specifications; comparisons over time are not appropriate.

Health Care Disparities Report from the MNCM Web site. News stories about the release of the reports have increased their visibility. Media attention has helped put this information in context and convey messages about the meaning and importance of this information.

Publicly reporting medical group performance rates also provides a framework of standardized measures so that appropriate comparisons between medical groups can be made. Based on a qualitative study using interviews with medical directors and clinic administrators,¹⁵ the ability of medical groups to compare performance rates against other medical groups has helped create a competitive environment that drives change. A primary finding of this study was that placement among peers matters whether comparing between competing medical

groups or comparing clinic sites within a medical group. Improving overall performance rates becomes the focus that mobilizes the entire care team to improve processes in the medical group. However, although these efforts may improve overall performance rates, they may not necessarily reduce the disparities highlighted by the Health Care Disparities Report. Medical group surveys conducted by MNCM following the release of the 2009 Health Care Disparities Report indicate that more than half have used information in the report for targeted quality improvement purposes (data available from Minnesota Community Measurement by submitting a request to info@mncm.org).

Although it is important to develop and implement quality improvement interventions for all patients, reducing gaps may require more creative interventions for

specific populations of patients within the medical group. For example, data from the 2009 report showed that the Colorectal Cancer Screening rate was significantly lower for patients enrolled in MHCP compared with patients enrolled in private/Medicare programs; it also was the measure with the largest gap between these patient populations. In January 2010, partially in response to the 2009 Health Care Disparities Report, a large medical group announced an effort to provide more timely colorectal cancer screening for their African American patients, a large number of whom were enrolled in MHCP. The initiative involved implementation of decision support in their electronic health records to assist staff and providers to recommend screening earlier to African American patients. This has become an important population to target because guidelines now recommend colorectal cancer screening for African American patients starting at the earlier age of 45, while the recommendation for the general population is age 50. This medical group has seen a 27% improvement in their colorectal cancer screening rates for African American patients since implementing this initiative.

Other creative strategies have been as simple as establishing same-day appointments for multiple procedures. For one medical group, identifying women due for a mammogram and offering an immediate opportunity to obtain one during a clinic visit increased access to this important service and led to a 10 percentage point improvement in their Breast Cancer Screening performance rate for MHCP patients since 2007. Same-day appointments are particularly helpful for lower income populations who lack resources (eg, transportation, child care) that otherwise would prohibit them from returning for basic primary care services such as cancer screenings or immunizations.

Since the 2007 Health Care Disparities Report, the Childhood Immunization Status measure has had a significant reduction in the gap between patients enrolled in MHCP and those enrolled with Other Purchasers. After implementing changes based on previous reports from MNCM, one medical group achieved a rate improvement from 48% to 85% of children enrolled in MHCP over a 3-year period. According to the medical group's medical director, this significant improvement was achieved by taking extra steps to allay the fears some parents have about vaccine safety, using a template in the electronic medical record that allows the doctor to recommend and track alternative vaccine schedules that some parents want, and counseling parents during well-child checkups.

Reporting results at a medical group level not only heightened awareness of the disparities problem, it also increased the visibility of the variation between medical

groups. Until now, MNCM's focus has been to develop standardized measures and publicly report results that are used by providers to improve care. We continue to see wide variation in rates each year. In response, we are beginning to collect anecdotal evidence of practice patterns from high-performing clinics. Future reports will include the best practices of these high-performing medical groups in an effort to spread implementation across all medical groups and accelerate improvement.

Conclusion

Improving performance rates for all patients requires a thorough examination of performance data at a medical group or clinic level in addition to data at national, state-wide, and health plan levels. The public reporting of health care performance rates can serve as an impetus to quality improvement, particularly when rates are reported at a medical group level or eventually at the clinic level where more accountability lies and actions to address disparities are more likely. Disparities within the health care system are unacceptable. Results from this report show that it is possible for medical groups and clinics to achieve optimal health outcomes for patients regardless of their insurance program. Improvement also will require an understanding of the unique needs of patients and implementation of targeted interventions to meet those needs.

Declaration of Conflicting Interests

The authors declared the following potential conflicts of interest with respect to the research, authorship, and/or publication of this article: Ms Snowden and Ms Vetta are employed by Minnesota Community Measurement (MNCM). MNCM has a contractual relationship with the Minnesota Department of Human Services to produce the Health Care Disparities Report. MNCM subcontracts with Data Intelligence Consultants to conduct the data aggregation, rate calculations, and analyses included in the Health Care Disparities Report. Dr Carlson is a principle owner of Data Intelligence Consultants. Data Intelligence is a subcontractor of MNCM on the Health Care Disparities Report and other data management and analyses projects. Ms Kunerth and Dr McRae are employed by the Minnesota Department of Human Services. Their employer contracts with MNCM to produce the Health Care Disparities Report. As the funder of this report, they had the opportunity to review, comment, and provide input on the article. The authors disclosed no other potential conflicts of interest.

Funding

The authors disclosed receipt of the following financial support for the research, authorship, and/or publication of this article:

This work was supported by the Minnesota Department of Human Services (Contract Number B01113).

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Racial and Ethnic Disparities in Influenza and Pneumococcal Immunization Rates among Medicare Beneficiaries

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Eighty-five percent of all flu and pneumonia deaths in 2010 occurred among adults age 65 and older. Yet, despite lack of Medicare cost sharing for flu and pneumonia vaccines, significant numbers of older adults don't get immunized and racial and ethnic disparities in immunization rates persist.

