



Healthcare Quality Reporting Program

NURSING HOME SUBCOMMITTEE

4/15/2014, 3-4:30pm

RICHA, 57 Kilvert St, Warwick, RI 02886

Goals/Objectives

- To advise the Department on nursing home reporting and implement agreed-upon policies

Invitees

- | | | |
|-------------------------------------|--|---|
| ✓ Rosa Baier, MPH | <input type="checkbox"/> Hugh Hall, MA | <input type="checkbox"/> Arthur Pullano |
| ✓ Virginia Burke, J.D. | ✓ Ann Messier | <input type="checkbox"/> Adele Renzulli |
| ✓ Emily Cooper, MPH | ✓ Jim Nyberg, MPA | ✓ Janet Robinson, RN, MEd, CIC |
| ✓ John Gage, MBA, CNHA, CAS, FACHCA | ✓ Gail Patry, RN (Chair) | ✓ Samara Viner-Brown, MS |
| ✓ Diane Gallagher | ✓ Isak Philbrick, RN | |

Time Topic/Notes

- 3:00pm **Welcome**
Gail Patry, RN
Rosa Baier, MPH
- **Today’s objectives**
 Rosa reviewed the past meeting’s action items. The objectives for this meeting are to discuss the 2013 and 2014 satisfaction surveys, discuss increasing employee influenza immunization data submission, and brainstorm about reporting treatment equality.
 - **Previous meeting’s action items:**
 - **Send information for MyInnerview call (Emily) – Complete**
 Emily sent the information for the MIV call to the group.
 - **Request the custom question data from My Innerview (Emily) – Complete**
 The questions were incorporated into the aggregate report. Gail, Rosa and Emily are working with MIV to set up a dashboard that will allow the program to view the data in the same format that the facilities use.
 - **Create press release for Satisfaction Report (Rosa) – Complete**
 Rosa has created a draft (distributed during this meeting), but it has not yet been disseminated to the media. We are working with My Innerview’s (MIV’s) media leads to add their thoughts and obtain their help getting it picked up by the media. MIV has had success helping other states publicize their efforts.

Time	Topic/Notes
	<ul style="list-style-type: none"> • Share the Safe Transitions Nursing Home Directory, when available (Emily/Rosa) – Pending The directory is being finalized and will be distributed when it is complete. • Work with Facilities Regulations to issue citations and warnings (Gail/Rosa) – Complete Facilities Regulations notified the facilities receiving a warning (10 facilities) or a citation (one facility) for failure to distribute surveys or failure to distribute a sufficient volume of surveys.
3:05pm	<p>Discussion: Satisfaction Surveys <i>Rosa Baier, MPH</i> <i>Emily Cooper, MPH</i></p> <ul style="list-style-type: none"> – 2013 follow-up: <ul style="list-style-type: none"> • <u>Citations and warnings</u> As noted above, Facilities Regulations notified the facilities receiving a warning (ten facilities) or a citation (one facility) for failure to distribute surveys or failure to distribute a sufficient volume of surveys. • <u>Press release (handouts)</u> The group reviewed two press releases: the draft Rhode Island version and one created by MIV for Georgia. As noted above, we are working with MIV’s media leads to add their thoughts and obtain their help getting it picked up by the media. MIV has had success helping other states publicize their efforts; the Georgia press release was picked up in Australia. Rosa and Sam will incorporate MIV’s feedback and then obtain sign-off from the Communications Department at HEALTH before distributing the press release, hopefully within the next 1-2 weeks. • <u>Recognition of high performers (handout)</u> During a call with MIV, Rosa and Emily asked if there were opportunities to recognize high performers. MIV responded that they do, in fact, have an existing award program and that winners receive press kits to publicize their success. MIV shared a list of recent winners (handout), so that the group could see which Rhode Island facilities won. Rosa asked if there would be a benefit to creating a Rhode Island-specific recognition program. The group recommended leveraging the MIV recognition program. Rosa will obtain information from MIV about the criteria for the awards and work with MIV to incorporate this information into the press release. – 2014 planning: <ul style="list-style-type: none"> • <u>MIV instrument changes</u> In previous discussions, the group indicated an interest in exploring opportunities to align the instrument with the changing environment, since it has not changed substantially, and asked the team to assess MIV’s plans to update the survey. MIV is currently piloting a new instrument, which is available for us to use this fall, if the committee is interested.

Time	Topic/Notes
	<p>The pilot instrument is proprietary and under development, so the team was unable to distribute it, but described the changes:</p> <ul style="list-style-type: none"> ○ Organizing the questions organized in a more intuitive order; ○ Improving the wording of questions to be more easily understood; ○ Making the questions reflect person-directed care; ○ Including questions about day-to-day staff interaction; ○ Using a five- vs. a four-point scale; and ○ Including an additional response category, 'Does not apply.' <p>Gail noted that the pilot instrument is nearly twice as long, and we do not know if it involves additional costs for the facilities. The group was in favor of using the MIV pilot instrument, but asked for cost information before making a final recommendation to the program. Gail, Rosa and Emily will meet with MIV to discuss logistical questions and also ask MIV to participate in the next committee meeting.</p> <ul style="list-style-type: none"> ● Opportunity to pilot AHCA's CoreQ questions (handout) <p>We have an opportunity to test a four-item instrument ("CoreQ") that the American Health Care Association (AHCA) is developing. Their goal is to create a short set of standardized questions that can be incorporated into vendors' existing instruments and endorsed by the National Quality Forum for public reporting on Nursing Home Compare.</p> <p>David Gifford approached MIV and the program to ask if Rhode Island would be interested in testing the CoreQ questions. We could include these questions in either MIV instrument (either the existing instrument or the pilot instrument). Rosa commented that this is an opportunity for Rhode Island to participate in an innovative effort. Gail also noted the importance of supporting national efforts.</p> <p>The four questions use a five-point scale, similar to the MIV pilot instrument, but Jim noted that the scale (negative to positive) does not match MIV's (positive to negative). Rosa explained that if we want to incorporate these questions, we would need to work with MIV and AHCA to incorporate the questions seamlessly.</p> <p>The group was in favor of piloting the AHCA questions. Rosa will ask Giff to participate in the next committee meeting.</p>
4:35pm	<p>Healthcare Worker Flu Vaccination <i>Rosa Baier, MPH</i> <i>Emily Cooper, MPH</i></p> <ul style="list-style-type: none"> - Data submission <p>Emily noted that the deadline for reporting Healthcare Worker flu vaccination to the Health Department is coming up on May 15, 2014.</p> <p>Although this is only the third year that our program has obtained these data for public reporting (and only the second year when facility rates will be published), the Immunization Program has a long history of requiring these data. Despite this, data submission rates remain very low: 42.4% of facilities reported in the 2011/2012 flu season, and 58.1% of facilities reported in the 2012/2013 flu season.</p> - Discussion <p>The group discussed possible barriers to data submission and brainstormed about</p>

Time	Topic/Notes
	<p>ways to increase submission rates:</p> <ul style="list-style-type: none"> • <u>Barriers</u> <p>The Immunization Program emails the email address on file with licensure; our program creates a reminder that we distribute via fax; and Healthcentric Advisors' nursing home team distributes the reminder via its nursing home listserv.</p> <p>The group noted several possible barriers. We need to ensure that:</p> <ul style="list-style-type: none"> ○ The request is received at the facility (licensure contacts may be incorrect); ○ The request is <i>read</i> at the facility; ○ The request is shared with the right person at the facility; and ○ The difference between dose reporting for residents and vaccination rate reporting for HCWs is clear. • <u>Suggestions</u> <p>After group discussion, Virginia, Jim and Janet volunteered to send messages to their members/partners, notifying them about the deadline, explaining the difference between dose reporting and vaccination reporting and requesting that the message be shared with the correct person in the facility.</p>
3:50pm	<p>Treatment Equality Measures <i>Rosa Baier, MPH</i> <i>Emily Cooper, MPH</i></p> <ul style="list-style-type: none"> - Steering Committee request <p>Over the past few months, the Steering Committee has been exploring the idea of reporting healthcare and treatment disparities. This discussion is still in the early stages, but the Steering Committee has asked that the Nursing Home Subcommittee discuss how this type of reporting might be published for nursing homes. Rosa reminded the group of the program's charge, which is to create comparative reports that consumers can use for decision making, and asked them to view this request through that lens.</p> - Discussion <p>The group reviewed several research articles that Emily found, citing racial and ethnic disparities in nursing homes, and discussed the questions sent with the agenda:</p> <ul style="list-style-type: none"> • What measures would be most meaningful in this setting? • How could this be measured in the nursing home setting? • How would this information be actionable for consumers/facilities? <p>Discussion included questions about what resident-level data are available (we do not have access to MDS data), what would be actionable (and not inflammatory), and the fact that there is very little diversity in Rhode Island's nursing home population. Gail mentioned the fact that CMS regularly asks Healthcentric Advisors to work on disparities, but that when we examine the data, we have not been able to identify anything actionable. She will check to see if there are data reports that Healthcentric Advisors can share with the group.</p> <p>The group deferred further discussion and recommendations until additional information is available.</p>

Time	Topic/Notes
4:10pm	<p data-bbox="358 163 675 197">Open Forum & Next Steps</p> <p data-bbox="358 218 558 247"><i>Rosa Baier, MPH</i></p> <ul style="list-style-type: none"> <li data-bbox="358 268 1425 407">– The group introduced themselves to a new member, Isak Philbrick from BCBSRI, and asked Isak to describe his role. Isak is new to BCBSRI, but said that there may be opportunities for the group to provide input in the future, as BCBSRI works on various contracting and network topics related to nursing homes. <li data-bbox="358 428 570 457">– Action Items: <ul style="list-style-type: none"> <li data-bbox="407 478 1284 508">• Work with MIV and Communications to distribute press release (Rosa) <li data-bbox="407 518 1019 548">• Ask MIV about their recognition program (Rosa) <li data-bbox="407 558 1300 588">• Distribute info about the HCW flu vaccine reporting (Virginia/Jim/Janet) <li data-bbox="407 598 1057 627">• Follow-up with MIV and David Gifford (Rosa/Emily) <li data-bbox="407 638 1247 667">• Share EOHHS nursing home quality measures/template (Jim/Emily) <li data-bbox="407 678 1081 707">• Share nursing home disparities data, if possible (Gail) <li data-bbox="358 718 688 747">– Next meeting: 6/12/14



Department of Health

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Public Health Press Release

For: Immediate Release
Date: XX
Contact: XX

Listening to residents helps Rhode Island nursing homes continue to outperform the nation

Nursing home providers are increasingly recognizing that the people who call their facilities “home” should have the opportunity to provide feedback about their care and environment. Under the direction of the Rhode Island Department of Health, the state’s nursing homes survey their residents and family members every year. The satisfaction surveys results from late 2013 show that:

- More than nine out of every 10 residents and families would recommend their nursing home to others
- 89% of residents say their quality of life and quality of care are “excellent” or “good”
- The questions that residents rank best relate to safety, cleanliness, care and respectfulness of staff
- Rhode Island nursing homes outperform the nation on satisfaction, quality of life, quality of care and service

This is the eighth consecutive year that Rhode Island nursing homes have outperformed the nation.

“I’m pleased that residents and families continue to acknowledge the care and compassion of Rhode Island’s nursing homes,” said Gail Patry, RN, Chief Program Officer at Healthcentric Advisors and chair of the committee that directs the satisfaction survey process. “The public tends to have a negative perception of nursing homes, in part because bad experiences receive a lot more publicity. But most residents and families are satisfied with their care, which speaks to Rhode Island facilities’ commitment to providing high quality of care while becoming more home-like and giving their residents choices.”

The satisfaction survey results provide actionable information. Nursing home providers use these data to identify opportunities to improve the quality of care they provide to their residents. The Department of Health also publishes the results on its website, so that Rhode Islanders can access this information when choosing between nursing homes for themselves or a family member.

“If you don’t have experience with nursing homes, it can be hard to know how to choose one,” said Rosa Baier, MPH, Senior Scientist at Healthcentric Advisors and director of the Department of Health program that publishes these data. “Resident and family satisfaction is one source of information that can help you make that choice.”

Nursing home satisfaction is published annually by the Department of Health’s Healthcare Quality Reporting Program, in collaboration with a multi-stakeholder group that includes the nursing home trade associations, LeadingAge Rhode Island and the Rhode Island Health Care Association. The program releases information about healthcare quality and patient satisfaction to inform consumer decision making and to encourage facilities to continually improve their performance. Learn more about the quality of care that nursing homes and other healthcare facilities provide by visiting www.health.ri.gov/programs/healthcarequalityreporting/.

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GEORGIA NURSING HOMES EXCEED NATIONAL SATISFACTION RATES, REPORT SAYS

Longest-running satisfaction measurement program in nation for nursing homes shows measurable improvement since 2003. In 2013, 90 percent of residents and families statewide rated their nursing homes as either excellent or good.

January 15, 2014 (Atlanta, Georgia) -Georgia holds the unique distinction of having the longest-running experience of regular satisfaction measurement for residents, families, and employees of nursing homes, according to a new analysis of data collected during the past 11 years by the Georgia Quality Initiative, a collaborative quality measurement and improvement program for the state's skilled nursing care centers.

The Georgia Quality Initiative was created in 2003 and has been sustained through the cooperative efforts of the state Department of Community Health, Alzheimer's Association, Georgia Chapter of the AARP, Georgia Office of Long Term Care Ombudsman, Georgia Medical Care Foundation, and the Georgia Health Care Association.

As part of the work of the Georgia Quality Initiative, the perceptions of key stakeholder groups are tracked alongside more technical measures of healthcare service quality. The initiative later evolved into an incentive-based performance measurement program that pursues a continuous focus on driving better outcomes for more than 30,000 Georgians who are served by the state's nursing homes every day.

National Research Corporation is honored to support this effort through its [My InnerView](#) satisfaction and quality measurement surveys and performance improvement tools. More than 95 percent of the state's nursing homes participate in the program. What's more, several other states have looked to this innovative model as a guide to developing new strategies for performance measurement and Medicaid value-based purchasing.

"National Research applauds the achievements that have been realized through the Georgia Quality Initiative and the Quality Incentive Program and recognizes the outstanding achievements in empowering customer-centric healthcare and improvement in this vital care segment," said Mary Oakes, senior vice president of post-acute for National Research. "We are proud to participate in this program as it focuses on representing the true voices of long term care customers and putting residents and families first."

In 2007, the Georgia Quality Initiative became the Quality Incentive Program. This "value-based" purchasing program began using My InnerView satisfaction survey and workforce data from National Research in combination with clinical outcomes results from the Centers for Medicare and Medicaid Services (CMS) as the basis for awarding small additional payments to facilities that meet pre-determined performance targets. A point scoring system calculates these data to determine eligibility for quarterly incentives. The Quality Incentive Program plays a small but important role in Medicaid reimbursement in the state of Georgia, applying a positive influence with minimal additional expense

to the Medicaid program.

Georgia Health Care Association President and CEO Jon S. Howell placed the achievements of the past 11 years in their historical context. “The Georgia Quality Initiative, and now the incentive program, was not the commitment of one year or 11 years, but a permanent commitment to quality improvement grounded in continuous learning and continuous application of things learned, undertaken not only by the men and women of our profession, but by them in partnership with all Georgians who value how our frailest citizens are served.”

Over the 11 years of the program, measureable improvements have been documented in virtually all the clinical, workforce, and satisfaction indices that make up the initiative. Georgia nursing homes overall exceed national rates of satisfaction among its customers and employees, including steadily increasing numbers of residents and families who rate their experience at the excellent level. In 2013, 90 percent of residents and families statewide rated their nursing homes as either excellent or good. This percentage reached its high in 2011 and has been maintained at very high levels over the past two years. This statistic is in alignment with national Quality Initiative put forth by the governing body of the Georgia Health Care Association, the American Health Care Association (AHCA). One provision in the Quality Initiative aims to increase customer satisfaction in the “willingness to recommend” category to 90 percent by March 2015. Through their dedicated efforts, Georgia is setting the pace nationally.

Family members also gave high marks. 89 percent of family survey respondents gave an overall rating of excellent or good, with the same percentage also indicating a strong willingness to recommend to others the facility where their loved one was receiving care.

Lastly, 75 percent of employees would recommend their facility as an excellent or good place to receive care. And this number has been growing steadily—the overall satisfaction of employees in 2004 was 59 percent and today it’s 63.

[See the exclusive Executive Report of the GHCA resident, family, and employee data.](#)

To find a skilled nursing care facility near you visit the Resources page of www.GHCA.info or www.Facebook.com/GHCA.info.

About National Research Corporation

For more than 30 years, National Research Corporation (NASDAQ: NRCIA and NRCIB) has been at the forefront of patient-centered care. Today the company’s focus on empowering customer-centric healthcare across the continuum extends patient-centered care to incorporate families, senior housing residents, communities, employees, and other stakeholders.

My InnerView by National Research helps improve quality, resident and family experiences, and employee engagement for skilled nursing homes, assisted living communities, continuing care retirement communities, and independent living communities.

Recognized by *Modern Healthcare* as the largest patient satisfaction firm in the U.S., National Research is dedicated to representing the true voice of patients and other healthcare stakeholders. This integration of cross-continuum metrics and analytics uncovers insights for effective performance improvement, quality measurement, care transitions, and many other factors that impact population health management. For more information, call 800-388-4264, write to info@nationalresearch.com, or visit www.nationalresearch.com.

About Georgia Health Care Association

Founded in 1953, the Georgia Health Care Association is a not-for-profit organization representing long-term and post-acute care providers located throughout the state of Georgia. The association is dedicated to enhancing the ability of providers to provide competent and compassionate care and



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Corporation

Empowering customer-centric healthcare across the continuum.

advocates for quality care and services for frail, elderly and disabled Georgians. GHCA's more than 350 members serve more than 58,000 individuals annually. For more information visit: www.GHCA.info.

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**The 2011-2012 Excellence in Action
Award recipients:**



C = Customer award winner WF = Workforce award winner

ALABAMA	City	Award
Cottage of the Shoals Care and Rehabilitation Center	Tuscumbia	WF & C
Cypress Cove Care and Rehabilitation Center	Muscle Shoals	C
Decatur Health and Rehab Center	Decatur	C
Falkville Health Care Center	Falkville	C
Hartford Health Care	Hartford	C
Lauderdale Christian Nursing Home	Killen	WF & C
Lynwood Healthcare and Rehab Center	Mobile	WF
Madison Manor Nursing Home, LLC	Madison	C
Magnolia Haven Health & Rehabilitation Center	Tuskegee	C
Marshall Manor	Guntersville	WF
Millennium Health Care & Rehabilitation	Huntsville	C
NHC HealthCare, Anniston	Anniston	C
NHC HealthCare, Moulton	Moulton	C
Oak Trace Care and Rehabilitation Center	Bessemer	WF
Orchard HealthCare Center	Hayneville	C
Ridgewood Health Care Center	Jasper	C
Robertsdale HealthCare Center	Robertsdale	WF & C

ARIZONA	City	Award
Good Samaritan Society - Prescott Valley	Prescott Valley	C
Sante of Chandler	Chandler	WF
Sante of Surprise	Surprise	WF

CALIFORNIA	City	Award
Alexandria Care Center, LLC	Los Angeles	WF
Arroyo Vista Nursing Center	San Diego	WF & C
Canterbury Woods	Pacific Grove	C
Carlsbad-By-The-Sea Care Center	Carlsbad	C
Country Villa Redlands	Redlands	C
Country Villa Sheraton	North Hills	WF
Folsom Convalescent Hospital	Folsom	WF
Golden LivingCenter - Country View Alzheimer	Fresno	C
Golden LivingCenter - Petaluma	Petaluma	C
Kindred Nursing and Healthcare - Bayberry	Concord	C
Kindred Nursing and Healthcare - Victorian	San Francisco	WF
Kindred Nursing and Rehabilitation - Ygnacio	Walnut Creek	C
Kindred Transitional Care and Rehab – Smith Ranch	San Rafael	C
Kindred Transitional Care and Rehab – Tunnell Center	San Francisco	C
Kingsley Manor Care Center	Los Angeles	C
Lincoln Glen Nursing Facility	San Jose	WF & C
Mercy retirement & Care Center	Oakland	C
Providence St. Elizabeth Care Center	North Hollywood	C
Stonebrook Healthcare Center	Concord	WF
Van Nuys Healthcare Center	Van Nuys	WF
Walnut Village Care Center	Anaheim	C

COLORADO	City	Award
Cheyenne Manor	Cheyenne Wells	C
Colorado State Veterans Nursing Home - Walsenburg	Walsenburg	C
Denver North Care Center	Denver	WF

Doak Walker Care Center	Steamboat Springs	WF & C
Frasier Meadows Retirement Community SNF	Boulder	WF
Good Samaritan Society - Simla	Simla	C
Harmony Pointe Nursing Center	Lakewood	C
Holly Nursing Care Center	Holly	C
San Juan Living Center	Montrose	WF

CONNECTICUT	City	Award
Bride Brook Health and Rehabilitation Center	Niantic	WF
Glen Hill Care and Rehabilitation Center	Danbury	WF & C
Jefferson House	Newington	C
Jerome Home	New Britain	C
Kindred Transitional Care and Rehab – Parkway Pavilion	Enfield	C

WASHINGTON D.C.	City	Award
The Methodist Home of DC	Washington	C

DELAWARE	City	Award
Kentmere Rehabilitation & Healthcare Center	Wilmington	C
Parkview Nursing and Rehab Center	Wilmington	WF

FLORIDA	City	Award
Arbor Trail Rehab & Skilled Nursing Center	Inverness	C
Bay Breeze Nursing and Retirement Center	Gulf Breeze	C
Brynwood Center	Monticello	C
Clyde E. Lassen State Veterans' Nursing Home	St. Augustine	C
Coquina Center	Ormond Beach	C
Debary Manor	Debary	C
Douglas T. Jacobson State Veterans' Nursing Home	Port Charlotte	C
Glen Cove Nursing Pavilion	Panama City	C
Good Samaritan Society - Florida Lutheran	Deland	C
Lake Eustis Care Center	Eustis	C
Life Care Center of Melbourne	Melbourne	C
Panama City Nursing Center	Panama City	C
Royal Manor	Royal Palm Beach	C
Silvercrest Manor	Crestview	C
Specialty Center of Pensacola	Pensacola	C
The Nursing Center at La Posada	Palm Beach Gardens	WF
UniHealth Post-Acute Care - Santa Rosa	Milton	WF & C

GEORGIA	City	Award
Azalea Health and Rehabilitation Center	Metter	WF
Azalealand Nursing Home, Inc.	Savannah	C
Bayview	Nahunta	WF & C
Boswell Parker Nursing Center	Greensboro	C
Brentwood Health and Rehabilitation	Waynesboro	WF
Brightmoor Health Care	Griffin	C
Canton Nursing Center	Canton	C
Carrollton Manor, Inc.	Carrollton	WF
Chulio Hills Health & Rehabilitation	Rome	C
Church Home for the Aged	Fort Valley	C
Coastal Manor	Ludowici	C
Covington Manor	Covington	C
Dade Health & Rehab	Trenton	WF
Delmar Gardens of Gwinnett	Lawrenceville	WF
Eatonton Health and Rehabilitation	Eatonton	C

Gibson Health & Rehab Center	Gibson	WF & C
Golden LivingCenter - Glenwood	Decatur	WF
Golden LivingCenter - Jesup	Jesup	WF & C
Golden LivingCenter - Rome	Rome	WF
Gordon Health Care Center	Calhoun	WF & C
GraceMore LLC	Brunswick	WF & C
Gray Health & Rehabilitation	Gray	C
Greene Point Health Care	Union Point	WF & C
Gwinnett Extended Care Center	Lawrenceville	WF
Heardmont Nursing Home	Elberton	C
Heritage Healthcare at Crestwood	Valdosta	WF
Heritage Healthcare at Grandview	Athens	WF
Heritage Healthcare of Blue Ridge	Blue Ridge	C
Heritage Healthcare of Forsyth	Forsyth	C
Heritage Healthcare of Fort Oglethorpe	Fort Oglethorpe	WF & C
Heritage Healthcare of Jasper	Jasper	WF
Heritage Healthcare of Toombsboro	Toombsboro	C
Heritage Healthcare of Wilkes	Washington	WF
Heritage Inn of Sandersville Health and Rehabilitation	Sandersville	WF
Kentwood	Augusta	WF & C
Keysville Nursing Home & Rehabilitation Center	Keysville	C
Laurel Park at Henry Medical Center	Stockbridge	WF & C
Lee County Health and Rehabilitation	Leesburg	WF & C
Mitchell Convalescent Center	Camilla	C
Palemon Gaskins Nursing Home	Ocilla	C
Pierce County Nursing Home	Blackshear	WF
Quiet Oaks	Crawford	C
Regency Park Health and Rehabilitation	Dalton	WF & C
Riverside Health & Rehabilitation	Thomaston	WF & C
Rockdale Healthcare	Conyers	C
Ross Memorial Health Care Center	Kennesaw	C
Satilla Care Center	Waycross	WF
Scott Health & Rehabilitation	Adrian	WF
Shamrock Nursing and Rehabilitation Center	Dublin	WF
Signature HealthCARE of Marietta	Marietta	WF
Southern Traditions	Buchanan	C
Southland Health & Rehabilitation	Peachtree City	C
Sparta Health and Rehabilitation	Sparta	C
Stevens Park Health and Rehabilitation	Augusta	WF & C
The A.G. Rhodes Home@Cobb	Marietta	WF
The Oaks of Carrollton (Healthcare Center)	Carrollton	WF & C
The Retreat Nursing Home	Monticello	C
Townsend Park Health and Rehabilitation	Cartersville	WF
Treutlen County Health & Rehabilitation	Soperton	C
Twin Oaks Convalescent Center	Alma	WF
UniHealth Magnolia Manor South	Moultrie	WF
UniHealth Post-Acute Care - Greenville	Greenville	WF
UniHealth Post-Acute Care - Lanier	Buford	WF & C
UniHealth Post-Acute Care - Old Capitol	Louisville	C
Union County Nursing Home	Blairsville	C
Warrenton Health & Rehab Center	Warrenton	C
Wellington Court@St. George Village	Roswell	C
WellStar Paulding Nursing Center	Dallas	WF & C
Wildwood Health Care, Inc.	Talking Rock	C
William Breman Jewish Home	Atlanta	C
Winder Health Care	Winder	C
Winthrop Health and Rehab	Rome	C

HAWAII

City

Award

Good Samaritan Society - Pohai Nani	Kaneohe	C
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IDAHO	City	Award
Cherry Ridge at Emmett	Emmett	C
Good Samaritan Society - Silver Wood Village	Silverton	C
Mountain Valley Care and Rehabilitation Center	Kellogg	WF & C

ILLINOIS	City	Award
Odin HealthCare Center	Odin	WF

INDIANA	City	Award
Golden LivingCenter - Knox	Knox	C
Good Samaritan Society - Northwood Ret Com	Jasper	WF
Homeview Center of Franklin	Franklin	WF
Kindred Transitional Care and Rehab - Harrison	Corydon	WF
Kindred Transitional Care and Rehab - Indian Creek	Corydon	WF
Mount Vernon Nursing and Rehabilitation	Mt Vernon	WF
Parker Health and Rehabilitation Center	Parker City	C
Todd-Dickey Nursing and Rehabilitation Center	Leavenworth	C

IOWA	City	Award
Casa De Paz Health Care Center	Sioux City	WF & C
Grundy Care Center	Grundy Center	WF
Jefferson Place	Pella	C
Norwalk Nursing and Rehabilitation Center	Norwalk	WF
Pacific Place	Pacific Junction	C
Regency Park Nursing & Rehabilitation Center of Carroll	Carroll	WF
Royale Meadows Care Center	Sioux Center	C

KENTUCKY	City	Award
Golden LivingCenter - Vanceburg (Skilled Nursing)	Vanceburg	C
Heartland Villa Care and Rehabilitation Center S	Lewisport	C
Helmwood Healthcare Center	Elizabethtown	WF
Masonic Home of Shelbyville	Shelbyville	C
Nazareth Home	Louisville	WF & C
Riverside Manor Healthcare Center	Calhoun	C

LOUISIANA	City	Award
Heritage Manor Natchitoches Rehabilitation & Ret	Natchitoches	WF & C
Oak Haven Community Care Center	Centerpoint	WF
Old Jefferson Community Care Center	Baton Rouge	WF
Poydras Home	New Orleans	C
Ridgecrest Community Care Center	West Monroe	C
St. James Place Highland Court Nursing	Baton Rouge	C

MAINE	City	Award
Dexter Health Care	Dexter	C
Katahdin Health Care	Millinocket	C
Sedgewood Commons	Falmouth	C
St. Andrews Village	Boothbay Harbor	C

MARYLAND	City	Award
Arcola Health and Rehabilitation Center	Silver Spring	WF

Bethesda Health and Rehabilitation Center	Bethesda	WF
Layhill Center	Silver Spring	C
North Arundel Health and Rehabilitation Center	Glen Burnie	WF
Severna Park Center	Severna Park	C
Solomons Nursing Center	Solomons	C

MASSACHUSETTS	City	Award
Bourne Manor	Bourne	C
Brockton Guardian Center	Brockton	WF
Campion Health Center	Weston	C
Farren Care Center	Turners Falls	C
Hillcrest Commons Skilled Nursing and Rehabilitation	Pittsfield	C
Kimball Farms Nursing Care Center	Lenox	WF & C
Kindred Nursing and Rehabilitation - Brigham	Newburyport	C
Kindred Nursing and Rehabilitation - Presentation	Brighton	C
Kindred Transitional Care and Rehab – The Meadows	Rochdale	C
Life Care Center of Nashoba Valley	Littleton	C
Linda Manor Extended Care Facility	Leeds	WF & C
Mary's Meadow at Providence Place, Inc.	Holyoke	C
Mount Greylock Extended Care Facility	Pittsfield	WF & C
Pilgrim Skilled Nursing and Rehabilitation Center	Peabody	WF & C
Pope Nursing Home (Weymouth)	Weymouth	C
Providence Care Center Lenox	Lenox	C
Thomas Upham House (Medfield)	Medfield	C
Williamstown Commons Skilled Nursing and Rehab	Williamstown	C
Windsor Skilled Nursing and Rehabilitation Center	S. Yaarmouth	C

MICHIGAN	City	Award
Allegan County Medical Care Community	Allegan	C
Capital Area Health and Rehabilitation	Lansing	C
Cass County Medical Care Facility	Cassopolis	C
Grandvue Medical Care Facility	East Jordan	C
Lenawee Medical Care Facility	Adrian	C
Lutheran Home Monroe	Monroe	C
Maple Lawn Medical Care Facilities	Coldwater	C
Marquette County Medical Care Facility	Ishpeming	C
Mercy Manor	Grayling	C
Newaygo Medical Care Facility	Fremont	WF & C
Pinecrest Medical Care Facility	Powers	C
Tendercare Green View	Alpena	C
The Maples Benzie County Medical Care Facility	Frankfort	C

MINNESOTA	City	Award
Golden LivingCenter - Lynnhurst	St Paul	C
Good Samaritan Society - Aftenro	Duluth	C
Good Samaritan Society - Edgebrook Care Center	Edgerton	C
Lakeside Health Care Center of Dassel	Dassel, MN	C
Lewiston Villa	Lewiston	C
Madonna Towers of Rochester - SNF	Rochester	C
Maple Lawn Nursing Home, Inc.	Fulda	C
Northfield Care Center	Northfield	C
Sterling Park Health Care Center	Waite Park	WF

MISSOURI	City	Award
Ash Grove Health Care Facility	Ash Grove	C

Cooper County Nursing home district (Katy Manor)	Pilot Grove	C
Golden LivingCenter - Malden	Malden	C
Grand River Health Care		C
Houston House	Houston	C
Miner Nursing Center	Miner	C
Ozark Riverview Manor		C
The Charless Home SNF	St. Louis	WF

MISSISSIPPI	City	Award
Landmark of DeSoto	Horn Lake	C

MONTANA	City	Award
Immanuel Skilled Care Center	Kalispell	C

NEBRASKA	City	Award
Heritage of Wauneta	Wauneta	WF & C
Midwest Covenant Home	Stromsburg	C
Tabitha Nursing Center at Crete	Crete	C
York General Hearthstone	York	WF

NEW HAMPSHIRE	City	Award
Bishop Peterson Residence	Manchester	WF
Country Village	Lancaster	WF
Hanover Hill Health Care Center	Manchester	C
Lebanon Center	Lebanon	WF & C
St. Teresa Rehabilitation and Nursing Center	Manchester	WF & C
Warde Health Center	Windham	C

NEW JERSEY	City	Award
CareOne at Valley	Westwood	WF
Claremont Center	Point Pleasant	C
Inglemoor Center	Englewood	C
Inglemoor Rehabilitation and Care Center - LTC	Livingston	WF
Parker at Landing Lane	New Brunswick	C
Parker at River Road	Piscataway	C
Ridgewood Center - NJ	Ridgewood	WF & C
Southern Ocean Center Genesis HealthCare Corp	Manahawkin	C
The Woodlands	Plainfield	WF
Van Dyk Manor of Montclair	Montclair	C
Van Dyk Manor of Ridgewood	Ridgewood	C
Voorhees Center	Voorhees	WF

NEW MEXICO	City	Award
Clovis Healthcare and Rehabilitation Center, LLC	Clovis	WF
Las Palomas Care and Rehabilitation Center	Albuquerque	WF

NEW YORK	City	Award
Friendly Home	Rochester	C
James A. Eddy Memorial Geriatric Center	Troy	C
Mercy Hospital Skilled Nursing Facility	Lackawanna	C

NEVADA	City	Award
Mission Pines Nursing and Rehabilitation Center	North Las Vegas	WF

NORTH CAROLINA	City	Award
Brian Center Health & Rehabilitation / Durham	Durham	C
Brian Center Health & Rehabilitation / Hendersonville	Hendersonville	WF
Brian Center Health & Retirement / Lincolnton	Lincolnton	WF & C
Brian Center Health & Retirement / Winston Salem	Winston-Salem	WF
Carolina Health Care Center of Burke	Connelly Springs	C
Golden LivingCenter - Tarboro	Tarboro	C
Heritage Healthcare of Elkin	Elkin	WF
Jesse Helms Nursing Center	Monroe	C
Kindred Transitional Care and Rehab – Chapel Hill	Chapel Hill	C
Kindred Transitional Care and Rehab – Raleigh	Raleigh	C
Kindred Transitional Care and Rehab – Rose Manor	Durham	C
Kindred Transitional Care and Rehab - Sunnybrook	Raleigh	C
Lillie Bennett Nursing Center	Wadesboro	C
The Oaks at Town Center	Harrisburg	WF
White Oak of Charlotte	Charlotte	WF
Wilmington Health and Rehabilitation Center	Wilmington	C

NORTH DAKOTA	City	Award
Good Samaritan Society - Lakota	Lakota	C
Good Samaritan Society - Mohall	Mohall	C
Good Samaritan Society - Osnabrock	Osnabrock	C
Souris Valley Care Center	Velva	C

OHIO	City	Award
Autumnwood Care Center	Tiffin	C
Golden LivingCenter - Lima	Lima	C
Hospitality Home East	Xenia	WF & C
Mercy Franciscan at Schroder	Hamilton	C
Mill Run Gardens and Care Center	Hilliard	C
The Laurels of Blanchester	Blanchester	WF

OKLAHOMA	City	Award
Ada Care Center	Ada	WF
Artesian Home Inc	Sulphur	WF & C
Bartlesville Health & Rehab Community	Bartlesville	WF & C
Beadles Nursing Home	Alva	WF
Bear Manor	Hartshorne	WF & C
Broadway Living Center	Lexington	WF
Broadway Manor	Muskogee	WF
Burford Manor	Davis	WF
Callaway Nursing Home	Sulphur	C
Cedarcrest Care Center	Broken Arrow	WF & C
Chickasha Nursing Center	Chickasha	WF & C
Colonial Estates	Guthrie	C
Colonial Lodge Care Center	Mcalester	WF & C
Community Health Center	Wakita	C
Corn Heritage Village	Corn	WF
Country Club Care	Duncan	WF
Countryside Estates	Warner	WF & C
Crescent Manor	Crescent	C
Eastgate Village Retirement Center	Muskogee	WF
Eastwood Manor, LLC	Commerce	C
Elmbrook Home Inc.	Ardmore	WF
Enid Senior Care	Enid	WF & C

