A Decade of Advancing Patient-Centered Care:
The 10th National CAHPS® User Group Meeting

Session: CAHPS Nursing Home Survey for Residents

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Why Develop a Resident Nursing Home CAHPS ?

- **CMS interested in developing a CAHPS survey for Nursing Home residents**
  – CMS, both Medicare & Medicaid, is a major payer of Nursing Home care
  – Thru "Nursing Home Compare" web site CMS provides info on clinical NH quality

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Resident Nursing Home CAHPS-History

- Early phases focused on feasibility (literature review, expert interviews, Methodological Expert Group (MEG) meeting
- Spring 2001-fall 2003:
  - focus groups with residents and families;
  - 5 Rounds of Testing of format and wording of Quality of Care (QoC) questions (September 2003 Report available)
- Fall 2003: CMS decided to merge Kane's Quality of Life (QoL) items
- Fall 2003 – Summer 2004: Selection of QOL items
- Fall 2004 – Spring 2005: 2 Rounds of testing of QoL questions

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Field Test Phase

- **May 2005: Pretest of Merged Instrument (QoC and QoL)**

- **June - August 2005: Field Test**
  - **in-person for long-term current residents**
  - **mail for short-term discharged residents**

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Merged Resident Questionnaire

- **Mixture of :**
  - **Unique CAHPS elements (e.g., Rate how well staff explain things to you; Rate how quickly staff come when you call for help)**
  - **Unique QOL items (e.g., Can you choose what time to go to bed, what clothes to wear?)**
  - **Overlap of both CAHPS and QOL (e.g., rate how respectful staff are to you)**
  - **Response scales**
    - *Quality of care* items generally have 0-10 scale
    - *Quality of life* items generally have yes/no/sometimes response scale

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Field Test

Questions for the Field Test

- **Can we get sample from Nursing Homes?**
- **How many residents are eligible?**
  - Can they participate?
  - Will they be willing to participate?
- **How do we do it?**
  - Will it work for the Nursing Homes?
  - Will it work for the study?
- **How long will it take?**
- **How do different cognitive screeners work?**

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Sample Decisions:
Nursing Homes

- **Size**
  - Small/Medium: 40-114 beds
  - Large: 115+ beds
- **Profit and not-for-profit**
- **Free-standing and hospital-based**

	For Profit	Not-for-profit
Small/Medium	3	2
Large	5	1

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Sample Decisions:
Long Term Residents (In- Person)

- **ELIGIBILITY:**
  - In nursing home for at least 30 days
  - No discharge planned within 90 days

- **EXCLUSIONS:**
  - In a coma
  - Last MDS evaluation indicates "severe mental impairment"
  - Has a legal guardian or other legal oversight

- **LANGUAGE**
  - Administered in English only
  - Not sampled on language

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Recruitment and Sample collection

- **Recruit NH**
- **Contact NH**
  - Get basic information
  - Designated contact person
- **Request total census from the NH**
  - All current residents
  - All residents discharged in last 2 months

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Data Requested (from MDS) Long term Residents

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- Resident Name & Room number
- Gender, Birth date, Race/ethnicity, Education

- Date of admission, Whether discharge is planned (Q1c)
- Have a legal guardian or "other legal oversight" (A9a & A9b)
- Comatose (B1)
- Cognitive Skills (B4)

- Date of most recent MDS (A3)
- Short-term memory problems (B2A)
- Making self understood (C4)
- Eating self-performance (G1hA)

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Sample Eligibility: In-Person Sample cahps

Initial Listing of Residents		**1347**
Determined Ineligible Based on MDS Records		477
Has Legal Guardian/Oversight	170	
Comatose	4	
Severely Cognitively Impaired	238	
Discharge Planned	97	
Not in NH > 30 days	39	
Found Ineligible During Data Collection		83
Has Legal Guardian/Oversight	7	
Deceased	20	
Discharged/No Longer at NH	31	
Non-English Speaking	25	
TOTAL INELIGIBLE		560
TOTAL ELIGIBLE		**787**
% INITIALLY LISTED WHO WERE ELIGIBLE		**58.4%**

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Interviewing Protocol: In-Person Survey

- **Create sample & randomize list**

- **The staff**
  - 11 professional interviewers
  - All female, ages 21 to 75
  - The team: site coordinator and 3 to 6 interviewers

- **Conduct the interviews in the order they received them**

- **In each home 2 days**

- **Repeat visits**
  - Asleep
  - Busy
  - Refusals
  - Unresponsive

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Data Collection Results: In-Person Survey
Field Period: June 22, 2005 – Aug 9, 2005

TOTAL ELIGIBLE:		**787**
Never assigned for Data Collection:	169	
ELIGIBLE & ASSIGNED FOR DATA COLLECTION	618	
Attempted but Not Interviewed	194	
INTERVIEWED		**424**
PERCENT OF ELIGIBLE SAMPLE INTERVIEWED		**68.6%**

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Who wasn't interviewed?