Introduction

Influenza (commonly called flu) and pneumonia are infectious respiratory diseases that are vaccine-preventable. Yet together they represented the ninth leading causes of death in the United States among all ages in 2010. During the same year, influenza and pneumonia represented the seventh leading causes of death among people age 65 and older. In fact, more than 85 percent of flu and pneumonia deaths combined occurred among adults age 65 and older.¹

Influenza is responsible for, on average, more than 200,000 hospitalizations each year in the United States,² and together, flu and pneumococcal pneumonia result in thousands of potentially preventable deaths each year.³

Flu and pneumonia immunization rates among *all* older adults are significantly below the Healthy People 2020 goals of 90 percent for each vaccine.⁴ Immunization rates among African Americans and Hispanics are substantially below those of their white counterparts.⁵ These data highlight the need to improve efforts to ensure

that all Medicare beneficiaries receive these important vaccines and especially beneficiaries who are members of racial and ethnic minority groups for which the immunization rates are disproportionately low.

Adult Immunization Recommendations and Medicare Coverage

The Medicare population is especially susceptible to complications associated with flu and pneumonia because both diseases often exacerbate underlying chronic conditions, such as heart or lung disease, asthma, and diabetes.⁶ For example, research suggests that acute respiratory infections, including influenza, may precipitate major cardiovascular events, such as acute coronary syndrome.⁷

The Advisory Committee on Immunization Practices (ACIP) is an expert panel selected by the Secretary of the U.S. Department of Health and Human Services to advise the nation on how to reduce vaccine-preventable diseases. The ACIP, which develops standards for routine

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vaccine administration, including dosage, periodicity schedules, and contraindications for pediatric and adult populations, recommends the following:

- An *annual* influenza vaccine for all people age 6 months and older.
- When vaccine supply is limited, vaccine priority groups to include adults ages 50 and older and all people who live in long-term care facilities.
- A *one-time* vaccination for pneumococcal pneumonia for all adults age 65 and older.⁸

The Medicare program covers pneumococcal and influenza vaccines for people age 65 and older in accordance with ACIP recommendations. Medicare pays for both the cost of the vaccines and their administration by participating providers. No coinsurance or copayments are associated with either vaccine, and beneficiaries are not required to meet the annual Medicare deductible in order to receive them. Finally, when five years have elapsed since the initial pneumococcal vaccine,

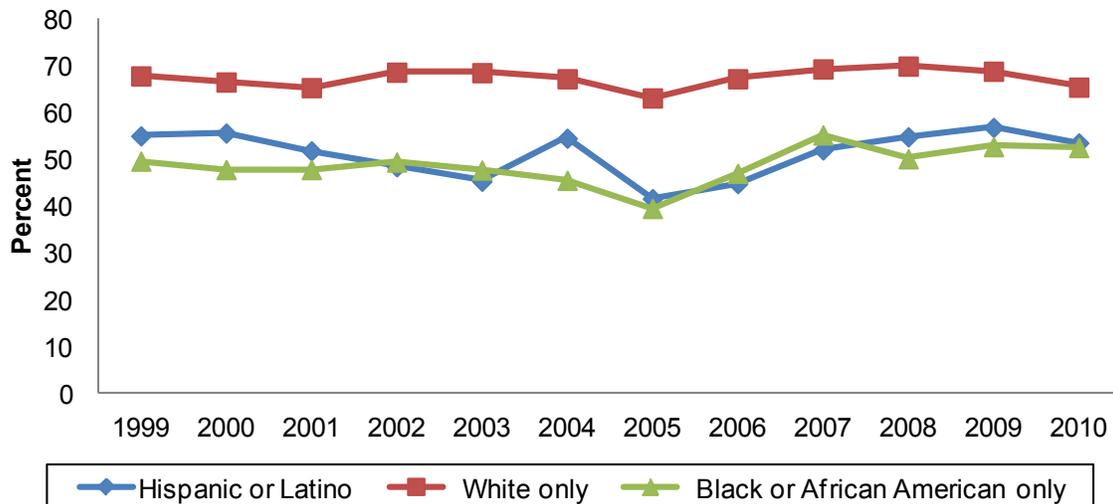
Medicare will cover a booster vaccine for people in high-risk categories.⁹

Disparities in Immunization Rates among Medicare Beneficiaries

Despite Medicare's coverage of influenza and pneumonia vaccines at no out-of-pocket cost to beneficiaries, the number of beneficiaries who are immunized is less than optimal, with even lower rates noted among African Americans and Hispanics. In 2010, just over half of African American and Hispanic adults age 65 and older (53 percent and 54 percent, respectively) reported receiving the influenza vaccine that year, compared with 65 percent of white adults in the same age group (figure 1).¹⁰ Influenza immunization disparities persist, even after controlling for other factors such as socioeconomic status, health status, and the presence of risk factors for influenza.^{11,12}

The gap is even wider for lifetime pneumonia immunization rates among adults age 65 and older. In 2010, only 46 percent of African Americans and 39 percent of Hispanics reported having

Figure 1
Percent of Adults Age 65 and Older who Received an Influenza Vaccination Within the Past 12 Months, 1999–2010



Source: AARP Public Policy Institute Analysis of National Health Interview Survey, 1999–2010.

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ever received the vaccine, compared with 63 percent of their white counterparts (figure 2).¹³ Although pneumonia coverage rates have modestly improved over the past decade for all racial and ethnic groups, disparities in pneumonia immunization rates persist; with the degree of the disparities observed today almost matching those observed more than a decade ago (figure 2).¹⁴

Factors Associated with Racial and Ethnic Immunization Disparities among Medicare Beneficiaries