Fairfax Manor LLC	Fairfax	C
Fort Gibson Nursing Home	Fort Gibson	WF
Fountain View Manor	Henryetta	WF
Geary Nursing Home	Geary	WF
Glenhaven Retirement Village	Chickasha	WF & C
Golden Age Nursing Home Of Guthrie Inc.	Guthrie	WF
Golden Oaks Nursing Center	Enid	WF
Grace Living Center- Bethany	Bethany	WF & C
Grace Living Center- Brookwood	Oklahoma City	WF & C
Grace Living Center- Buffalo	Buffalo	WF
Grace Living Center- Chickasha	Chickasha	WF & C
Grace Living Center- Clinton	Clinton	WF
Grace Living Center- Del City	Del City	WF
Grace Living Center- East Shawnee	Tahlequah	WF
Grace Living Center- Edmond	Edmond	WF & C
Grace Living Center- El Reno	El Reno	WF & C
Grace Living Center- Jenks	Jenks	WF & C
Grace Living Center- Mangum	Mangum	WF & C
Grace Living Center- Muskogee	Muskogee	WF
Grace Living Center- Ne21stokc	Oklahoma City	WF
Grace Living Center- Norman	Norman	WF
Grace Living Center- NW 10th OKC	Oklahoma City	WF
Grace Living Center- Sw55thokc	Oklahoma City	WF & C
Grace Living Center- University Northwest	Tahlequah	WF
Grace Living Center- Wilshire	Oklahoma City	WF & C
Gran Grans Place	Yukon	WF
Grand Lake Villa LLC	Grove	WF & C
Green Country Care Center	Tulsa	C
Gregston Nursing Home, Inc.	Marlow	WF
Grove Nursing Center	Grove	WF
Hennessey Care Center	Hennessey	WF
Heritage Manor	Oklahoma City	WF & C
Heritage Village Nursing Center, LLC	Holdenville	WF & C
Higher Call Nursing Center	Quapaw	WF
Highland Park Manor-Enid	Enid	C
Hillcrest Manor NH	Blackwell	WF & C
Hillcrest Nursing Center	Moore	C
Kenwood Manor	Enid	WF & C
Lakeland Manor	Ardmore	WF & C
Leisure Village Health Care Community	Tulsa	WF
Lexington Nursing Home, Inc.	Lexington	WF
Manorcare Health Services - Tulsa - 307	Tulsa	WF
Maple Lawn Manor	Hydro	WF
Marlow Manor	Marlow	WF & C
Mcalester Nursing Center	Mcalester	WF
Meadowbrook Nursing Center	Chouteau	C
Miami Nursing Center LLC	Miami	C
Mitchell Manor Convalescent Home, Inc.	Mcalester	WF
North Winds Living Center	Oklahoma City	WF
Northside Nursing Home	Sapulpa	WF & C
Oak Dale Manor	Sand Springs	WF
Oak Hills Care Center	Jones	WF & C
Plantation Village Nursing Center	Altus	WF
Ranch Terrace Nursing Home, Inc.	Sapulpa	WF
Rebold Manor / A Grace Living Center Community	Okmulgee	WF & C
Scg Lake Country Nursing Center	Marietta	WF
Seiling Nursing Center	Seiling	WF
Seminole Pioneer Nursing Home	Seminole	WF
Sequoyah Manor Nursing Home L.L.C.	Sallisaw	WF
Shattuck Nursing Center	Shattuck	WF & C

Shawnee Care Center	Shawnee	WF
Southbrook Healthcare Inc.	Ardmore	WF
Southern Pointe Living Center	Colbert	WF
Spiro Nursing Home	Spiro	C
St. Ann's Home	Oklahoma City	WF
Stroud Health Care Center South	Stroud	WF & C
Sunset Estates Of Purcell	Purcell	WF
The Kings Daughters & Sons Nursing Home	Durant	WF
The Living Center	Enid	WF
The Village Health Care Center	Broken Arrow	WF
Town Of Vici Nursing Home	Vici	WF & C
Walnut Grove Living Center	Mcalester	WF
Warr Acres Nursing Center	Oklahoma City	WF
Waynoka Nursing Center	Waynoka	WF
Wewoka Care And Rehabilitation Center	Wewoka	WF
Whispering Oaks	Ardmore	C
Willow Creek Health Care LLC	Guthrie	WF
Willow Haven	Tonkawa	C
Woodland Hills	Allen	WF
Woodview Home Inc.	Ardmore	WF

OREGON	City	Award
Providence Benedictine Nursing Center	Mt. Angel	C

PENNSYLVANIA	City	Award
Eldercrest Nursing Center	Munhall	C
Genesis Health Care at Spring Mill	Phoenixville	WF
Golden LivingCenter - Gettysburg	Gettysburg	C
Guardian Elder Care Center	Nanticoke	WF
Havencrest Nursing Center	Monongahela	C
Lakeview Senior Care	Smethport	WF
Laurel Ridge Center	Uniontown	WF
Neshaminy Manor	Warrington	C
North Hills Health and Rehabilitation Center	Wexford	WF & C

RHODE ISLAND	City	Award
Alpine Nursing Home Inc.	Coventry	C
Avalon Nursing Home	Warwick	C
Brentwood Nursing Home	Warwick	C
Grand Islander	Middletown	C
Hattie Ide Chaffee Home	East Providence	C
Jeanne Jugan Residence	Pawtucket	C
Mansion Nursing and Rehabilitation Center	Central Falls	C
Mount St. Rita Health Centre	Cumberland	C
Overlook Nursing & Rehabilitation Center	Pascoag	C
Saint Elizabeth Home	East Greenwich	C
Saint Elizabeth Manor	Bristol	C
Scallop Shell Nursing & Rehabilitation Center	Peace Dale	C
SILVER CREEK MANOR	Bristol	C
Sunny View Nursing Home	Warwick	C
The Holiday Retirement Home, Inc.	Manville	C
The John Clarke Retirement Center	Middletown	C
Tockwotton Home	Providence	WF & C
Westerly Nursing Home	Westerly	C

SOUTH CAROLINA	City	Award
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Kingston Nursing Center	Conway	C
PCSC Florence - SN	Florence	WF
UniHealth Post-Acute Care - Barnwell	Barnwell	C

SOUTH DAKOTA	City	Award
Avera Brady Health and Rehab	Mitchell	C
Avera Eureka Health Care Center	Eureka	C
Avera Yankton Care Center	Yankton	C
Golden LivingCenter - Lake Norden	Lake Norden	C
Golden LivingCenter - Watertown - South Dakota	Watertown	C
Good Samaritan Society - De Smet	De Smet	WF
Good Samaritan Society - Tripp	Tripp	C
White Health Care Center	White	C

TENNESSEE	City	Award
Covington Care Center	Covington	WF
Fairpark Healthcare Center	Maryville	C
Fort Sanders Sevier Nursing Home	Sevierville	C
Harbert Hills Academy Nursing Home	Savannah	WF & C
Lebanon Health and Rehabilitation Center	Lebanon	C
NHC Columbia	Columbia	WF
Shannondale of Maryville Health Care Center	Maryville	WF
Vanco Manor Nursing & Rehabilitation Center	Goodlettsville	C

TEXAS	City	Award
Buena Vida Of Odessa	Odessa	WF
Deer Creek Of Wimberley	Wimberley	WF & C
Del Rio Nursing & Rehabilitation Center	Del Rio	WF
First Colony Health And Rehabilitation Center	Missouri City	C
Golden Palms SNF	Harlingen	C
Golden Years Nursing And Rehabilitation Center	Marlin	WF & C
Good Samaritan Society - White Acres	El Paso	C
Gracy Woods li Nursing Center	Austin	C
Greenview Manor	Waco	WF & C
Hill Country Care	Dripping Springs	WF
Hillview Manor	Goldthwaite	WF
Kindred Transitional Care And Rehabilitation - Grapevine	Grapevine	WF
Las Palmas Healthcare Center	Mcallen	C
Levelland Nursing & Rehabilitation Center	Levelland	WF
Linden Healthcare Center	Linden	C
Live Oak Nursing Center, LP	George West	WF
Madisonville Care Center	Madisonville	C
Mclean Care Center	Mclean	C
Northeast Atlanta Health & Rehabilitation Center	Weatherford	WF
Northgate Health And Rehabilitation Center	San Antonio	WF & C
Peach Tree Place	Weatherford	WF
Retama Manor Nursing Center/Edinburgh	Edinburg	WF
Retama Manor Nursing Center/Harlingen	Harlingen	C
Retama Manor Nursing Center/Pleasanton South	Pleasanton	WF
Retama Manor Nursing Center/Rio Grande City	Rio Grande City	WF
River Oaks Health And Rehabilitation	Fort Worth	WF
The Heights At Atascosa	Pleasanton	WF
Trisun Care Center - Corpus Christi	Corpus Christi	C
Woodwind Lakes Health And Rehabilitation Center	Houston	WF

UTAH	City	Award
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George E. Wahlen Ogden Veterans Home	Ogden	C
Heritage Care Center - American Fork	American Fork	C
St. George Care & Rehabilitation	St. George	C
Utah State Veterans Nursing Home	Salt Lake City	WF & C
Willow Wood Care Center	Salt Lake City	C

VIRGINIA	City	Award
Golden LivingCenter - Battlefield Park	Petersburg	C
Hampton Rehabilitation Center	Hampton	C
Lee Health & Rehabilitation Center	Pennington Gap	WF
Lynn Care Center-Warren Memorial Hospital	Front Royal	C
Riverside Convalescent Center-West Point	West Point	C
Sentara Nursing Center - Windermere	Virginia Beach	C

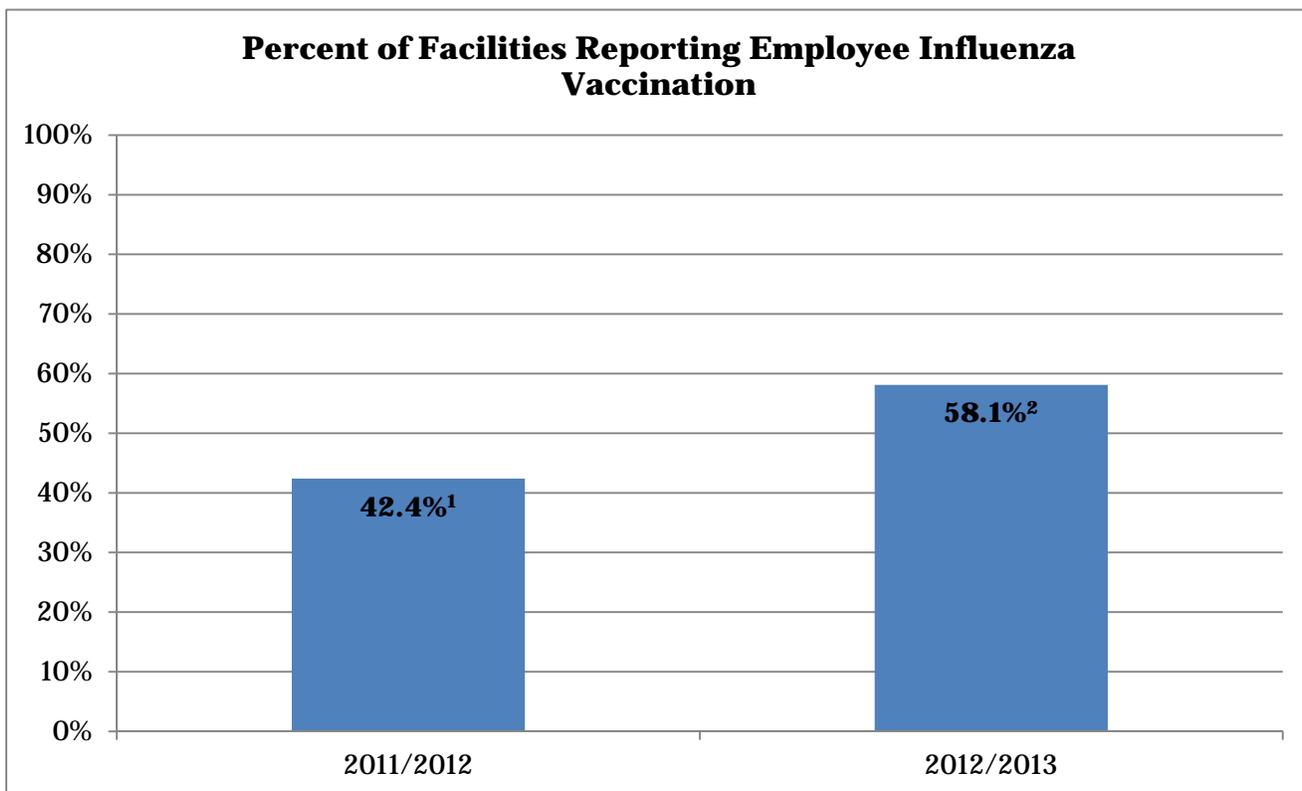
WASHINGTON	City	Award
Benson Heights Rehabilitation Center	Kent	WF & C
Good Samaritan Society - Spokane Valley	Spokane Valley	C
Good Samaritan Society - Stafholt	Blaine	C
Kindred Transitional Care and Rehab – Beacon Hill	Longview	C
Kindred Transitional Care and Rehab – Queen Anne	Seattle	C
Life Care Center of Ritzville	Ritzville	C
Providence St. Joseph's Chewelah Long Term Care	Chewelah	C
Vashon Community Care	Vashon	C
Willapa Harbor Care Center	Raymond	WF & C

WEST VIRGINIA	City	Award
Cameron Nursing & Rehabilitation Center	Cameron	C
Clarksburg Nursing & Rehabilitation Center	Clarksburg	WF
E.A. Hawse Nursing & Rehabilitation Center	Baker	WF
Good Samaritan Society - Barbour County	Belington	C
Hidden Valley Center	Oak Hill	C
Huntington Health and Rehabilitation Center	Huntington	WF
Lincoln Nursing & Rehabilitation Center	Hamlin	WF & C
McDowell Nursing & Rehabilitation Center	Gary	WF
Mercer Nursing & Rehabilitation Center	Bluefield	WF
Peterson Rehab Hospital and Geriatric Center	Wheeling	WF
Pine Lodge Care and Rehabilitation Center	Beckley	WF
Raleigh Center	Daniels	WF & C
The Madison Center - WV	Morgantown	WF
Wayne Nursing & Rehabilitation Center	Wayne	WF
Willows Center - WV	Parkersburg	C
Wyoming Nursing & Rehabilitation Center	New Richmond	WF & C

WISCONSIN	City	Award
American Heritage Care Center	Hammond	C
Golden LivingCenter - Continental Manor Randolph	Randolph	C
Good Samaritan Society - Scandia Village	Sister Bay	C
Maryhill Manor, Inc.	Niagara	C
Ministry DCMC Skilled Nursing Facility	Sturgeon Bay	C
Oakbrook Health & Rehabilitation	Thorp	C
River's Bend Health and Rehabilitation Center	Manitowoc	C
Shorehaven Health & Rehab Center	Oconomowoc	C
Wheaton Franciscan Healthcare - Lake Shore Manor	Racine	C
Wheaton Franciscan Healthcare - Terrace at St. F	Milwaukee	C
Woodside Lutheran Home	Green Bay	C



Healthcare Quality Reporting Program
NURSING HOME EMPLOYEE INFLUENZA VACCINATION REPORTING



¹36 of 85 facilities reported.

²50 of 86 facilities reported.

Racial Inequities in Receipt of Influenza Vaccination Among Long-term Care Residents Within and Between Facilities in Michigan

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Background: Although influenza vaccination is recommended for all nursing home residents and is covered by Medicare, racial inequities remain.

Objectives: To determine the extent of racial difference in influenza vaccination among nursing home residents within and between nursing facilities by facility resident racial composition in a state with a large White-Black difference in vaccination.

Research Design: Data from the Centers for Medicaid & Medicare Services' (CMS) Minimum Data Set (MDS) for assessments from October 1, 2005 through March 31, 2006. Facility-level data for nonhospital-administered CMS-certified nursing facilities in Michigan were merged with MDS.

Subjects: All nursing home residents (n=90,120).

Main Outcome Measure: Receipt, refusal, or unvaccinated due to contraindication or not being offered the influenza vaccine.

Results: The unadjusted influenza vaccination coverage of residents was 60.6%, 63.5% for whites, and 43.0% for blacks, a difference of 20.5 percentage points. The adjusted median range of inequity (white-black) within homes stratified by proportion blacks in the facility (eg, 0%, 1% to 4.9%, 5% to 19.9%, 20% to 49.9%, and ≥ 50%) was 5.0% to 5.6% points. White residents refused the vaccine less than black residents in all groups of homes by

proportion blacks in the home, ranging from 7.5% in the all white homes to 14.0% among blacks in homes with >50% black residents. The adjusted median black deficit in not being offered the vaccine between nursing homes was large (up to 27.8% points between all white homes and homes with >50% blacks).

Conclusion: Michigan statewide vaccination inequity among nursing home residents results from blacks disproportionately living in nursing homes where vaccination coverage is lowest. The inequity between facilities can be attributed to facility-level difference in offering.

Key Words: nursing home, influenza immunization, racial inequity
(*Med Care* 2011;49: 371–377)

Racial inequities in receipt of the influenza vaccine among community-dwelling seniors have been reported,¹ but studies among nursing home residents have not consistently found significant racial inequities.^{2,3} Because many of the barriers to vaccination that exist for community-dwelling seniors are not an obstacle for institutionalized seniors, little difference in vaccination coverage for residents of nursing homes is expected. However, a study conducted between 1999 and 2002 in 14 geographically diverse states reported an 8% point difference in receipt of influenza vaccine between white and black nursing home residents.² The same racial difference in vaccination was reported using a national survey of nursing home residents in 2004.⁴

In 2005, the Centers for Medicare & Medicaid Services (CMS) mandated that all residents of long-term care facilities be offered influenza vaccine as a requirement for certification, and began collecting vaccination status for all residents of all nursing facilities it certified. Using the CMS Minimum Data Set (MDS), which consists of nursing home resident assessment data collected during the 2005 to 2006 influenza season, 63.6% influenza vaccination coverage was reported among whites and 55.5% among blacks.⁵ Therefore, nursing home census-level (ie, residents of nonhospital-administered CMS-certified nursing homes) data confirmed an 8% point difference between whites and blacks in reported influenza vaccination among nursing home residents.

In our previous multistate study of residents nested within nursing homes, the unadjusted association between

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Supported by the Centers for Disease Control and Prevention.

The analyses upon which this publication is based were performed under Intra-agency agreement Number IA07–52 between the Centers for Disease Control and Prevention (CDC) and the Centers for Medicare and Medicaid Services (CMS), Department of Health and Human Services. The content of this publication does not necessarily reflect the views or policies of the Department of Health and Human Services, nor does mention of trade names, commercial products, or organizations imply endorsement by the US Government. The authors assume full responsibility for the accuracy and completeness of the ideas presented. Ideas and contributions to the authors concerning experience in engaging with issues presented are welcomed.

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ISSN: 0025-7079/11/4904-0371

race and receipt of vaccine was statistically significant ($P < 0.05$). However, after controlling for facility by stratifying using the Cox Mantel-Haenszel χ^2 test, the association between race and receipt of vaccine was no longer statistically significant ($P = 0.15$).² This result suggests that the facility plays an important role in receipt of the vaccine; thus, if facility is not controlled for, the standard error of the estimate and probability of the statistical test for the relationship between the resident's race and vaccination is likely biased. We arrived at the same conclusion when comparing a 1-level logistic model that does not control for variability in vaccination between nursing homes with a multilevel model that does control for such variability.⁶

The CMS MDS provides a unique opportunity for evaluating the role of within and between facility differences in vaccination. However, at a national level, there was large variation in vaccination coverage and racial differences in vaccination between states and nursing homes. Some states had <1% black residents, some had large racial differences in vaccination, and some had little difference. Therefore, to properly account for the variation statistically would require the use of random effects at the nursing home and state levels which would necessitate a model with 31,000 parameters to estimate at a minimum, which is not possible. In addition, our goal was to determine if the racial differences in vaccine uptake were really within or between nursing homes. Therefore, we elected to focus on one state with a large statewide unadjusted racial difference in influenza vaccine uptake. Michigan had the largest statewide unadjusted racial inequity (21.1% points) for the influenza vaccination quality indicator among long-term care residents in the 2005 to 2006 season.⁷ In addition, the proportion of black nursing home residents in Michigan was higher than in most states. Furthermore, the vaccination gap by race among nursing home residents was substantially higher than that reported among the noninstitutionalized population (by approximately 10% points).⁸ The objective of this article is to describe the extent to which racial inequities in receipt of the influenza vaccine are related to individual residents' race and the racial composition of nursing homes in Michigan.

METHODS AND MATERIALS

Study Population

During the 2005 to 2006 influenza season, there were 426 Medicare- and Medicaid-certified nursing facilities in Michigan, 18 of which were owned or operated by hospitals. These hospital-administered facilities are postacute recuperative settings serving mainly Medicare-eligible residents. Because the focus of our study is on the traditional nursing home population, hospital-based facilities and residents were excluded from the analyses. The analyses in this article included residents from 403 (98.8%) of 408 nursing homes that had complete facility-level data.

Between October 1, 2005 and March 31, 2006, 241,485 resident assessment instruments (RAI) were conducted in Michigan, submitted to CMS, and included in MDS. Resident assessments are administered at admission, quarterly, and for any significant change in condition for all

residents in Medicare- or Medicaid-certified facilities. There was an average of 5.1 assessments per resident. To identify unique residents with multiple assessments, we used probabilistic software, Link Plus,⁹ thereby reducing the number of assessments to 92,425; of these, 90,120 were non-Hispanic white or black residents who had complete information and represented 83,534 unique residents. This includes all residents who ever lived in a nursing facility (or in more than one facility, $n = 6586$), in Michigan during the study period.

Resident-level Data

All resident-level variables come from the RAI and include level of education, sex, age, and race. Instructions for completing residents' assessments include reporting race "within which the resident places self."¹⁰ The RAI has one of the following variable for race or ethnicity with responses: (1) American Indian/Alaskan native, (2) Asian/Pacific Islander, (3) Black, not of Hispanic origin, (4) Hispanic, and (5) White, not of Hispanic origin. Residents reported as other than "White" or "Black" comprised <2% of the nursing home residents in Michigan and were excluded from the analyses. Resident-level variables that may confound the relationship between race and receipt of vaccine include sex, age, level of education, and Medicaid as primary payment source.

Vaccination Status

The question on the immunization supplement to the RAI asks, "Did the resident receive the influenza vaccine in this facility for this year's influenza season (October 1 through March 31)?" The next question asked was, "If influenza vaccine was not received, state reason: (1) not in facility during this year's flu season; (2) received outside of this facility; (3) not eligible; (4) offered and declined; (5) not offered (other); and (6) inability to obtain vaccine" (Fig. 1). Because there were multiple assessments for the majority of residents, the reasons for being unvaccinated were deter-



FIGURE 1. Facility determination of resident vaccination status.

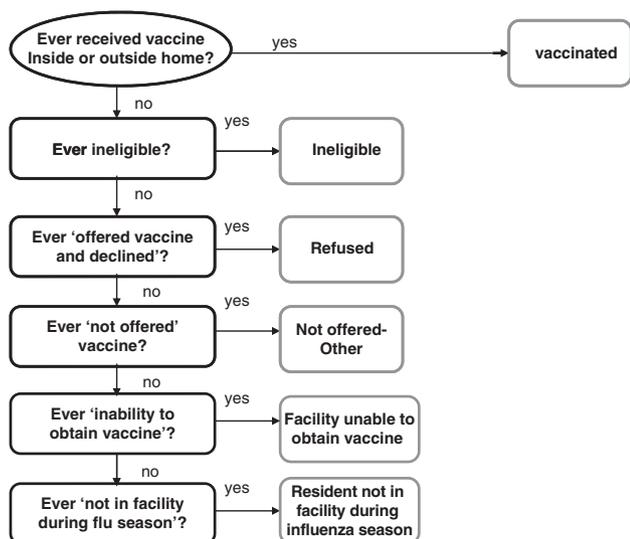


FIGURE 2. Algorithm to define resident vaccination status.

mined based on an algorithm (Fig. 2). Residents were categorized as having been vaccinated if they were reported to have received the vaccine in the facility or outside the facility. Residents were categorized as not offered the vaccine if they were not in facility during this year’s flu season, were ineligible, were not offered (other), or the facility was unable to obtain vaccine. There was no racial difference in the proportion of residents who resided in >1 nursing facility during the influenza vaccination season (approximately 8%); the vaccination status reported by each facility was included exactly as that facility reported it.

Facility-level Data

Data from the Online Survey and Certification Assessment Reporting System (OSCAR) submitted during the influenza season were obtained from CMS. OSCAR is a federal administrative database containing structural, staffing, and other information on nursing facilities. OSCAR includes data for all US nursing homes that Medicare and/or Medicaid certifies. State survey and certification agencies collect the data, which are part of the annual nursing home certification and recertification process. Each facility completes a standardized form about the facility characteristics, for example, number of beds, affiliation, and staffing levels. State surveyors review the form and enter the data into the OSCAR database. State surveyors also visit each facility and decide whether the facility meets each standard. These data were merged with the residents’ MDS data based on the facility.

Reported variables that have been found to be associated with both race and receipt of vaccine include the number of residents in the facility, proportion of blacks in the facility, number of nurse full-time equivalents, type of ownership, affiliation with a chain, CMS facility certification, (ie, skilled nursing facility or nursing facility—Medicare and/or Medicaid certified), proportions of residents on Medicaid, Medicare, and Private payment, and compliance with program requirements for Medicare and/or Medicaid certification.

Racial Composition of the Facility

To assess racial differences in vaccination within and between nursing homes, we grouped the facilities based on the percent of black residents: 0%, 0.1% to 4.9%, 5% to 19.9%, 20% to 49.9%, and ≥ 50%. These categories were chosen to examine homes with no black residents (eg, 0%), homes in which blacks were in the majority (eg, ≥ 50%), and groups in between with sufficient sample sizes.

Statistical Analysis

We present descriptive analyses examining vaccination coverage received, refused, and not offered (includes contraindicated, <2%), based on race in facilities grouped according to the percent of black residents. We used HLM v6.08 software (Scientific Software International, Inc, Lincolnwood, IL) to conduct multilevel analyses to obtain adjusted probabilities for vaccination by race, adjusting for confounders which include age, sex, level of education, Medicaid payment, number of residents in the facility, proportion of blacks in the facility during the influenza season, facility’s affiliation with multifacility chain, type of facility ownership, type of CMS certification, number of nurse full-time equivalents, compliance with program requirements for Medicare and/or Medicaid certification, and proportion of residents on Medicaid. We also assessed effect modification between race and other variables.

To examine vaccination within and between facilities, we calculated probabilities based on estimates from the polytomous multilevel model for vaccination, refusal, and not offering the vaccine for both whites and blacks in each nursing home. Probabilities for the individual nursing homes were stratified according to percentage of black nursing home residents in the facility; medians are presented within each stratum. To assess variability of vaccination between all nursing homes, we tested the significance of the random intercepts (ie, null hypothesis of variances equal to zero) in the multilevel model that included all 403 facilities.

This study was reviewed by the Human Subjects Coordinator at the Centers for Disease Control and Prevention and, as an analysis of secondary data without identifiers, was determined not to require Institutional Review Board review.

RESULTS

Racial Distribution Among Facilities

Of the 83,534 unique residents in the population, 12,195 (14.6%) were black and 71,339 (85.4%) were white. Among the 403 nonhospital-based nursing facilities with complete data, all residents were white in 111 (27.5%) facilities, all residents were black in 1 facility (0.3%), and the remaining 291 (72.2%) facilities were racially mixed. Approximately 47% of all the black residents in Michigan lived in 41 homes in which they were the majority (≥ 50%) (Fig. 3).

Vaccination Coverage

Overall unadjusted coverage in Michigan for all residents who lived in a nursing facility during the 2005 to

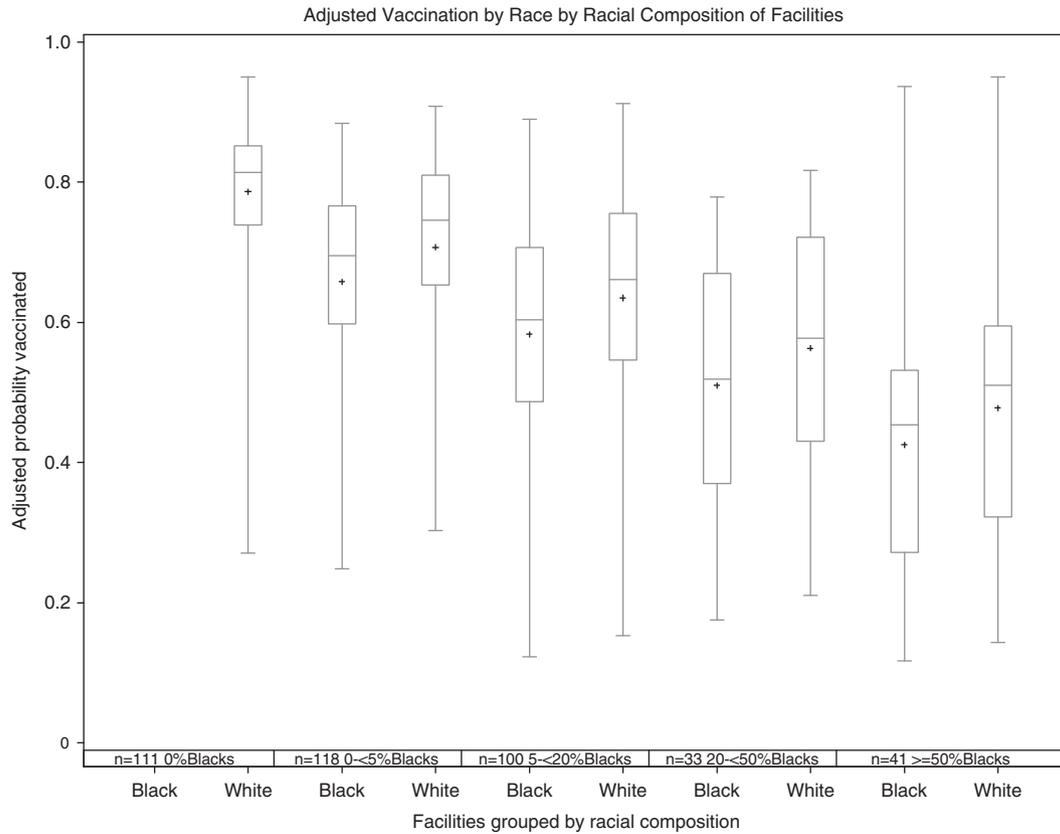


FIGURE 3. Adjusted Vaccination by Race by Racial Composition of Facilities. The horizontal line in the middle of the box plot is the median. The length of the box represents the interquartile range (distance between the 25th and 75th percentiles). The vertical lines (called whiskers) issuing from the box extend to the group minimum and maximum values. Vaccination coverage is adjusted for: sex, education, Medicaid, age, number of residents in the facility, proportion African-Americans in the facility, facility’s affiliation with multifacility chain, type of ownership, type of certification, compliance with program requirements for Medicare and/or Medicaid certification, number of nurse full-time equivalents, MSA, and proportion of residents on Medicaid. +denotes mean.

2006 influenza season was 60.6%, 63.5% for whites and 43.0% for blacks, for a difference of 20.5 percentage points. Among the 39.4% not reported to be vaccinated, 13.0% refused, 1.7% were contraindicated, 12.4% were not offered the vaccine (for 1.6% the facility could not obtain vaccine), 6.9% were reported to not live in the facility during the influenza season (although their assessment indicated they did), and 3.8% had missing vaccination status. Unadjusted median facility vaccination coverage decreases for both white and black residents, as the proportion of blacks in the nursing home increases (for whites from 82.7% in 100% white homes to 54.5% in homes with >50% black residents and for blacks from 71.2% in homes with 0.1% to 5% black residents to 48.4% in homes with >50% black residents).

Variability in Vaccination Coverage Within Facilities

Whites had slightly higher adjusted vaccination coverage than blacks in all groups of facilities (Fig. 3). Table 1 shows median vaccination coverage and refusal vaccination levels by race by percentage of blacks in homes. After adjusting for the clustered structure of residents within nursing facilities and known resident- and facility-level confounders, the median

range of difference in coverage within homes based on the proportion of blacks in the nursing home was 5.0% to 5.6% points. The median difference in refusing the vaccine was ≤2.5% points for each group of facilities.

Variability in Vaccination Coverage Between Facilities

Vaccination coverage varied between the 5 groups of facilities; notably, 47.5% of blacks lived in facilities where the median coverage was <50% and 58.1% of whites lived in facilities where the median coverage was >75%. In the group of facilities with ≥ 50% blacks during the influenza vaccination season, the adjusted probability of vaccination for both whites (median: 49.2%) and blacks (median: 43.0%) was lowest among the categories. In the 2 groups of facilities in which blacks were 0.1% to <5% and 5% to <20% of the facility population, blacks and whites had higher vaccination coverage than in the facilities with more than 20% blacks. Vaccination coverage in the 100% white homes was higher (median: 82.1%) than in the other facilities.

Some of the inequities in vaccination between facilities are attributed to differences in the proportion of residents not being offered vaccine. In facilities with the largest proportion

TABLE 1. Multilevel Model Results: Within and Between Facility Vaccination Coverage by % Black Residents in the Facility, Michigan, 2005–2006

Facilities Grouped by Percent Black Residents in the Homes	No. facilities	Median No. Residents (Range)	Distribution (%) in Michigan						Vaccination Coverage*								
			Blacks		Whites		Vaccinated†		Refused		Not Offered‡						
			Blacks	Whites	White	Black	White	Black	White	Black	White	Black	White	Black	White	Black	White
1. 0% black residents	111	159 (22–383)	0	23.1	81.7	—	7.6	—	9.8	—	—	—	—	—	—	—	—
2. 0.1%–<5% black residents	118	217 (40–242)	4.4	35.0	74.7	69.9	5.0	12.4	—	—	—	—	—	—	—	—	—
3. 5%–<20% black residents	100	238 (61–240)	26.2	32.3	66.2	60.8	5.4	12.3	—	—	—	—	—	—	—	—	—
4. 20%–<50% black residents	33	222 (66–68)	21.9	7.6	57.9	52.2	5.6	12.8	—	—	—	—	—	—	—	—	—
5. >50% black residents	41	169 (45–26)	47.5	2.0	50.7	45.4	5.6	14.3	—	—	—	—	—	—	—	—	—

Difference in each category is the white-black median difference for the facilities in that stratum. Coverage probabilities (eg, vaccinated, refused, and not offered) are medians for the facilities in each stratum and therefore do not add to 100%.
 *Adjusted: Multilevel model, adjusted for covariates: sex, level of education, Medicaid, private insurance, age, number of residents in the facility, proportion African-Americans in the facility, facility's affiliation with multi-facility chain, type of ownership, type of certification, compliance with program requirements for Medicare and/or Medicaid certification, number of nurse full-time equivalents, metropolitan statistical area, and proportions of residents on Medicaid, Medicare, and Private pay.
 †Adjusted vaccinated and refused probabilities are from a multilevel model with a multinomial outcome: vaccinated, refused, unvaccinated—other reasons.
 ‡Adjusted not offered probabilities also include residents who were contraindicated for the vaccine (1%–2%). There were no racial differences in proportions contraindicated.

of blacks, the median probability of not being offered the vaccine was highest for both whites (32.5%) and blacks (37.2%), compared with the facilities housing fewer black residents, for both whites (medians: 14.0% to 22.8%) and blacks (medians: 16.9% to 26.1%).