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	N	% of Non-Responders (n=194)	% of Eligible Sample (n=618)
Unable to answer 3 Questions In a row	73	38.6	11.8
Unresponsive	43	22.2	7.0
Refused	39	20.1	6.3
Ill	19	9.8	3.1
Hearing Problems	15	7.7	2.4
Other	5	2.8	0.8
TOTAL	194	100%	31.4%

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Results by CPS score:
In-Person Survey

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CPS	Actual Sample Received	Eligible	Eligible & Assigned	Refused	Unrespon-sive	Could not Answer 3 Questions	Interviews
0	167	116 (69.5%)	99	4 (4.0%)	0 (0%)	7 (7.1%)	82 (83.8%)
1	173	121 (69.9%)	98	4 (4.1%)	1 (1.0%)	7 (7.1%)	80 (81.6%)
2	197	159 (80.7%)	128	10 (7.8%)	2 (1.6%)	10 (7.8%)	99 (77.3%)
3	448	326 (72.7%)	254	16 (6.3%)	22 (8.7%)	45 (17.7%)	153 (60.2%)
4	84	50 (59.5%	38	5 (13.2%)	18 (47.4%)	4 (10.5%)	9 (23.7%)

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How long did it take?

	Mean time (minutes)	Range (minutes)
Vignettes	3.29	1 - 12
Survey	15.94	5 - 80
Short Blessed	4.41	1 - 15
Total	23.66*	10 - 84

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What we Learned: In-Person Survey

- **Getting sample**
  - Possible to get – but was time consuming for NHs and project staff

- **Eligibility & Participation**
  - 57% of original sample eligible
  - Almost 70% of eligibles interviewed
  - Most non-responders not capable of participating
  - Very few refusals

- **Procedure**
  - No problems reported by NHs
  - Professional Interviewing Team worked well
  - Visiting over 2 days with up to 2 visits per respondent worked well

- **Time**
  - Interviews: about 20 minutes long
  - Total time spent per interview: about 96 minutes

- **Cognitive "Screeners"**
  - Short Blessed was disliked by both interviewers and respondents
  - Vignettes worked
  - Shouldn't base eligibility solely on CPS
  - Stopping when unable to answer worked best

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Why Professional Interviewers for Field Test?

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- **Allow for quick start-up**

- **Trained in non-directive standardized interviewing**

- **Knowledge of interview process**
  - We were confident that sample decisions would be consistent

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Comparison of Interviewer Types

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	Professional Interviewers	NH Staff	Other e.g. students, ombudsmen
Exposure to/understanding of NH population	maybe	+	maybe
Cost	-	+	+
Need for increased supervision/quality control	+	-	-
Understanding of research methods/neutrality	+	-	-
Data Quality (missing/inadequate data)	+	-	-
Reporting bias (Respondent self-censorship/fear of retaliation)	+	-	maybe
Competing demands on time	+	-	maybe

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Sample Decisions: Discharged Residents (Mail)

- **ELIGIBILITY:**
  - In nursing home for at least 5 days but not more than 90 days

- **EXCLUSIONS:**
  - In a coma
  - Last MDS evaluation indicates "severe mental impairment"
  - Has a legal guardian or other legal oversight

- **LANGUAGE**
  - Only English version mailed
  - Not sampled on language

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Additional Data Requested (asked for data from the last 2 months)

- **Where discharged to? (R3a)**

- **Date of discharge (R4)**

- **Address discharged to**

- **Phone number discharged to (if available)**

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Sample Eligibility: Mail Sample

Initial Listing of Discharged Residents		381
Determined Ineligible Based on Records		**133**
Has Legal Guardian/Oversight	**11**	
Discharged to another facility	**60**	
Deceased	**36**	
Not meet residency requirements	**29**	
Severely Cognitively Impaired	**7**	
TOTAL MAILED		248
Found Ineligible (Deceased)	**10**	
TOTAL INELIGIBLE	**143**	
TOTAL ELIGIBLE		238
% INITIALLY LISTED WHO WERE ELIGIBLE		62.5%