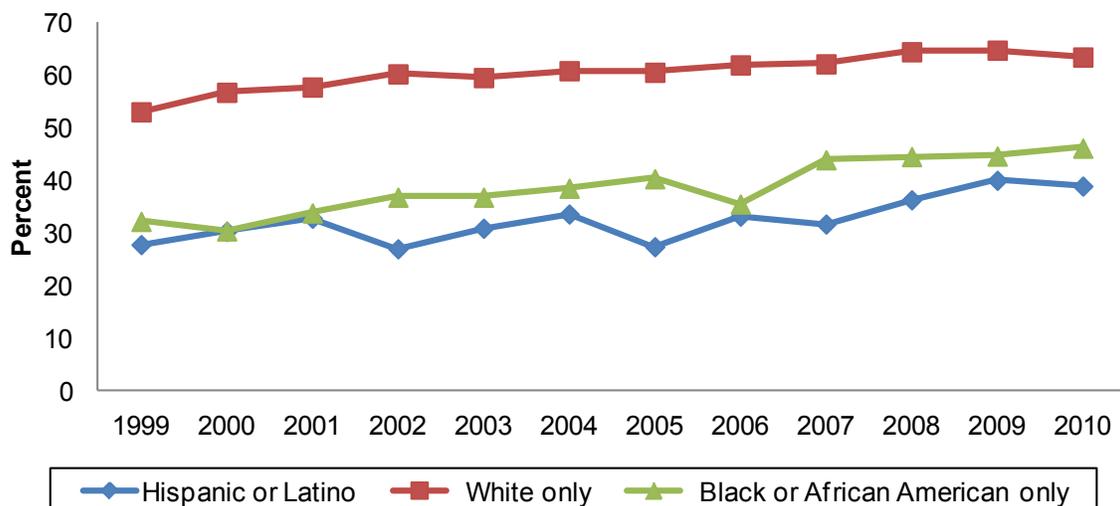
Research shows the following factors are associated with low flu and pneumococcal pneumonia immunization rates among African Americans and Hispanics:

- Cultural and linguistic barriers that limit access to care;¹⁵
- Living in linguistically isolated areas and newer immigrant destinations;¹⁶
- Consumer lack of awareness about the need for the vaccinations;¹⁷
- Consumer fear that the vaccines will cause severe illness;¹⁸
- Distrust of immunizations due to memories of the Tuskegee syphilis experiments;¹⁹
- Few consumer-initiated visits to providers to receive the vaccines;²⁰
- Provider underestimation of the safety and efficacy of the vaccines;²¹
- Provider lack of familiarity with age-based immunization recommendations;²²
- Provider failure to recommend age-appropriate immunizations to older adults;²³ and
- Provider failure to institute ACIP recommendations for standing-order programs that authorize nurses or pharmacists to administer vaccinations according to an institution- or clinician-approved protocol.

Conclusion

Although the Medicare program pays for influenza and pneumococcal

Figure 2
Percent of Adults Age 65 and Older who Have Ever Received a Pneumococcal Vaccination, 1999-2010



Source: AARP Public Policy Institute Analysis of National Health Interview Survey, 1999–2010.

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vaccinations for all beneficiaries, racial and ethnic disparities persist among African Americans, and Hispanics. The challenge of increasing the take up of vaccines is twofold:

- Educating patients in culturally competent, linguistically appropriate

ways about the benefits of vaccination so they can engage in responsible disease prevention; and,

- Educating providers and health systems about the importance of prioritizing adult vaccination, especially among racial and ethnic minorities.

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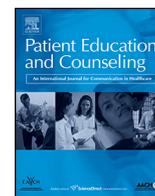
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Fact Sheet 256, May, 2012

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Can public reporting impact patient outcomes and disparities? A systematic review

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ARTICLE INFO

Article history:

Received 9 November 2012

Received in revised form 24 January 2013

Accepted 6 March 2013

Keywords:

Public reporting

Disparities

Systematic reviews

ABSTRACT

Objective: Recent US healthcare reforms aim to improve quality and access. We synthesized evidence assessing the impact that public reporting (PR), which will be extended to the outpatient setting, has on patient outcomes and disparities.

Methods: A systematic review using PRISMA guidelines identified studies addressing the impact of PR on patient outcomes and disparities.

Results: Of the 1970 publications identified, 25 were relevant, spanning hospitals (16), nursing homes (5), emergency rooms (1), health plans (2), and home health agencies (1). Evidence of effect on patient outcomes was mixed, with 6 studies reporting a favorable effect, 9 a mixed effect, 9 a null effect, and 1 a negative effect. One study found a mixed effect of PR on disparities.

Conclusion: The evidence of the impact of PR on patient outcomes is lacking, with limited evidence that PR has a favorable effect on outcomes in nursing homes. There is little evidence supporting claims that PR will have an impact on disparities or in the outpatient setting.

Practice implications: Health systems should collect information on patient-relevant outcomes. The lack of evidence does not necessarily imply a lack of effect, and a research gap exists regarding patient-relevant outcomes and PR.

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1. Introduction

The United States healthcare system provides poor quality with significant disparities [1], where disparities can be defined as differences in health outcomes across population subgroups, often linked to social, economic, or environmental disadvantages. Public reporting (PR) has been proposed as one mechanism to reduce disparities and improve quality [2,3].

The term “public reporting” first referred to the projected assessment of practice quality using standardized patients [4]. However, the first use of the term “public reporting” to refer to healthcare in a way familiar to present readers was in 1992 [5].

Since that time, several pathways have been proposed linking PR to improved performance. Providers may be motivated by PR to improve performance to increase market share. Alternatively it is claimed that patients will use it to choose the best health care. However, it is not known how PR affects patients and disparities.

1.1. Existing evidence on public reporting

More than ten years ago, a review showed improvement in health outcomes among 7 PR systems [6]. In 2008, a systematic review showed inconsistent association between public reporting and effectiveness [7]. Most recently, a 2012 review found moderate evidence that quality measures improved with PR [8]. The reviews of the association between outcomes, quality, and PR have all remarked on the scarcity of the available evidence. In addition, these reviews have not examined the effect of PR on patient subgroups or disparities.