Adjusted vaccination estimates previously described were determined using multilevel analysis. The effect of race on vaccination was modeled controlling for resident- and facility-level confounders. Random effects were included in the model to account for and test the variance ($H_0: \sigma_{01}^2 = 0$ and $H_0: \sigma_{02}^2 = 0$) in vaccination between homes (Appendix). Controlling for correlation as well as resident- and facility-level confounders, differences between racial groups in receiving the influenza vaccine and for refusing vaccine were highly statistically significant ($H_0: \beta_{41} = \beta_{42} = 0, P < 0.001$). Additionally, the variance components were highly significant at $P < 0.001$, suggesting remaining unexplained variance in vaccination coverage between nursing homes after modeling the effect of race, and controlling for resident- and facility-level confounders.

DISCUSSION

Results from this study indicate racial inequities in receipt of the influenza vaccine among black and white long-term care residents in Michigan exist both within and between facilities. The differences within facilities are small, a median $\leq 5.6\%$ points, after adjusting for reported confounders and correlation from the clustered structure of residents within nursing facilities. It is clear that differences between facilities drive the magnitude of the statewide inequity. The median proportion not offered the vaccine was the highest and the receipt of vaccine was lowest in facilities with the largest proportion of black residents. Those facilities house 47% of black residents in the state. The remaining unexplained variance in our multilevel models implies that there are likely factors (eg, resources, staff practices of vaccination, policies) at the facility level contributing to the inequity in vaccination between nursing facilities based on the proportion of black residents beyond reported resident and facility confounders, resident refusals, and correlation from the clustered structure of residents within nursing facilities.

Studies have found that the concentration of black residents in nursing homes with the fewest resources is a strong contributor to racial disparities in nursing home quality.¹¹ A study conducted in New York found that pressure ulcers occurred at a higher rate among residents of nursing homes with a higher proportion of black residents.¹² Another study found that residents in nursing homes with higher proportions of blacks was associated with higher, although statistically nonsignificant, likelihood of receiving antipsychotic drugs.¹³

We are the first to describe the inequities in influenza vaccination within nursing facilities as partly due to more refusals among blacks as compared with whites. This finding highlights the need to address cultural competency of nursing home staff, and explore other possible reasons for refusals. In one study of pneumococcal vaccination among adult outpatients, refusals were reduced by strong recommendations from physicians for vaccination during office visits combined with addressing patients' vaccine-related concerns.¹⁴

This approach could be adaptable to the nursing home environment. Personalized presentation of information, along with quality assurance of staff’s communication skills, would be important training components. Understanding and addressing vaccine-related concerns that may be particular to minorities may prove effective in reducing inequities for vaccination. Studies in nursing homes have also found cultural barriers to receiving influenza vaccine among their minority healthcare workers.¹⁵ Therefore, understanding and addressing vaccine-related concerns among facility staff—not just residents—may affect resident vaccination outcomes.

Although we found that racial differences in not being offered the vaccine accounts for a small portion of the racial inequity in vaccination within facilities, it is a strong contributor to between facility differences in vaccination as well as to the overall statewide difference. Differences in offering vaccine could be due to differences in the level of resources in the facility, in addition to those we controlled for in our model. The difference in being offered the vaccine between racially mixed and the 100% white facilities may be due to differential documentation and/or how the vaccine is offered in the home.

There are several limitations to these data. Approximately 7% of residents were reported to be unvaccinated because they were not in the facility during the influenza season (between October 1 and March 31), yet their assessment dates (and types) indicate that they did live in the facility during that time. There was no racial difference in this misclassification (data not presented). Another limitation may be that we presented only 1 state and therefore the data may not be representative. However, we have replicated this analysis for the other 10 states with ≥ 10% point racial gaps in vaccination, and found similar trends in disparities between facilities, stratified by proportion of black residents.

This is the first report that identifies racial inequities in receipt of the influenza vaccine between nursing facilities of playing a critical role in overall inequities among nursing home residents. The adjusted result of statistical significance of the random effects suggests that either additional facility-level resources should be examined or some unmeasured construct, a 2-tiered system¹⁶ for example, may exist that is driving the measurable facility-level factors. Intervention studies are needed to determine the effect of implementation of policies, such as standing orders on narrowing disparities and increasing vaccination rates, and to identify other effective interventions at both the facility and individual levels. Effective interventions reduce inequities in vaccination coverage and have the potential to reduce morbidity and mortality due to vaccine-preventable illness as well as provide cost savings from reduced number of acute hospitalizations by nursing home residents.¹⁷

ACKNOWLEDGMENTS

The authors thank Beth Bell, MD, MPH and Abigail Shefer, MD, both with the Centers for Disease Control and Prevention, for critical review of the manuscript.

APPENDIX

The multilevel model and null hypothesis for the random effects:

Level-1 Model

$$\begin{aligned} \text{Prob}(Y_{1ij} = 1 | \beta_j) &= P_{1ij} \\ \text{Prob}(Y_{2ij} = 1 | \beta_j) &= P_{2ij} \\ \text{Prob}(Y_{3ij} = 1 | \beta_j) &= P_{3ij} = 1 - P_{1ij} - P_{2ij} \\ \log [P_{1ij} / (P_{3ij})] &= \beta_{01} \beta_{11} \times (\text{Education}_{ij} \\ &\quad - \overline{\text{Education}_{.j}}) + \beta_{21} \\ &\quad \times (\text{Medicaid}_{ij} - \overline{\text{Medicaid}_{.j}}) \\ &\quad + \beta_{31} \times (\text{Sex}_{ij} - \overline{\text{Sex}_{.j}}) \\ &\quad + a_{41} \times (\text{Black vs. white}_{ij}) \\ &\quad + \beta_{51} \times (\text{Age}_{ij} - \overline{\text{Age}_{.j}}) \\ &\quad + \beta_{61} \times (\text{Private payment}_{ij} \\ &\quad - \overline{\text{Private Payment}_{.j}}) \\ \log [P_{2ij} / (P_{3ij})] &= \beta_{02} \beta_{12} \times (\text{Education}_{ij} \\ &\quad - \overline{\text{Education}_{.j}}) + \beta_{22} \\ &\quad \times (\text{Medicaid}_{ij} - \overline{\text{Medicaid}_{.j}}) \\ &\quad + \beta_{32} \times (\text{Sex}_{ij} - \overline{\text{Sex}_{.j}}) \\ &\quad + \beta_{42} \times (\text{Black vs. white}_{ij}) \\ &\quad + \beta_{52} \times (\text{Age}_{ij} - \overline{\text{Age}_{.j}}) \\ &\quad + \beta_{62} \times (\text{Private payment}_{ij} \\ &\quad - \overline{\text{Private Payment}_{.j}}) \end{aligned}$$

Level-2 Model

$$\begin{aligned} \beta_0 &= \gamma_{001} + \gamma_{011} \\ &\times (\text{total number of residents in the facility} \\ &\quad - \overline{\text{total number of residents in the facility}}) \\ &+ \gamma_{021} \times (\text{Percent blacks in facility} \\ &\quad - \overline{\text{Percent blacks in facility}}) \\ &+ \gamma_{031} \times (\text{Chain}_{.j} - \overline{\text{Chain}_{.j}}) \\ &+ \gamma_{041} \times (\text{Number RN FTES}_{.j} - \overline{\text{Number RN FTES}_{.j}}) \\ &+ \gamma_{051} \times (\text{Percent residents on Medicaid} \\ &\quad - \overline{\text{Percent residents on Medicaid}}) \\ &+ \gamma_{061} \times (\text{Ownership}_{.j} - \overline{\text{Ownership}_{.j}}) \\ &+ \gamma_{071} \times (\text{Certification}_{.j} - \overline{\text{Certification}_{.j}}) \\ &+ \gamma_{081} \times (\text{In compliance with program requirements}_{.j} \\ &\quad - \overline{\text{In compliance with program requirements}_{.j}}) \\ &+ \gamma_{091} \times (\text{Percent on Medicare}_{.j} \\ &\quad - \overline{\text{Percent on Medicare}_{.j}}) \\ &+ \gamma_{101} \times (\text{Percent with private pay}_{.j} \\ &\quad - \overline{\text{Percent with private pay}_{.j}}) \\ &+ \gamma_{111} \times (\text{Urban / rural}_{.j} - \overline{\text{Urban / rural}_{.j}}) + \mu_{01j} \end{aligned}$$

$$\begin{aligned} \beta_{11} &= \gamma_{101} \\ \beta_{21} &= \gamma_{201} \\ \beta_{31} &= \gamma_{301} \\ \beta_{41} &= \gamma_{401} \\ \beta_{51} &= \gamma_{501} \\ \beta_{61} &= \gamma_{601} \end{aligned}$$

$$\begin{aligned} \beta_0 &= \gamma_{002} + \gamma_{012} \\ &\times (\text{total number of residents in the facility} \\ &\quad - \text{total number of residents in the facility.}) \\ &+ \gamma_{022} \times (\text{Percent blacks in facility} \\ &\quad - \text{Percent blacks in facility.}) \\ &+ \gamma_{032} \times (\text{Chain}_j - \text{Chain.}) \\ &+ \gamma_{042} \times (\text{Number RNFTES}_j / \text{Number RNFTES.}) \\ &+ \gamma_{052} \times (\text{Percent residents on Medicaid} \\ &\quad - \text{Percent residents on Medicaid.}) \\ &+ \gamma_{062} \times (\text{Ownership}_j - \text{Ownership.}) \\ &+ \gamma_{072} \times (\text{Certification} - \text{Certification.}) \\ &+ \gamma_{082} \times (\text{In compliance with program requirements}_j \\ &\quad - \text{In compliance with program requirements.}) \\ &+ \gamma_{092} \times (\text{Percent on Medicare}_j \\ &\quad - \text{Percent on Medicare.}) \\ &+ \gamma_{102} \times (\text{Percent with private pay}_j \\ &\quad - \text{Percent with private pay.}) \\ &+ \gamma_{112} \times (\text{Urban / rural}_j - \text{Urban / rural.}) + \mu_{02j} \end{aligned}$$

$$\begin{aligned} \beta_{12} &= \gamma_{102} \\ \beta_{22} &= \gamma_{202} \\ \beta_{32} &= \gamma_{302} \\ \beta_{42} &= \gamma_{402} \\ \beta_{52} &= \gamma_{502} \\ \beta_{62} &= \gamma_{602} \end{aligned}$$

where $i = \text{resident}$ and $j = \text{nursing home}$, $\mu_{01j} \sim \text{Multivariate normal}(0, \sigma_{01}^2)$ and $\mu_{02j} \sim \text{Multivariate normal}(0, \sigma_{02}^2)$

$$H_0 : \sigma_{01}^2 = 0; H_0 : \sigma_{02}^2 = 0$$

Facility-level variables are “grand mean” centered (subscript “.”) which makes zero equal to the proportion in the population without that characteristic instead of meaning does not have that characteristic. Similarly, resident-level variables are “group mean” centered (subscript “j”) which

makes zero equal to the proportion of residents in the nursing home without the characteristic instead of not having the characteristic. The certification and ownership variables were nominal with more than 2 categories and therefore dummy variables were used.

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Race, Education, and the Treatment of Depression in Nursing Homes

Journal of Aging and Health

24(5) 752-778

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DOI: 10.1177/0898264311435548

<http://jah.sagepub.com>



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Abstract

Objectives: We investigate, among older adult nursing home residents diagnosed with depression, whether depression treatment differs by race and schooling, and whether differences by schooling differ by race. We examine whether Blacks and less educated residents are placed in facilities providing less treatment, and whether differences reflect disparities in care. **Method:** Data from the 2006 Nursing Home Minimum Data Set for 8 states ($n = 124,431$), are merged with facility information from the Online Survey Certification and Reporting system. Logistic regressions examine whether resident and/or facility characteristics explain treatment differences; treatment includes antidepressants and/or psychotherapy. **Results:** Blacks receive less treatment (adj. $OR = .79$); differences by education are small. Facilities with more Medicaid enrollees, fewer high school graduates, or more Blacks provide less treatment. **Discussion:** We found disparities at the resident and facility level. Facilities serving a low-SES (socioeconomic status), minority clientele tend to provide less depression care, but Blacks also receive less depression treatment than Whites within nursing homes (NHs).

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Keywords

Blacks, medications, mental health, nursing homes, social factors

Introduction

Depression affects a substantial number of older adult Americans living in nursing homes (American Health Care Association, 2009; Thakur & Blazer, 2008). If untreated or undertreated, depression can cause other adverse health outcomes, including malnutrition (Morley & Silver, 1995) functional decline (American Geriatrics Society & American Association for Geriatric Psychiatry, 2003a, 2003b), and death (Covinsky et al., 1999), and complicate comorbid conditions such as congestive heart failure (Koenig, 1998), diabetes (Egede, Zheng, & Simpson, 2002), and dementia (Bartels et al., 2003). Antidepressant treatment and psychotherapy can usually restore mental and physical function and prevent depression recurrence (Kallenbach & Rigler, 2006; Mann, 2005).

Parallel with diffusion of new generation antidepressants, depression diagnosis and treatment with antidepressants have increased (Sambamoorthi, Olsson, Walkup, & Crystal, 2003). Yet, several studies suggest differences in treatment of diagnosed depression by race and education exist in community-dwelling older adults (Crystal, Sambamoorthi, Walkup, & Akincigil, 2003; Melfi, Croghan, Hanna, & Robinson, 2000; Miranda et al., 2003), and earlier work finds racial and educational differences in depression treatment in nursing homes (NHs). More specifically, Black race and less than a high school (HS) education were associated with lower treatment rates among older adult NH residents diagnosed with depression (Brown, Lapane, & Luisi, 2002; Levin et al., 2007). However, differences in depression care have received less attention in NHs than in other health care settings. Few studies if any have examined the combined effects of resident race and education. It is unclear whether lower treatment rates for Black NH residents diagnosed with depression are due to lower education levels, whether Blacks with less education are at higher risk for lower treatment rates, or if education has a smaller effect on increasing treatment rates for Blacks than for Whites.

To illuminate the relationship of resident race and education to depression care, among those diagnosed with depression, this article compares depression treatment rates for these older adult Black versus White NH residents, with versus without a HS degree. Our outcome is any treatment with antidepressant medication and/or psychotherapy. Our primary objectives are to (a) replicate with more recent data the earlier finding that Whites and more

educated NH residents are more likely to be treated for depression than are Blacks and those without a degree and (b) examine whether the effects of education are additive (or synergistic) with the effects of race, so that Blacks with less education are particularly likely to be “undertreated” for depression, controlling for differences in underlying symptoms (albeit imperfectly). In addition, we investigate whether adjusting for other resident and facility characteristics explains, at least in part, or moderates the relationship of resident race and education to depression treatment. Furthermore, we examine whether depression treatment varies with the characteristics of the NHs in which Blacks and/or the less educated are more likely to reside. Our interest at the facility level is whether factors which give rise to such differences operate within homes or between homes, the role played by differences in facilities’ aggregated resident characteristics in explaining differences in depression care by resident race and schooling, and whether these can be considered disparities in care. Our findings should be of interest to those providing care in NHs, and the policymakers who regulate them, since successful treatment of depression is an important component of quality care, and treatment differences may reveal disparities in care quality.

We use the Institute of Medicine (IOM) definition of racial disparities, and Hebert, Sisk, and Howell’s (2008) conceptualization of racial disparities, to examine whether differences we find can be considered disparities. The Institute of Medicine defines a disparity as “racial and ethnic differences in the quality of health care that are not due to access-related factors or clinical needs, preferences, and appropriateness of intervention” (p. 376). Hebert argues that a racial difference is a disparity when (a) a health-related factor (e.g., depression care) is affected by (resident) race and (b) these racial differences have their roots in a “social inequity due to race.” We postulate that racial disparities in depression treatment operate through the educational disadvantages suffered by the current cohort of minority older adults (who came of age prior to the civil rights movement) and that these differences in education level have their roots in a “social inequity due to race” and could lead to disparate depression treatment. We control for factors that, we postulate, affect treatment in ways that do not have their roots in “social inequity due to race,” but instead are due to “access-related factors or clinical needs, preferences, and appropriateness of intervention.” These may include limitations in physical, cognitive, and psychosocial function. They may result in racial differences in treatment rates that may not reflect racial disparities in care.

Conceptually, there may be differences in aggregated resident characteristics at the facility level that affect and reflect processes of care (i.e., facility case mix) but do not themselves reflect disparities in care. However, those

racial differences in access that have their roots in “social inequities due to race” may be disparities, and these differences are troubling if they result in differences in care quality, including quality of depression care. Mor’s study of “disparities” in the quality of NH care found that “lower-tier” facilities (as defined by their payer mix) were significantly more likely to serve Black and less educated residents (Mor, Zinn, Angelelli, Teno, & Miller, 2004). Mor et al. define “lower-tier” facilities based on their access to financial resources: NHs with at least 85% of residents supported by Medicaid, less than 10% supported by private payers, and less than 8% supported by Medicare were defined as lower-tier. Greater dependence on Medicaid may be indicative of a lack of resources because Medicaid’s per diem payment rates are usually lower than the rates paid by private payers and may even be below the actual cost of providing care (Mor et al., 2004; Grabowski, 2001; Grabowski, Angelelli, & Mor, 2004). These “lower-tier” facilities are likely to provide lower quality care, including lower quality depression care. We postulate that Black and less educated residents are more likely to be placed in “lower-tier” facilities, that is, those with a high percent of residents funded by Medicaid, because they themselves are likely to have lower income and wealth than their White and more educated counterparts. These differences in income and wealth likely have their roots in social inequalities due to race.

However, we further postulate that facilities with a high proportion of Black and less educated residents are more likely to provide less depression care, even controlling for the percent of residents funded by Medicaid. As residents are likely to be placed in NHs near their original neighborhoods, racial segregation in NHs largely reflects residential segregation, and as in other venues, separate is not likely to be equal. If Whites do not want to be placed in NHs with a high proportion of Black residents, the racial composition of NHs will be driven by the “racial tipping point” phenomenon that we still see in residential segregation (Schelling, 1971). Smith, Feng, Fennell, Zinn, & Mor (2007) found NH segregation to be greater than residential segregation within communities and hospitals. The result is that, due to racial differences that have their roots in “social inequities due to race,” Black and less educated residents are more likely to be placed in NHs with a high proportion of Black and less educated residents, which then have an ever increasing proportion of Black and less educated residents. Mor et al. (2004) found that Blacks were nearly four times as likely as Whites to reside in “lower-tier” facilities. These “lower-tier” facilities are likely to have fewer resources for care, including depression care, and poorer performance.

In sum, although the factors that contribute to the racial and socioeconomic differences in depression treatment in NHs found in the literature

remain poorly understood, it is unlikely that the entire difference in treatment rates can be fully explained by patient and family preferences (Cooper et al., 2003). Instead, this difference in treatment rates likely reflects both residents' psychological state, health needs, and preferences, and facilities' clinical and financial resources, quality, and case mix. Together they impact the facility's propensity to recognize symptoms, diagnose depression, and treat it with antidepressants and/or psychotherapy. We postulate that differences in depression treatment by race and education level also reflect disparities in care.

Design and Method

Data. Three sources of data were used for this study. Resident information, obtained from the 2006 Nursing Home Minimum Data Set (MDS v.2.0) from eight states (California, Florida, Georgia, Illinois, New Jersey, New York, Ohio, and Texas), were merged with facility information from 2006 Online Survey Certification and Reporting system (OSCAR) survey data; information on facility urbanicity were obtained from the Rural–Urban Commuting Area Codes (RUCA codes; WWAMI Rural Health Research Center, 2008). The MDS is a nationally standardized 350-item summary screening and assessment tool. Medicare- and Medicaid-certified NHs are required by the Centers for Medicare and Medicaid Services (CMS) to use the MDS to assess every resident upon admission, quarterly and annually, and when there is a significant change in a resident's health status (Centers for Medicare and Medicaid Services [CMS], 2004). Quarterly assessments only use a subset of items, so we used the full nonadmission assessments, which must be completed annually or when there is a significant change. These assessments include resident demographic characteristics, measures of physical, psychological, and psychosocial functioning, active clinical diagnoses and health conditions, and treatments and services received (Morris et al., 1990).

The MDS has been used extensively to study NH care and outcomes (Castle, 2006; Hawes et al., 1995; Mor, 2004). In Hawes et al., MDS (v 2.0) items were assessed for interrater reliability using the Spearman-Brown intraclass correlation coefficient (Fleiss, 1986), by comparing MDSs completed by two trained nurses who independently evaluated the same 135 residents (Hawes et al., 1995). This measure generally provides a more conservative estimate of reliability than either simple correlation or percent agreement. Hawes et al. view an intraclass correlation of 0.4 or higher as reflecting adequate reliability, and a value of 0.7 or higher was considered excellent reliability (Fleiss, 1986). Most sections used in our analyses attained

an average interrater reliability of 0.70 or higher in Hawes et al. Key variables in our study (depression diagnosis, antidepressant treatment, race and schooling, respectively) were drawn from the Disease Diagnoses, Medication Use, and Identification and Background sections of the MDS (v 2.0). In Hawes et al., the Disease Diagnoses (32 items, with reliability of 0.74), Medication Use (7 items, with reliability of 0.73), and Identification and Background (27 items, with reliability of .71) sections had excellent reliability (Hawes et al., 1995). Psychotherapy was drawn from the Special Treatment and Procedures section (19 items, with reliability of 0.58), which Hawes described as adequate reliability (Hawes et al., 1995); nonetheless, since receipt of psychotherapy is likely to generate a reimbursable claim, it may be more reliably reported than other items in that section. MDS diagnoses, special treatments, and medications have shown 90% level of agreement with medical records (Castle, 2006).

OSCAR data, self-reported and validated yearly by state surveyors as part of the recertification of all Medicare/Medicaid certified NHs, contain information on facility resources, aggregated resident characteristics, and survey deficiencies (Harrington, Carrillo, & LaCava, 2006). Although some find OSCAR based measures of staffing unreliable and recommend using cost reports based measures of staffing (Intrator et al., 2005; Kash, Hawes, & Phillips, 2007), many studies have found OSCAR measures appropriate for research (Feng, Katz, Intrator, Karuza, & Mor, 2005; Harrington et al., 2006). The RUCA Codes Version 2.0 classifies census tracts by their rural/urban status (WWAMI Rural Health Research Center, 2008).

Study population. We included all older adult (age ≥ 65) long-term care NH residents in the eight states with a complete nonadmission full MDS assessment in year 2006 (they thus resided in the NH for at least 90 days). For residents with multiple assessments in 2006, the last full assessment was used. It was merged with the facility-level OSCAR data collected closest to the MDS assessment date. As our focus was depression care among long-term care NH residents, we excluded residents for whom the assessment was required for Medicare funded postacute stays. Hospital-based homes were excluded, as their case-mix and resources differ from that of freestanding NHs (Harrington et al., 2006). We also excluded residents who were comatose, and those with mental retardation or developmental disability. Residents with schizophrenia or bipolar disorder were excluded because recommended care differs for this population. As the number of residents of other racial/ethnic groups was relatively small, we restricted the study population to non-Hispanic Whites and Blacks. This resulted in a study population of 240,330 residents in 5,429 facilities (205,183 Whites and 35,147 Blacks), of whom 124,431 (51.8%) in

5,330 NHs had a depression diagnosis recorded in the selected assessment. We focused on the 111,372 (89.5%) Whites and 13,059 (10.5%) Blacks reported as having depression; 54.3% of Whites and 37.2% of Blacks had a depression diagnosis. Among the 124,431 residents with a depression diagnosis, 60.8% had and 39.2% did not have a HS diploma. Depression diagnosis was ascertained from the MDS and is based on whether there was an "active" physician-documented depression diagnosis in the resident's clinical record using a 7-day look-back period (CMS, 2004). An "active" diagnosis is defined as having "a relationship to current ADL status, cognitive status, mood and behavior status, medical treatments, nursing monitoring, or risk of death" (CMS, 2004). The research protocol was approved by the Rutgers University Institutional Review Board.

Outcome measure. The dependent variable was "any" depression treatment with antidepressants and/or psychotherapy. Antidepressant use (Section O of the MDS) was based on whether a resident received *any* antidepressant during the 7 days prior to the assessment (CMS, 2004). Psychotherapy use (Section P of the MDS) was based on whether a resident received *any* psychological therapy from a licensed mental health professional during the 7 days prior to the assessment (CMS, 2004). We also estimated the models using antidepressant treatment as the dependent variable, and the results were the same. We did not analyze receipt of psychotherapy as a separate outcome in the multivariate models because its prevalence in the MDS was too low to reliably analyze: 2.5% of residents diagnosed with depression received psychotherapy; only 0.3% received psychotherapy alone, without concomitant antidepressant treatment (343 Whites, 78 Blacks).

Resident Characteristics

Resident characteristics (and facility characteristics), described in Table 1, were the independent variables in our models. Resident characteristics were further categorized as sociodemographic characteristics (race, education, age, and sex) or health needs (chronic health conditions, physical, and cognitive functional limitations, psychiatric comorbidities, behavioral symptoms, and pain). In examining whether there are racial and educational disparities in NH depression treatment, we first control for sociodemographic characteristics, because these other demographic subgroups (i.e., the oldest-old, rural populations, and women) have been shown to be undertreated for depression due to factors other than race (Brown et al., 2002; Levin et al., 2007; Mor et al., 2004). Older age may affect the "appropriateness of the intervention," rurality may affect "access" to services, and gender differences may reflect

Table 1. Description of the Explanatory Variables

Variable	Description
Resident characteristics (MDS)	
Sociodemographic traits (MDS)	
Black race	Section A: 1 = <i>Black</i> ; 0 = <i>White</i>
High school diploma	1 = <i>high school diploma or above</i> ; 0 ≤ <i>high school</i>
Female gender	1 = <i>female</i> ; 0 = <i>male</i>
Age	1 = 75-84; 1 ≥ 85; 0 = 65 to 74 years (2 dummies)
Health care need (MDS)	
Depressive symptoms	Section E: MDS Depression Rating Scale: Consists of 7 items: negative statements; persistent anger/irritability; unrealistic fears; repetitive health complaints; repetitive nonhealth complaints; sad, worried facial expressions; crying/tearful. Each scored 0-2 for scale of 0-14. Cutoff ≥3 indicates mild to moderate depressive symptoms, maximizing sensitivity with minimal loss of specificity (Burrows, Morris, Simon, Hirdes, & Phillips, 2000).
Chronic condition index	Section I: 3 dummies for 1 condition; 2 conditions; ≥3 conditions; 0 = <i>no chronic conditions</i> Ranges from 0-11 diseases: heart failure, other cardiovascular/cerebrovascular diseases, diabetes, kidney disease, liver disorders, chronic pulmonary disease, ulcers, rheumatologic disease, malignancies, HIV, osteoporosis
ADL physical functioning	Section G: ADL Self-Performance Hierarchy: ranges from 0 to 6 (Morris et al., 1990) and includes: locomotion on unit, eating, toilet use, personal hygiene, each w/severity index 0 to 4. 0 = <i>independent</i> (all ADLs = 0); 1 = <i>supervision</i> (all ADLs < 2); 2 = <i>limited</i> (all ADLs < 3); 3 = <i>extensive 1</i> (eating/locomotion < 3; hygiene/toilet > 2); 4 = <i>extensive 2</i> (eating/locomotion 3 but not 4); 5 = <i>dependent</i> (eating/locomotion = 4); 6 = <i>totally dependent</i> (all ADLs = 4).

(continued)

Table 1. (continued)

Variable	Description
Cognitive function	Section B: MDS-COGS Index: Sums short-term memory problem (0-1), long-term memory problem (0-1), resident doesn't recall location of own room (0-1), doesn't know who he or she is (0-1), has no items recalled (0-1), lacks skills for daily decision making (0-3), is never/ rarely understood (0-1), has total dependence in dressing (0-1). Score ranges from 0 (cognitively intact) to 10 (severe impairment).
Psychiatric/mood diagnoses	Section I: Assessed "active" physician-documented diagnosis in resident's clinical record using a 7-day look-back period. (CMS, 2004).
Dementia and/or Alzheimer's	1 = <i>dementia/Alzheimer's</i> ; 0 = <i>otherwise</i>
Anxiety disorder	1 = <i>anxiety disorder</i> ; 0 = <i>otherwise</i>
Conditions and symptoms	Section J: Problem conditions and pain symptoms
Delusions	1 = <i>delusions in past 7 days</i> ; 0 = <i>otherwise</i>
Hallucinations	1 = <i>hallucinations in past 7 days</i> ; 0 = <i>otherwise</i>
Pain	1 = <i>daily pain in past 7 days</i> ; 0 = <i>otherwise</i> (Fries, Simon, Morris, Flodstrom, & Bookstein, 2001)
Mood and behavior patterns	Section E
Aggressive behavioral symptoms	1 = <i>resident has verbally and physically abusive behavioral symptoms</i> ; 0 = <i>otherwise</i>
Nonaggressive behavioral symptoms	1 = <i>wandering, resists care, socially inappropriate/disruptive behaviors</i> ; 0 = <i>otherwise</i>
Facility characteristics (OSCAR)	
Ownership structure	
Nonprofit ownership	1 = <i>nonprofit ownership</i> ; 0 = <i>for-profit ownership</i>
Government ownership	1 = <i>government ownership</i> ; 0 = <i>for-profit ownership</i>
Part of chain	1 = <i>owned or leased by multifacility organization</i> ; 0 = <i>otherwise</i>
Resident census	
Total number of beds	Total number of beds in facility

(continued)

Table 1. (continued)

Variable	Description
Occupancy rate	Number of residents for whom a bed is maintained divided by number of beds
Staffing	
Physician staffing	
Physician team with extenders	1 = <i>physician team, including nurse practitioners or physician assistants</i> ; 0 = <i>one physician other than medical director, who does more administration than direct patient care</i>
No other physician	1 = <i>no physician other than medical director</i> ; 0 = <i>one physician other than medical director</i>
Nurse staffing	
CNA hours per resident day	Number of hours provided by certified nurse aides per resident day
LPN hours per resident day	Number of hours provided by licensed practical nurses per resident day
RN hours per resident day	Number of hours provided by registered nurses per resident day
Mental health staffing	1 = <i>any mental health staffing provided</i> ; 0 = <i>no mental health staffing provided</i>
Social service staff PRD	Number of hours provided by social service staff per resident day
Quality measures	
% residents restrained	Percent of residents in physical restraints
Total number of deficiencies	Total number of deficiencies, including those in quality of care, quality of life, and others
Resident health needs	
Acuity	A composite of an ADL index and special treatment index, as a measure of case mix
% on psychoactive medications	Percent of residents on any psychoactive medication
% with depressive symptoms	Percent of residents with signs or symptoms of depression
% with psychiatric symptoms	Percent of residents with psychiatric symptoms (exclude dementias and depression)

(continued)

Table 1. (continued)

Variable	Description
Resident socioeconomic characteristics	
% on Medicaid	Percent of residents whose primary payer is Medicaid (as reported in resident census)
% with high school diploma (MDS)	Percent of residents with a high school diploma (calculated from the MDS)
% who are Black (MDS)	Percent of residents who are Black (calculated from the MDS)
Community characteristics (RUCA)	
Urbanicity (RUCA)	
Large rural city/town	1 = facility located in large rural city or town; 0 = facility located in large urban city
Small/isolated rural town	1 = facility located in small or isolated rural town; 0 = facility located in large urban city

sex differences in treatment response or social inequities due to factors other than race.

In light of the IOM definition of when a difference is not a disparity, we also control for health conditions, symptoms, and limitations which may (appropriately) affect the odds of depression treatment due to clinical needs and appropriateness of the intervention. For example, individuals with more severe depressive symptoms may be (appropriately) more likely to be treated, and thus we included the Depression Rating Scale (DRS) to adjust for differences in underlying depression symptoms and severity. Although the validity of the DRS for identifying depression has been questioned, prior studies indicate that a cut off score of "3" suggests mild to moderate depressive symptoms needing further evaluation (Anderson, Buckwalter, Buchanan, Maas, & Imhof, 2003; Burrows, Morris, Simon, Hirdes, & Phillips, 2000; Horgas & Margrett, 2001), and therefore we included the dichotomized DRS score as an indicator of depression symptom severity.

We control for physical, cognitive, and psychosocial function because empirically, individuals with severe ADL or cognitive impairment may be less likely to be treated (Levin et al., 2007), and the appropriateness of treatment may vary with physical, cognitive, and psychosocial functioning, and comorbid conditions. Comorbidities and associated symptoms may complicate antidepressant side effects and thus may (appropriately) affect the odds

of treatment (Kallenbach & Rigler, 2006). Conditions such as dementia and anxiety disorders; symptoms such as delusions, hallucinations and daily pain; and aggressive and nonaggressive behaviors may (rightly) affect the prescriber's perception of the appropriateness of psychotherapy or antidepressant treatment.

Facility Characteristics

Facility characteristics, described in Table 1, were also independent variables in our models. Facility characteristics (such as nurse and physician staffing, and culture of care) may affect the odds of depression treatment through their effect on access related factors and quality of care. Thus, we control for facility characteristics, including infrastructure, ownership, financing and staffing, quality, case-mix, and other aggregated resident characteristics; these include the socioeconomic composition of facility residents.

We control for facility ownership for several reasons. Facility for-profit status may affect facility resources, as nonprofits may have access to additional funding sources. Multifacility organizations (i.e., NHs chains) may benefit from economies of scale or market power in providing depression treatment. Facility physician and nurse staffing have been shown to affect quality and services provided (Miller, Papandonatos, Fennell, & Mor, 2006; Smith et al., 2007); for depression treatment, mental health and social service staffing may also affect care quality. Measures of NH quality that may reflect the quality of depression care include total number of deficiencies and use of restraints. Deficiency citations are given by state surveyors when facilities do not meet minimum quality of care and quality of life standards. Facility use of restraints may reflect facility case-mix, facility culture in managing mental health and behavioral symptoms, or facility resources to address mental health issues without physical or chemical restraints.

Aspects of facility case-mix that may affect quality of depression care include the facility acuity index, percent of residents on psychoactive drugs, percent with depression symptoms, and percent with other psychiatric conditions. Selection of residents by physical, cognitive, and psychiatric function may be the best way a facility can match resident health needs with the services that the facility provides. Resulting differences in access related factors would not necessarily have their roots in social inequities due to race. However, some empirical evidence suggests that this selection process channels residents with more psychiatric conditions into "lower-tier" facilities, defined as those with fewer resources based on payer mix (Mor et al., 2004). Mor's study of "disparities" in the quality of NH care found that "lower-tier"

facilities (as defined by their payer mix) were significantly more likely to serve residents with psychiatric conditions. Mor's study suggests that the selection of facility residents by psychiatric function is not fully explained by the matching of resident health needs with the services that the facility provides. As these "lower-tier" facilities also more often serve Black and less educated residents (Mor et al., 2004), we postulate that these differences in access are likely to have their roots in social inequities due to race.

In examining the effect of a facility's socioeconomic composition on a resident's depression treatment, a novel aspect of our study is that a facility's socioeconomic composition is measured by its residents' education level. In the NH literature, a facility's socioeconomic composition is usually measured by percent (or quartile) of facility residents funded by Medicaid, which also is used in defining "lower-tier" facilities and to describe facility financial resource status. Resident education does not have this dual role as a measure of facility resources. Unlike Medicaid enrollment, which may include middle-income residents who spent down to meet eligibility requirements, a resident's educational attainment remains largely fixed after early adulthood. Thus, it may be a more appropriate measure of older adult resident socioeconomic status (Crystal, Shea, & Krishnaswami, 1992; Siegel, Akincigil, Amin, & Crystal, 2009). We posit that facility-level racial and educational mix will affect access to care and the availability of services, even controlling for other measures of facility resource constraints such as percent of facility residents funded by Medicaid or facility nonprofit status. Facility racial and educational mix serves as proxies for those aspects of quality care, at the facility level, that cannot be directly measured.