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Protocol: Mail Survey

- **Initial Mailing**
  – Cover letter
  – Fact sheet
  – Self-administered questionnaire
  – Postage-paid return envelope

- **2nd Mailing to non-responders** (Sent after 2 weeks)

- **Reminder Calls to non-responders** (After 2 weeks)
  – After 2 weeks
  – Make sure they had received the questionnaire
  – Answer questions
  – Urge participation

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Data Collection Results: Mail Survey

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TOTAL ELIGIBLE		238
NHs with 1 mailing	**95**	
NHs with 2 mailings	**143**	
RETURNED SURVEYS		123
NHs with 1 mailing	**41**	
NHs with 2 mailings	**82**	
% ELIGIBLE WHO RETURNED SURVEYS		51.7%
NHs with 1 mailing	**43.2%**	
NHs with 2 mailings	**57.3%**	

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What We Learned: Mail Survey

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- **Getting sample**
  - Harder to collect than for current residents
  - Contact data reasonably good

- **Eligibility & Participation**
  - Many fewer discharged residents than current residents
  - 63% of original sample eligible
  - 57% of those with a 2-mailing protocol returned surveys
  - Other surveys done by NH does not seem to be a factor in participation

- **Procedure**
  - A standard mail protocol – 2 mailings and phone follow-up/ interview would lead to very acceptable response rates

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Analysis of Field Test Data

Comparison of Responders and Non-Responders in Both Samples:

- **Potentially eligible but not-interviewed were older and more cognitively impaired than the interview sample**
- **No significant differences between responders and non-responders on mail survey**
- **The interview sample was significantly more cognitively impaired than the mail sample**

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Survey Item Performance

- **Item non-response ranged from 1-6% (1-11%) the interview (mail) sample for most items**
  - Religious needs had the highest non-response - 6% in interview and 18% in mail sample
  - Correlations between an index of non-response and measures of cognitive function were statistically significant but weak
- **Questions on hearing, eye and dental care had lower levels of applicability**
- **Interviewers found several items need revision**
- **Responses from Interview and Mail respondents from the same nursing home are poorly correlated**

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Survey Item Performance (cont.)

- **Ceiling effects**
  - More pronounced among 3-response items - Yes, Sometimes, No
    - Most pronounced:
      - Autonomy items, choose bedtime, clothes, activities
      - Personal privacy item

  - Less pronounced for 0-10 ratings

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5 Composite Measures

Scale	Number of items	Internal Consistency
Environment	9	0.73
Care	5	0.77
Communication & Respect	3	0.86
Autonomy	3	0.56
Activities	2	0.64

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Items within Composites

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- **Communication & Respect (3 items):**
  - How respectful staff are, how well staff listen to resident, how clearly staff explain things
- **Autonomy (3 items):**
  - Can choose: (1) time to go to bed, (2) clothes to wear, (3) activities to do
- **Activities (2 items):**
  - Enough organized activities on weekdays and weekends

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Items within Composites (cont.)

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- **Environment (9 items):**
  - Food, dining room experience, temperature, cleanliness, safety & security, noise during day and night, private place for visiting, room set up
  - Also can use subscale on the 2 food items
- **Care (5 items):**
  - Medicine helps w/pain, staff helps w/pain, how quickly staff respond, gentleness of staff, staff making sure one has enough privacy

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Correlations between Scales and Overall Ratings

Ratings	Environment	Care	Communication & Respect	Autonomy	Activities
Care from NH staff	0.55	0.65	0.80	0.20	0.27
Care from physicians	0.38	0.44	0.45	0.20	0.30
Overall Rating of NH	0.62	0.49	0.57	0.24	0.34
Would Recommend NH	0.47	0.34	0.45	0.20	0.36
Overall Life at NH	0.32	0.36	0.33	0.12	0.29

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Next Steps

- **Long Stay Resident Interview Survey**
  - Refine and test identified questions
    - E.g., room set up, doctor care (access)
  - Develop minimum standards for in-person protocol
- **Short Stay Mail Survey**
  - Need larger sample for psychometric analysis
- **Looking for testing partners to replicate/expand field test results**
- **Plan to release both versions to public domain when finalized & after internal review**

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