1.2. Disparities and healthcare reform

The National Healthcare Disparities Report of 2011 attributes the persistence of disparities to “differences in access to care, provider biases, poor provider-patient communication, or poor health literacy.” Quality of care and access continue to be suboptimal overall and worse in minority groups [9].

Improving access and reducing disparities is a key objective of the Patient Protection and Affordable Care Act of 2010 (PPACA), which provides uninsured Americans the opportunity to purchase affordable insurance from a system of state-based insurance

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exchanges, raises the income limit for eligibility for Medicaid, and introduces penalties for being without health insurance coverage. The reforms could significantly reduce disparities in insurance coverage [10], and assuming the additional coverage for 32 million previously uninsured Americans leads to greater utilization, there could be an additional 15–24 million primary care visits in 2019 [11]. Quality improvement and its relationship to disparities will thus continue to be relevant [12].

The American health care system is built on a consumerist model. Information is thought to empower patients from vulnerable groups to choose the highest quality care and provide incentives for providers to improve. According to the US Department of Health and Human Services Action Plan to Reduce Racial and Ethnic Health Disparities, “Providing incentives for quality care in these populations is critical for improving patient outcomes and creating a high-value healthcare system that promotes equity.” [13].

1.3. Can public reporting impact access and quality?

While there is some evidence that disparities in care can be improved by PR, especially if “quality improvement programs...tailor health care toward the cultural, linguistic, and educational needs of minorities” [14] there is evidence to doubt this claim.

First, quality improvement and PR efforts can actually increase disparities through various mechanisms. For example, providers might avoid high-risk patients likely to adversely affect their quality scores, and disproportionately low ratings might be received by healthcare organizations that cater to high-risk groups [15].

Secondly, the consumerist model according to which information diffusion leads to a decreased knowledge gap, enabling patients to “shop for quality,” has long been held by some social scientists to be based on mistaken assumptions [16]. While information might lead to greater knowledge in some groups, other less advantaged groups might not be able to take advantage of the information as quickly or reliably for their benefit.

While it might be problematic to claim that PR might help reduce disparities, the scientific literature lacks studies to judge this claim. Chien et al. [14] found only one study examining the effect of performance incentive programs on disparities, which found an increase in disparities in coronary artery bypass graft surgery rates after the implementation of New York State’s report card system. Even today we concur with their judgment of five years ago that “there needs to be more explicit attention to thinking about how policies affect disparities if we are to maximize the chance of improvement for all.” [14].

In order to evaluate the role that PR might play in improving the health of patients and, in particular, disadvantaged subgroups affected by disparities, we undertook a systematic review of the effects of PR on patients and disparities. Our goal was to assess to what extent studies of any appropriate design have examined the effects of PR on any health outcomes for patient populations, where outcomes were compared before and after PR and/or between patient groups using providers that were or were not participating in PR. We asked whether any effects on patient outcomes have been positive or negative, whether there has been any effect on health disparities, and what gaps exist in the literature regarding PR’s effect on disparities.

2. Methods

Our systematic review is reported according to the PRISMA guidelines [17]. A protocol is available from the authors. The key questions were as follows:

1. What is the effect of PR on patient outcomes?
2. What is the effect of PR on disparities?
3. What is the effect of PR on patient choice?
4. What are the potential sources of bias, conflicts of interest, and limitations that characterize the literature on PR and the above areas, and what is the quality of the body of evidence?

2.1. Data sources and searches

We searched PubMed, Scopus, PsycINFO, Sociological Abstracts, Social Science Citation Index (Web of Science), EconLit and Anthropology Plus through January 20, 2013, for primary studies relating to PR. Our original intention was to search only for studies that mentioned disparities or minorities; however, we saw that this search would potentially miss studies that assessed effects on subgroups as secondary analyses. Thus, our literature search was broadened. The final search strategy included the terms “public reporting” or “quality reporting”, and specified “health” for databases that also covered non-health topics. Title, abstract and full article reviews were performed by two independent reviewers to identify relevant publications. Conflicts were resolved by consensus.

2.2. Study selection

From the larger database of studies on PR we identified studies of any design with original data addressing the effects of PR on measures of morbidity, mortality, or patient-reported outcomes. We were interested in any patient-relevant outcomes, as opposed to process outcomes that may not be associated with any meaningful effects for patients. Participants could be any patient population, and the intervention any government-provided PR of health care process or outcome measures. Crowd-sourced or privately funded PR initiatives were excluded because we were chiefly interested in the effect of state- or Federally-sponsored PR initiatives, which are most closely linked to healthcare reform through the public sector (Table 1).

Studies with any length of follow-up were included, although cross-sectional studies that compared changes in patient outcomes measured by the PR instrument without a longitudinal component

Table 1
Exclusion and inclusion criteria.

Review stage	Include	Exclude
Title	<ul style="list-style-type: none"> ✓ Any article about “public reporting” ✓ Any article about “quality reporting” 	<ul style="list-style-type: none"> ☒ Only concerned with narrowly technical issues ☒ Not about providers ☒ Only concerned with epidemiological surveillance ☒ Model or simulation
Abstract	<ul style="list-style-type: none"> ✓ Any article, review, editorial, consensus statement, or letter to the editor relating to public or quality reporting AND one of the following: <ul style="list-style-type: none"> Preferences Disparities Minorities 	<ul style="list-style-type: none"> ☒ All of the above exclusion criteria ☒ Health care reform policy discussion ☒ Regulation description, technical implementation (e.g. “how-to”), or compliance guide ☒ Non-formal, crowd-sourced, social-media, or Web-search based public reporting

were excluded because any differences could not be attributed to the effects of PR. There were no limits on publication dates or languages. Reviews, dissertations, abstracts, unpublished reports, and commentaries were excluded because they did not report any original data, or were likely to be published subsequently in journal articles. Other exclusion and inclusion criteria are listed in Table 1.