Analytical approach. In bivariate analyses, we calculated—by race, education level, and education level \times race—percent of residents with a depression diagnosis treated with antidepressants, percent treated with psychotherapy, percent treated with antidepressants and/or psychotherapy, and percent with each of the other included resident and facility characteristics included in the regression models. Facility measures were sometimes categorical (e.g., nonprofit ownership) and sometimes continuous (e.g., percent Black); we calculated their percent or mean value as appropriate.

In the multivariate models, all resident characteristics (sociodemographics, then health needs) and then all facility characteristics were added sequentially in blocks. Logistic regressions were estimated using proc survey logistic in SAS, to adjust standard errors for the clustering of residents within facilities using Taylor series variance estimation to compute robust standard errors. The analytic strategy was to first only control for all resident characteristics, to examine whether Black and less educated residents had lower

Table 2. Study Variables by Education, Stratified by Race, for Older Adult NH Residents Diagnosed With Depression

	Whites		Blacks	
	HS degree	W/out	HS degree	W/out
	(N = 70,278)	(N = 41,094)	(N = 5,400)	(N = 7,659)
Dependent variables				
AD use (%)	84.5	84.0 ^a	77.9	77.9
Psychotherapy use (%)	2.5	2.4	3.0	2.7
AD or psychotherapy use (%)	84.8	84.3 ^a	78.5	78.5
Demographics (resident level)				
Female gender (%)	79.8	78.3 ^a	71.0	67.9 ^b
Age 65-84	47.7	44.0 ^a	67.7	62.0 ^b
Age 85 or Over	52.3	56.0 ^a	32.3	38.0 ^b
Health needs (resident level)				
Depression Rating Scale ≥ 3	7.4	8.0 ^a	3.7	4.4
Comorbidities = 0 (%)	9.0	8.1 ^a	7.6	8.1
= 1	20.0	19.3 ^a	15.9	15.7
= 2	24.0	23.7	20.0	20.2
≥ 3	47.1	49.0 ^a	56.4	56.1
ADL Hierarchy Scale:				
Independent (%)	4.5	5.7 ^a	3.0	3.6
Supervision	5.0	6.1 ^a	5.0	5.3
Limited	12.6	14.2 ^a	11.5	11.7
Extensive 1	23.4	23.4	22.8	24.1
Extensive 2	16.4	15.2 ^a	13.2	12.0
Dependent	25.0	23.2 ^a	25.2	23.9
Totally dependent	13.2	12.4 ^a	19.4	19.5
MDS COGS: Intact/mild impairment (%)				
Moderate impairment	16.7	15.8 ^a	14.6	12.7 ^b
Moderate/severe impairment	35.5	37.6 ^a	34.6	34.4
Very severe impairment	37.1	36.3 ^a	38.9	40.1
Dementia/Alzheimer's (%)	10.8	10.2 ^a	12.0	12.8
Anxiety (%)	62.4	62.6	63.2	65.3 ^b
Delusions (%)	25.4	27.6 ^a	13.1	13.2
Hallucinations (%)	3.4	4.1 ^a	3.6	4.1
	1.3	1.6 ^a	1.6	1.7

(continued)

Table 2. (continued)

	Whites		Blacks	
	HS degree	W/out	HS degree	W/out
	(N = 70,278)	(N = 41,094)	(N = 5,400)	(N = 7,659)
Daily pain (%)	11.5	12.0 ^a	9.7	10.3
Aggressive behaviors (%)	11.9	13.0 ^a	10.6	12.5 ^b
Nonaggressive behaviors (%)	31.1	32.8 ^a	31.7	33.4 ^b
Facility characteristics (Facility Level)				
Government ownership (%)	4.6	5.3 ^a	2.2	2.8
Nonprofit ownership (%)	26.6	23.3 ^a	20.5	22.0
For-profit ownership (%)	68.8	71.4 ^a	77.3	75.2
Part of multifacility ownership structure (%)	49.6	50.3	51.6	52.5
Total number of beds (M)	155.7	151.0 ^a	183.3	172.8 ^b
Occupancy rate (%)	87.0	86.8	87.5	87.0
Medical team with physician extender (%)	34.9	32.6 ^a	41.9	38.5 ^b
No physician other than medical director (%)	9.0	10.2 ^a	6.5	8.5 ^b
Presence of mental health professionals (%)	63.4	61.0 ^a	70.0	66.8 ^b
Staffing CNA mean HRD ^c (M)	2.2	2.2 ^a	2.2	2.2
Staffing LPN mean HRD ^c (M)	0.76	0.75	0.77	0.78
Staffing RN mean HRD ^c (M)	0.30	0.28 ^a	0.28	0.24 ^b
Staff social service mean HRD ^c (M)	0.09	0.09 ^a	0.08	0.08
Quality measure: % residents restrained (M)	6.5	6.3 ^a	5.6	5.7
Quality indicator: mean number of deficiencies (M)	5.9	5.6 ^a	6.6	6.1
Acuity index mean score (M)	10.4	10.3 ^a	10.6	10.5 ^b
Percent on psychoactive medications (M)	63.0	63.7 ^a	59.2	58.4 ^b
Mental illness: % w/ depression symptoms (M)	49.0	50.5 ^a	43.9	45.5 ^b

(continued)

Table 2. (continued)

	Whites		Blacks	
	HS degree	W/out	HS degree	W/out
	(N = 70,278)	(N = 41,094)	(N = 5,400)	(N = 7,659)
Mental illness: % w/ psychiatric symptoms (m)	19.3	21.2 ^a	21.6	23.3 ^b
Percent funded by Medicaid (M)	61.4	66.1 ^a	71.7	74.9 ^b
Percent with high school diploma (M)	52.2	45.3 ^a	47.5	40.6 ^b
Percent Black race (M)	8.8	9.8 ^a	41.5	42.9 ^b
Large rural city/town (%)	10.7	14.4 ^a	3.5	6.5 ^b
Small/isolated rural town (%)	8.5	13.7 ^a	2.7	7.7 ^b

Note: Numbers represent mean values (M) or percentages (%). If marked as percentages, numbers represent rates.

^aDifference between Whites with and without a high school degree significant at the 5% level. Chi-square tests were used to detect significant differences between percentages. *T* tests were used to detect significant differences between means.

^bDifference between Blacks with and without a high school degree significant at the 5% level. Chi-square tests were used to detect significant differences between percentages. *T* tests were used to detect significant differences between means.

^cHRD refers to hours per resident day.

odds of being treated for depression, and whether membership in other demographic subgroups, or differences in health needs and appropriateness of treatment, accounted for the lower odds. Subsequently, all facility characteristics were added to the models to test whether these measures of access related factors and quality indicators accounted for differences that were found. We hypothesized that Black race would reduce the odds of depression treatment, while a HS diploma would increase the odds, and that Blacks without a diploma would be at heightened risk of “undertreatment.” We further hypothesized that resident and facility characteristics would at least partially account for these relationships. In sum, we examined whether there were racial differences in depression treatment, and whether these racial differences could be considered disparities.

Results

Descriptive results. The rate at which residents diagnosed with depression received any treatment with antidepressants and/or psychotherapy was lower for Blacks than Whites (78.5% vs. 84.6%; $p < .05$). Antidepressant treatment rates for Blacks and Whites were 77.9% versus 84.3% ($p < .05$), respectively, and psychotherapy treatment rates were 2.9% versus 2.5% (ns). Thus, psychotherapy rates were marginally higher for Blacks but the difference was not significant. There was little difference in rates of antidepressant treatment or psychotherapy by education level. For those with and without a HS degree, rates of antidepressant use were 84.0% versus 83.1% ($p < .05$), respectively, whereas psychotherapy rates were 2.6% versus 2.5% (ns). There was also little difference in rates of antidepressant use or psychotherapy by education level, within racial groups. Among Whites, 2.5% of those with versus 2.4% of those without a HS diploma received psychotherapy. Among Blacks, 3.0% of those with versus 2.7% of those without HS diplomas received psychotherapy (see Table 2).

Blacks and Whites, with and without a HS degree, resided in facilities with different characteristics. Particularly noteworthy were differences in the socioeconomic characteristics of facilities' residents. There was clear evidence of residential segregation by race. Blacks resided in facilities in which a far higher percentage of residents were Black. Whites and HS graduates resided in facilities with fewer Blacks, more HS graduates, and fewer residents funded by Medicaid, than did Blacks and residents without a HS degree.

Regression results. Our regression models examined the relationship of resident race and schooling to the odds of antidepressant or psychotherapy treatment (see Table 3), among residents diagnosed with depression, adjusting for resident and facility characteristics. We present the results of two model specifications, to assess whether membership in other demographic subgroups or clinical needs explain treatment differences by resident race and schooling, and if not, whether access related factors or selection into low-resourced NHs explains treatment differences. Model 1 contains only resident characteristics, with all resident characteristics listed in Table 2 included in the model. Model 2 adds facility characteristics in a block, and includes all resident and facility characteristics listed in Table 2. Adjusted odds ratios (adj. OR) for control variables that were not statistically significant at $p < .05$ were not presented in Table 3; these results are available on request. Adjusted odds ratios (adj. OR) for key study variables that were not statistically significant were presented in Table 3.

Table 3. Odds of Antidepressant and/or Psychotherapy Use Among Older Adult NH Residents Diagnosed With Depression

	Model 1	Model 2
Demographics (resident level)		
Black race	0.71*	0.79*
HS diploma	1.04*	1.02
Black × HS diploma	0.94	0.95
Female gender	1.07*	1.06*
Age 85 or over	0.85*	0.84*
Health needs (resident level)		
ADL: (ref. = totally dependent)		
Independent	1.51*	1.57*
Supervision	1.61*	1.66*
Limited	1.68*	1.71*
Extensive 1	1.76*	1.77*
Extensive 2	1.69*	1.69*
Dependent	1.49*	1.48*
MDS COGS: (ref. = very severe impairment)		
Intact/mild impairment	2.01*	2.03*
Moderate impairment	2.18*	2.20*
Moderate/severe impairment	1.75*	1.76*
Psychiatric symptoms		
Aggressive behaviors	0.92*	0.92*
Nonaggressive behaviors	0.89*	0.89*
Facility characteristics (facility level)		
Total beds		1.06*
Occupancy rate		1.65*
CNA staffing		1.03*
Acuity index		1.06*
Percent on psychoactive medications		1.99*
Percent with depression symptoms		0.98
Percent with psychiatric symptoms		0.77*
Percent funded by Medicaid		0.96
Percent with high school diploma		1.16
Percent Black race		0.76*
Nagelkerke R ²	.0448	.0496

Note: Model 1 includes only resident characteristics. Model 2 includes all resident and facility characteristics. Both models control for all other resident health needs (Depression Rating Scale, comorbidities, dementia/Alzheimer's disease, anxiety, delusions, hallucinations, and daily pain). Model 2 also controls for all other facility characteristics (government ownership, nonprofit ownership, part of multifacility chain, physician extender/no physician, CNA/LPN/RN HRD, mental health staffing, social service staff HRD, % residents restrained, total number of deficiencies), and urbanicity.

* $p < .05$.

In Model 1, Black race was associated with reduced odds of antidepressant or psychotherapy use among residents diagnosed with depression (adj. $OR = 0.71, p < .05$), whereas graduating from HS was associated with a small increase in the odds of antidepressant or psychotherapy use (adj. $OR = 1.04, p < .05$). There was no interaction in the effect of race and schooling. Adding facility characteristics in Model 2 had a limited effect on the odds ratio for Black race (adj. $OR = 0.79, p < .05$); but the odds ratio for education was no longer significant. When we defined the outcome as use of antidepressants, the results were unchanged.

At the facility level, aggregated resident characteristics, residents' health needs and SES, had the largest effects on antidepressant or psychotherapy use. Of the health needs, percent of residents on psychoactive medications more than doubled the odds of a particular resident's receipt of antidepressants or psychotherapy (adj. $OR = 1.99, p < .05$). This may reflect facility prescribing culture or propensity to use psychoactive medications (Chen et al., 2010; Hughes, Lapane, Watson, & Davies, 2007), or more residents in these facilities may need psychoactive drugs. The percent of residents with psychiatric symptoms (excluding depression or dementia) reduced the odds of a resident's antidepressant or psychotherapy use (adj. $OR = 0.77, p < .05$); these facilities may treat residents with antipsychotics instead. Finally, percent of facility residents who were Black reduced the odds of antidepressant or psychotherapy use (adj. $OR = 0.76, p < .05$).

At the facility level, we were particularly interested in (a) whether it was the resource constraints of "lower-tier" facilities, due to their dependence on Medicaid, that was associated with lower odds of treatment with antidepressants and/or psychotherapy or (b) whether it was the high proportion of low SES (less educated) and/or Black residents that was associated with lower treatment odds, which may reflect socioeconomic and/or racial differences in access that have their roots in "social inequities due to race." To explore these hypotheses, we controlled for all other resident and facility characteristics, and sequentially added percent funded by Medicaid, percent HS graduates, and percent Black (results of the first two models were not presented in the tables). We found that percent of facility residents funded by Medicaid independently reduced the odds of a resident's depression treatment (adj. $OR = 0.87, p < .05$), but its effect was no longer significant once percent who were HS graduates was included in the model. Percent of facility residents who were HS graduates increased the odds of a resident's depression treatment (adj. $OR = 1.26, p < .05$), but its effect was no longer significant once percent of facility residents who were Black was included in the model (see Table 3). Thus, even after adjusting for facility resource constraints and the SES of

facility residents, residing in facilities with a high proportion of Black residents is associated with lower odds of depression treatment, and this may reflect “social inequities due to race.”

Discussion

This study examines the relationship of resident race and schooling to the odds of antidepressant and/or psychotherapy treatment among older adult NH residents diagnosed with depression. To our knowledge, this is the first study to examine whether racial differences in depression treatment in NHs vary by education level. We found lower depression treatment rates for Blacks than for Whites; but these lower treatment rates were not simply a consequence of lower education levels. Education did not augment or diminish the effect of race on depression care. Instead, differences in treatment rates by education level were the same within the two racial groups. Differences in depression treatment by race and to some extent schooling that are likely to reflect “social inequities due to race,” were found at both the resident and facility level. Residents who differ in race or schooling reside in facilities with different aggregated resident characteristics. The proportion of residents who were Black, the proportion without a HS diploma, and the proportion funded by Medicaid, were highly correlated with each other and were inversely correlated with the odds of depression treatment.

Mor et al. described the NH industry as a two tier system, with the lower tier defined as NHs in which 85% or more of residents were funded by Medicaid. These facilities with a high proportion of Medicaid-funded residents and limited resources are less able to provide quality services and are more likely to serve a low-income, minority clientele (Feng, Fennell, Tyler, Clark, & More, 2011). Black NH residents are overrepresented in these “lower tier,” low revenue (high-percent Medicaid), understaffed, “poor quality” facilities (Mor et al., 2004, p. 240). Although Mor et al. (2004) did not address the association between a facility’s racial and socioeconomic composition and the quality of depression care, his findings are consistent with our own.

Nonetheless, it is not simply dependence on Medicaid that accounts for the effects of aggregated resident sociodemographic characteristics, race and schooling, on depression care. Other aggregated resident characteristics at the facility level have been strongly associated with various components of NH quality (Miller et al., 2006; Mor et al., 2004). Studies suggest that differences in care by race and SES may be mediated by selection into facilities

with poorer quality care (Angelelli, Grabowski, & Mor, 2006). Black race and lower education increase the likelihood that Medicare patients are discharged from a hospital to a low-quality NH, with more health-related deficiencies for postacute care (Angelelli, Grabowski, & Mor, 2006). Blacks are admitted to NHs with more health related deficiency citations, more total deficiencies, lower staffing ratios and greater financial vulnerability than are Whites (Grabowski, 2004; Smith et al., 2007). Racial segregation in NHs largely reflects residential segregation (Smith et al., 2007). Although this may reflect individual preferences for placement "close to home," the concentration of Blacks in for-profit NHs, located in the poorest neighborhoods, with a high proportion of Black residents, a high Medicaid payer mix, and fewer nurses per beds, explains much of the differences in care at the individual level (Miller et al., 2006; Mor et al., 2004). Racial differences in depression treatment with antidepressants and/or psychotherapy, may be a reflection of Blacks' lower socioeconomic status compounded by their "segregation" into lower resourced facilities.

Some of our findings, particularly those on the effects of staffing, contrast with those in the literature (e.g., Lapane & Hughes, 2004; Mor et al., 2004). Lapane and Hughes found that nurse staffing levels (all grades) appeared to promote depression treatment. We found that staffing resources were not directly related to depression care, nor did they mediate the effects of race and schooling. Physician staffing, presence of a physician extender, and RN, LPN, and mental health staffing, had no relationship to depression treatment; CNA staffing had at best a minimal relationship.

There may be alternative explanations for our findings of racial differences, other than that these are due to disparities in care. The lower antidepressant treatment rates of Blacks may reflect, in part, patient or family preferences. In a study of primary care patients, Cooper et al. (2003) found that Blacks were less likely than Whites to find antidepressant treatment acceptable. They were less likely to believe that antidepressants could be effective, more likely to believe that antidepressants were addictive, and more likely to believe that prayer could heal depression. Although providers play a larger role in treatment decisions in the NH context than in the community, resident and family beliefs may nonetheless affect antidepressant use among Black NHs residents. Few residents of either race received psychotherapy, perhaps due to funding constraints.

Some limitations of this study should be noted. We used MDS recording of a depression diagnosis to define our study population, and the recording of psychiatric diagnoses in Section I of the MDS has been questioned in the literature (Bagchi, Verdier, & Simon, 2009). Studies have found that a higher

percent of residents had a depression diagnosis recorded in the MDS than in the National Nursing Home Survey or in Medicaid claims data (Bagchi et al., 2009). In a current analysis (not shown), we examine the concordance of depression diagnoses in MDS and in Medicaid/Medicare claims data. We found that a higher percent of residents were diagnosed with depression in the MDS, while the prevalence of a depression diagnosis and its concordance with a depression diagnosis in the MDS was higher in Medicare than in Medicaid claims (preliminary analyses available on request). The potential for detection or ascertainment bias may be greater in clinical areas that are harder to define or diagnose, or audit in medical charts, such as pain or mood (e.g., depression; Mor et al., 2003; Zinn, Spector, Hsieh, & Mukamel, 2005).

The lack of a reliable measure of depression severity is an additional limitation. If Blacks and the less educated are less likely to be diagnosed with depression than Whites and HS graduates, holding depression severity constant, it would suggest that Black and less educated residents must be more severely depressed to receive a diagnosis. In fact, 54.3% of Whites and 37.2% of Blacks had a depression diagnosis. If these Blacks are more severely depressed than their White counterparts, they should be more likely to be treated with antidepressants or psychotherapy. This would suggest that our study provides a conservative estimate of differences in depression treatment by race and education. Nonetheless, although there was no measure of depression severity by diagnosis (ICD9 code), we were able to use the DRS to indicate symptom severity. Severity as measured by the dichotomous DRS score showed no effect on depression treatment, perhaps because treatment lowered symptom severity.

Additional limitations are that MDS data record use of antidepressant or psychotherapy treatment for only 7 days prior to the MDS assessment, and by drug class only rather than individual drug. However, although this may result in an underestimate of antidepressant or psychotherapy use, it should not affect our estimates of the difference in the odds of their use by race or schooling. As this was a cross-sectional study, we examine relationships among covariates of interest but do not infer causality, and current psychosocial characteristics may reflect prior antidepressant or psychotherapy use.

Implications

Nonetheless, our findings suggest that practitioners and policy makers who wish to avoid/reduce treatment disparities need to address treatment differences both within NHs and between NHs. Facilities that serve a low-SES, minority clientele tend to provide less depression care, but Blacks also

receive less depression treatment than Whites within NHs. Like Mor et al. (2004), we suggest that targeted higher Medicaid payment rates may provide incentive for higher quality facilities to accept (low-SES, minority) Medicaid residents, but this type of change may be difficult to implement on a broad scale in this time of scarce resources. Another regulatory approach might be to calculate depression care quality indicators by race and publicly report them on the CMS Nursing Home Compare web site (CMS, 2006). An example would be reporting the percent of residents with diagnosed depression, who did not receive antidepressants or psychotherapy, by race. This might help focus attention on racial differences in treatment rates. It would at least raise this issue to the attention of family members, practitioners, and state surveyors and assist with monitoring person-centered treatment in these vulnerable populations.

Author's Notes

The corresponding author was at the Institute for Health, Health Care Policy and Aging Research at Rutgers University when this research was conducted.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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 National Institute of Mental Health (NIH MH076206) and the Agency for Healthcare Research and Quality (U18 HS016097), Stephen Crystal, PhD, principal investigator.

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Published in final edited form as:

Med Care. 2010 March ; 48(3): 233–239. doi:10.1097/MLR.0b013e3181ca2810.

Pressure ulcer prevalence among Black and White nursing home residents in New York State: Evidence of racial disparity?

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Abstract

Objective—The occurrence of pressure ulcers (PUs) in nursing homes (NHs) is a marker for poor quality of care. We examine whether differences in PU prevalence between Black and White residents are due to within- or across-facility disparities.

Methods—2006–2007 Minimum Data Sets are linked with the Online Survey Certification and Reporting (OSCAR) database. Long-term care (LTC) residents with high risk for PUs are identified. The dependent variable is dichotomous, indicating PU presence/absence. Individual race and facility race-mix are the main variables of interests.

The sample includes 59,740 LTC high-risk residents (17.4% black & 82.6% white) in 619 NHs. We fit three risk-adjusted logit models: base, conditional fixed-effects, and random-effects.

Results—Unadjusted PU prevalence is 14.5% (18.2% for Blacks and 13.8% for Whites). Overall, Blacks are more likely to have PUs than Whites, controlling for individual risk factors. We find no such effect within facilities after additional controlling for facility fixed effect. The effect of race is significantly different between the base and the conditional fixed-effects logit model. The random-effects and conditional fixed-effects logit models show similar results, demonstrating that higher PU presence among Blacks is associated with greater facility-specific concentration of Black residents.

Conclusion—Greater PU occurrence among Blacks may not result from differential within-facility treatment of Blacks versus Whites. Rather, Blacks are more likely to reside in facilities with poorer care quality. To improve PU care for Blacks, efforts should focus on improving the overall quality of care for facilities with high proportion of Black residents.

Keywords

nursing home; racial disparity; quality

This study does not have any potential conflicts of interest in the past three years.

This study was presented at AcademyHealth Annual Meeting 2009 Chicago and will be presented at APHA 2009 Philadelphia.

INTRODUCTION

In long-term care, as in other health care settings, evidence of racial disparities is unmistakable (1–3). Blacks are 26% less likely to access a nursing home than Whites (4). Compared to Whites, Black nursing home residents are more likely to be un-treated or under-treated. For example, Black residents are less likely to receive analgesics for pain management (5) and less likely than Whites to receive pneumococcal vaccinations (6).

Presence of pressure ulcers is considered to be an important quality indicator in nursing homes since it is closely related to quality of life, mortality, and morbidity (7–9), yet it is potentially preventable (10–12). The occurrence of pressure ulcers among nursing home residents is common (7, 13). The Centers for Medicare and Medicaid Services (CMS) consider pressure ulcer rates to be a quality indicator, and they publish facility-specific prevalence data on the Nursing Home Compare quality report card website.

Black nursing home residents have been found to have a higher prevalence of pressure ulcers than White residents (2, 14, 15). However, the reasons behind this phenomenon are not clear. It may be the result of unequal treatment within the same facility. Nursing homes may provide unequal care to Blacks and Whites in the same facility because of persistent social stereotypes and biases among care providers. They may also discriminate due to financial reasons. Stays of Black residents, for whom Medicaid is disproportionately the primary payer, are reimbursed at a lower rate on average than stays of White residents. Alternatively, it is possible that the disparity between Blacks and Whites is not the result of differential care within the facility, but rather due to differences resulting from the unequal quality of care across facilities. A number of studies have shown that Blacks are more likely to congregate in nursing homes with fewer financial resources and with poorer quality of care (1, 16–19).

It is important to disentangle the source of disparities in quality of care in order to determine the appropriate corrective actions. Disparities resulting from unequal within-facility treatment and disparities due to differences in quality across facilities require substantially different strategies.

To date, to the best of our knowledge, the within versus the across facilities' variations in the relationship between race and quality of care have not been examined (20). The main objective of this study is to disentangle the source of racial disparity in the risk of pressure ulcers in nursing homes. We address two questions. 1) Is the prevalence of pressure ulcers the same for Blacks and Whites within the same facility, adjusting for residents' health status? 2) Is the observed higher prevalence of pressure ulcers among Black residents caused solely by across-facility variations?

STUDY DESIGN

Data and population

Two data sources are employed: the Minimum Data Set (MDS) for all New York State (NYS) nursing facilities during a one year period (06/01/2006–07/01/2007), and the Online Survey Certification and Reporting (OSCAR) file for the same period.

OSCAR data contain information about nursing home characteristics (e.g. facility size, staffing hours, proportion of Medicare/Medicaid residents). The MDS is a federally mandated process for clinical assessment of residents in Medicare or Medicaid certified nursing homes. It contains detailed information about residents' health status. Long term care (non-Medicare) residents are assessed at admission and quarterly thereafter, or when

health status changes significantly (21). The reliability and validity of the MDS data in recording residents' clinical health conditions is generally considered to be high (22–26).

We focus on long-term care (LTC) residents who are at high risks for pressure ulcers. We define LTC residents as individuals with either quarterly or annual MDS assessments, thus ensuring that their length of stay is at least 90 days (approximately). For residents who have more than one quarterly assessment during the year, we randomly select one to avoid within-individual correlation.

The reason we focus on LTC residents is because the prevalence of pressure ulcers among LTC residents is likely a reflection of the quality of care provided in the facility, while the prevalence of pressure ulcers among residents admitted for short-term post-acute care is more likely to be present at admission, reflecting the care received at the hospital.

The definition of high-risk for pressure ulcers is based on the CMS criteria used in the Nursing Home Compare report card. Residents with any of the following conditions at the time of assessment are considered as having high risks for pressure ulcers: (1) impaired in bed mobility or transfer; (2) comatose; or (3) malnutrition (27). The reason that we only focus on high-risk residents is because the prevalence of pressure ulcers is very low among residents who are not at high risk for pressure ulcers (~3% in NYS).

We identify 122,222 unique LTC residents with 68,872 (56%) at high-risk for pressure ulcers. After linking the MDS and OSCAR data, and excluding observations with missing values, the final analytic sample includes 59,740 unique LTC high-risk residents (17.4% Black & 82.6% White) in 619 nursing homes in NYS.

Variables

Outcome variables—Following the CMS' definition, the outcome variable is dichotomous, indicating presence or absence of any stage pressure ulcers (27).

Key variables of interests—The key variables of interests are individuals' race and facility race-mix. We only include residents with race identified as "White" or "Black"; their ethnicities are not considered. Race-mix is calculated as the proportion of Black residents to all residents in that facility during the observational period. The facility race-mix is constructed as 0–10 scale in increments of 10% (we divide the original scale, which ranged from 0–100%, by 10).

Other control variables—Based on the literature, we identify a set of risk adjustors for pressure ulcers from the MDS (8, 28, 29). All the risk adjustors entering the final model are listed in Table-1. In order to account for different effects of risk adjustors on the prevalence of pressure ulcers across age groups (29), four age groups (≤ 65 , 66–75, 76–85, and ≥ 86) are created (represented by three dichotomous variables, ≤ 65 as the reference group) and interacted with all the risk adjustors. In addition, we also use these age groups (main effect) to account for the potential non-linear relationship between age and the prevalence of pressure ulcers. Residents' bed mobility and transfer restriction are categorized as: dependence, extensive assistance, and the reference (independent/supervision/limited assistance). Loss of voluntary movement is defined as a dichotomous variable (=1 if any of the following functions is fully lost: arm voluntary movement, hand voluntary movement, leg voluntary movement, and foot voluntary movement). Body weight is categorized as low (BMI<18.5), undefined (no measurement available, which may be due to residents' being bed-bound) or other (as a reference). We also include dichotomous variables for presence/absence of bedfast, diabetes, peripheral disease, bladder incontinence, bowel incontinence, weight loss, end-stage disease, hip fracture (in the last 180 days) and edema.

Facility level characteristics are obtained from OSCAR and include: ownership (for-profit vs. nonprofit); facility size (number of beds); staff hours (registered nurse, licensed practical nurse, and certified nurse aide) per resident per day; occupancy rates; and percentage of Medicare and Medicaid patients (both on 1–10 scale in increments of 10%). We also control for location of each facility (Upstate vs. Downstate) since practice patterns in NYS nursing homes may be vastly different between these regions.

Statistical analysis

The analysis is done in three steps. The first step is to select risk adjustors and their interaction terms. The second step is to fit three sets of models to investigate the within-facility versus across-facility racial disparity in the prevalence of pressure ulcers. Individuals are the units of analysis for these two steps. The third step is to fit a regression model to examine the relationship between facility race-mix and other facility characteristics. Facilities are the units of analysis for this step.

Step 1 - Selecting risk adjustors—In order to avoid over-fitting the model, we randomize the data into two datasets: a training sample (used to develop the risk adjustment model) and a validation sample (used to validate the risk adjustment model developed from the training sample). This is a standard approach in developing risk-adjusted outcomes (30, 31). We first fit a random-effects logit model in the training sample with all individual level characteristics (including interaction terms) and a random facility intercept to account for the potential clustering of residents within facilities (29). We only keep variables that are significantly associated with the outcome at the 0.2 level (listed in Table-2). A joint likelihood ratio test is performed to compare the reduced model with the full model to confirm that the potentially important variables/interactions are not excluded. We then apply the estimated model to the validation sample and calculate the C statistic for both the training and the validation samples to evaluate the goodness of fit in both models.

Step 2 - Within-facility versus across-facility racial disparity—In order to investigate the relationship between race and the prevalence of pressure ulcers, three types of regression models are fit with the selected risk adjustors. First, a base logit regression is fit to examine the overall difference in the risk of pressure ulcers between Blacks and Whites, controlling for individual-level risk factors. Then a conditional fixed-effects logit model is fit. Conditional fixed-effects models account for the heterogeneity of facilities and provide consistent estimates, regardless of the distribution of the facility effect or the correlation between the facility effect and individual characteristics(32). The likelihood function for this model is conditional on the number of events (pressure ulcer) in the facility. As for a logit model, the number of events in the facility is a minimal sufficient statistic for the facility effect (32, 33). The effect of race estimated from the conditional fixed-effects model represents the within-facility difference in risk of pressure ulcers between Black and White residents. However, the conditional fixed-effects model does not provide the estimation of facility characteristics, which are invariant for residents in the same facility.

The effect of race is then tested between the base logit model and the conditional fixed-effects model by the Wald statistics. The covariance between the two estimates is accounted for in the test since these two models are fit for the same data. If the facility effects are homogenous, i.e. there are no across facility differences in the prevalence of pressure ulcers, then the estimates of the base logit model should not be significantly different from the estimates of the conditional fixed-effects model. The difference in the estimates between these two models indicates the existence of heterogeneity across facilities.

Finally, in order to examine the facility characteristics that may contribute to the risk of pressure ulcers, we estimate a random-effects model, which includes facility as well as individual level characteristics. The effect of facility race-mix from this model indicates across-facility variations that could contribute to the difference in the prevalence of pressure ulcers between Blacks and Whites. A random-effects model requires the assumption of independence between unobserved facility characteristics and other control variables. If any unobserved facility characteristics are correlated with the explanatory variables and with the outcome variable (risk of pressure ulcers), the estimates of all covariates (including individual level covariates) from random-effects logit model will be inconsistent. However, conditional fixed-effects logit model gives consistent estimates regardless of the correlation between facility characteristics and outcome variable. Therefore, random-effects and fixed-effects models are compared to examine the potential inconsistency of the estimates from the random-effects model. If the assumptions for the random-effects model are met, the random-effects logit model estimates (for individual characteristics) should not be very different from the conditional fixed-effects logit model estimates (33).

In order to compare across these three models, we exclude facilities that could not be matched with OSCAR data as the random-effects model requires facility level characteristics. We also exclude facilities with pressure ulcer prevalence of 0% or 100% since those facilities would not be used for conditional fixed-effects models.

Step 3 - Race-mix & facility characteristics—A logit model is estimated to examine the relationship between facility characteristics and concentration of Black residents in a facility. In order to compare the effect sizes of facility characteristics on racial congregation, we standardize the coefficients of the continuous independent variables (i.e. the independent variables are divided by their standard deviation).

RESULTS

Descriptive statistics

In NYS, the prevalence of pressure ulcers among high risk LTC residents is 14.5%. The unadjusted prevalence of pressure ulcers among high risk LTC residents is 18.2% for Blacks and 13.8% for Whites. Table-1 shows the distributions of individual characteristics, stratified by race, and of facility characteristics. Blacks and Whites seem to differ with regard to health status. The distribution of race-mix (proportion of Blacks) in facilities is highly skewed, as illustrated in Figure-1. Only 6% of facilities have race-mix over 50%.

Racial disparity and risk of pressure ulcers

The final model contains all selected individual risk adjustors and interaction terms that are significant at 0.2 the level. The C-statistic of the reduced model is 0.77 in the training sample, and 0.75 the validation sample, suggesting that the selected risk adjustors fit the data well.

The second column of Table-2 depicts the results from the base logit model. Black residents are more likely than Whites to develop pressure ulcers, controlling for other risk factors (OR=1.203, $P<0.01$).

The third column of Table-2 presents the results from the conditional fixed-effects logit model. After accounting for facility fixed effects, we do not detect statistically significant differences in pressure ulcer prevalence between Blacks and Whites. The odds ratio declines from 1.203 ($P<0.01$), in the base logit model, to 0.970 ($P=0.47$), in the conditional fixed-effects logit model. The difference in the odds ratio between the two models is statistically

significant ($P<0.01$), suggesting that the differences in pressure ulcer risks detected in the base logit model are due to heterogeneity of facilities rather than to differential treatment of Blacks and Whites within the same facility.

The fourth column of Table-2 represents the results from random-effects logit model. Consistent with the results from the conditional fixed-effects logit model, individual's race does not seem to have a significant effect on pressure ulcer risks. After accounting for other facility characteristics, facility race-mix is independently significantly correlated with pressure ulcer prevalence: every 10% increase in the proportion of Black residents is correlated with 4% increase in the odds of having pressure ulcers ($OR= 1.04$, $P<0.01$). Residents in for-profit facilities or facilities located in Downstate NY have higher odds of pressure ulcer prevalence compared with their counterparts in not-for-profit facilities or facilities located in Upstate. In addition, residents in facilities with higher RN hours are less likely to develop pressure ulcers than their counterparts in facilities with lower RN hours.

The coefficient estimates of individual characteristics from the random-effects logit model (column-4) are similar to the estimates from the conditional fixed-effects logit model (column-3). This suggests that the random-effects model does not suffer extensively from inconsistency.

In order to test the robustness of our findings, we also repeat the analyses with the outcome variable defined as pressure ulcers with stage 2 or higher (penetrating the skin), since these stages of pressure ulcers are more likely to lead to clinically important complications such as infections. Our findings with regard to racial disparity remain unchanged: the difference in the prevalence of pressure ulcers with stage 2 or greater between Whites and Blacks are due to across facility variations rather than within-facility disparity.

Race-mix & facility characteristics

Facilities with higher proportion of Blacks are more likely to be not-for-profit, have more beds, be located downstate, and have higher proportion of Medicaid residents; and the effect sizes are not trivial (Table-3). For example, the odds ratio of being Black in a for-profit facility is 0.83 compared to a not-for-profit facility. We note, however, these results only provide information about the associations between facility characteristics and race-mix, not causal relationships.

DISCUSSION

This study finds that Blacks have higher odds of experiencing risk adjusted pressure ulcer outcomes than Whites in NYS nursing home. Furthermore, we find that the higher rates of pressure ulcers experienced by Blacks can be attributed to their disproportionate congregation in facilities with lower quality of care rather than within facility disparities. That is, all residents in such facilities have higher risks of pressure sores, regardless of race.