2.3. Data extraction and quality assessment

Data from each article were serially extracted by a junior reviewer, then by a more senior reviewer; differences in opinion were resolved through consensus. We sought data on the following variables: setting, population, outcomes, and effect on patients, choice, and disparities. The principal summary measure was the nature of the effect on patients, positive or negative, and the nature of the effect on patient choice. Given the heterogeneity of the methods used in the articles, we did not summarize the magnitude of effect. Effects were identified and classified as either positive, negative, or none, and reported separately where studies assessed multiple outcomes or patient subgroups.

In addition to abstracting the main effects of PR on patient outcomes, we also abstracted information from any subgroups of patient populations in order to address research questions about effects of PR on disparities, i.e. differences in outcomes between subgroups due in part to social or economic disadvantage. In order to assess quality of individual studies, we also abstracted information on the reported funding source of the study, reported conflict of interest for the authors, and the major limitations presented. Information on risks of bias was tabulated and analyzed through narrative synthesis.

2.4. Data synthesis and analysis

No groups of studies could be pooled quantitatively due to the heterogeneity of the PR tools examined and patient outcomes reported. We summarized and described the results qualitatively, grouping the results by outcome, setting, and population for clarity of presentation. We summarized the direction of the effect on patients and the effect on patient choice as overall positive, overall mixed, null, or overall negative. We also analyzed the general direction of effect for multiple subgroups of studies; in particular, we summarized the direction of effect for the settings most represented in our review.

Similarly, we summarized the direction of the effect of PR on disparities. We evaluated the quality of the body of evidence using the GRADE approach [18]. This approach evaluates the quality starting from a “baseline” quality associated with a given study design, and then further refines the estimate of quality given various quality domains.

3. Results

We identified 1970 records through our database search (see Fig. 1). As is frequently the case in such reviews, most studies were excluded at the title or the abstract level. After reaching the abstract level, many studies, 523 of 605, were found not to be relevant to our key questions. Finally, at the full-text level, 57 of 82 studies were excluded for lack of relevance to our questions, lack of original data, or unpublished manuscript. We included 25 studies in our systematic review. For characteristics of the included studies, see Table 2. The publication year of the studies varied from 2002 to 2012. One study was carried out in the Netherlands [25] and one in Italy [42]; the remaining studies were carried out in the US. The majority of the studies ($N = 16$) were carried out in hospitals [19,21–23,26,28–30,32–36,38,43,44]. In five studies, the

setting was nursing homes or skilled nursing facilities [20,24,38–40], in one study, emergency rooms [25], and in two studies, health plans [27,42]. Home health care was the setting for one study [31]. No studies were conducted in the outpatient setting.

3.1. Outcomes reported in the studies and sources of PR information

A number of studies shared common or multiple aims. Many studies ($N = 14$) had among their research aims the effect of PR on inpatient mortality [19,21,22,26,28–30,32–37,43], and two studies examined the effect of PR on hospitalization or rehospitalization [19,31]. Six studies included outcomes relevant to activities of daily living (ADLs) or other quality measures for nursing home residents [20,24,31,38–40]. Four studies examined cardiovascular outcomes apart from mortality or hospitalization, involving either coronary artery bypass graft (CABG), percutaneous coronary intervention (PCI), or heart failure [19,22,37,43]. Other aims in these studies included quality measures appropriate to the outpatient setting including vaccinations and cancer screening [42], general quality of care [22,37], case mix [22,32], and market share or patient choice [34,40]. One study examined patient-reported satisfaction and other measures of patient experience [23].

Various sources of PR information were used. Nine used various states' public reporting mechanisms for outcomes of CABG or PCI [19,22,26,28,29,32–34,43]. One study used state-level PR data from the Minnesota Department of Human Services [42]. Four studies used Nursing Home Compare [20,38–40], of which one used, as well, the On-Site Compliance Review [20]. Three studies used Hospital Compare [35–37], one used data from the Hospital Quality Incentive Demonstration project of the CMS [30], and one study used data from the Hospital Quality Alliance [25]. Two studies used patient surveys [23,27]. One study used Home Health Compare [31]. One study used information from the Regional Outcome Evaluation Program from the region of Lazio in Italy [44].

3.2. Effect on patient outcomes, disparities, and choice

Table 2 summarizes the effect of PR on patients and patient choice. In general, the effect of public reporting on patients was mixed. Six studies reported a positive effect on patients, nine reported a mixed effect, that is, some positive effects on patients and some negative or null, eight reported a null effect, and one reported negative effects.

Among the five studies set in nursing homes, three showed a positive effect on patients and two showed a mixed effect. Three of the studies set in nursing homes were carried out by the same first author. As opposed to the studies conducted in the hospital setting, the studies in nursing homes did not address mortality, but rather quality measures appropriate to the setting, such as activities of daily living. For example, Werner and colleagues [39], in a study of 13,683 skilled nursing facilities in the U.S., found improvement in both reported and unreported measures associated with PR, that is, improvement in measures of pain, delirium, and walking, as well as in measures not reported for the purpose of PR (improved pain, locomotion, shortness of breath, bladder incontinence, respiratory infection, urinary tract infection, and activities of daily living [ADLs]).

Among the studies set in hospitals, four showed a mixed effect, two showed a positive effect, seven showed a null effect, and one showed a negative effect. Most of the studies set in hospitals were in populations undergoing cardiac surgery and using PR information from a CABG or PCI reporting database. For example, Carey and colleagues examined mortality, admission, and repeat procedures among patients in California hospitals undergoing cardiac surgery from 1998 to 2004, finding that risk-adjusted in-hospital mortality

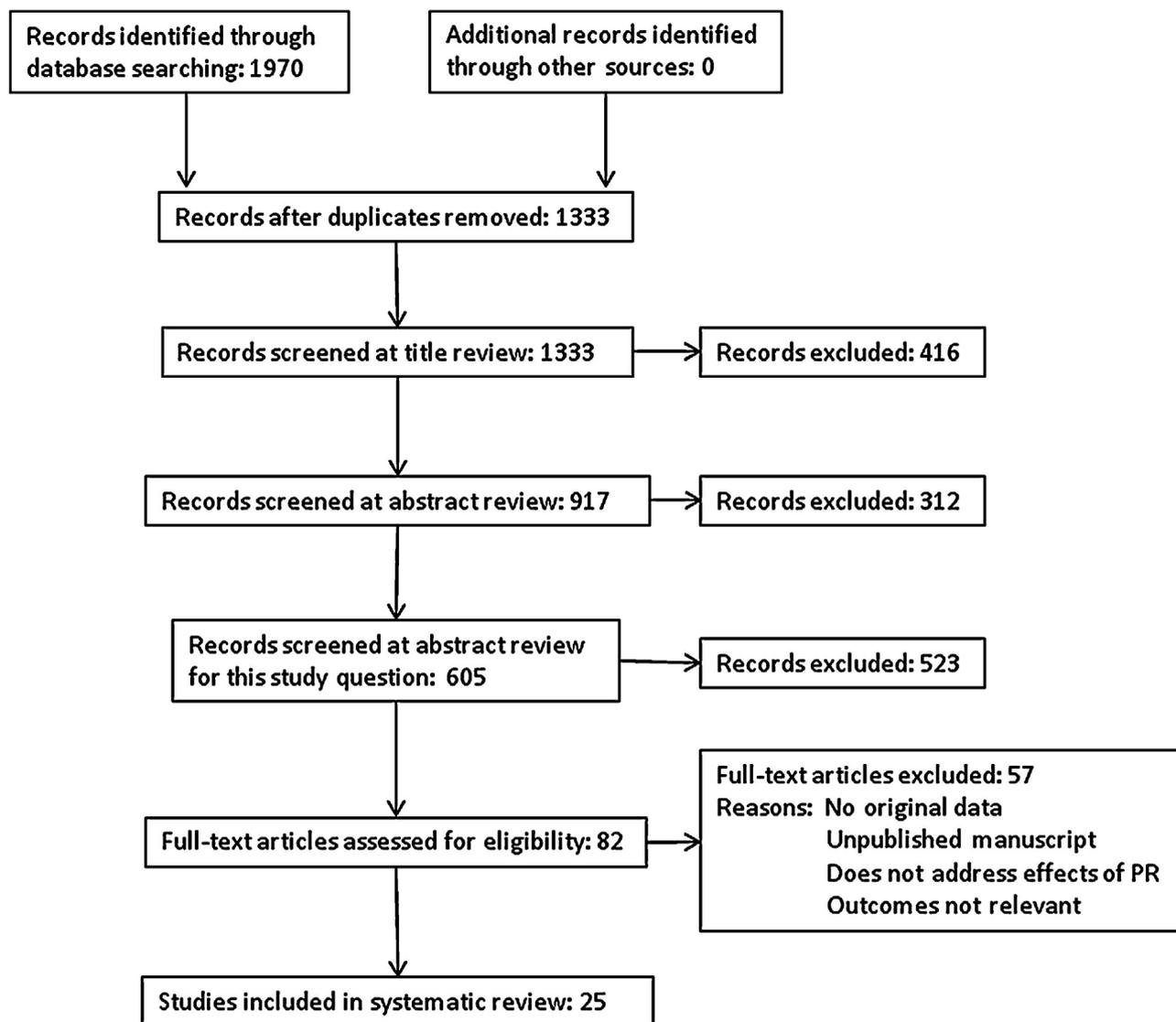


Fig. 1.

for CABG, CABG plus valve or aneurysm, and valve procedures decreased during 2003 and 2004 compared with 1998 through 2002.

Of the three studies conducted in settings other than nursing homes or hospitals, the effect on patients was mixed. Friedberg showed no difference in antibiotic use, waiting time, or pneumonia diagnosis in the emergency department [25], and Jung found mixed evidence for improvement among home health agencies [31]. Hendriks found improved health plan ratings among users in Holland [27] and Snowden found mixed trends in quality measures among users of public health plans after the initiation of PR [42].

Two studies showed a positive effect of PR on patient choice, increasing the proportion of patients who chose high-quality facilities [32,38].

Regarding the effect of PR on disparities, Snowden et al. assessed the differences to which best practices on a variety of measures were achieved in the state of Minnesota, USA, between state and Federally funded public health care programs and private programs, from 2007 (when PR started there) till 2009. The gap between private and public plans narrowed for some measures, widened for others, and did not significantly change in the rest

[42], but no analysis controlling for patient or health system characteristics was conducted.

3.3. Sources of bias and quality concerns

Many studies were funded by more than one organization. In seven studies, funding came from a federal or national agency [21,33–37,43,44]; in three studies support came from a non-governmental organization, university or foundation [29,33,37]. In several cases ($N = 4$) funding came from state-level departments of health or insurance agencies [32,36,37,42]. In the remainder of studies, no information was given on source of funding for the research.

Potential conflicts of interest on the part of the authors was reported in three studies; in two studies, the authors included employees of the state agency responsible for PR [26,42]. In one study the CMS was a funder [21], which could have constituted a conflict of interest given that the CMS administers Hospital Compare, the mechanism of public reporting in that study.

We summarize the quality domains in Table 3 according to the GRADE approach; quality assessments of the individual

Table 2
Characteristics of included studies and effects of public reporting on patients, patient choice, and disparities.