The within-facility racial disparities in treatment have not been previously studied (20). However, studies that did examine the within-facility disparities in quality of care delivered to Medicaid and private-pay residents also found no significant within-facility differences (34). These findings suggest that daily care staff are not likely to systematically render better or worse care to residents on the basis of race or insurance status. Similarly, consistent with other studies (20), we find that residents in facilities with higher proportion of Blacks have higher risk of pressure ulcers than their counterparts from facilities with lower penetration of Blacks. This may be explained by the fact that Blacks are more likely to reside in nursing homes with higher percentage of Medicaid residents. Such facilities have been shown to have fewer resources and poorer quality of care (18).

Since the disparity we observed is mostly due to variations across facilities, it may be necessary to improve overall quality in facilities serving a large percent of Blacks in order to bring about equality in outcomes. Such efforts may require a substantial influx of new resources to facilitate upfront investments necessary to institute quality improvement processes in these facilities. In recent years, a number of state Medicaid agencies started to implement Medicaid pay-for-performance (P4P) strategies in nursing homes, using either a bonus or an add-on to facility daily rate based on quality improvement (35, 36). Such strategies may provide some financial incentives for nursing homes where Blacks tend to congregate to improve their quality of care. However, whether as a result of such incentives the differential in quality of care between these facilities and those with mostly White residents will narrow, remains to be seen. Furthermore, P4P alone may not be sufficient to bring about quality improvement. Blacks are more likely to congregate in facilities with Medicaid concentration, which tend to be more strapped for resources. Moreover, as suggested by Mor et al (18), poor-quality facilities are not randomly distributed, but rather they are aggregated in poor communities. Therefore, such facilities may require additional funding to bring them up to par, so that eventually they may be able to successfully compete for P4P rewards and produce better outcomes. A simple subsidy of these poor quality facilities is, however, costly and inefficient. A better approach may be a subsidy based on the continuous evaluation of quality of these facilities (18).

The congregation of Blacks into “poorer” quality nursing homes may also be the result of “better” quality nursing homes denying or delaying admissions based on individual’s race (37). Although nursing homes in New York State are required not to discriminate against Medicaid residents with regard to admission (New York regulation section 415.3), perhaps not all facilities faithfully follow this regulation. This may be true especially of those homes that have long waiting lists are also the one “better” quality. Additional research is needed to prove or disprove this supposition. It has been suggested that higher Medicaid payments, on behalf of the access-disadvantaged populations, may more equitably redistribute them across facilities (36). However, the impact of such a strategy has not as yet been tested.

Several limitations should be mentioned. First, we only examine racial disparity with regard to the risk of pressure ulcers in nursing homes. CMS measures nursing home quality of care using nineteen quality indicators. It has been shown that there is no association between quality performance in one area with that of another (31). For example, a facility that provides poor quality of care in prevention of pressure ulcers may have average or good performance with regard to a different quality indicator. It would be prudent to examine the relationship between race and other quality indicators before concluding that there is no within-facility disparity in the overall quality of care provided to Blacks and Whites in other dimension of care. Second, this study is only focused on facilities in NYS. Therefore, its findings might not generalize to other states.

In conclusion, we find that in New York State higher odds of risk adjusted pressure ulcers among Black nursing homes residents are largely a function of differences across facilities rather than of within-facility discrimination. To improve the quality of pressure ulcer care for Black nursing home residents, efforts should focus on improving the overall quality of care in facilities with higher proportion of Black residents.

Acknowledgments

We gratefully acknowledge funding from the National Institute on Aging, Grant R01 AG23077.

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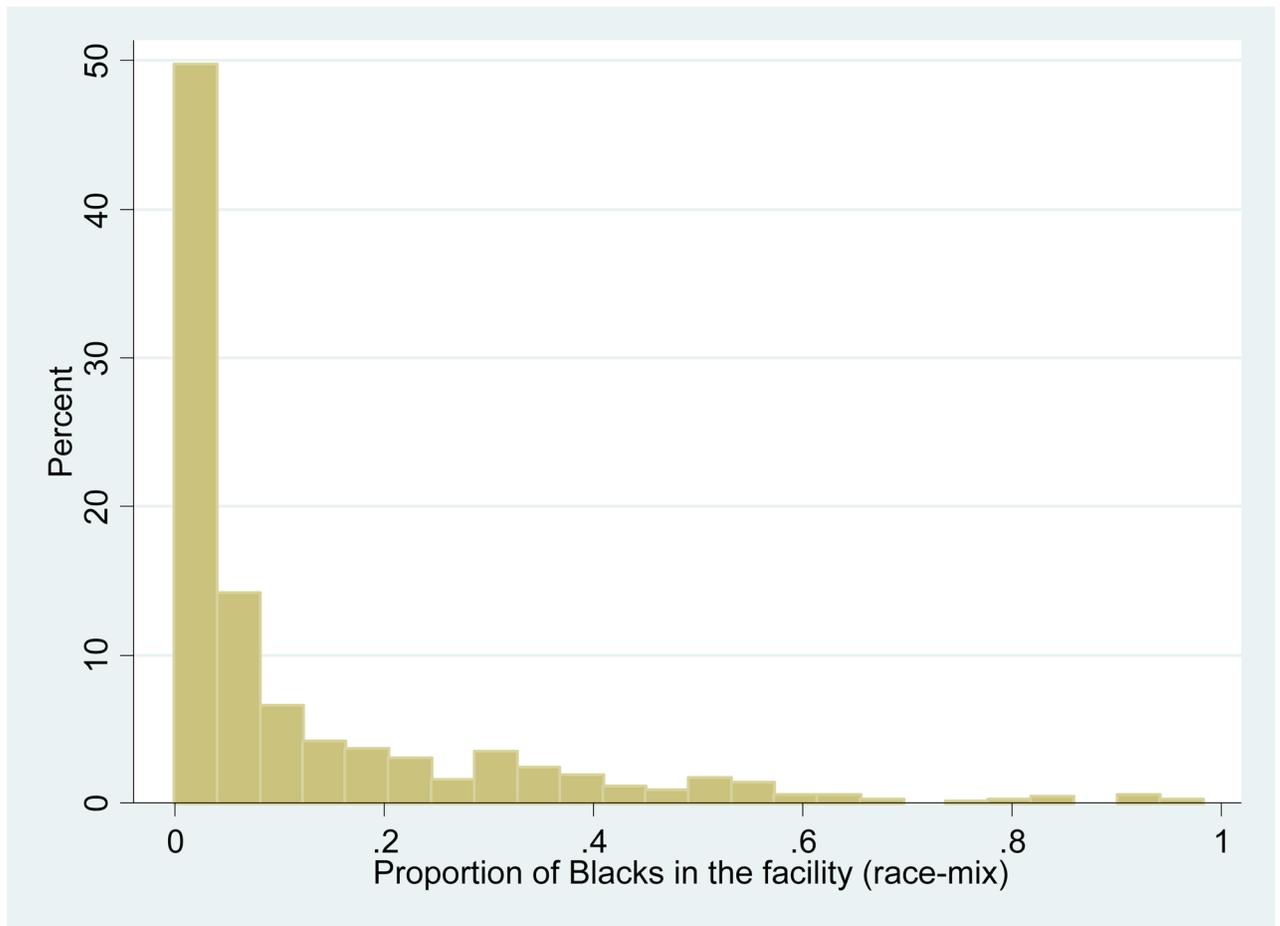


Figure 1.
Distribution of concentration of Blacks in the facility in NYS

Table 1

Characteristics of LTC residents with high risk for pressure ulcers in NYS: descriptive statistics

Individual characteristics (N=59,740)		
	White(N=49,324)	Black(N=10,416)
Sore (%)	13.8%	18.2%
Age group1 (<=65) (%)	8.2%	18.7%
Age group2 (66–75) (%)	9.1%	17.9%
Age group3 (76–85) (%)	29.7%	30.9%
Age group4 (>=86) (%)	53.0%	32.6%
Male (%)	25.7%	32.2%
Bed mobility: extensive assistance (%)	52.0%	35.2%
Bed mobility: total dependence (%)	26.4%	37.7%
Transfer restriction: extensive assistance (%)	51.1%	36.8%
Transfer restriction: total dependence (%)	44.5%	62.1%
Loss of voluntary movement (%)	14.2%	27.4%
Bedfast (%)	2.3%	2.8%
Diabetes (%)	29.3%	47.4%
Peripheral vascular disease (%)	17.4%	16.7%
Bladder incontinence (%)	77.0%	82.0%
Bowel incontinence (%)	67.2%	80.6%
Indwelling catheter (%)	8.0%	6.1%
BMI<18.5 (%)	8.6%	8.3%
BMI (undefined) (%)	2.3%	2.5%
Weight loss (%)	10.0%	8.8%
End-stage disease (%)	1.6%	0.7%
Hip fracture in last 180 days (%)	2.1%	0.5%
Edema (%)	14.3%	8.7%
Facility characteristics (The following statistics is based on 619 facilities)		
Profit (%)	50.1%	
Downstate (%)	48.5%	
Number of beds in the facility (Mean, SD)	188.50 (130.59)	
RN hours per resident per day (Mean, SD)	0.59 (0.27)	
LPN hours per resident per day (Mean, SD)	0.77 (0.29)	
CNA hours per resident per day (Mean, SD)	2.26 (0.43)	
Occupancy rate ¹ (Mean, SD)	92.84 (7.13)	
Race-mix:proportion of black residents in the facility (Mean, SD) ²	1.25 (1.85)	
Proportion of Medicare residents in the facility (Mean, SD) ²	1.31 (1.11)	
Proportion of Medicaid residents in the facility (Mean, SD) ²	6.99 (1.77)	

¹ On 0–100 scale

²On 0–10 scale

Table 2

Estimates from three sets of models for LTC residents with high risk for pressure ulcers in NYS

Independent variables (Number of individual=59740; Number of facilities=619)	Base logit model	Conditional fixed-effects logit model	Random-effects model with Bootstrapping SE
	Odds Ratio	Odds Ratio	Odds Ratio
Black +++	1.203***	0.970	0.976
% black residents (0–10 scale)	-	-	1.036***
Age group1 (<=65)	reference	reference	reference
Age group2 (66–75)	1.295***	1.227***	1.245***
Age group3 (76–85)	1.281***	1.269***	1.274***
Age group4 (>=86)	1.211***	1.200**	1.203**
Male	1.253***	1.248***	1.253***
Bed mobility-extensive assistance	1.428***	1.564***	1.546***
Bed mobility-total dependence	1.844***	2.072***	2.022***
Transfer restriction-extensive assistance	1.380***	1.272***	1.268***
Transfer restriction-total dependence	2.231***	2.065***	2.056***
Transfer restriction-total depend.×group3	1.169***	1.162**	1.166**
Loss of voluntary movement	1.496***	1.500***	1.503***
Loss of voluntary movement * group3	0.911	0.889*	0.893*
Bedfast	1.927***	1.875***	1.941***
Diabetes	2.047***	1.941***	1.969***
Diabetes×group2	0.741***	0.770**	0.764**
Diabetes×group3	0.696***	0.719***	0.716***
Diabetes×group4	0.649***	0.671***	0.664***
Peripheral vascular disease	1.247***	1.342***	1.310***
Bladder continence	0.622***	0.618***	0.616***
Bladder continence×group4	1.181***	1.158**	1.170***
Bowel incontinence	1.460***	1.333***	1.345***
Indwelling catheter	2.805***	2.906***	2.921***
BMI<18.5	1.956***	1.942***	1.939***
BMI (undefined)	1.128	1.201**	1.198**
BMI<18.5 ×group4	0.708***	0.684***	0.686***
Weight loss	1.929***	1.900***	1.928***
Weight loss×group4	1.115	1.149**	1.137*
End-stage disease	1.581***	1.698***	1.704***
Hip fracture in last 180 days	2.532***	2.590***	2.609***

Independent variables (Number of individual=59740; Number of facilities=619)	Base logit model	Conditional fixed-effects logit model	Random-effects model with Bootstrapping SE
	Odds Ratio	Odds Ratio	Odds Ratio
Fracture×group2	0.504 [*]	0.527 [*]	0.506 [*]
Edema	1.496 ^{***}	1.669 ^{***}	1.641 ^{***}
Edema×group3	0.933	0.907	0.921
Profit			1.067 ^{**}
Number of beds (facility size)			1.000
Registered nurse hours/resident/day			0.877 [*]
Licensed practical nurse hours/resident/day			0.997
Certified nurse aide hours/resident/day			1.012
Occupancy rate			0.998
% Medicare residents (0–10 scale)			1.026
% Medicaid residents (0–10 scale)			1.021
Downstate			1.415 ^{***}

p<0.01,

**
p<0.05,

*
p<0.1;

+++ The effect of race from base logit (1.203) model is significantly different from that from conditional fixed-effect (0.970) log model, with P<0.01.

Table 3

The association between facility characteristics and facility race-mix (the proportion of Black residents) among NY nursing homes: **results from a logit model**

Facility Characteristics	Odds Ratio	Standardized Estimates (Odds Ratio)
Profit	0.830***	$\sqrt{3}$
Number of beds (facility size)	1.001***	1.101
Registered nurse hours/res/day	1.120***	1.016
Licensed practical nurse hours/res/day	1.077***	1.012
Certified nurse aide hours/res/day	0.923***	0.982
Occupancy ¹	0.995***	0.983
% Medicare residents ²	1.073***	1.047
% Medicaid residents ²	1.417***	1.386
Downstate	3.795***	$\sqrt{3}$
Intercept	0.006***	-

¹ is on 1–100 scale. One unit increase=1% increase

² is on 1–10 scale. One unit increase=10% increase

³ the categorical independent variables are not standardized

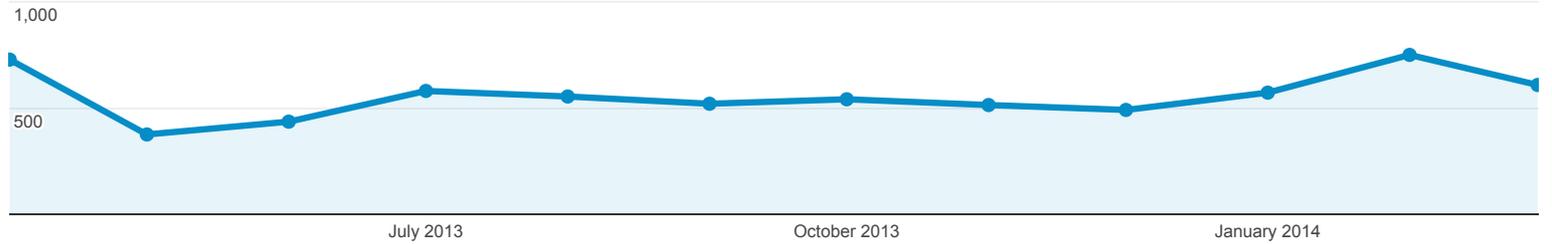
*** p<0.01,

Apr 1, 2013 - Mar 31, 2014

All Visits
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Month

Pageviews



Month of Year	Pageviews	Unique Pageviews	Avg. Time on Page	% Exit	Bounce Rate
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1. 201304	727 (10.90%)	400 (10.17%)	00:01:31	37.55%	55.28%
2. 201305	376 (5.64%)	222 (5.64%)	00:01:51	42.02%	55.46%
3. 201306	436 (6.54%)	272 (6.92%)	00:02:01	40.60%	48.18%
4. 201307	580 (8.70%)	366 (9.31%)	00:02:16	44.14%	55.14%
5. 201308	554 (8.31%)	358 (9.10%)	00:02:25	45.31%	57.14%
6. 201309	520 (7.80%)	312 (7.93%)	00:02:00	40.58%	48.34%
7. 201310	541 (8.11%)	319 (8.11%)	00:02:16	43.81%	53.29%
8. 201311	514 (7.71%)	319 (8.11%)	00:02:35	46.50%	56.41%
9. 201312	491 (7.36%)	291 (7.40%)	00:02:29	41.75%	50.66%
10. 201401	572 (8.58%)	342 (8.70%)	00:01:59	44.58%	61.33%
11. 201402	749 (11.23%)	366 (9.31%)	00:02:08	37.25%	55.67%
12. 201403	608 (9.12%)	366 (9.31%)	00:02:08	45.07%	60.40%

Rows 1 - 12 of 12

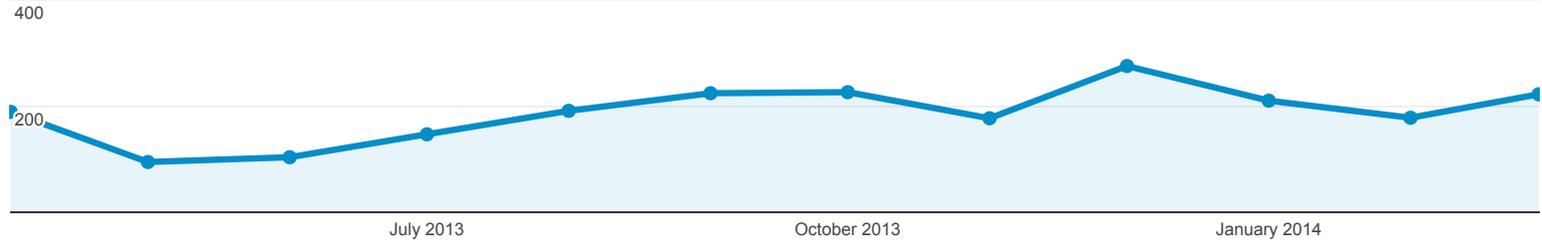
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Month of Year	Pageviews	Unique Pageviews	Avg. Time on Page	% Exit	Bounce Rate
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1. 201304	189 (8.45%)	125 (8.64%)	00:00:21	20.11%	51.43%
2. 201305	95 (4.24%)	75 (5.19%)	00:00:29	27.37%	54.55%
3. 201306	104 (4.65%)	70 (4.84%)	00:00:49	19.23%	33.33%
4. 201307	147 (6.57%)	99 (6.85%)	00:00:54	24.49%	66.67%
5. 201308	191 (8.53%)	121 (8.37%)	00:00:53	26.18%	56.25%
6. 201309	224 (10.01%)	122 (8.44%)	00:00:49	18.30%	38.64%
7. 201310	226 (10.10%)	149 (10.30%)	00:00:54	20.35%	36.17%
8. 201311	177 (7.91%)	110 (7.61%)	00:01:24	15.25%	31.03%
9. 201312	275 (12.29%)	195 (13.49%)	00:00:50	44.00%	77.42%
10. 201401	210 (9.38%)	135 (9.34%)	00:01:02	17.62%	35.14%
11. 201402	178 (7.95%)	107 (7.40%)	00:00:41	16.85%	34.29%
12. 201403	222 (9.92%)	138 (9.54%)	00:00:39	21.62%	54.55%

Rows 1 - 12 of 12

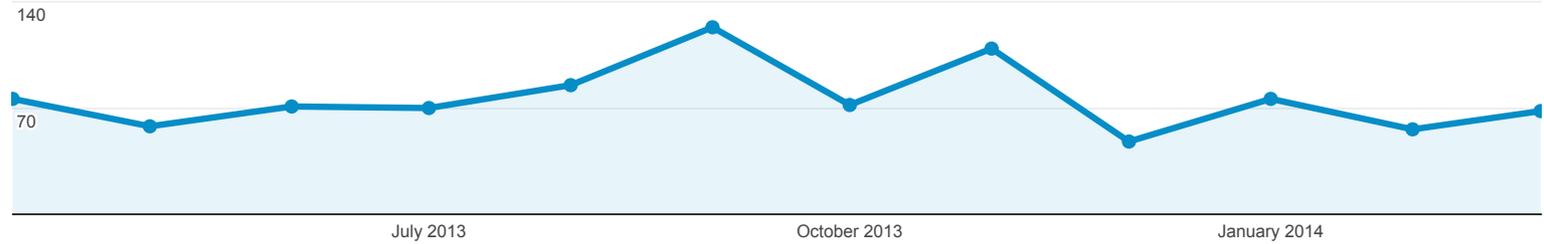
Apr 1, 2013 - Mar 31, 2014

Home Health Reports

All Visits
0.03%

Report Tab

● Pageviews



Month of Year	Pageviews	Unique Pageviews	Avg. Time on Page	% Exit	Bounce Rate
	912 % of Total: 0.03% (3,614,321)	613 % of Total: 0.03% (2,436,999)	00:01:16 Site Avg: 00:01:47 (-28.53%)	31.80% Site Avg: 36.66% (-13.27%)	60.24% Site Avg: 49.70% (21.21%)
1. 201304	76 (8.33%)	46 (7.50%)	00:01:21	26.32%	75.00%
2. 201305	58 (6.36%)	41 (6.69%)	00:01:10	24.14%	42.86%
3. 201306	71 (7.79%)	52 (8.48%)	00:00:35	36.62%	35.71%
4. 201307	70 (7.68%)	54 (8.81%)	00:01:29	34.29%	66.67%
5. 201308	85 (9.32%)	55 (8.97%)	00:01:12	28.24%	45.00%
6. 201309	123 (13.49%)	73 (11.91%)	00:01:28	30.08%	50.00%
7. 201310	72 (7.89%)	48 (7.83%)	00:01:50	36.11%	61.54%
8. 201311	109 (11.95%)	68 (11.09%)	00:01:42	33.03%	72.73%
9. 201312	48 (5.26%)	34 (5.55%)	00:00:44	31.25%	66.67%
10. 201401	76 (8.33%)	53 (8.65%)	00:00:57	32.89%	53.85%
11. 201402	56 (6.14%)	45 (7.34%)	00:01:28	42.86%	76.92%
12. 201403	68 (7.46%)	44 (7.18%)	00:00:50	27.94%	100.00%

Rows 1 - 12 of 12

**STATE OF RHODE ISLAND
EXECUTIVE OFFICE OF HEALTH AND HUMAN SERVICES**

NOTICE TO INTERESTED PARTIES, March 28, 2014

The Rhode Island Executive Office of Health and Human Services (RI EOHHS) has prepared a draft proposed *Comprehensive Quality Strategy* for the State's section 1115 Medicaid demonstration and is seeking the input of recipients, the RI EOHHS Medical Care Advisory Committee (MCAC), and other stakeholders. This process has been undertaken to fulfill the requirements of 42 CFR 438.202(b) and the Waiver's associated Special Terms and Conditions (STC). STC # 128 requires the submission of a draft *Comprehensive Quality Strategy* to the Centers for Medicare and Medicaid Services (CMS) within one-hundred and twenty (120) days following CMS' approval of the Rhode Island Comprehensive Demonstration on December 23, 2013.

The State's current CMS-approved Quality Strategy was approved by CMS on April 25, 2013. The proposed draft *Comprehensive Quality Strategy* addresses the quality measures associated with the implementation of Rhody Health Options (RHO) and Connect Care Choice Community Partners (CCCCP), which began on November 1, 2013, and the enrollment of the State's Affordable Care Act (ACA) Adult Expansion population into Medicaid managed care delivery systems, which started on January 1, 2014.

Persons wishing to submit written testimony may do so by April 28, 2014 to Darren J. McDonald, Office of Policy and Innovation, Executive Office of Health and Human Services, Louis Pasteur Building, 57 Howard Avenue, Floor # 1, Cranston, RI 02920. The *Comprehensive Quality Strategy* is attached, as well as accessible on the EOHHS website www.eohhs.ri.gov or available in hard copy upon request (401-462-1965 or RI Relay, dial 711). The referenced appendices in the *Comprehensive Quality Strategy* have been included below via attachment and/or link to the EOHHS website.

2005 CMS Approved Quality Strategy:

<http://www.eohhs.ri.gov/ReferenceCenter/ResearchAnalysis/tabid/135/LiveAccId/5920/Default.aspx>

2012 CMS Approved Quality Strategy

<http://www.eohhs.ri.gov/ReferenceCenter/ReportstoGovernmentPartners.aspx>



**RHODE ISLAND
1115 WAIVER
COMPREHENSIVE QUALITY STRATEGY**

March 2014

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Revised
February 2014

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Appendix 1: 2005 CMS Approved Quality Strategy

Appendix 2: 2012 CMS Approved Quality Strategy

Appendix 3: Quality Improvement Activity Form Template

Appendix 4: National Committee for Quality Assurance (NCQA) Crosswalk

INTRODUCTION

COMPREHENSIVE QUALITY STRATEGY

Rhode Island's proposed *Comprehensive Quality Strategy* for its Section 1115 Demonstration Waiver builds on the State's initial framework for continuous quality improvement, *Strategy for Assessing and Improving the Quality of Managed Care Services Offered Under RIte Care*. This seminal framework was one of the first of its kind in the United States, was approved by the Centers for Medicare & Medicaid Services (CMS) in April 2005, and focused on Rhode Island's first capitated Medicaid managed care program, RIte Care.

Subsequently, the State's most recent revision to its *Quality Strategy* was approved by CMS in April 2013. The latter document built upon the core principles that had been previously approved by CMS for RIte Care, with the inclusion of chapters that delineated the components of quality design for Rhody Health Partners, the State's MCO-based Medicaid managed care program for disabled adults, as well as the corresponding design for the State's primary care case management (PCCM) program for disabled adults, Connect Care Choice. The State's current *Quality Strategy* also delineates the quality design for RIte Smiles, the State's dental managed care program for Medicaid-enrolled children born on or after 05/01/2000.

Three (3) major policy initiatives have contributed to the development of Rhode Island's proposed *Comprehensive Quality Strategy*:

- The implementation of Phase One of Rhode Island's program for Medicare and Medicaid Eligible (MME) individuals who are eligible for full Medicaid benefits, as approved by CMS for implementation, which began 11/01/2013. Phase One implementation is the incorporation of home and community based services for Medicaid eligibles and MMEs into a managed care delivery system.
- The enrollment in Medicaid, beginning on 01/01/2014, of adults who are age 19 or older and under 65 who are at or below the Federal Poverty Level based on household income using the application of a modified adjusted gross income (MAGI) who are not pregnant, not entitled to or enrolled in Medicare, and not eligible for mandatory coverage under the State's Medicaid Plan. (This group is referred to as Rhode Island's Affordable Care Act Adult Expansion population.) Additional information on this new population is defined further in Chapter 4.
- CMS' renewal on 12/23/2013 of the State's Comprehensive 1115 Demonstration (Project Number 11-W-00242/1) and the Demonstration's associated Special Terms and Conditions (STCs), which include STC 128 (Comprehensive Quality Strategy).

Rhode Island's two preceding CMS-approved quality strategies have been appended in their entirety to the proposed *Comprehensive Quality Strategy (CQS)* as Appendices One and Two, respectively.

On March 12, 2013, the State submitted a request to renew the State's Comprehensive 1115 Demonstration. The renewal request was approved on December 23, 2013. The Special Terms and Conditions (STCs), waiver and expenditure authorities are effective from the approval date through December 31, 2018. The State operates its entire Medicaid program under the Comprehensive 1115 Demonstration, with an aggregate budget ceiling for Federal reimbursement with the exception of disproportionate share hospital (DSH) payments, administrative expenses, phased Medicare Part D contributions, and payments to local education agencies (LEAs).

The Comprehensive 1115 Demonstration Waiver is built upon three fundamental goals:

- Rebalance the State's long-term care system
- Integrate care management across all Medicaid populations
- Complete the transition from a payer to a purchaser of care

These goals are based on a commitment by the State to incorporate the following principles in the Rhode Island Medicaid program:

Consumer Empowerment and Choice with the provision of more information about the health care delivery system so that consumers can make more reasoned and cost-effective choices about their health care.

Personal Responsibility in choosing treatment options, living healthy lifestyles, and having a financial stake in the care provided.

Community-Based Solutions so that individuals may live and receive care in the communities in which they live and work, a more cost-effective and preferable approach to the institutional setting.

Prevention, Wellness, and Independence initiatives to reduce the incidences of illness and injuries and their associated costs.

Competition among Health Care Providers to ensure that care is provided at the best price and with the highest quality.

Pay for Performance by linking provider reimbursement to the provision of quality and cost-effective care.

Improved Technology that assists decision-makers, consumers, and providers so that they may make the most informed and cost-effective decisions regarding the delivery of health care.

The Comprehensive 1115 Waiver helps to assure the financial viability, sustainability, and stability of the State's Medicaid program. In effect, the Comprehensive 1115 Waiver sets forth a strategic approach for reforming the Medicaid program to build a more responsive and a more accountable program that serves Medicaid beneficiaries with the *right services, in the right setting, and at the right time.*

Serving as the State's Medicaid agency, the Rhode Island Executive Office of Health and Human Services (RI EOHHS) has responsibility for the State's Section 1115 Demonstration Waiver. The EOHHS is designated as the administrative umbrella that oversees and manages publicly funded health and human services in Rhode Island, with responsibility for coordinating the organization, financing, and delivery of services and

supports provided through the State's Department of Children, Youth, and Families (DCYF), the Department of Health (HEALTH), the Department of Human Services (DHS) including the divisions of Elderly Affairs and Veterans Affairs, and the Department of Mental Health, Retardation and Hospitals (BHDDH). Because the Rhode Island EOHHS is an integral partner in a broad array of quality initiatives, a new Office of Health Policy and Innovation was established within the agency in 2013.

Rhode Island was one of twenty-six (26) States to be awarded a Medicaid Adult Quality grant from the Center for Medicare and Medicaid Services (CMS)¹ in 2012. Through this grant opportunity EOHHS is able to build State capacity in the reporting and analysis of health care quality. A key focus of this grant will be building the needed capacity and system to produce fifteen (15) clinical quality measures that have been prioritized by the State for analysis across Medicaid's delivery systems, based on the inputs of various stakeholders. (That process was outlined in the State's first Annual Report to CMS for the Adult Quality grant, which was submitted on 01/31/2014.)

The Adult Quality Grant management responsibility referenced above resides in the Office of Policy and Innovation within the RI EOHHS. The Office was designed to centralize oversight of policy and development, health information technology initiatives (including the All Payer Claims Database (APCD) and EHR incentive program), data systems (including MMIS, UHIP – the new enrollment system, and the data warehouse), and quality measurement across Rhode Island's 1115 Waiver.

As a next step, RI EOHHS is working to develop and sustain the infrastructure required to identify and collect meaningful quality measures. A pivotal component of that process is building the system capacity to collect, analyze and share performance based outcomes. Rhode Island is currently seeking to develop a RI Healthcare Quality Measurement, Reporting and Feedback System. This new system would capture data from health care providers to inform quality improvement efforts, payment, and consumer choice. RI Medicaid is working with several partner agencies on this effort. This would represent a tremendous opportunity to truly evaluate the State's healthcare quality performance across systems, payers and providers. A key aspect of this new system will be to ability to publicly report outcomes to enable consumers to make informed decisions about their health care. Another valuable component of such a system will be the ability to harmonize quality measures and reduce duplication of effort, reducing reporting burden and ensuring a streamlined electronic data collection process.

On page 7, Rhode Island has prepared a diagram that has been crafted to depict the qualitative and quantitative analytic components of the proposed *Comprehensive Quality Strategy* for the Section 1115 Demonstration Waiver. The State has endeavored, where possible, to employ the use of standard measures that are nationally endorsed, by such entities as the National Quality Forum (NQF) and which have relevance to Medicaid-enrolled populations, such as the CMS Adult Core Measure Set and the Children's Core

¹ <http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Quality-of-Care/Adult-Medicaid-Quality-Grants.html>

Measure Set. Measurement stewards include the National Committee for Quality Assurance (NCQA), the Agency for Healthcare Research & Quality (AHRQ), and the American Medical Association-Physician Consortium for Performance Improvement (AMA-PCPI).

Please refer to the diagram shown on page 7, which has been devised to provide a visual depiction of the various qualitative and quantitative measures that will be used to monitor the State's Demonstration Waiver. Measures have been bulleted for each of the following areas of analysis:

- Program Oversight and Administration
- Access
- Enrollment, Utilization, & Cost Analysis
- Participant Satisfaction
- Participant Engagement
- Clinical & Functional Quality Measures



As is customary for Section 1115 waivers, CMS defines “Special Terms and Conditions” (STCs) for the demonstration. In the renewal of Rhode Island’s Comprehensive 1115 Demonstration, STC 128 addresses quality assurance and improvement and stipulates:

“The state shall adopt and implement a comprehensive and dynamic continuous quality improvement strategy that integrates all aspects of quality improvement programs, processes, and requirements across the state’s Medicaid program. This CQS must include all components of the Medicaid state plan, including but not limited to: the Comprehensive demonstration (RIte Care, Rhody Health, Connect Care Choice, RIte Smiles, and the HCBS programs).”

This update therefore incorporates relevant changes made to RIte Care, Rhody Health Partners, Connect Care Choice, and RIte Smiles as well as separate sections for Rhody Health Options and Connect Care Choice Community Partners.

Enrollment (as of December 31, 2013) in each of these programs has been provided below²:

RIte Care – 126,784
Rhody Health Partners – 13,871
Connect Care Choice – 1,757
RIte Smiles – 67,346
Rhody Health Options - 10,986³
Connect Care Choice Community Partners - 2,539⁴

² These enrollment figures represent a point-in-time snapshot as of 12/31/2013.

³ This is based on a snapshot of enrollment as of 2/1/2014. The enrollment approach for both Rhody Health Options and Connect Care Choice Community Partners is a phased approach in which the last enrollment wave will occur in April 2014.

⁴ This is based on a snapshot of enrollment as of 2/1/2014. The enrollment approach for both Rhody Health Options and Connect Care Choice Community Partners is a phased approach in which the last enrollment wave will occur in April 2014.

CHAPTER 1

OVERVIEW OF FEDERAL QUALITY ASSESMENT AND PERFORMANCE IMPROVEMENT REQUIREMENTS

This chapter describes the various Federal quality assessment and performance improvement requirements applicable to the Quality Strategy, including:

- Medicaid Managed Care Final Regulations
- Medicaid External Quality Review Final Regulations
- Waivers and Special Terms and Conditions
- Children’s Health Insurance Program (CHIP) Quality Requirements

1.1 Medicaid Managed Care Final Regulations

Except for those Federal legal requirements specifically waived in the *approval letter* for demonstrations, the State must meet all other applicable, Federal legal requirements. Salient requirements include those contained in the June 14, 2002 *Final Rule* implementing the managed care provisions of the Balanced Budget Act of 1997 (BBA)⁵. States had until June 16, 2003 “to bring all aspects of their managed care programs (that is, contracts, waivers, State plan amendments and State operations) into compliance with the final rule provisions.”⁶

This strategy document is essentially a required element of the June 14, 2002 *Final Rule*. Specifically, Subpart D of the *Final Rule* “implements section 1932(c)(1) of the Act and sets forth specifications for quality assessment and performance improvement strategies that States must implement to ensure the delivery of quality health.” It also establishes “standards” that States and Health Plans must meet. Section 438.204 of the *Final Rule* delineates the following minimum elements of the State’s quality strategy:

- Health Plan “contract provisions that incorporate the standards specified in this subpart”
- Procedures that:
 - Assess the quality and appropriateness of care and services furnished to all Medicaid recipients enrolled in Health Plans
 - Identify the race, ethnicity, and primary language spoken of each enrollee
 - Monitor and evaluate Health Plan compliance with the standards regularly

⁵ *Federal Register*, 67(115), June 14, 2002, 41094-41116. The BBA also created the State Children’s Health Insurance Program (SCHIP).

⁶ *Ibid.*, 40989.

- Arrangements for annual, external independent reviews of the quality outcomes and timeliness of, and access to, the services covered under each Health Plan contract
- Appropriate use of intermediate sanctions, at a minimum, to meet Subpart I of the June 14, 2002 *Final Rule*
- An information system that supports initial and ongoing operation and review of the State’s quality strategy
- Standards, at least as stringent as those in Subpart D, for access to care, structure and operations, and quality measurement and improvement

1.2 Medicaid External Quality Review Final Regulations

On January 24, 2003, the Centers for Medicare & Medicaid Services (CMS) published an external quality review (EQR) *Final Rule* in the *Federal Register* to implement Section 4705 of the BBA.⁷ The effective date of this *Final Rule* is March 25, 2003 and provides⁸:

“Provisions that must be implemented through contracts with MCOs, PIHPs, and external quality review organizations (EQROs) are effective with contracts entered into or revised on or after 60 days following the publication date. States have up until **March 25, 2004** to bring contracts into compliance with the final rule provisions.” (Emphasis added)

The basic requirements of the January 24, 2003 *Final Rule* are as follows:

- **EQRO Must Perform an Annual EQR of Each Health Plan** – The State must ensure that: “a qualified external quality review organization (EQRO) performs an annual EQR for each contracting MCO.”⁹
- **EQR Must Use Protocols** – The January 24, 2003 *Final Rule* stipulates how the EQR must be performed. It should be noted that this includes the requirement¹⁰ that “information be obtained through methods consistent with the protocols established under §438.352.”
- **EQRO Must Produce A Detailed Technical Report** – The January 24, 2003 *Final Rule* requires¹¹ that the EQRO produce a “detailed technical report” that “describes the manner in which the data from all activities conducted in

⁷ Essentially Section 1932(c) of the Social Security Act.

⁸ *Federal Register*, 68(16), January 24, 2003, 3586.

⁹ 42 CFR 438.350(a).

¹⁰ 42 CFR 438.350(e).

¹¹ 42 CFR 438.364.

accordance with §438.358 were aggregated and analyzed, and conclusions were drawn as to the quality, timeliness, and access to the care furnished by the MCO or PIHP.” In accordance with 42 CFR 438.360(b)(4), a crosswalk pertaining to NCQA’s comparability to the regulatory requirements for compliance is also incorporated. This strategy was approved by CMS in April of 2005¹² and 2013¹³.

- **States Must Perform Mandatory EQR Activities** – The January 24, 2003 *Final Rule* distinguishes between “mandatory” and “optional” EQR-related activities. Apart from the required “detailed technical report”, the “mandatory” activities include¹⁴:
 - Validation of performance improvement projects
 - Validation of MCO performance measures reported
 - Review to determine the MCO’s compliance with standards

Other “mandatory” EQR activities need not be performed by an EQRO, although enhanced FMAP is not available unless an EQRO performs them¹⁵. Table 1-1 shows these obligations in tabular form.

“Optional” activities¹⁶ include:

- Validation of encounter data
- Administration or validation of consumer or provider surveys of quality of care
- Calculation of additional performance measures¹⁷
- Conduct of additional quality improvement projects¹⁸
- Conduct of studies that focus on a particular aspect of clinical or non-clinical services at a point in time

The information provided as a result of the External Quality Review process informs the dialogue between the EQRO and the State, part of which is the determination to continue or recommend alternative quality improvement projects. Rhode Island incorporates the recommendations from the EQRO into the State’s oversight and administration of RIte Care, Rhody Health Partners, and Rhody Health Options. Concurrently, each Medicaid-participating Health Plan is presented with the EQRO’s report, in conjunction with the State’s annual continuous quality improvement cycle, as well as correspondence prepared by Rhode Island Medicaid which summarizes the key findings and recommendations from the EQRO. Subsequently, each Health Plan must make a presentation at the State’s

¹² Appendix 1

¹³ Appendix 2

¹⁴ 42 CFR 438.358(b).

¹⁵ *Federal Register. Op. Cit.*, 3611.

¹⁶ 42 CFR 438.358(c).

¹⁷ Any “additional” performance measures must be validated by an EQRO.

¹⁸ Any “additional” performance improvement projects must be validated by an EQRO.

Oversight and Management meeting, outlining their response to the feedback and recommendations made by the EQRO.

Table 1-1

EXTERNAL QUALITY REVIEW (EQR) ACTIVITIES

Activity	Mandatory Activity¹⁹	Must Be Performed by EQRO²⁰
Prepare detailed technical report	Yes²¹	Yes
Validation of performance improvement projects ²²	Yes	No
Validation of MCO performance measures reported	Yes	No
Review to determine MCO compliance with standards	Yes	No
Validation of encounter data	No	No
Administration or validation of consumer or provider surveys of quality of care	No	No
Calculation of additional performance measures	No	No
Conduct of additional quality improvement projects	No	No
Conduct of studies that focus on a particular aspect of clinical or non-clinical services at a point in time	No	No

1.3 Waivers and Special Terms and Conditions

¹⁹ Defined as “mandatory” under the January 24, 2003 *Final Rule*.

²⁰ According to the provisions of the January 24, 2003 *Final Rule*.

²¹ Not listed in the *Final Rule* as a “mandatory” activity in 42 CFR 438.358(b), but “required” by 42 CFR 438.364.

²² Since 2008, all Quality Improvement Projects are documented using the NCQA’s Quality Improvement Activity (QIA) Form. The QIA form can be found in Appendix 3.

The renewal of the Comprehensive 1115 Waiver and Federal matching is contingent upon the State's compliance with Special Terms and Conditions (STCs). These STCs also delineate the "nature, character, and extent of anticipated Federal involvement" in the demonstration. The STCs contained a number of elements germane to measurement of quality of care and access to care improvement, as follows:

- **Comprehensive Quality Strategy** – The State has to address the following quality assurance requirements:
 - Develop a Continuous Quality Strategy that addresses the State's goal for improvement. Goals for improvement should be identified via claims and encounter data, quality metrics and expenditure data.
 - Discuss monitoring and evaluation methods, including components for discovery, remediation, and improvement.
 - Develop a methodology to monitor the performance of the Health Plans, which, will include, at a minimum, monitoring the quality assurance activities of each Health Plan. Monitoring compliance and contract performance, identifying any problem areas, assisting in the development and implementation of corrective action plans, providing technical assistance to improve cost-effectiveness and ensure that MCOs are addressing any changes in Federal and State rules and regulations.
 - Contract with an external quality review organization (EQRO) for an independent audit each year of the demonstration. Identify standards that are deemed duplicative to what is already addressed under the NCQA MCO accreditation process and ensure the relevant rationale is explicit.
 - Require, by contract, that Health Plans meet certain State-specified standards for Internal Quality Assurance Programs (QAPs) as required by 42 CFR 438.240 and monitor on a periodic basis each Health Plan's adherence to these standards. Include all Quality Improvement Projects (QIPs), methodology for determining benchmarks, and metrics related to each population covered by Medicaid as a component of the Quality Strategy.
 - Collect and review quarterly reports on complaints and grievances received by the Health Plans, and their resolution.
 - Delineate Medicaid and contracted providers' responsibilities.
 - Obtain Stakeholder input, including the State's Medical Care Advisory Committee (MCAC) as well as others and ensure the strategy is made available for public comment prior to implementation.

As noted at the beginning of this update, the STCs²³ for the Comprehensive 1115 Demonstration called for the development of a Comprehensive Quality Strategy (CQS):

“The State shall adopt and implement a comprehensive and dynamic continuous quality improvement strategy that integrates all aspects of quality improvement programs, processes, requirements across the State’s Medicaid program. This CQS must include all components of the Medicaid state plan, including but not limited to: the Comprehensive Demonstration (RIte Care, Rhody Health, Connect Care Choice, RIte Smiles and HCBS)”.

When administering the Comprehensive 1115 Demonstration, Rhode Island is responsible for ensuring that the following six (6) assurances, that pertain to 1915(c) waivers, are met for home- and community-based services:

1. Level of Care: Persons enrolled have needs consistent with an institutional level of care.
2. Service Plan: Participants have a service plan that is appropriate to their need and they receive the services and supports specified in the plan.
3. Qualified Providers: Waiver providers are qualified to deliver services and supports.
4. Health & Welfare: Beneficiaries’ health and welfare are safeguarded and monitored.
5. Financial Accountability: Claims for waiver services are paid according to State payment methodologies.
6. Administrative Authority: The State Medicaid agency is involved in the oversight of the waiver and overall responsibility of the program.

Rhode Island Medicaid has constructed a Quality framework and performance indicators for Home and Community Based Services (HCBS) based on the assurances listed above. The use of such performance indicators provides ongoing monitoring of how the Medicaid program is meeting such assurances. As indicated, the renewal of Rhode Island’s Comprehensive 1115 Demonstration waiver on December 23, 2013 requires the State to follow the guidance set forth in the STCs. This guidance calls for remaining consistent with the Quality framework that had been utilized under Rhode Island’s former 1915(c) waivers. As such, many of the current methods utilized for ongoing monitoring and performance measures continue, and include but are not limited to the following elements:

- Case record review and chart audits
- Provider monitoring, including BCI checks
- Client surveys, including home visits and interviews
- Fiscal and eligibility review, including utilization reviews, and
- Risk assessments

²³ STCs dated December 23, 2013.

In addition to the above discovery and remediation strategies, the HCBS Oversight and Monitoring team meet on a regular basis to review a case from each month in the previous quarter. The purpose of the review is to identify and address quality concerns and develop system change recommendations as indicated. In addition to these quarterly meetings, key evaluation findings and monitoring outcomes and updates are presented to the 1115 Waiver Quality and Evaluation workgroup on a regular basis.

- **General Administrative/Reporting Requirements** – The State’s Comprehensive 1115 Demonstration Waiver STCs include requirements for quarterly operational reports (STC # 93) and an annual report (STC # 94). On a quarterly basis, the State must present its analysis of the various operational areas under the Demonstration, including but not limited to:
 - Events that affect health care delivery including approval and contracting with new plans; benefits; cost-sharing, enrollment; grievances; quality of care; access; health plan financial performance that is relevant to the demonstration; pertinent legislative activity; and other operational issues;
 - Evaluation and Quality Assurance and Monitoring activities and interim findings.

On an annual basis, the State must submit a draft report documenting accomplishments, project status, quantitative and case study findings, utilization data, and policy and administrative difficulties in the operation of the Demonstration.

1.4 CHIP Quality Requirements

CHIP, too, has quality requirements. Specifically, 42 CFR 457.495 addresses “access to care and procedures to assure quality and appropriateness of care²⁴. The State CHIP Plan must describe how it will assure:

- Access to well-baby care, well-child care, well-adolescent care, and childhood and adolescent immunizations.
- Access to covered services, including emergency services.
- Appropriate and timely procedures to monitor and treat enrollees with chronic, complex, or serious medical conditions, including access to an adequate number of visits to specialists experienced in treating the specific medical condition and access to out-of-network providers when the network is not adequate for the enrollee’s medical condition.
- That decisions related to the prior authorization of health services are completed in accordance with the medical needs of the patient, within 14 days

²⁴ *Federal Register*, 66(8), January 11, 2002, 2666-2688.

after receipt of a request for services, with an extension possible under certain circumstances, and in accordance with State law.²⁵

Section 401(a) of the Children's Health Insurance Program Reauthorization Act of 2009 (CHIPRA) (Pub.L. 111-3) required the Secretary of the Department of Health and Human Services to identify an initial core set of child health care quality measures for voluntary use by state programs administered under titles XIX and XXI, health insurance issuers and managed care entities that enter into contract with such programs, and providers of items and services under such programs. CHIPRA also required the Secretary to publish changes to the core set measures beginning in January 2013.

Three (3) measures (Human Papillomavirus (HPV) Vaccine for Female Adolescents, Behavioral Health Risk Assessment for Pregnant Women, and Medication Management for People with Asthma) were added to the Children's Core Set in 2013 and one measure (Otitis Media with Effusion) was retired. Beginning in 2014, CMS retired the following three measures: 1) Appropriate Testing for Children with Pharyngitis (two to 18 years); 2) Annual Pediatric Hemoglobin A1C Testing (five to 17 years); and 3) Annual Percentage of Asthma Patients who are two to 20 years old with one or more Asthma-related emergency visit.

Additionally, Section 401(a)(4) required the development of a standardized reporting format for states that volunteer to report on the core set of measures. CARTS was modified by CMS for standardized reporting on the Children's Core Set measures.

Rhode Island's Executive Office of Health & Human Services was awarded a certificate on 06/15/2012 at the CMS 2nd Annual Medicaid and CHIP Quality Conference. This award acknowledged Rhode Island's achievement in reporting twelve (12) of the measures, which represented one-half of the Initial Core Set of Voluntary Measures for Children during the first year of voluntary reporting. Rhode Island was one of eight (8) States to be recognized for this honor.

²⁵ *Federal Register*, 66(122), June 25, 2001, 33810-33824.

CHAPTER 2

PROCESS FOR INVOLVING RECIPIENTS AND OTHER STAKEHOLDERS

To fulfill the requirements of 42 CFR 438.202(b) to “obtain the input of recipients and other stakeholders in the development of the strategy and make the strategy available for public comment before adopting it in final,” the State used the following process:

- RI Medicaid posted the “final draft” on the RI EOHHS Website.
- RI Medicaid put a notice in English and Spanish in *The Providence Journal*, the newspaper of widest circulation in the State, making the public aware that the “final draft” was available for review and how to obtain a copy of it. A 30-day comment period was provided.
- RI Medicaid put the “final draft” on the agenda of the Medical Advisory Committee for discussion.
- With there being no comments received from the public, the document was finalized and copies were forwarded to CMS Central and Regional Offices.

The State reviews the Quality Strategy periodically with the EOHHS’ Consumer Advisory Committee (CAC) and the 1115 Waiver Quality and Evaluation Workgroup to assess the strategy’s effectiveness and to update it, as needed.

In addition, Rhode Island will review its Quality Strategy whenever the following temporal events occur: a) new population groups are to be enrolled in managed care delivery systems; and b) Medicaid managed care re-procurement takes place. Such activity was undertaken by the State when it facilitated a series of community stakeholder meetings during the Summer of 2012. These meetings were sponsored by the RI EOHHS to inform the quality design component for the new coverage opportunities afforded through Rhody Health Options (RHO) and Connect Care Choice Community Partners (CCCC-P). Please refer to Chapters 7 and 8 for additional discussion.

CHAPTER 3

COMPONENTS OF RITE CARE'S QUALITY ASSESSMENT AND PERFORMANCE IMPROVEMENT STRATEGY

From the very beginning of Rite Care, the State has taken to heart the fact that it is a *demonstration* initiative. Table 3-1 shows the various components of Rite Care's CMS-approved quality strategy. In order to track compliance with Federal requirements, the table has been organized first according to those minimum elements delineated in the June 14, 2002 *Final Rule* and then according to the applicable STCs for the Rite Care waivers that preceded the Comprehensive 1115 Demonstration Waiver. For additional detail on the Quality Design specific to Rite Care, please see Appendices 1 and 2.

In the proposed Comprehensive Quality Strategy, the State has set forth its quality design for Rhody Health Options and Connect Care Choice Community Partners building upon the core principles that have been previously approved by CMS for Rite Care.

Table 3-1

COMPONENTS OF RITE CARE'S QUALITY ASSESSMENT AND PERFORMANCE IMPROVEMENT STRATEGY

QUALITY/PERFORMANCE IMPROVEMENT AREA	MECHANISM	COMMENTS
<p>1. Assess the quality and appropriateness of care and services to enrollees</p>	<ul style="list-style-type: none"> • Performance incentive program • Encounter Data System • NCQA information • Member satisfaction survey • Complaint, grievance and appeals reporting • Care management reporting • Compliance dashboard reporting • Pharmacy-related reporting • EQRO studies • Special studies • Contract compliance review • Analysis of the State's priority measures from the CMS Medicaid Adult Core Set and the Core Set of Children's Health Care Quality Measures 	

<p>2. Identify the race, ethnicity, and primary language spoken of each enrollee</p>	<ul style="list-style-type: none"> • MMIS data 	
<p>3. Arrange for annual, external independent reviews of the quality and timeliness of, and access to, the services covered under each Health Plan contract</p>	<ul style="list-style-type: none"> • Performance incentive program • Encounter Data System • NCQA accreditation information • Member satisfaction survey • Audited HEDIS® submissions • Quality Improvement Projects (QIP) • EQRO studies • Special studies • Contract compliance review 	<p>The State’s EQRO is responsible for preparing an annual, plan-specific detailed technical report that assesses the quality, timeliness, and access to the care furnished by each Health Plan.</p>
<p>4. Appropriate use of intermediate sanctions</p>	<ul style="list-style-type: none"> • Contract compliance review 	<p>Provisions for levying intermediate sanctions have always been a part of the RItE Care Health Plan Contract.</p>
<p>5. Standards for Access to Care, Structure and Operations, and Quality Measurement and Improvement</p> <p>5.a. Access Standards</p> <p>5.a.1 Availability of services</p> <p>5.a.2 Assurances of adequate capacity and services</p>	<ul style="list-style-type: none"> • Performance incentive program • Encounter Data System • MMIS data • Risk-share reporting • NCQA accreditation information • Member satisfaction survey • Complaint, grievance, and appeals reporting • EQRO activities • Special studies • Contract compliance review • Audited HEDIS® submissions • Program management meetings with each RItE Care-participating Health Plan • Provider network reporting • GeoAccess™ reporting 	<p>As outlined in Table 3 – 1 in Appendix 1, the State has had quantitative access standards in effect since 1994.</p> <p>As outlined in Table 3 – 1 in Appendix 1, the State has quantitative capacity standards and has since 1994.</p>

QUALITY/PERFORMANCE IMPROVEMENT AREA	MECHANISM	COMMENTS
<p>5.c. Quality Measurement and Improvement Standards</p> <p>5.c.1 Practice guidelines</p> <p>5.c.2 Quality assessment and performance improvement program</p> <p>5.c.3 Health information systems</p>	<ul style="list-style-type: none"> • NCQA information • Special studies • Contract compliance review • Performance incentive program • EQRO reports • Quality improvement projects (QIPs) • Encounter Data System • Complaint, grievance, and appeals reporting • NCQA accreditation information • Special studies • Contract compliance review • Encounter Data System • Risk-share reporting • NCQA information • EQRO activities • Special studies • Contract compliance review 	
<p>6. Encounter Data Requirements</p>	<ul style="list-style-type: none"> • Encounter Data System • EQRO activities • Special studies • Contract compliance review 	<p>The Encounter Data System has been used to produce reports since 1998. It is supplemented by EQRO studies and special studies in areas of access and clinical care interest.</p>
<p>7. Quality Assurance Requirements</p> <p>7.a. Methodology to monitor performance</p> <p>7.b. Contract with EQRO</p> <p>7.c. Quarterly reports on complaints and grievances</p>	<ul style="list-style-type: none"> • All mechanisms • EQRO activities • Complaint, grievance, and appeals reporting • Contract compliance review • Program management meetings with each RItE Care-participating Health Plan 	<p>Previously, the State had a <i>Plan for Monitoring RItE Care Health Plans</i>. That plan was superseded by the CMS-approved Quality Strategy.</p> <p>The State's EQRO contract was reprocured in 2003, 2006, and 2012.</p> <p>Complaint, grievance, and appeals reporting requirements have been in place since 1994.</p>

7.d. Require that Health Plans meet certain quality assurance requirements	<ul style="list-style-type: none"> • Contract compliance review • Program management meetings with each RItE Care-participating Health Plan • NCQA information 	
8. General Administrative/Reporting Requirements – quarterly and annual reports	<ul style="list-style-type: none"> • 1115 Comprehensive Demonstration Waiver, Special Terms and Conditions quarterly and annual reports • Annual Children’s Health Insurance Program (CHIP) Report 	

Table 3-2 shows those areas where the State has established quantitative standards for access.

Table 3-2

RIte Care’s Quantitative Standards for Access and Mechanisms for Measuring Them

Area	Quantitative Standard	Mechanism for Measuring It
Availability of services	<ul style="list-style-type: none"> • Emergency services are available 24 hours a day, 7 days a week • Make services available immediately for an “emergent” medical condition including a mental health or substance abuse condition • Make treatment available within 24 hours for an “urgent” medical problem including a mental health or substance abuse condition • Make services available within 30 days for treatment of a non-emergent, non-urgent medical condition, except for routine physical examinations or for regularly scheduled visits to monitor a chronic medical condition for visits less frequently than once every 30 days • Make services available within five business days for diagnosis or treatment of a non-emergent, non-urgent mental health or substance abuse condition 	<ul style="list-style-type: none"> • Complaint, grievance, and appeals data • Contract compliance review • Member satisfaction surveys • Findings from Health Plans’ after-hours access surveys
Adequate capacity and services	<ul style="list-style-type: none"> • No more than 1,500 RIte Care members for any single PCP in a Health Plan network • No more 1,000 RIte Care members per single PCP within the team or site • Members may self-refer for up to four GYN/family planning (FP) visits annually or for FP services, without obtaining a referral from the PCP 	<ul style="list-style-type: none"> • Provider network reporting • Informal complaints reporting • Encounter Data System
Coverage and authorization of services	<ul style="list-style-type: none"> • Assignment of a PCP within 20 days of enrollment, if none selected by the enrollee • For children with special health care needs, completion of an Initial Health Screen within 45 days of the effective date of enrollment • For children with special health care needs for whom it is applicable, completion of a Level I Needs Review and Short Term Care Management Plan within 30 days of the effective date of 	<ul style="list-style-type: none"> • On-site review • Member satisfaction survey • Complaint, grievance, and appeals data • Care management reporting

	<p>enrollment</p> <ul style="list-style-type: none"> • Provide initial assessments of pregnant women and members with complex and serious medical conditions within 30 days of the date of identification • Allow women direct access to a women's health care specialist within the Health Plan's network for women's routine and preventive services • Resolution of a standard appeal of an adverse decision within 14 days • Resolution of an expedited appeal of an adverse decision within three days 	
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The State's standards are at least as stringent as required by 42 CFR 438.204(g).

As noted in Chapter 2, information gathering for EQR must be consistent with *protocols* established under 42 CFR 438.352. Table 3-3 describes the entity that will perform each EQRO activity and the *protocol* used/to be used to guide the activity.

Table 3-3

Protocols Used/To Be Used for EQR

IPRO, Incorporated is the State’s EQRO. Xerox State Healthcare, LLC, (formerly ACS) is the State’s management assistance contractor.

Activity	Who Has, Will, or May Perform	Protocol Used/To Be Used
Prepare detailed technical report	<ul style="list-style-type: none"> EQRO 	EQRO’s methods consistent with CMS protocols
Validation of performance improvement projects	<ul style="list-style-type: none"> EQRO Xerox State Healthcare, LLC EOHHS staff 	Methods consistent with CMS protocols
Validation of MCO performance measures reported	<ul style="list-style-type: none"> EQRO NCQA auditors 	Methods consistent with CMS protocols and NCQA audit standards and protocols
Review to determine MCO compliance with standards	<ul style="list-style-type: none"> EOHHS staff Xerox State Healthcare, LLC 	State-specific protocols consistent with CMS protocols
Validation of encounter data	<ul style="list-style-type: none"> Xerox State Healthcare, LLC May be the EQRO 	Validate against claims and/or Against medical records
Administration or validation of consumer or provider surveys of quality of care	<ul style="list-style-type: none"> Xerox State Healthcare, LLC EOHHS staff 	State-specific consumer survey consistent with CMS protocols and CAHPS® standards
Calculation of additional performance measures	<ul style="list-style-type: none"> EOHHS staff Xerox State Healthcare, LLC 	Methods consistent with CMS protocols
Conduct of additional quality improvement projects	<ul style="list-style-type: none"> EOHHS staff Xerox State Healthcare, LLC 	Methods consistent with CMS protocols
Conduct of studies that focus on a particular aspect of clinical or non-clinical services at a point in time	<ul style="list-style-type: none"> EQRO 	EQRO’s methods consistent with CMS protocols

CHAPTER 4

RHODY HEALTH PARTNERS

Rhody Health Partners members have the same comprehensive benefit package as RItE Care members, with the exception of Home Care Services. However, Rhody Health Partners members do have Home Health Services benefits and as of July 1, 2013 the adult day benefit has been included as part of the comprehensive benefit package. In addition, Rhody Health Partners members have access to out-of-plan benefits covered prior to the State's Comprehensive 1115 Waiver by Section 1915(c) waivers including, for example, homemaker services, environmental modification, home-delivered meals, supportive living arrangements, adult companion services, respite services, and assisted living. As noted previously, the State's former 1915(c) waiver services were integrated into Rhode Island's Comprehensive 1115 Waiver.

As indicated in the Introduction, the renewal of the Comprehensive 1115 Waiver allowed the State to conform to the new coverage opportunities created under the Affordable Care Act (ACA). The new Medicaid Expansion population is enrolled under the Rhody Health Partners comprehensive benefit package, which includes for this new enrollment population additional substance abuse, mental health and HIV covered services and benefits.

During the initial implementation phase, the contracted Managed Care Organizations (MCOs) for the Medicaid Expansion population are submitting start up indicator reports on a weekly and/or monthly basis, which include statistics on Welcome Calls, Initial Health Screens, Utilization Management, Appeals, Informal Complaints, and Call Center Metrics, including provision of Member ID Cards and Handbooks within ten (10) calendar days of enrollment. These start-up indicator reports are in addition to the established quarterly calendar of reports that include but are not limited to finance, quality, compliance and Medicaid program integrity, operational reporting.

As part of its Contract with the State, each Health Plan agrees to conduct at least one quality improvement project annually directed at Rhody Health Partners members.

Table 4-1 shows the quality design for Rhody Health Partners.

Table 4-1

Rhody Health Partners Quality Design

Date Collection Method	Type of Method	Performed By
Administrative data and hybrid measures, as set forth annually by the NCQA.	The HEDIS [®] methodology.	Medicaid-participating Health Plans serving Rhode Island's RHP enrollees
Quality Improvement Project (QIP)	NCQA's Quality Improvement Assessment (QIA) methodology that meets CMS protocol requirements.	Medicaid-participating Health Plans serving Rhode Island's RHP enrollees
Annual External Quality Review	Elements as mandated by 42 CFR 438.350(a).	Rhode Island's designated External Quality Review Organization (IPRO, Inc.)
Informal Complaints, Grievances, and Appeals	Informal complaints reports are submitted electronically in a spreadsheet template established by RI Medicaid.	Medicaid-participating Health Plans serving Rhode Island's RHP enrollees
Health Plan Member Satisfaction Survey	The CAHPS [®] 4.0 Survey Methodology for Adults in Medicaid.	NCQA-certified CAHPS [®] vendor
Care Management Report for RHP	Care management reports are submitted electronically in a spreadsheet template established by RI Medicaid.	Medicaid-participating Health Plans serving Rhode Island's RHP enrollees
Compliance Dashboard	Compliance dashboard reports are submitted electronically in a spreadsheet template established by RI Medicaid.	Medicaid-participating Health Plans serving Rhode Island's RHP enrollees
Encounter Data Reporting and Analysis	The managed care encounter dataset is designed to identify services provided to an individual and track utilization over time and across service categories, provider types, and treatment facilities.	Medicaid-participating Health Plans serving Rhode Island's RHP enrollment population
Administrative data and hybrid measures as set forth by Measure Stewards for the subset of Medicaid Adult Core Set measures that have been given priority status by the RI EOHHS	Methods include those set forth by the NCQA, The Joint Commission, the AMA-PCPI, and the AHRQ	The RI EOHHS and Medicaid-participating Health Plans serving Rhode Island's RHP enrollees

CHAPTER 5 CONNECT CARE CHOICE

Connect Care Choice is a Primary Care Case Management (PCCM) option for adults who have Medical Assistance coverage and are 21 year old or older. The goal of Connect Care Choice (CCC) is to improve access to primary care, help coordinate health care needs, and link to support services in the community. Connect Care Choice was implemented under Section 1915(a) of the Social Security Act and was incorporated into Global Compact Consumer Choice Waiver on January 16, 2009.

Participating primary care sites include:

Name	Locations
Anchor Medical Associates	Providence, Warwick, Lincoln
Aquidneck Medical Associates	Newport, Portsmouth
Blackstone Valley Community Health Care	Pawtucket, Central Falls
Coastal Medical Inc.	Providence
Cranston Comprehensive Community Action Program (CCAP)	Cranston
East Bay Community Action Program	East Providence, Newport
Hillside Family Medicine	Pawtucket, Scituate
The Immunology Clinic at Miriam Hospital	Providence
Memorial Hospital	Pawtucket
Center for Primary Care and Prevention	
The Miriam Hospital Primary Care Clinic	Providence
Providence Community Health Centers:	Providence
Central Health Center	
Capitol Hill Health Center	
Allen Berry Health Center	
Fox Point Health Center	
Chafee Health Center	
Olneyville Health Center	
Rhode Island Hospital Ambulatory Clinic	Providence
Thundermist Health Center	Woonsocket, West Warwick, South County
TriTown Community Action Program (CAP)	Johnston
St. Joseph's Ambulatory Clinic	Providence
University Medical Group	Providence, Cranston, Lincoln
Roger Williams Ambulatory Clinic	Providence
University Medicine Foundation-	Providence
Governor St. Primary Care Center	

Table 5-1 shows the quality design for Connect Care Choice.

**Table 5-1
Connect Care Choice Quality Design**

Date Collection Method	Type of Method	Performed By
SF-36™	The SF-36™ is a multi-purpose, short-form survey with 36 questions. It yields an 8-scale profile of functional health and well-being scores as well as psychometrically-based physical and mental health summary measures and a preference-based health utility index.	The CCC nurse case manager in conjunction with the Connect Care Choice enrollee
The Index of Independence in Activities of Daily Living (Katz Index of ADL)	The Katz Index assesses basic activities of daily living and ranks adequacy of performance in six functions: bathing, dressing, toileting, transferring, continence, and feeding. Clients are scored yes/no for independence in each of the six functions. A score of 6 indicates full function, 4 indicates moderate impairment, and 2 or less indicates severe functional impairment.	The CCC nurse case manager in conjunction with the Connect Care Choice enrollee
The PHQ-9 Patient Health Questionnaire	The PHQ-9 is the nine-item depression scale of the Patient Health Questionnaire. The PHQ-9 is based directly on the diagnostic criteria for major depressive disorder in the Diagnostic and Statistical Manual Fourth Edition (DSM-IV). There are two components of the PHQ-9: Assessing symptoms and functional impairment and deriving a severity score to help monitor treatment.	The CCC nurse case manager in conjunction with the Connect Care Choice enrollee
Selected HEDIS®-like clinical measures which focus on Coronary Artery Disease, Depression, Diabetes, and Smoking & Tobacco Use Cessation	The following HEDIS®-like measures are analyzed by RI Medicaid for the Connect Care Choice Program. <u>Coronary Artery Disease:</u> <i>Persistence of Beta-blocker Therapy After a Heart Attack.</i> <u>Depression:</u> <i>Antidepressant Medication Management (Effective Acute Phase Treatment).</i> <u>Diabetes:</u> The following components of the	The RI EOHHS

	<p><i>Comprehensive Diabetes Care</i> measure: Hemoglobin A1c with poor control (<9.0%), LDL control (<100 mg/dL), Eye (retinal) exam performed, Blood Pressure control (<130/80). For all enrollees: <i>Advising Smokers & Tobacco Users to Quit</i>.</p>	
<p>Administrative data and hybrid measures as set forth by Measure Stewards for the subset of Medicaid Adult Core Set measures that have been given priority status by the RI EOHHS</p>	<p>Methods include those set forth by the NCQA, The Joint Commission, the AMA-PCPI, and the AHRQ.</p>	<p>The RI EOHHS</p>

CHAPTER 6

RITE SMILES

RItE Smiles is designed to increase access to dental services, promote the development of good oral health behaviors, decrease the need for restorative and emergency dental care, and decrease Medicaid expenditures for oral health care.

To achieve these goals, Rhode Island transitioned in 2006 from functioning simply as a payer of services to becoming a purchaser of a new oral health delivery system, a dental benefit manager (DBM) program with one capitated Plan that serves Medicaid enrolled children born on or after May 1, 2000. Among other responsibilities, the DBM program was charged with:

- Increasing reimbursement rates paid to private dentists
- Ensuring there are enough dentists who participate in the network
- Assisting members with finding dentists

In order to restructure the Medicaid dental benefit for children from fee-for-service to a Dental Benefit Manager (DBM), Rhode Island sought a Section 1915(b) waiver of the Social Security Act (the Act) specifically to implement the RItE Smiles Prepaid Ambulatory Health Plan (PAHP) dental waiver. This would allow Rhode Island Medicaid to have the following sections of the Act waived:

- Section 1902(a)(10) – Comparability of Services
- Section 1902(a)(23) – Freedom of Choice
- Section 1902(a)(4) – Mandatory enrollment in a single PAHP

Effective January 16, 2009, RItE Smiles was incorporated into the Rhode Island's Comprehensive 1115 Demonstration, with all of its Section 1915(b) waivers and other requirements intact. Excluded from enrollment in RItE Smiles, and therefore continuing to obtain their dental benefits through Medicaid fee-for-service, if applicable, would be the following groups of children on Medicaid: 1) those with other insurance; 2) residents of nursing facilities and ICF/MR; and 3) children in substitute care residing outside Rhode Island.

Table 6-1

RItE Smiles Quality Design

Date Collection Method	Type of Method	Performed By
Annual Dental Visit	The HEDIS [®] methodology.	Medicaid-participating DBM
Quality Improvement Project (QIP)	NCQA's Quality Improvement Assessment (QIA) methodology that meets CMS protocol requirements.	Medicaid-participating DBM

Provider Network Adequacy	Provider network reporting that meets State and Federal Accessibility Standards	Medicaid-participating DBM
Informal Complaints, Grievances, and Appeals	Informal complaints and grievance and appeal reports are submitted electronically in a spreadsheet template established by RI Medicaid.	Medicaid-participating DBM
Compliance Dashboard	Compliance dashboard reports are submitted electronically in a spreadsheet template established by RI Medicaid	Medicaid-participating DBM
Encounter Data Reporting and Analysis	The managed care encounter dataset is designed to identify services provided to an individual and track utilization over time and across service categories, provider types, and treatment facilities.	Medicaid-participating DBM
Sealant applications on permanent molars	Paid claims analysis of sealant applications, in conformance with the CMS 416 specifications	The RI EOHHS and the Medicaid-participating DBM

CHAPTER 7

RHODY HEALTH OPTIONS

The goal of the State’s Integrated Care Initiative (ICI) is to build on the Rhody Health Partners and Connect Care Choice programs through the integration of acute care services, primary care, and long term services and supports (LTSS). Rhody Health Options (RHO) is the integration of these LTSS services into a managed care delivery system. LTSS includes nursing home care as well as home and community-based supports that allow members to live independently in the community.

The Connect Care Choice Community Partners (CCCC-P) program, the focus of Chapter 8, is the State’s Primary Care Case Management (PCCM) model which serves adult populations with complex medical and behavioral, and offers extensive care management services through seventeen (17) comprehensive medical home practice sites throughout the State.

The following safeguards were implemented to ensure access and continuity of care:

- All newly enrolled members have access to out-of-network providers for six months post enrollment,
- The MCO must honor all prior authorizations, including long-term services and supports (LTSS) authorizations, and
- Members residing in an out-of-network nursing facility can remain in that facility if and when the member chooses to change nursing homes.

Eligibility for enrollment in RHO is based on State determination of Medicaid beneficiaries who meet the following criteria:

- Age twenty-one (21) or older
- Categorically eligible for Medicaid-only
- Not covered by other third-party insurance
- Residents of Rhode Island

Effective through RHO on November 1, 2013 Medicare-Medicaid eligible beneficiaries and Medicaid only receiving long-term services and supports (LTSS) were given the option to enroll in a managed care organization (MCO) with the provision that they could “opt-out” to fee-for-service or enroll in the Primary Care Case Management Model (PCCM). The Medicaid-only members represent a small number of Rhody Health Partners (RHP) members who have already been enrolled in managed care, but who had been receiving their long term services and supports (i.e., HCBS) via Medicaid fee for service. These Medicaid-only members who have been receiving home- and community-based services through the State’s fee-for-service program are now given the option to stay in managed care and receive LTSS as an in-Plan benefit or otherwise opt in to the State’s enhanced PCCM model (CCCC-P) or fee-for-service delivery systems. For both

delivery systems, Medicare services will continue to be administered by the Medicare program.