Author, year	Setting	Population	Public reporting mechanism	Outcomes	Effect on patients	Effect on patient choice	Effect on disparities
Carey et al. [19]	H	CSurgPts	California Cardiac Surgery and Intervention Project	Mortality, readmission, repeat procedure	+	NI	NI
Clement et al. [20]	NH	NHRes	Nursing Home Compare, OSCR	Restraints, pressure sores	+/-	NI	NI
Werner and Bradlow [38]	NH	NHRes	Nursing Home Compare	Pain, delirium, walking	+	NI	NI
Werner [39]	NH	NHRes	Nursing Home Compare	Reported and unreported measures	+	NI	NI
Werner [40]	NH	NHRes	Nursing Home Compare	ADLs	+	+	NI
Jung [31]	HH	HHPts	Home Health Compare, OASIS	ADLs, emergent care, hospitalization	+/-	NI	NI
Li [32]	H	CSurgPts	California CABG Outcomes Reporting Project	Mortality, case mix	0	NI	NI
Romano [34]	H	CSurgPts	California CABG Outcomes Reporting Project	Mortality, market share, patient selection	0	+	NI
Jha and Epstein [29]	H	CSurgPts	NY CABG report cards	Mortality	+/-	NI	NI
Moscucci [33]	H	CSurgPts	Coronary Angioplasty Reporting System in New York	Mortality	0	NI	NI
Dranove et al. [22]	H	CSurgPts	NY and PA CABG report cards	Patient health; case mix; CABG quality; mortality; cost	-	NI	NI
Guru [26]	H	CSurgPts	Ontario (Canada) CABG performance report cards	Mortality	0	NI	NI
Hollenbeak [28]	H	CSurgPts	PHC4	Mortality	+	NI	NI
Ryan [35]	H	Patients with MI, heart failure, pneumonia, or CABG	Hospital Compare	Mortality	0	NI	NI
Ryan et al. [36]	H	Patients with heart failure, hip fracture, pneumonia, stroke, or GI hemorrhage	Hospital Compare	Mortality	0	NI	NI
Werner [37]	H	Patients with MI, heart failure, pneumonia	Hospital Compare	Mortality; care for heart failure, MI, pneumonia	+/-	NI	NI
Jha et al. [30]	H	Patients with MI, CHF, CABG, pneumonia	Premier HQID	Mortality	0	NI	NI
Friedberg et al. [25]	ED	Patients with respiratory symptoms	Hospital Quality Alliance data on antibiotic timing in pneumonia	ED diagnosis of pneumonia, antibiotic use, waiting time	0	NI	NI
Elliott et al. [23]	H	Medical, surgical, maternity inpatients	HCAHPS	Measures of patient experience	+/-	NI	NI
Hendriks et al. [27]	HP	Health plan users in Holland	Kiesbeter.nl	Rating of health plan	+	NI	NI
Feng Lu [24]	NH	NHRes	NHQJ	ADLs, bowel function, transfer, depression, other NH quality measures	+/-	NI	NI
Clough et al. [21]	H	Inpatients with multiple diagnoses	CHQC	Mortality	0	NI	NI
Snowden et al. [42]	HP	Patient enrolled in the Minnesota Health Care Programs and patients in private/Medicare managed care programs	Minnesota Health Care Disparities Report	Various health quality measures including vaccination, cancer screening, and treatment of asthma, URIs, diabetes, and hypertension	+/-	NI	+/-
Joynt et al. [43]	HP	Medicare beneficiaries older than 65 with primary discharge diagnosis of acute MI as initial episode of care	NY, MA, and PA PCI public reports	Mortality, PCI rates	+/-	NI	NI
Renzi et al. [44]	H	Patients with acute MI, hip fractures, and maternity patients (in Italian hospitals)	Regional Outcome Evaluation Program, P.Re.Val.E	PCI rates, hip fracture operations, Cesarean sections	+/-	NI	NI

Abbreviations: H, hospital; NH, nursing home; HP, health plans; CSurgPts, cardiac (i.e. PCI, CABG, valvular) surgery patients; NHRes, nursing home residents; MI, myocardial infarction; CABG, coronary artery bypass graft; GI, gastrointestinal; CHF, congestive heart failure; OSCR, On-Site Compliance Review; OASIS, Outcome and Assessment Information Set; NY, New York; PA, Pennsylvania; PHC4, Pennsylvania Health Care Cost Containment Council; HQID, Hospital Quality Incentive Demonstration; HCAHPS, Hospital Consumer Assessment of Healthcare Providers and Systems; NHQJ, Nursing Home Quality Initiative; CHQC, Cleveland Health Quality Choice; ADLs, Activities of Daily Living; ED, emergency department; +/-, mixed effect reported, some outcomes improving and some worsening; -, all reported outcomes worsened; +, all reported outcomes improved; 0, null effect; NI, not investigated.

studies are available in a Web appendix. The studies were done with observational methodologies, as opposed to randomized clinical trials, and thus the quality of the body of evidence is at most low at baseline. Given the likely existence of publication bias, as many internal and pilot studies concerning PR likely

never are prepared for publication, the quality is reduced somewhat further.

We found a number of limitations in the studies. As many PR programs are global, that is, applying to all hospitals of a given type, pre-post methods were used and no contemporaneous

Table 3
Quality of the body of evidence.

Quality dimension	Characteristic	Effect on quality
Design	Observational studies	Low baseline quality
Risk of bias	Minimal	No change
Consistency	Consistent	No change
Directness	Direct	No change
Precision	Precise	No change
Publication bias	Likely	Decrease (−1)
Effect	Not large	No change
Dose–response	None shown	No change
Residual confounding	Might increase or decrease effect	No change
Summary quality of evidence		Very low

control group was available for comparison. Furthermore, information was often not available on the frequency with which hospitals or nursing homes dropped out or self-removed from the public reporting mechanism in question. Finally, unmeasured aspects of hospital, nursing home, or patient characteristics could have explained variation in outcomes with and without public reporting.