Those who do not select an option are automatically assigned to either model. Eligible clients are auto-assigned to either Rhody Health Options (RHO) or Connect Care Choice Community Partners (CCCC-P) using an algorithm established by EOHHS. The algorithm takes into account whether a member currently receives primary care from one of the seventeen (17) Connect Care Choice patient-centered medical homes (PCMH) using a primary care attribution methodology established by the Medicare program. These 17 practices are also part of the RHO managed care delivery option. Seventy-five (75) percent of eligible members currently receiving primary care services from one of the 17 Connect Care Choice patient-centered medical homes received an auto-assignment letter. The remainder of the eligible population received an RHO auto-assignment letter. This auto-assignment approach preserves existing patient and provider relationships. Members also have an opportunity to change programs monthly.

Enrollment began through a staged approach starting on November 1, 2013. The target population for the Integrated Care Initiative will be enrolled over a six-month period which began in November 2013 and will conclude in April of 2014. Each enrollment “wave” assumes that a certain percentage of ICI eligible members will opt out and choose to remain in the fee-for-service delivery system. Enrollment estimates do not include individuals for whom the Executive Office of Health and Human Services (EOHHS) has received returned or undeliverable mail.

Services for individuals with intellectual/developmental disabilities and individuals with severe and persistent mental illness will continue to be funded and managed by the RI Department of Behavioral Health, Developmental Disabilities and Hospitals.

The following populations are exempt from enrollment in an MCO:

- Medicare beneficiaries who are not eligible for full Medicaid benefits, i.e. Qualified Medicare Beneficiaries (QMBs)
- Specified Low-Income Beneficiaries (SLMBs)
- Qualified Individuals (QIs)
- Individuals who are eligible for partial Medicare benefits (Part A only or Part B/D)
- Individuals residing at Tavares²⁶, Eleanor Slater²⁷ Hospital or out-of-State hospitals
- Individuals who are incarcerated (adjudicated and in prison)
- Individuals who are in hospice on the enrollment start date

RHO members have a comprehensive benefit package, which now includes all home and community-based services (e.g., homemaker services, environmental modification,

²⁶ Tavares Pediatric Center is an intermediate care facility for the Developmentally Disabled.

²⁷ Eleanor Slater Hospital is a State hospital providing care and treatment to patients with acute and long term medical illnesses as well as patients with psychiatric disorders. This hospital is operated by the Rhode Island Department of Behavioral Healthcare, Developmental Disabilities and Hospitals.

home-delivered meals, supportive living arrangements, adult companion services, respite services, and assisted living.)

A key component of Rhody Health Options is the Care Management Program for which the Health Plan must comply with the *Executive Office of Health and Human Services Care Management Protocols for Rhody Health Options*. The goal is to have a person-centered system of care focused on improving health outcomes, coordination of care and services, access to timely health care, LTSS, and other community-based services, and optimizing resources.

Care Management program elements include:

- For community non-LTSS members, an Initial Health Screen (IHS) is to be completed within 45 days of enrollment and every 180 days thereafter.
- For LTSS members, the Comprehensive Functional Needs Assessment (CFNA) and Discharge Opportunity Assessment must be completed by a licensed clinician in person, face-to-face, at either the member's residence or chosen location.
- For a Community non-LTSS member determined to be "at-risk", the CFNA must be completed within 15 days of completion of the IHS. A reassessment must be completed within 180 days or sooner depending on the member's condition.
- For a Community LTSS member, the CFNA must be completed within 15 days of enrollment and a reassessment completed every 90 days or sooner depending on the member's condition.
- For Members living in a Nursing Facility, the Discharge Opportunity Assessment must be completed within 30 days of enrollment and every 180 days or sooner depending on the member's condition.
- A home re-assessment is to be completed for all RHO members post-hospitalization within five (5) days of hospital discharge.
- A plan of care is to be developed in collaboration with a member and/or identified caregiver within 5 days of completion of the CFNA. The plan of care is to be re-evaluated and modified as needed and in collaboration with the member and/or identified caregiver after the completion of a reassessment, change in the member's condition or need, acute care episode, or critical incident.

The qualitative oversight of the newly integrated home and community based LTSS services, long-term care services, and nursing home transitions are paramount areas of focus. The State will work with the RHO-participating Health Plan (Neighborhood Health Plan of Rhode Island) to ensure the continued monitoring of the following four (4) quality assurances:

- 1) Level of Care: Persons enrolled in Nursing Facilities have needs consistent with an institutional level of care
- 2) Service Plan: Participants have a service plan that is appropriate to their need and that they receive the services and supports specified in the plan
- 3) Qualified Providers: LTSS providers are qualified to deliver services and supports
- 4) Health and Welfare: Enrollees' health and welfare are safeguarded and monitored

Table 7-1 shows the quality design for RHO. This quality design was informed by community stakeholders through a series of three (3) public forums which were held

during the Summer of 2012. These forums were held to obtain input and recommendations on the focus of the RHO and Connect Care Choice Community Partners quality design, and specifically quality of care domains. The input obtained through the stakeholder process was then cross-walked against national benchmarks such as the NCQA's HEDIS[®] and the AHRQ's CAHPS[®] measures as well as National Quality Forum (NQF)-endorsed measures.

Table 7-1

Rhody Health Options (RHO) Quality Design

Date Collection Method	Type of Method	Performed By
Administrative data and hybrid measures, as set forth annually by the NCQA.	The HEDIS [®] methodology.	Medicaid-participating Health Plan(s) ²⁸ serving Rhode Island's RHO enrollees
State Specific Quality Measures (See Table 7-2).	On-site audit, reporting, and MDS data.	Medicaid-participating Health Plans serving Rhode Island's RHO enrollees
Quality Improvement Project (QIP)	NCQA's Quality Improvement Assessment (QIA) methodology that meets CMS protocol requirements.	Medicaid-participating Health Plans serving Rhode Island's RHO enrollees
Annual External Quality Review	Elements as mandated by 42 CFR 438.350(a).	Rhode Island's designated External Quality Review Organization (IPRO, Incorporated)
Informal Complaints, Grievances, and Appeals	Informal complaints reports are submitted electronically in a spreadsheet template established by RI Medicaid.	Medicaid-participating Health Plans serving Rhode Island's RHO enrollees
Health Plan Member Satisfaction Survey	The CAHPS [®] 5.0 Survey Methodology for Adults in Medicaid.	NCQA-certified CAHPS [®] vendor (2015 cycle)
Care Management Report for RHO	Care management reports are submitted electronically in a spreadsheet template established by the RI EOHHS.	Medicaid-participating Health Plans serving Rhode Island's RHO enrollees
Long Term Services and Supports Operational Report	Long Term Services and Supports Operational Reports are submitted electronically in a spreadsheet template established by the RI EOHHS.	Medicaid-participating Health Plans serving Rhode Island's RHO enrollees
Critical Incident Report	The Critical Incident Report is submitted electronically in a spreadsheet template established by the RI EOHHS.	Medicaid-participating Health Plans serving Rhode Island's RHO enrollees
Nursing Home Transitions Report	The Nursing Home Transitions Report is submitted electronically in a spreadsheet template established by the RI EOHHS.	Medicaid-participating Health Plans serving Rhode Island's RHO enrollees

²⁸ As of 11/01/2013, Rhode Island has contracted with one Health Plan, Neighborhood Health Plan of Rhode Island (NHPRI), for Rhody Health Options (RHO).

Nursing Home Quality Report	The Nursing Home Quality Report is submitted electronically in a spreadsheet template established by the RI EOHHS.	Medicaid-participating Health Plans serving Rhode Island's RHO enrollees
24 hour Emergency Back-Up report	The 24 hour Emergency Back- Up Report is submitted electronically in a spreadsheet template established by the RI EOHHS.	Medicaid-participating Health Plans serving Rhode Island's RHO enrollees
Care Transitions Report	The Care Transitions Report is submitted electronically in a spreadsheet template established by the RI EOHHS.	Medicaid-participating Health Plans serving Rhode Island's RHO enrollees
Encounter Data Reporting and Analysis	The managed care encounter dataset is designed to identify services provided to an individual and track utilization over time and across service categories, provider types, and treatment facilities.	Medicaid-participating Health Plans serving Rhode Island's RHO enrollment population

In 1998, Rhode Island launched its Performance Goal Program. Rhode Island was the 2nd state in the nation to establish a Pay for Performance Program within its Medicaid program. Table 7-2 outlines the State's Performance Goal Program for Rhody Health Options. In addition to national benchmarks such as HEDIS[®] and CAHPS[®] measures, the State's Performance Goal Program has established a set of State-specific quality and operational standards in three main focus areas: Member Services, Beneficiary Protection, Care Management and Nursing Home Quality of Care and Transitions to Community.

Table 7-2

Performance Goal Program for RHO

Area	Goal
Member Services	Identification cards are distributed within ten (10) calendar days of Plan receipt of enrollment information
	During standard hours of operation, Member Service calls are answered by a live voice in thirty (30) seconds average speed to answer
	Grievance & appeals are resolved within Federal Balanced Budget Act Time Frames
Care Management	Non-LTSS Members receive an initial telephonic assessment within forty-five (45) days of enrollment
	Non-LTSS Members who are identified for a comprehensive needs assessment will have a face to face visit assessment completed within thirty (30) days of the initial telephonic assessment
	A comprehensive face-to-face visit assessment is completed within fifteen (15) days for recipients of Community Long Term Care Services and Supports (LTSS); within thirty (30) days for nursing home residents
	Care plans clearly demonstrate adequate and appropriate care and service plan, including social and environmental supports, shared decision making, involvement of the Member and/or caregiver in plan development, and assessment of Member goals and preferences

Nursing Home Transitions (NHT)	Members have a risk assessment (as defined per NHT protocol) prior to transition to the community
	Members have a home visit within one (1) calendar day of their transition to the community

Historically the Medicaid Home and Community Based 1915(c) Quality framework has included the following key components:

- The design of a Quality Strategy which includes performance measures, methodology, and sampling strategy
- The monitoring of the implementation of the Quality Strategy and reporting on findings using performance measures
- The correction of non-compliance based on performance measures
- The implementation of corrective action when needed to improve performance

Many of the current methods utilized for monitoring and oversight are based on the CMS Quality framework for home and community-based services (HCBS), which includes the following elements:

- Case record review and chart audits
- Provider monitoring, including BCI checks
- Client surveys, including home visits and interviews
- Fiscal and eligibility review, including utilization reviews, and
- Risk assessments

The State-specified quality measures listed above are a critical component to monitoring the quality and oversight of this new integrated care delivery system. These quality measures are used to capture critical process and structural data elements from several key domains to monitor the ongoing viability of key functions and operations, and ensure high quality care and outcomes. In addition to the State specified quality measures, the Health Plan will be required to conduct a quality improvement project. Baseline data will be used to identify target areas for improvement. By conducting performance improvement projects, the MCO will be able to implement interventions that lead to improved processes and therefore outcomes.

CHAPTER 8

CONNECT CARE CHOICE COMMUNITY PARTNERS

The Connect Care Choice Community Partners (CCCC-P) program is the State’s Primary Care Case Management (PCCM) model which serves adults 21 years or older with complex medical and behavioral services, and offers extensive care management services through seventeen (17) comprehensive medical home practice sites throughout the State. The Connect Care Choice Community Partners program addresses the needs for greater integration of primary care, acute care, specialty care, behavioral health and long-term care services through high touch care coordination via a contracted Coordinating Care Entity (CCE). The CCE²⁹ coordinates the collection of performance data, quality assurance and quality improvement activities. A key feature of the CCE is that it provides a Community Health Team (CHT) that coordinates the social supports and services for both Medicaid-only and MME members.

Participating primary care sites include:

Name	Locations
1. Anchor Medical Associates	Providence, Warwick, Lincoln
2. Aquidneck Medical Associates	Newport, Portsmouth
3. Blackstone Valley Community Health Care	Pawtucket, Central Falls
4. Coastal Medical Inc.	Providence
5. Cranston Comprehensive Community Action Program (CCAP)	Cranston
6. East Bay Community Action Program	East Providence, Newport
7. Hillside Family Medicine	Pawtucket, Scituate
8. The Immunology Clinic at Miriam Hospital	Providence
9. Memorial Hospital Center for Primary Care and Prevention	Pawtucket
10. The Miriam Hospital Primary Care Clinic	Providence Providence
11. Providence Community Health Centers:	
• Central Health Center	
• Capitol Hill Health Center	
• Allen Berry Health Center	
• Fox Point Health Center	
• Chafee Health Center	
• Olneyville Health Center	
12. Rhode Island Hospital Ambulatory	Providence

²⁹ As of 11/01/2013, Rhode Island has contracted with CareLink, Incorporated, for the CCE.
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- Clinic
- | | |
|---|--|
| 13. Thundermist Health Center | Woonsocket, West Warwick, South County |
| 14. Tri-Town Community Action Program (CAP) | Johnston |
| 15. St. Joseph's Ambulatory Clinic | Providence |
| 16. University Medical Group | Providence, Lincoln |
| 17. University Medicine Foundation-Governor St. Primary Care Center | Providence |

Table 8-1 shows the quality design for Connect Care Choice Community Partners. This quality design was informed by community stakeholders through a series of three public forums which were held during the Summer of 2012. These forums were held to obtain input and recommendations on the Rhody Health Options and Connect Care Choice Community Partners quality design, and specifically quality of care domains. The input obtained through the stakeholder process was then cross-walked against national benchmarks such as the NCQA's HEDIS[®] and the AHRQ's CAHPS[®] measures as well as National Quality Forum (NQF)-endorsed measures.

Table 8-1

Connect Care Choice Community Partners Quality Design

Date Collection Method	Type of Method	Performed By
Administrative data and hybrid measures	Based on HEDIS [®] methodology.	The CCE serving Rhode Island's Connect Care Choice Community Partners enrollees
State Specific Quality Measures (See Table 8-2).	On-site audit, reporting, and MDS data.	The CCE serving Rhode Island's Connect Care Choice Community Partners enrollees
Informal Complaints	Informal complaints reports are submitted electronically in a spreadsheet template established by RI Medicaid.	The CCE serving Rhode Island's Connect Care Choice Community Partners enrollees
Health Plan Member Satisfaction Survey	The CAHPS [®] 5.0 Survey Methodology for Adults in Medicaid.	The CCE serving Rhode Island's Connect Care Choice Community Partners enrollees
Care Management Report	Care management reports are submitted electronically in a spreadsheet template established by the RI EOHHS.	The CCE serving Rhode Island's Connect Care Choice Community Partners enrollees
Long Term Services and Supports Operational Report	Long Term Services and Supports Operational Report are submitted electronically in a spreadsheet template established by the RI EOHHS.	The CCE serving Rhode Island's Connect Care Choice Community Partners enrollees
Critical Incident Report	Critical Incident Report is submitted electronically in a spreadsheet template established by the RI EOHHS.	The CCE serving Rhode Island's Connect Care Choice Community Partners enrollees
Nursing Home Transitions Report	Nursing Home Transitions Report is submitted	The CCE serving Rhode Island's Connect Care Choice Community Partners

	electronically in a spreadsheet template established by the RI EOHHS.	enrollees
Nursing Home Quality Report	Nursing Home Quality Report is submitted electronically in a spreadsheet template established by the RI EOHHS.	The CCE serving Rhode Island's Connect Care Choice Community Partners enrollees
24 hour Emergency Back-Up report	24 hour Emergency Back- Up Report is submitted electronically in a spreadsheet template established by the RI EOHHS.	The CCE serving Rhode Island's Connect Care Choice Community Partners enrollees
Care Transitions Report	Care Transitions Report is submitted electronically in a spreadsheet template established by the RI EOHHS.	The CCE serving Rhode Island's Connect Care Choice Community Partners enrollees
Claims and/or Encounter Data Analysis	MMIS is designed to identify services provided to an individual and track utilization over time and across service categories, provider types, and treatment facilities.	The CCE serving Rhode Island's Connect Care Choice Community Partners enrollees

The State has established a set of State-specific quality and operational standards in four main focus areas: Member Services, Beneficiary Protection, Care Management and Nursing Home Quality of Care and Transitions to Community. The table below outlines each of these four focus areas and accompanying goals within each area.

Table 8-2

CCCC-P Quality and Operational Standards

Member Services	Member materials are distributed within ten (10) calendar days of Plan receipt of enrollment notification.
	During standard hours of operation, Member Service calls are answered by a live voice in 30 seconds average speed to answer.
	Grievances (Informal Complaints) are resolved within 30 days.
Beneficiary Protection	For members that report a critical incident, the Care Plan must demonstrate the completion of an updated risk assessment and mitigation plan.
	Member and/or caregivers receive education and information, annually at a minimum, about how to identify and report instances of abuse and neglect.
Care Management	Level I and Level II members with LTSS receive an initial telephonic assessment within thirty (3) days of enrollment. Level II Non-LTSS Members receive an initial telephonic assessment within sixty (60) days of initial start-up enrollment and 45 days thereafter.
	Members identified as "At Risk" during the initial telephonic assessment will receive an in-person Health Risk Assessment within sixty (60) days during initial start-up enrollment and fourteen (14) days thereafter.
	Based on a risk profile, members identified as Level I and Level II with LTSS will receive an in-person Health Risk Assessment within sixty (60) days during the initial start-up enrollment and thirty (30) days thereafter.
	Based on a risk profile, member identified as Level II Non LTSS will receive an in-person Health Risk Assessment within one hundred and eighty (180) days during initial start-up enrollment and ninety (90) days thereafter.

	All Health Risk Assessments must be received within two (2) business days of the in-person visit.
	All comprehensive needs assessments conducted by the CCE and/or care manager should include documentation of completed home safety evaluations and appropriate follow up thereafter.
	Members are screened for clinical depression using a standardized tool and follow up is documented.
Nursing Home Quality Measures	Percent of long-stay nursing facility residents (i.e., residing in a nursing facility continuously for one hundred (100) days prior to the second quarter of the calendar year) who were hospitalized within six (6) months of baseline assessment.
	Percent of all long-stay ³⁰ residents in a nursing facility with an annual, quarterly, significant change or correction MDS assessment during the selected quarter who were identified at high risk and who have one more stage 2-4 pressure ulcers.
	Percent of all long-stay residents with a selected target assessment that indicates a urinary tract infection within the last thirty (30) days.
	Percentage of all long-stay residents with a selected target assessment where the following condition is true: antipsychotic medications received.
	Percent of long-stay residents who report either (1) almost constant or frequent moderate to severe pain in the last 5 days or (2) any very severe/horrible pain in the last 5 days.

The Connect Care Choice Community Partner primary care practice network consist of practices that have adopted the “chronic care model” and are certified as a “patient-centered medical home” by the National Committee for Quality Assurance (NCQA). In addition, these practices must meet a high standard of performance, provide evidenced-based chronic disease management, nurse care management, primary and preventive care while encouraging self-management supports and education. The design of this health delivery system is quality focused, holistic in its approach to achieve and maintain wellness as well as to improve access to primary and specialty care. The ability to monitor clinical quality is critical to measuring practice based performance and outcomes. Table 8-3 below provides a list of clinical measures being used to monitor practice based performance on chronic care management and patient self-management.

As noted in Introduction to the proposed Comprehensive Quality Strategy, in 2013 the Rhode Island Executive Office of Health and Human Services was one of twenty-six (26) States to be awarded a Medicaid Adult Quality grant from the Center for Medicare and Medicaid Services (CMS)³¹. Through this grant opportunity EOHHS is able to build State capacity in the reporting and analysis of health care quality. A key focus of this grant will be building the needed capacity and system to produce the clinical quality measures outlined in the table below following the HEDIS[®] technical specifications for the CCCC-P program.

³⁰ All residents in an episode whose cumulative days in the facility is greater than or equal to 101 days at the end of the target period. An episode is a period of time spanning one or more stays, beginning with an admission and ending with either a discharge or the end of the target period (whichever comes first). A target period is the span of time that defines the QM reporting period (e.g. a calendar quarter).

³¹ <http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Quality-of-Care/Adult-Medicaid-Quality-Grants.html>

Table 8-3

CCCCP Clinical Quality Measures based on Selected HEDIS^{®32}-like Clinical Measures		
Measure Name	Measure Description	Measure Steward & Data Source
Persistence of Beta-Blocker Treatment After a Heart Attack	Percent of Members 18+ during the measurement year who were hospitalized and discharged alive from July 1 of the year prior to the measurement year to June 30 of the measurement year with a diagnosis of acute myocardial infarction (AMI) and who received persistent beta-blocker treatment for six (6) months after discharge	NCQA Administrative Claims Chart Review
Adult BMI Assessment	% of members 18-74 years of age who had an outpatient visit and whose BMI was documented during the measurement year or the year prior to the measurement year.	NCQA Administrative Claims & Hybrid
Anti-depressant Medication Management (Effective Acute Phase Treatment)	The % of members 18 + who were diagnosed with a new episode of major depression and treated with anti-depressant medication, and who remained on anti-depressant medication.	NCQA Administrative Claims
Comprehensive Diabetes Care	Hemoglobin A1c with poor control (> 9.0%), LDL control (< 100 mg/dL), Eye (retinal) exam performed, Blood Pressure control (< 140/80).	NCQA Administrative Claims & Hybrid
Advising Smokers & Tobacco Users to Quit	The percentage of members 18 years of age and older who are current smoker or tobacco users and who received cessation advice during measurement year.	NCQA/AHRQ

³² (Healthcare Effectiveness Data and Information Set) is a registered trademark of the National Committee for Quality Assurance (NCQA). The State expects to follow the annual specifications in HEDIS[®] for these measures.

Quality Improvement Activity (QIA) Form Instructions

When to Use the QIA Form

This document is a guide for completing NCQA's Quality Improvement Activity (QIA) form. This form can be used for the QIA required NCQA accreditation and certification programs, as applicable. It must be used to meet the Quality Improvement Projects required for Medicare Advantage Deeming.

You are not required to use the QIA form; however, you must provide the data it requests in order for NCQA to review your QIAs completely and accurately. Submit a QIA for each activity you present by attaching it to the applicable element in the Survey Tool using the **Attach Document** feature in the Survey Tool.

Detailed instructions on attaching documents to the Survey Tool are found in the Survey Tool Instructions under **Help** on the Main Menu bar.

The purpose of the QIA form is to *summarize* the clinical and service quality activities that you are using to demonstrate meaningful improvement in the applicable element.

You should not complete the QIA forms for service or clinical activities that you use to demonstrate compliance with other standards that require data collection and analysis such as member/enrollee satisfaction, availability and access and satisfaction with UM. Document compliance with these standards as you would document any other standard.

All data points must be final when your organization submits the Survey Tool.

NCQA does not recommend using this form to report on activities that have only one data point (e.g., baseline only).

Consult the appropriate Explanation for the meaningful improvement standard for the accreditation or certification program for which you apply.

***Remember that you cannot achieve a score of 100% with only one data point.
The activity will not be considered.***

Achieving Meaningful Improvement

Submit enough data

To receive "credit" for meaningful improvement, you must submit enough data to allow an evaluation of any seasonal variations that could affect the results. On the service side, open-enrollment seasons can affect such activities as ensuring access to primary care and reduction in referral time frames. In most cases you must present:

- annual measurement occurring during the same season (e.g., comparing the first quarter of one year to the first quarter of the following years) for areas that show seasonal differences, such as provision of enrollment cards
- five quarters of data
- fifteen months of data.

Note: *If you do not have adequate data to satisfy the above conditions or if you believe that the results are not biased by seasonal issues, provide an explanation as it relates to QI 12 and QI 13 under Other Pertinent Methodology Features, in Section I.*

The improvement must meet the time period covered in the survey

To receive “credit” for meaningful improvement, the improvement must have occurred in the three-year period covered in the survey. For example, if you have annual data on member satisfaction since 1996, but the date of the survey for which this QIA is being prepared is January 2008, only data beginning in 2005 should be shown.

In other words, the improvement must have started at some point during the three years immediately prior to the survey and have been subsequently sustained.

For Renewal Surveys, you may need to present measurements for the year prior to the current survey period if these data were not available for your previous survey.

The QIA Form

The form’s five sections

The QIA form is divided into five sections:

- *Section I* Activity Selection and Methodology
- *Section II* Data/Results Table
- *Section III* Analysis Cycle
- *Section IV* Interventions Table
- *Section V* Chart or Graph

Activity name and activity examples

The form first asks you to supply an activity name. The activity name should succinctly encompass the purpose of the activity and begin with an action word that accurately states what the activity is designed to do (e.g., “improving,” “increasing,” “decreasing,” “monitoring”). Examples are listed below.

- decreasing the risk of congestive heart failure
- improving claims turn-around time to practitioners
- increasing the rate of diabetic foot exams
- improving access to behavioral health services
- decreasing practitioner complaints with the referral process.

Section I: Activity Selection and Methodology

This section asks you to provide the rationale for choosing this QI activity for your organization. Explain why the clinical or service activity affects your members or practitioners.

NCQA requires you to choose service improvements based on their impact on members. NCQA also accepts improvements in practitioner satisfaction that relate to utilization management (UM) processes or effects (e.g., issues identified in UM 11) for *one* service QIA.

Examples are listed below:

- *improvements in turnaround time for prior-authorization requests* decrease the time that members wait to receive care requiring authorization and/or increase productivity for practitioners
- *improvements in UM decision making turn-around-time* ensure more satisfied members and/or practitioners
- *improvements in referral to specialist turnaround time* reduce the number of complaints and appeals regarding referrals.

Rationale

Define the rationale for selecting the activity

This section asks you to define your rationale for selecting this activity for improvement.

- Why was it chosen over others?
- Why is it important to your members or practitioners?
- Why is it worth the resources your organization is spending on it?

Using objective information provide as much information that is specific to your organization as possible.

You do not have to provide generic defenses for most clinical or service issues. For example, do not include explanatory phrases such as “member services departments serve many important functions”, or “neuropathy of the foot is a serious condition that affects thousands of diabetics nationwide.”

Nor is it necessary to provide literature source cites on the importance of a clinical or service issue to members unless it is an unusual topic. Focus on the importance of the activity to your organization.

Importance of activity

Include pertinent organization data or community demographic data that reflect the importance of the activity to your organization’s membership. Describe the magnitude of the issue related to the activity in quantifiable terms.

Activity examples

Examples are listed below.

- Between 2004 and 2005, hospitalization due to diabetic foot neuropathy rose 9 percent. This was the largest increase in any diabetes related hospitalization. Research has shown that periodic foot screening of diabetics and self screening by diabetics can decrease rates of foot neuropathy.
- Practitioner dissatisfaction turnaround time with UM decisions increased from 5 to 15 percent between 2004 and 2005. This was the largest increase in practitioner dissatisfaction the organization has received for four years. In addition, this 15 percent dissatisfaction rate was the highest dissatisfaction rate on the practitioner survey.

Quantifiable Measures

Quantifiable measures clearly and accurately measure the activity

This section asks you to list *all* quantifiable measures you use in this activity, including those added over time. Quantifiable measures should clearly and accurately measure the activity being evaluated. List your baseline benchmarks and goals and if you modify them over time, list the updated benchmark or goal in the table in Section II.

Multiple measures

You may use one or more measures for each activity. For some activities, multiple measures are useful. For example, practitioner complaints and actual turn-around-time for UM decisions would be two measures that are closely linked to the timeliness of UM decisions.

In other cases, multiple measures may not be useful. For example, you may display multiple measures associated with a CHF disease management (DM) program, only one of which shows improvement. Unless the intervention is clearly focused to address that measure, NCQA may not consider the improvement meaningful.

Denominator

Describe here the event being assessed or the members who are eligible for the service or care. Indicate whether all events or eligible members are included, or whether the denominator is a sample. Examples of responses are listed below:

- all physician complaints
- members 35 years of age and older during the measurement year who were hospitalized and discharged alive from January 1–December 24 of the measurement year with a diagnosis of congestive heart failure
- all survey respondents

Numerator Describe here the criteria being assessed for the service or care:

- all physician complaints concerning UM decision turn-around-time
- members meeting the criteria for inclusion in the denominator who received an ambulatory prescription for ace inhibitors within 90 days of discharge
- survey respondents who do or do not like the event in the denominator

First measurement period State here the time period covered by the initial assessment.

For clinical issues, this is typically an entire calendar year (e.g., January 1, 2008–December 31, 2008).

For service issues, the measurement period is often monthly or quarterly (e.g., January 2008 or 1Q 2008). Measurement periods may vary by measure. For example, the first measurement period for UM decision timeliness may be the first quarter of 2008, but the measure addressing timeliness may not have started until the third quarter of 2008.

Baseline benchmark Include here information on how the benchmark was derived as well as the benchmark rate. NCQA defines “benchmark” as the industry measure of best performance against which the organization’s performance is compared. It should be directly comparable to your QI measure.

You may describe the benchmark in numerical terms (e.g., the 90th percentile), or in terms of the comparison group (e.g., the best published rate in our state, 85 percent).

The benchmark may be a best practice in an industry based on published data or the best performance within a corporation with multiple organizations. NCQA requires a benchmark or a goal, but not both. Many service activities do not have benchmarks. If you are not using a benchmark, insert “NA” in response to this query.

**Remember: Benchmarks are not averages; they are the best in class.
 The average for a national organization or corporation with multiple organizations is not a benchmark.
 The organization’s best rate would be considered a benchmark.**

- Benchmark source** If you give a benchmark, list the organization or publication from which it was obtained and the time period to which it pertains.
- Baseline goal** The performance goal is the desired level of achievement for the measure within a reasonable time. It does not have to be based on actual best practices, but it should reflect the level of achievement your organization has targeted.
- The goal should be quantitative and stated in numerical terms (e.g., 90 percent, 0.3 appeals per thousand, 3 days).
- Most organizations do not set performance goals until after they have collected baseline results. If that is the case, enter NA here.
- Words such as “improve,” “decrease” or “increase” are not acceptable in stating goals unless they are accompanied by a numerical quantifier (e.g., “improve one standard deviation from baseline” or “decrease by 5 percentage points from the last remeasure”).

***Remember to use the words “percent” and “percentage” precisely.
An increase in practitioner satisfaction with the UM referral system from 35 percent to 40 percent is a 5 percentage point increase, not a 5 percent increase.***

State the first goal you set (which, generally, is set after baseline results have been analyzed). NCQA expects that as you achieve your goals, you set new ones. Section II has a space to list updated goals. Examples are listed below.

- Goal example**
- Measure:** Pre-service UM decisions.
- Numerator:** Number of preservice decisions less than 4 days.
- Denominator:** Number of preservice decisions.
- Benchmark:** NA
- Baseline Goal:** 80 percent of preservice decisions are made within 3 days of the request.
- Note:** NCQA does not consider achievement of a prespecified goal or benchmark alone as a demonstration of meaningful improvement.

Baseline Methodology

This section uses tables, check boxes and narrative to enable you to describe your methodology. The more precisely you describe the data you used and how they were obtained; the sampling procedures, if any, that were applied; and any special factors that could have influenced the results, the more easily NCQA can assess the validity and reliability of the findings.

- C.1 Data sources** Check all the data sources used. If you used other sources that are not listed, check “Other” and describe the sources completely. Indicate the number of the measure from Section B next to the data source used.
- C.2 Data collection methodology** This section is divided into:
- medical/treatment record
 - survey
 - administrative.
- Because you may use different data collection methodologies for different measures, check all that apply. Indicate the number of the measure from Section B next to the data source used. If you collected survey data using more than one of these techniques, check all that apply. If you used different techniques, or if you used other methods to collect administrative data, mark “Other” and describe your data sources completely. You are not limited to the options provided.
- Most of these methodologies are self-explanatory. The definitions for the survey data collection methodology are listed below.

Definitions

- Personal interview** A face-to-face interview.
- Mail** A survey mailed to and returned from the respondent and involving no personal contact.
- Phone with CATI script** A telephone interview using a computer-assisted script containing prompts beyond the actual questions that can be used according to a set protocol.
- Phone with IVR** A telephone interview involving an interactive voice recognition system rather than a live person.
- Internet** A survey conducted using the Internet and involving no personal interaction.
- Incentive provided** A survey in which the respondent was given an incentive (e.g., gift certificate, cash) for participating.
- Note:** *Regardless of the survey methodology, mark this box if the respondent is given any incentive to complete the survey.*
- Other** Any other survey methodology different from those listed above.
- C.3 Sampling** For each measure that involved sampling, state the sample size, the method used to determine the size and the sampling methodology. If the size is the same for all measures, state “All Measures” and give the information only once. Also provide the size of the full population from which you drew the sample.

Remember that the sampling methodology here relates to your baseline measurement only. Any change to this sampling methodology is reported in Section I.D of this form.

Table elements

Measure. You may use the measure number from the measures listed in Section I.B and abbreviate the name.

Sample size. State the number of the full sample selected, including any oversampling. The denominator listed in Section II provides the number included in the measure.

Determining the sample size. To determine the size, explain the parameters used to determine the sample size, which typically include:

- the assumptions or requirements of the statistical test to be used to verify the significance of observed differences
- the desired degree of confidence in the statistical test (alpha level)
- statistical power (the sensitivity of the statistical test to detect differences; bigger samples yield greater power)
- the margin of error to be allowed when assessing the hypothesis
- the oversample rate
 - the **oversample** is the extra cases included in the sample to replace cases rejected because of contraindications, ineligibility, etc. (In survey measurement, the oversample should be large enough to replace expected nonresponses.) Examples of oversampling are shown below.

Oversampling example

You plan to improve the time required for members to obtain a referral. You conduct telephone surveys of different groups of members who obtained referrals at two points in time, asking them how many days it took for them to get the referral. You have these expectations about the survey:

- the distribution of responses about the “number of days to referral” is normally distributed for both the pre- and post-survey groups
- the t-test is used to test the significance of the pre- and post-differences at alpha = 0.05 and 80 percent power
- a pilot survey showed that the standard deviation of “number of days to referral” responses is 5.25
- the program reduces the average number of days from 8.5 days to 7 days
- the response rate is 85 percent.

Sample size calculations based on the above parameters indicate that you require a sample of 193 completed surveys. You expect that 15 percent of the sampled members will not respond, so you sample 227 members to account for the nonresponse ($X * 0.85 = 193$; $X = 193/0.85$; $X = 227$). This calculation includes 193 members in the original sample plus an oversample of 34 patients to replace those who do not respond.

Sampling method

State the sampling methodology (simple random sample, stratified random sample, convenience sample). State the reasons for exclusions from the sample, if there were any (e.g., “Simple random sampling was used. During the claims pull, three claims were excluded because they were miscoded.”).

Remember that if your sampling methodology involves a survey, it is not necessary to complete this table because you have included the Survey Tool and the survey protocol (requested in Section I.C.2).

C.4 Data collection cycle and data analysis cycle

Check the box that applies or describe the frequency of data collection and analysis. Indicate the number of the measure from Section B next to the data source used. For many service activities, the data collection cycle is more frequent than the analysis cycle.

For example, hospitalization data may be collected weekly, but analyzed monthly or quarterly. Survey data may be collected quarterly and analyzed at six-month intervals.

C.5 Other pertinent methodology features

Describe any other methodological decisions or issues that could affect the analysis of the data or influence the results, such as:

- coding definitions
- claims-processing specifications unique to your organization
- claims-processing delays
- unique survey response coding or benefit design (e.g., pharmacy benefits).

If your QIA does not include sufficient data as specified by NCQA policy, or if you believe the results are not biased by seasonal issues because of the definition of the measure, provide your rationale for considering this for QI 12 and QI 13.

Mark this section “NA” if there are no other methodological features that need to be brought to NCQA’s attention. You are not required to complete this section past this point.

Changes to Baseline Methodology

This section asks you to describe any methodology changes that were made after the baseline measurement was taken. To compare results accurately, it is best to use the same methodology over time. However, you may need to change methodology in order to strengthen the validity and reliability of the outcome, correct inadequacies in the initial process, or accommodate for lack of resources. Specifying changes that were made is important because those changes influence analysis of the results.

For each affected measure, you must describe:

- the dates during which the changed methodology was used
- how the methodology was changed
- the rationale for the change
- the anticipated impact of the change on the analysis.

If you changed the sampling methodology in the same way for several measures you need to provide the information only once. If the sampling methodology is the same, but the sample size has changed, show only those changes.

Section II: *Data/Results Table*

This section consists of a table of the results of the baseline measurement and all of the remeasurements that you are presenting for consideration for the QIA. You may substitute a table of your choice as long as it includes all of the required elements. If there are more than five remeasurement periods, add a row for each additional measure. If you measured a service issue more frequently than quarterly, combine the data by recalculating the numerator and denominator and enter the quarterly result in the table.

Table Description

Quantifiable measure	You may use the measure number from the list of measures completed in Section I and abbreviate the name.
Time period covered	State the time period the measurement covers. It could be quarterly (e.g., 1Q 2008), twice a year (e.g., January–June and July–December 2008), yearly (e.g., 2008), or every other year (e.g., January–December 2006 and January–December 2008).
Numerator/denominator	<p>List the numerator and denominator for each remeasurement period.</p> <p>If the measure uses survey methodology, state the number of people who met the numerator criteria (numerator) and the number of people who responded to the question (denominator).</p>
Rate or results	Convert the fraction (numerator/denominator) to a percentage.
Comparison benchmark/comparison goal	<p>List the goal and/or benchmark period in effect during the remeasurement cycle. The comparison goal is blank for the baseline measurement unless you have established a goal prior to pulling the baseline data. A goal based on baseline data that is in effect for the first remeasurement cycle should appear in the comparison box on remeasurement line 1. If you met your goal but there is still opportunity for improvement, NCQA suggests you increase your goal.</p> <p>If you changed your goal for any other reason, explain the basis for doing so in <i>Section III: Analysis Cycle</i>. You may also add benchmarks that you did not have at the baseline period.</p>
Statistical test and significance	<p>NCQA <i>does not</i> require you to test for statistical significance. Consult the appropriate Standards and Guidelines for the accreditation or certification program for which you are applying for additional information on the requirements for achieving meaningful improvement.</p> <p>If you have performed such tests and choose to report them, however, state the time periods that you compared and the type of statistical test used for each measure. The table has been left open-ended to allow you to compare any time period you choose. Most organizations compare the latest remeasurement to the previous one and the latest remeasurement to the baseline measurement.</p>

Statistical testing is generally not necessary when measures are based on the entire eligible population, and may not be appropriate if the denominator is not based on a random or probability sample or if the measure specifications substantially changed since the last remeasurement period.

For the most common test (comparing two independent rates), the chi-square test of proportions or the z-test of proportions can be used (e.g., a z-test to compare the baseline to remeasure #1, p value = 0.2992; and baseline to remeasure #5, p value = 0.001).

These tests are not appropriate when the same members are being measured at different time periods, in which case the McNemar test for correlated proportions might be appropriate.

If you measure nonrate data, such as average wait times, the t-test or z-test for comparing means would be appropriate, depending on the size of the sample. If you have several independent remeasurements, based on samples, you may want to do an ANOVA test of linear trend to show that the rate is increasing over time.

Section III: *Analysis Cycle*

In this section, you are asked to present the results of the quantitative and qualitative analyses you used to interpret the meaning of the results and to identify the opportunities for improvement that you wish to pursue. These analyses involve interpreting the data, which may include collecting additional data; identifying barriers or causes for less-than-desired performance; and designing strategies to overcome the barriers. Implementation of interventions is covered in Section IV.

Time Period and Measures Covered by the Analysis

Focus of the analysis

The analysis may occur after every remeasurement or after grouping several remeasurement periods. Your analysis may focus on one measure, on all measures or on a combination of measures.

For example, an activity designed to improve Preservice UM decision turn-around time may include three measures:

- time from request to decision
- time from request is notification
- perceived turn-around-time by member

You may collect these data quarterly but analyze the data only twice a year. The first analysis period might include only the first and second measure and the second might include all three measures.

On the clinical side, an example for improving asthma management could include:

- measures of ER visits
- inpatient admissions per thousand
- quality-of-life measures from a member survey.

For example, if you measured ER visits and inpatient admissions monthly and conducted the quality-of-life survey annually, you could analyze the first two measures quarterly and the quality-of-life measure annually.

If you have multiple analysis periods, it is helpful to label them clearly. For example:

- *Analysis I:* Calendar year
- *Analysis II:* Calendar year
- *Analysis III:* January–December 2005.

Identifying and Analyzing Opportunities for Improvement

In this section, you are asked to address the points specified, as appropriate, for the activity *for each analysis cycle*.

B.1 Quantitative analysis

Compare to the goal/benchmark. Have you met your goals and or achieved the benchmark?

Why did the goals change? If you changed your goal, explain why. If you met your goal but there is still opportunity for improvement, NCQA expects you to increase your goal. If you change your goal for any other reason, explain the basis for doing so. Avoid adjusting goals without a sound rationale for doing so.

Has the benchmark changed? If you changed your benchmark, indicate the source of the new benchmark and the date it was adopted.

Compare to previous measurements. Have the results increased or decreased since the previous remeasurement? If so, does this change represent an improvement, or deterioration?

Trends and statistical significance. Describe any trends you identified and their significance. What weight do you place on the presence or absence of statistical significance?

Impact of any methodological changes. Discuss the impact of the methodological changes on the actual results. Could the results be biased, positively or negatively, by the changes in methodology? Explain why or why not.

Overall survey response rate and implications. If any measures in the analysis are based on survey data, give the survey response rate for the entire survey.

Describe the impact that this response rate could have on the reliability of the findings. Variability in response rates in remeasurement periods should also be addressed (e.g., a 20 percent or less response rate is generally considered too low to draw reliable population-based conclusions).

B.2 Qualitative analysis

Techniques and data used. Many techniques exist for determining the barriers or root causes for the results. You may have to collect additional data, stratify the data, or analyze subgroup data in order to drill down sufficiently to understand the reasons for the results. Include both how you performed the barrier analysis and any additional data collected used for barrier analysis.

Brainstorming, multivoting, pareto analysis and fishbone diagramming are common continuous quality improvement techniques used to identify barriers to improvement. In addition to stratifying the data you already have collected to calculate the measure, you may have to analyze the results of other data, such as targeted survey results, complementary data (e.g., complaints in relation to satisfaction survey rates), and results of focus groups.

Expertise of group performing analysis. List the group or committee that was involved in the analysis and state why it was qualified to perform this analysis by describing the composition of the group and its expertise in evaluating this activity. If statistical or survey research analysis is required, describe the qualifications of those involved.

For service issues, such as UM turn-around on decision, the analysis may be performed by departmental managers and staff. Clinical issues may require expertise in the clinical subject matter as well as an understanding of the delivery system, benefit structure and other distinctive aspects of the organization.

NCQA recognizes that many service issues are addressed during the normal course of business and that there may not be a formal a committee structure to address these issues as there is with clinical issues.

Citations from literature. For many clinical and service quality improvement activities, there are sources that contain information about barriers to performance that have already been identified and are generally accepted. You may use these sources to supplement, or substitute for, your own barrier analysis. Give the complete citation (i.e., name of article and journal and date of publication) for each source you have used.

Barriers/opportunities identified. List the barriers to or causes for the less than acceptable performance that you identified, if any. Although NCQA recognizes that inadequate data collection may contribute to low performance, it does not accept improvements in data collection alone as an opportunity to improve.

Barriers and opportunities for improvement must focus on variables (e.g., improving processes, changing benefits, and educating members, practitioners or both) that can result in improved performance.

The following are examples of categories that may create barriers:

- member knowledge
- practitioner knowledge
- benefit coverage
- co-pay restrictions
- organization staffing
- problems with PCP or specialist access
- referral access
- systems issues in the organization.

List opportunities for improvement that you identified from the barriers. For example, you may identify the lack of family involvement in therapy as a barrier to improving depression management for children and adolescents. Next, you may identify as opportunities for improvement the lack of knowledge by the practitioner of the importance of family involvement, the family's unwillingness to participate in therapy, and the child's resistance to parental involvement. You must then choose which of these opportunities to focus on and develop one or more interventions.

Although you list the interventions in relation to the barriers you identified in Section IV, you should justify here the causal link between your interventions and the results you observed. Explain how your interventions influenced the outcome; identify the interventions that were most influential and explain why; and describe any intervening or confounding factors that may have contributed to the changes.

Some barriers do not lead to opportunities because of benefit restrictions, state law or other problems outside the control of the organization.

Remember that opportunities are not the same as barriers or interventions.

- | | |
|--------------------------|---|
| Barrier example 1 | <p>Barrier: Inadequate coverage of phones during lunch and breaks</p> <p>Opportunity: Improve lunchtime and break coverage</p> <p>Intervention: Revised staff scheduling to provide better coverage using existing staff</p> |
| Barrier example 2 | <p>Barrier: Insufficient psychiatrist availability in a region</p> <p>Opportunity: Increase psychiatrist access by contracting with more psychiatrists</p> <p>Intervention: Recruited six new psychiatrists to meet availability needs</p> |

Section IV: Interventions Table

In this section, you are asked to list the interventions taken to overcome barriers you identified in the previous section.

Note: You are not required to pursue interventions for all identified barriers.

Table Description

Date implemented	List the month and year during which the intervention was implemented.
Check if ongoing	<p>Some interventions occur on a regular, ongoing basis. Often the effectiveness of the intervention rests on its repetitive nature.</p> <p>Check the column if the intervention occurs at some periodic interval, then state its frequency (e.g., monthly, quarterly, annually). Examples are:</p> <ul style="list-style-type: none"> • quarterly training for UM staff, • annual mailings on the importance of colon cancer screening, and • monthly review of quality reports of timeliness of approving referrals are examples of ongoing interventions.
Intervention	<p>List the interventions chronologically. Generally, you implement interventions after the data are analyzed. If you began interventions prior to analyzing the baseline measure or prior to this survey period and you believe they have an impact on the performance measures during this survey period, list them first. Interventions may be listed under categories, such as member, practitioner, collaborative, and systems, if doing so is useful to you.</p> <p>Provide a detailed, quantitative definition of the intervention whenever possible. For example, “hired four UM nurses” is more specific than “increased UM staffing.” “Mailed lists of 455 noncompliant members to 54 pediatricians and 31 family practitioners” better describes the magnitude of the intervention than “mailed lists of noncompliant members to practitioners.” You may abbreviate the full name of the intervention after using it for the first time.</p> <p>Do not include activities that have been planned but not yet implemented (e.g., developing policies, conducting committee meetings or organizing activities).</p>

Remember that you may include interventions taken after the last remeasurement period shown on this form, but they are not used by NCQA to determine meaningful improvement.

This list also summarizes your interventions. NCQA surveyors review additional back-up material to document the extent of the intervention and its implementation.

Barriers that interventions address

List all the barriers that each intervention is designed to address, which you should have previously described in Section III. You may abbreviate the name of the barrier. It may be helpful to number the barriers and use the numbers in subsequent references to them.

Do not include barriers related to data collection. An example of a completed Section IV interventions table appears below:

Activity Name: Improving Preservice UM decision turn-around time			
Section IV: Interventions Table			
Interventions Taken for Improvement as a Result of Analysis. List chronologically the interventions that have had the most impact on improving the measure. Describe only the interventions and provide quantitative details whenever possible (e.g., "hired 4 customer service reps" as opposed to "hired customer service reps"). Do not include the intervention planning activities.			
Date Implemented (MM / YY)	Check if Ongoing	Interventions	Barriers That Interventions Address
03/05		Hired 3 UM nurses	Inadequate UM staffing
09/05	X	Instituted weekly lunchtime training sessions conducted by staff of claims, marketing, etc., departments to update UM staff about policies and discuss more efficient decision making processes	UM staff not following timeliness protocols consistently
12/06		Distributed to all practitioners an updated practitioner handbook that included a description of how the UM decision making process and the time frames	Inadequate practitioner knowledge about role of customer service department
4/06	X	Revised session on UM procedures and processes and delivered as part of all new practitioner orientations	Inadequate practitioner knowledge of UM process

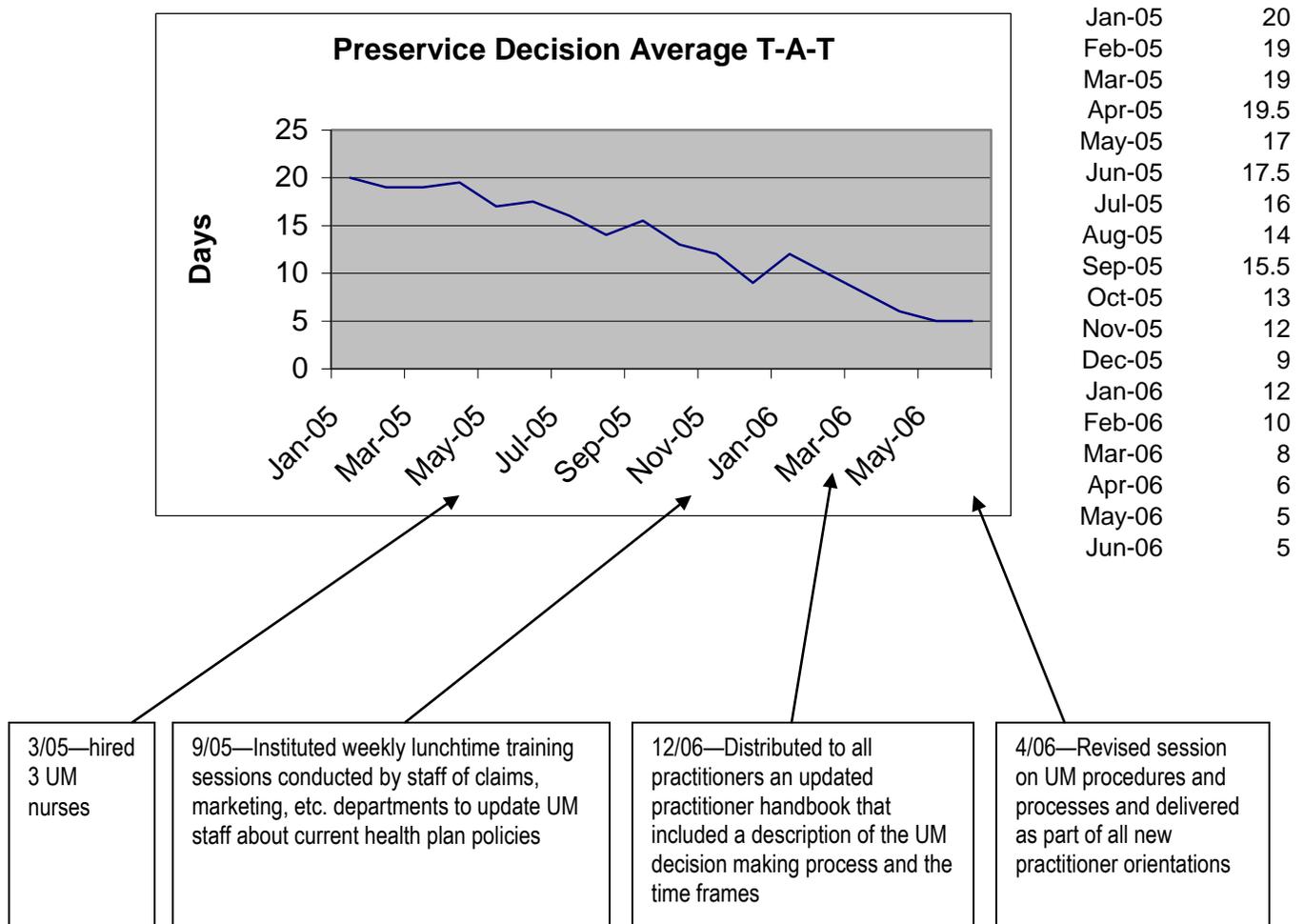
Section V: Chart or Graph (Optional)

This section supplements the information you have provided up to now by more fully clarifying the relationship between the results of the remeasurements and the timing of the interventions.

A chart or a graph that plots both the results and the dates you implemented changes designed to improve your results often provides a visual presentation that is helpful in addition to the narrative or tables.

NCQA recommends attaching this “picture” if the activity has more than two measurement periods in order to show the relationship between the timing of the interventions (the cause) and the result of the remeasurements (the effect). Present one chart or graph for each measure unless the measures are closely correlated, which may be displayed in one graphic.

Use whatever type of chart (line, bar, mixed) that clearly presents both your interventions and your performance measures. A simple line graph might be appropriate for service activities with multiple data points, while a bar chart might be more appropriate to show changes in measures with annual measurement points. Interventions are placed on the graph or bar and show the dates of implementation. You may number the interventions and provide a key to the numbering, or you may number the interventions in Section III and use those numbers on the graph or bar. NCQA encourages you to limit the interventions you use to those you have identified as being the strongest.



NCQA does not require control charts that display upper and lower confidence limits, but you may include them if you believe they are helpful in demonstrating the stability of the measure over time.

Back-Up Information

NCQA wants to review documentation that supports the information you have summarized on your QIA. In addition to the completed QIA form, NCQA may need additional documentation. Your designated ASC will let you know if this applies.

- Such information often encompasses:
 - all material related to methodology, including data collection tools (e.g., medical record abstraction sheets, codes for administrative data, inter-rater reliability testing, computer algorithms)
 - copies of literature cited, as appropriate
 - excerpts of minutes or other documentation that show how and when analysis was performed
 - tools and supplemental data used in barrier analysis
 - evidence and dates of actions taken:
 - ◆ Copies of mailings
 - ◆ Newsletters
 - ◆ Responses from practitioners or members
 - ◆ Revised policies and procedures
 - ◆ Excerpts from updated member or practitioner handbooks
 - ◆ Revised contracts

QUALITY IMPROVEMENT FORM

NCQA Quality Improvement Activity Form (an electronic version is available on NCQA's Web site)

Activity Name:	
Section I: Activity Selection and Methodology	
A. Rationale. Use objective information (data) to explain your rationale for why this activity is important to members or practitioners <i>and</i> why there is an opportunity for improvement.	
B. Quantifiable Measures. List and define <i>all</i> quantifiable measures used in this activity. Include a goal or benchmark for each measure. If a goal was established, list it. If you list a benchmark, state the source. Add sections for additional quantifiable measures as needed.	
Quantifiable Measure #1:	
Numerator:	
Denominator:	
First measurement period dates:	
Baseline Benchmark:	
Source of benchmark:	
Baseline goal:	

Quantifiable Measure #2:	
Numerator:	
Denominator:	
First measurement period dates:	
Benchmark:	
Source of benchmark:	
Baseline goal:	
Quantifiable Measure #3:	
Numerator:	
Denominator:	
First measurement period dates:	
Benchmark:	
Source of benchmark:	
Baseline goal:	
C. Baseline Methodology.	

C.1 Data Sources.
<input type="checkbox"/> Medical/treatment records <input type="checkbox"/> Administrative data: <input type="checkbox"/> Claims/encounter data <input type="checkbox"/> Complaints <input type="checkbox"/> Appeals <input type="checkbox"/> Telephone service data <input type="checkbox"/> Appointment/access data <input type="checkbox"/> Hybrid (medical/treatment records and administrative) <input type="checkbox"/> Pharmacy data <input type="checkbox"/> Survey data (attach the survey tool and the complete survey protocol) <input type="checkbox"/> Other (list and describe): <hr/> <hr/>

C.2 Data Collection Methodology. Check all that apply and enter the measure number from Section B next to the appropriate methodology.	
<p>If medical/treatment records, check below:</p> <input type="checkbox"/> Medical/treatment record abstraction <p>If survey, check all that apply:</p> <input type="checkbox"/> Personal interview <input type="checkbox"/> Mail <input type="checkbox"/> Phone with CATI script <input type="checkbox"/> Phone with IVR <input type="checkbox"/> Internet <input type="checkbox"/> Incentive provided <input type="checkbox"/> Other (list and describe): <hr/> <hr/>	<p>If administrative, check all that apply:</p> <input type="checkbox"/> Programmed pull from claims/encounter files of all eligible members <input type="checkbox"/> Programmed pull from claims/encounter files of a sample of members <input type="checkbox"/> Complaint/appeal data by reason codes <input type="checkbox"/> Pharmacy data <input type="checkbox"/> Delegated entity data <input type="checkbox"/> Vendor file <input type="checkbox"/> Automated response time file from call center <input type="checkbox"/> Appointment/access data <input type="checkbox"/> Other (list and describe): <hr/> <hr/>

C.3 Sampling. If sampling was used, provide the following information.

Measure	Sample Size	Population	Method for Determining Size <i>(describe)</i>	Sampling Method <i>(describe)</i>

C.4 Data Collection Cycle.	Data Analysis Cycle.
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<ul style="list-style-type: none"> <input type="checkbox"/> Once a year <input type="checkbox"/> Twice a year <input type="checkbox"/> Once a season <input type="checkbox"/> Once a quarter <input type="checkbox"/> Once a month <input type="checkbox"/> Once a week <input type="checkbox"/> Once a day <input type="checkbox"/> Continuous <input type="checkbox"/> Other (list and describe): <p>_____</p> <p>_____</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Once a year <input type="checkbox"/> Once a season <input type="checkbox"/> Once a quarter <input type="checkbox"/> Once a month <input type="checkbox"/> Continuous <input type="checkbox"/> Other (list and describe): <p>_____</p> <p>_____</p>
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C.5 Other Pertinent Methodological Features. Complete only if needed.

D. Changes to Baseline Methodology. Describe any changes in methodology from measurement to measurement.

Include, as appropriate:

- Measure and time period covered
- Type of change
- Rationale for change
- Changes in sampling methodology, including changes in sample size, method for determining size and sampling method
- Any introduction of bias that could affect the results

Section II: Data / Results Table
 Complete for each quantifiable measure; add additional sections as needed.

#1 Quantifiable Measure:

Time Period Measurement Covers	Measurement	Numerator	Denominator	Rate or Results	Comparison Benchmark	Comparison Goal	Statistical Test and Significance*
	<i>Baseline:</i>						
	Remeasurement 1:						
	Remeasurement 2:						
	Remeasurement 3:						
	Remeasurement 4:						
	Remeasurement 5:						

#2 Quantifiable Measure:

Time Period Measurement Covers	Measurement	Numerator	Denominator	Rate or Results	Comparison Benchmark	Comparison Goal	Statistical Test and Significance*
	<i>Baseline:</i>						
	Remeasurement 1:						
	Remeasurement 2:						
	Remeasurement 3:						
	Remeasurement 4:						
	Remeasurement 5:						

#3 Quantifiable Measure:

Time Period Measurement Covers	Measurement	Numerator	Denominator	Rate or Results	Comparison Benchmark	Comparison Goal	Statistical Test and Significance*
	<i>Baseline:</i>						
	Remeasurement 1:						
	Remeasurement 2:						
	Remeasurement 3:						
	Remeasurement 4:						
	Remeasurement 5:						

* If used, specify the test, p value, and specific measurements (e.g., baseline to remeasurement #1, remeasurement #1 to remeasurement #2, etc., or baseline to final remeasurement) included in the calculations. NCQA does not require statistical testing.

Section III: Analysis Cycle
Complete this section for EACH analysis cycle presented.

A. Time Period and Measures That Analysis Covers.

B. Analysis and Identification of Opportunities for Improvement. Describe the analysis and include the points listed below.

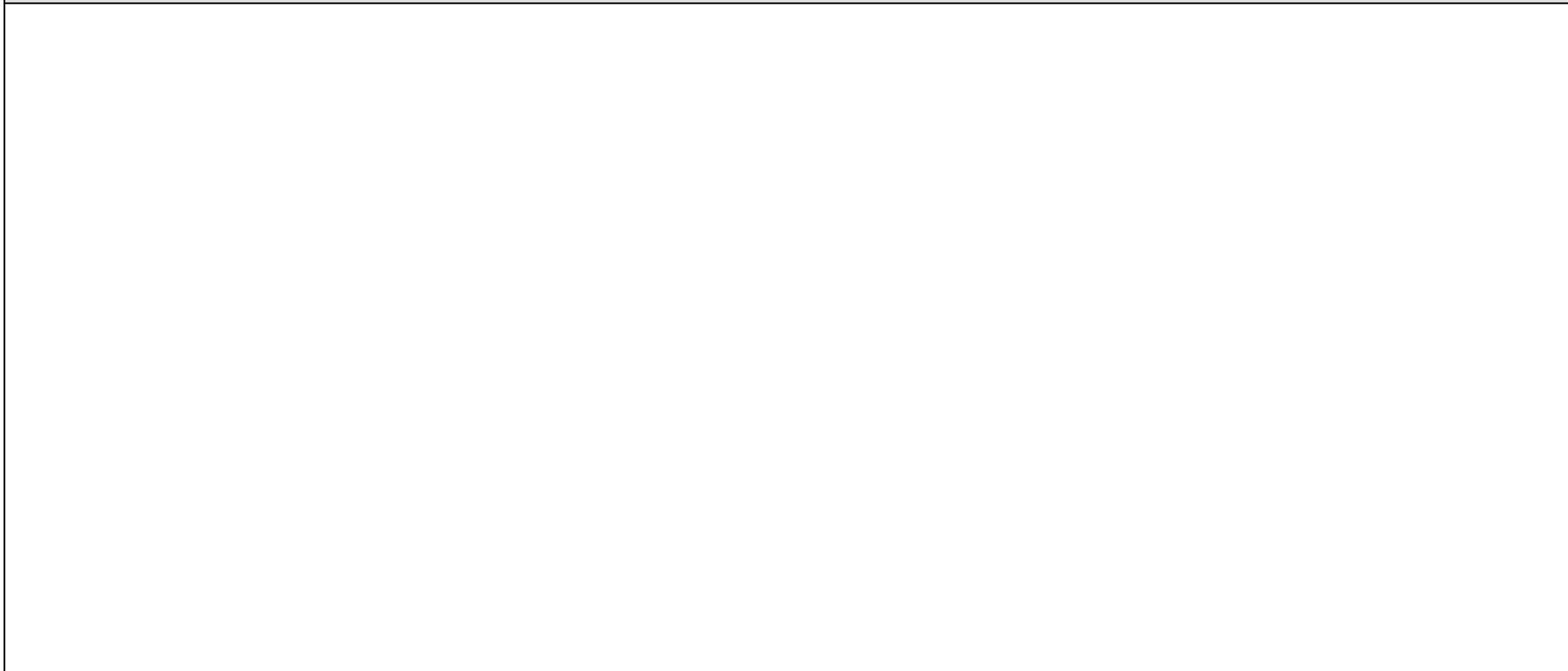
B.1 For the quantitative analysis, include the analysis of the following:

- Comparison with the goal/benchmark
- Reasons for changes to goals
- If benchmarks changed since baseline, list source and date of changes
- Comparison with previous measurements
- Trends, increases or decreases in performance or changes in statistical significance (if used)
- Impact of any methodological changes that could impact the results
- For a survey, include the overall response rate and the implications of the survey response rate

B.2 For the qualitative analysis, describe any analysis that identifies causes for less than desired performance (barrier/causal analysis) and include the following:

- Techniques and data (if used) in the analysis
- Expertise (e.g., titles; knowledge of subject matter) of the work group or committees conducting the analysis
- Citations from literature identifying barriers (if any)
- Barriers/opportunities identified through the analysis
- Impact of interventions

remeasurements (effect). Present one graph for each measure unless the measures are closely correlated, such as average speed of answer and call abandonment rate. Control charts are not required, but are helpful in demonstrating the stability of the measure over time or after the implementation.



QUALITY/PERFORMANCE IMPROVEMENT AREA	STATE OVERSIGHT & MONITORING MECHANISM	FEDERAL REGULATION	NCQA STANDARD
5. Standards for Access to Care, Structure and Operations, and Quality Measurement and Improvement			QI 3: Health Services Contracting <ul style="list-style-type: none"> • Element A: Practitioner Contracts
5.a. Access Standards	<ul style="list-style-type: none"> • Performance incentive program • Encounter Data System • MMIS data • Risk-share reporting • NCQA information • Member Satisfaction Survey • Complaint, grievance, and appeals reporting • EQRO activities • Special studies • Contract compliance review 	§438.206	QI 4: Availability of Practitioners <ul style="list-style-type: none"> • Element A: Cultural Needs and Preferences • Element B: Practitioners Providing Primary Care • Element C: Practitioners Providing Specialty Care QI 5: Accessibility of Services <ul style="list-style-type: none"> • Element A: Assessment Against Access Standards MED 1: Medicaid Benefits and Services <ul style="list-style-type: none"> • Element A: Direct Access to Women's Health Services • Element B: Second Opinions • Element C: Out-of-Network Services • Element D: Out-of-Network Cost to Member • Element E: Hours of Operation Parity RR 3: Subscriber Information
5.a.1 Availability of services			
5.a.2 Assurances of adequate capacity and services	<ul style="list-style-type: none"> • Provider network reporting • NCQA information • Contract compliance review 	§438.207	QI 4: Availability of Practitioners <ul style="list-style-type: none"> • Element B: Practitioners Providing Primary Care • Element C: Ensuring Availability of SCPs QI 4: Availability of Practitioners <ul style="list-style-type: none"> • Element B: Practitioners Providing Primary Care
5.a.3 Coordination and continuity of care	<ul style="list-style-type: none"> • Complaint, grievance, and appeals reporting • NCQA information • EQRO activities • Special studies • Contract compliance review 	§438.208	QI 5: Accessibility of Services <ul style="list-style-type: none"> • Element A: Assessment Against Access Standards Using valid methodology UM 2: Clinical Criteria for UM Decisions <ul style="list-style-type: none"> • Element C: Consistency in Applying Criteria UM 4: Appropriate Professionals <ul style="list-style-type: none"> • Element A: Licensed Health Professionals • Element B: Use of Practitioners for UM Decisions • Element F - Affirmative Statement about Incentives
5.a.4 Coverage and authorization of services	<ul style="list-style-type: none"> • Encounter Data System • MMIS data 	§438.210	

	<ul style="list-style-type: none"> Risk-share reporting NCQA information Member Satisfaction Survey Complaint, grievance, and appeals reporting EQRO activities Contract compliance review 	<p>UM 5: Timeliness of UM Decisions</p> <ul style="list-style-type: none"> Element A: Timeliness of Non-BH UM Decision Making Element B: Notification of Non-BH Decisions: Element C: Timeliness of BH UM Decision Making Element D: Notification of BH Decisions <p>UM 7: Denial Notices</p> <ul style="list-style-type: none"> Element A: Notification of Reviewer Availability Element C: Reason for Non-BH Denial Element F: Reason for BH Denial 	
<p>5.b. Structure and Operation Standards</p>		<p>CR 1: Credentialing Policies</p> <ul style="list-style-type: none"> Element A: Practitioner Credentialing Guidelines Element B: Practitioner rights 	<p>§438.214</p>
<p>5.b.1 Provider selection</p>	<ul style="list-style-type: none"> Provider network data NCQA information Complaint, grievance, and appeals reporting Contract compliance review 	<p>UM 2: Clinical Criteria for UM Decisions</p> <ul style="list-style-type: none"> Element C: Consistency in Applying Criteria 	<p>§438.218</p>
<p>5.b.2 Enrollee information</p>	<ul style="list-style-type: none"> Performance incentive program On-site reviews NCQA information Complaint, grievance, and appeals reporting Special studies Contract compliance review 	<p>UM 4: Appropriate Professionals</p> <ul style="list-style-type: none"> Element A: Licensed Health Professionals Element B: Use of Practitioners for UM Decisions Element F - Affirmative Statement about Incentives <p>UM 5: Timeliness of UM Decisions</p> <ul style="list-style-type: none"> Element A: Timeliness of Non-BH UM Decision Making Element B: Notification of Non-BH Decisions: Element C: Timeliness of BH UM Decision Making Element D: Notification of BH Decisions 	<p>UM 7: Denial Notices</p> <ul style="list-style-type: none"> Element A: Notification of Reviewer Availability Element C: Reason for Non-BH Denial Element F: Reason for BH Denial
<p>5.b.3 Confidentiality</p>	<ul style="list-style-type: none"> NCQA information Complaint, grievance, and appeals reporting Contract compliance review 	<p>438.204</p> <ul style="list-style-type: none"> States can use NCQA's accreditation reports to monitor MCO compliance HEDIS® Measures can be used to measure and evaluate plan performance The annual review can incorporate information obtained from HEDIS® measures and accreditation standards 	<p>RR 5 Privacy and Confidentiality</p>
<p>5.b.4 Enrollment and disenrollment</p>	<ul style="list-style-type: none"> MMIS data NCQA information Complaint, grievance, and appeals reporting Contract compliance review 		<p>§438.224</p>

<p>5.b.5 Grievance systems</p>	<ul style="list-style-type: none"> • NCQA information • Annual Member Satisfaction Survey • Complaint, grievance, and appeals, reporting • Special studies • Contract compliance review • Specific to §438.226, analysis by the Rhode Island EOHHS Member Dis-enrollment Request Review Team • NCQA information • Complaint, grievance, and appeals reporting • Special studies • Contract compliance review 	<ul style="list-style-type: none"> • Element A: Adopting Written Policies • Element C: Protection for PHI Sent to Plan Sponsors • Element D: Authorization • Element E: Communication of PHI Use and Disclosure <p>NCQA Standards are not applicable; please refer to the State Oversight and Monitoring Mechanism</p> <p>RR 2: Policies for Complaints and Appeals</p> <ul style="list-style-type: none"> • Element A: Policies and Procedures for Complaints • Element B (and C): Preservice (and Postservice) Appeals <p>UM 2 Element C: Consistency in Applying Clinical Criteria</p> <p>UM 5: Timeliness of UM Decisions</p> <ul style="list-style-type: none"> • Element B: Notification of Non-BH Decisions <p>UM 8: Policies for Appeals</p> <ul style="list-style-type: none"> • Element B: Preservice Appeals • Element C: Postservice Appeals • Element E: External Reviews in States With Laws <p>UM 7: Denial Notices</p> <ul style="list-style-type: none"> • Elements C and F: Reason for Non-Behavioral Health and Behavioral Health Denial • Elements D and G: Non-BH and Behavioral Health Notice of Appeals Rights/Process <p>UM 9 Appropriate Handling of Appeals</p> <ul style="list-style-type: none"> • Element A: Preservice and Postservice Appeals • Element D - Notification of Appeal Decision/Rights • Element F: Appeals Overturned by the IRO <p>RR 2B: Member notification</p> <p>Delegation Standards: CR 12, RR 7, UM 15 and QI 12: Delegation of Credentialing, Rights and Responsibilities, Utilization Management and Quality Improvement</p> <ul style="list-style-type: none"> • Element A: Written Delegation Agreement • Element D: Predelegation Evaluation • Element F: Reporting • Element G: Opportunities for Improvement
<p>§438.226</p>		
<p>§438.228</p>		
<p>§438.230</p>		
<p>5.b.6 Sub contractual relationships and delegation</p>		

<p>5.c. Quality Measurement and Improvement Standards</p>	<ul style="list-style-type: none"> • NCQA information • Special studies • Contract compliance review 	<p>§438.236</p>	<p>QI 9: Clinical Practice Guidelines</p> <ul style="list-style-type: none"> • Element A: Adoption and Distribution of Guidelines
<p>5.c.1 Practice guidelines</p>	<ul style="list-style-type: none"> • Performance incentive program • Encounter Data System • Complaint, grievance, and appeals reporting • NCQA information • Special studies • Contract compliance review 	<p>§438.240</p>	<p>QI 1: Program Structure</p> <ul style="list-style-type: none"> • Element A: Quality Improvement Program Structure
<p>5.c.2 Quality assessment and performance improvement program</p>	<ul style="list-style-type: none"> • Performance incentive program • Encounter Data System • Complaint, grievance, and appeals reporting • NCQA information • Special studies • Contract compliance review 	<p>§438.242</p>	<p>HEDIS® Measures: HEDIS® clinical measures account for 32.86 out of 100 points for HP accreditation.</p> <p>CAHPS 4.0H Survey: CAHPS survey results account for 13.00 out of 100 points for HP accreditation</p> <p>A plan's ability to report HEDIS® indicated that these required systems are in place</p> <p>HEDIS® Compliance Audit</p>
<p>5.c.3 Health information systems</p>	<ul style="list-style-type: none"> • Encounter Data System • Risk-share reporting • NCQA information • EQRO activities • Special studies • Contract compliance review 		<p>A copy of the plan's HEDIS® Data Submission Tool (DST) could be submitted to the state</p>