In order to examine whether excluded studies might not have suffered from the gaps of the body of evidence included in our review, we examined the 57 full-text articles which we excluded through lack of relevance to our key questions, lack of original data, or through being an unpublished manuscript. None of them addressed the outpatient setting. One study did directly address disparities in terms of difference of utilization among minority groups; however, it did not directly assess the effect of PR on disparities in care or patients [41].

4. Discussion and conclusion

4.1. Discussion

Our findings show that it is unclear whether PR can contribute to the improvement of quality of care, as it pertains to outcomes important to patients. We found consistent evidence that PR positively affected patients in the nursing home setting, though this should be understood in the context of a low quality of evidence. Furthermore, only one study on the effects of PR in our review addressed disparities – identified as an important task for health care reform efforts – and that to a limited extent.

Increased patient access to health care as provided by the PPACA is meant in large measure to take place in the outpatient setting, in increased patient visits with primary care providers. However, we found no evidence in the literature of the possible effects of PR in the outpatient setting. Most fundamentally, we found very little evidence that PR positively affects patient choice, a mechanism posited to explain the potential role of PR in health care reform, though what evidence we did find showed a positive effect. Of the two studies associated with a positive effect on choice, one was in the nursing home setting and the other in hospitals, making it difficult to generalize conclusions about the effect on choice to all settings.

There are several possible reasons for the minimal evidence provided in this review for the effect of PR on disparities. One is that our search was not broad enough and missed those studies that address the effect of public reporting on patient subgroups. Some studies might have not collected information on subgroups, or done so without comparing effects of PR. Another possibility is that these studies, in fact, already considered patient subgroups by controlling for race, socioeconomic status, or gender in the analyses. However, it is possible that such an analysis itself

overlooks the significant disparities among patient subgroups for the outcomes that they considered. Statistical methods have recently been developed to examine population heterogeneity in such research and could be of use here [42].

Our review has a number of limitations. We limited our review to studies that included the terms “public reporting” or “quality reporting,” so we could have missed studies if they used some other term to refer to the same phenomenon. We excluded studies which did not include a comparison group, so might have overlooked studies which explicitly addressed a vulnerable group. In addition, given the heterogeneity in methods and measures already mentioned, we could not perform a meta-analysis. We did not perform a gap analysis according to the method of Saldanha and colleagues [45] and thus might have overlooked significant gaps in the literature remarked upon by the authors. Nevertheless, ours is the first systematic review examining the effect of PR on patients, focusing on demand-side and not supply-side information, and is the first to examine the literature for evidence on PR's effect on disparities and patient choice.

4.2. Conclusion

In summary, our review shows that the evidence supporting the effect of PR on outcomes is mixed, and of low quality in general, with consistent evidence of a positive effect of PR in the nursing home setting. The evidence to judge the effect of PR on disparities is minimal. Most significantly, we found only one study reporting the effect of PR on patient subgroups affected by disparities, with the evidence mixed [42].

Further, we found no studies focusing on the effect of public reporting in the outpatient setting. We are therefore left with a significant hole in our knowledge concerning the effect of public reporting on disparities.

Thus, it is unclear whether the expected increases in coverage and access to primary care under the PPACA, a time when many new patients are seeking new providers [47], will actually result in any improvements in health care quality for vulnerable and underserved populations.

We believe that the relationship between PR and disparities is complicated by an underlying contradiction. PR initiatives aim to improve population health. However, if PR is prioritized according to the wants and needs of relatively advantaged groups, individual patients from disadvantaged groups such as are impacted by disparities might not see their preferences reflected in the process. As is well known, an effective practitioner pays attention to the patient as an individual, responding to her needs and the items on her agenda as she prioritizes them.

Thus, while PR might have been conceived as an initiative to empower individuals, unless the system of PR recognizes individual differences between patients, using technologies and delivery systems that can adapt to such differences, the heterogeneity of patients might be overlooked.

Future work should seek to broaden this search to examine the relationship between public reporting and patient subgroups, understanding how patients in minority and disadvantaged subgroups are affected by such initiatives. In particular, qualitative and mixed methodologies should explore the patient experience of PR in a variety of health systems. Such mixed methodologies should help to clarify the quantitative questions, leading to a study of the relationship between public reporting and disparities.

4.3. Practice implications

Our results have implications for patients, purchasers, and providers. These findings suggest that patients might consider using PR information regarding nursing homes as it may be associated

with positive outcomes, though the nature of the causal relationship is unclear. The consistency of the positive effect of PR in the nursing home setting is intriguing, perhaps explained by the greater longitudinality and chronicity of the NH setting compared to hospitals: nursing home residents stay longer in those facilities than hospital patients, thus making it easier to track improvements, and more likely that outcomes are more relevant and closer in time to patients' care [46]. In addition, nursing homes might already possess the centralized infrastructure in health information technology to make quality improvement feasible.

In response to the need by patients from disadvantaged subgroups for information from providers, hospitals, and health plans about outcomes relevant to them, health care systems should ask patients what information they are most seeking and provide it to them, tailored to their particular subgroup. The goal of such information would be to improve the implementation of PR systems, focusing on patient-relevant outcomes, in all relevant subgroups, including the disadvantaged, and in all sectors of the US health care system.

Most importantly, the lack of evidence which we found supporting the effect of PR on patient-related outcomes and disparities does not necessarily imply a lack of effect. In fact, the US Agency for Healthcare Research and Quality recently issued a request for applications for funding to advance the science of PR. Future research in this area should bridge the gap between PR and the broad literature on patient education and communication in the service of patient-centered care.

Conflict of interest

No author has any conflict of interest to declare.

Role of funding

No funding or technical support was used in the preparation of this manuscript.

Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at <http://dx.doi.org/10.1016/j.pec.2013.03.003>.

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