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Long Term Care (LTC) Insurance: Underwriting and Claims

Part One – Underwriting

Sheila MacDonnell, MD, MS, DBIM
John Hancock Financial Services

Overview – Underwriting

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- Long Term Care Insurance Coverage

- Industry Dynamics

- LTC Policies

- Underwriting Requirements
  - Cognitive screens

- Underwriting LTC Challenges

LTC Insurance

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A "Chronically ill individual"

Being unable to perform without "substantial assistance" at least 2 activities of daily living for a period of at least 90 days due to loss of functional capacity

Requiring substantial supervision to protect the individual from threats to health and safety due to severe cognitive impairment

Activities of Daily Living (ADLs) = Dressing, bathing, toileting, transferring, continence, eating

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Industry Dynamics

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- 1980s and '90s – rapid growth of LTC market (2002 →102 companies)
- 2012 – present, less than 15 companies active
  - Interest rates
  - Lapse rates
  - Pricing assumption

LTC Policies

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- No traditional "face amount"
- Number of years of coverage
- Maximum daily benefit (ex: $300/day)
- Elimination period (0, 30, 60, 365 days)
- 2-4 Classes
  - Different names but typically include:
    - Preferred (discounted rate)
    - Select (standard equivalent)
    - Class 1 (25% increase in premium)
    - Class 2 (50% increase in premium)
- Introduction of gender based pricing
- Typically a reimbursement policy
- Policies benefits vary
  - home health care, assisted living facility room and board, nursing home room and board, home modification

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Underwriting Requirements

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- Focus: assessment of functional status and cognition and the risk of either deteriorating due to underlying chronic disease

- Vary by company and issue age:
  - Telephone interview, paramedical exam or face to face interview
  - Cognitive screen – certain ages and/or medical conditions/histories
  - APS - some companies base on age, reported medical conditions, others obtain on all applicants
  - Drug profile screen
  - MIB search
  - Insurance lab screening – recent introduction into LTC
  - EKG and stress testing not a typical LTC insurance screen

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Telephone Interview

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- Lifestyle– With whom and where do you live, recent relocation, driving, work or volunteer, exercise, tobacco use, alcohol consumption

- Ability to independently perform instrumental activities of daily living (IADLs)
  - (ex: meal prep, shopping, laundry, finances, taking medications)

- Ability to independently perform activities of daily living (ADLs)

- Use of assistive devices (ex: walker wheelchair, stair lift)

- Medical history questions including reported height, weight, recent BP

- Any other conditions not previously mentioned

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Face to Face Interview

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- Similar to telephone interview regarding lifestyle questions, IADLs, ADLs, assistive devices, medical history

- Measured height, weight and BP

- Mobility evaluation (demonstration)

- Cognitive screen

- Physical description/mental health/general comments

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Adverse Selection

- Genetic Testing for Alzheimer's Disease and its Impact on Insurance Purchasing Behavior
  - Health Affairs 2005 (March);24:483-490

- 148 of the 162 Participants from the REVEAL Study
  - (Risk Evaluation and Education for Alzheimer's Disease Study)
  - Cognitively normal, at least one parent affected by AD
  - Randomized to control vs disclosure of APOE status

- 46 subjects –no APOE disclosure

- 54 subjects – learned APOEe4 negative

- 48 subjects – learned APOEe4 positive (one or both alleles)

Source: Zick CD, Mathews CJ, et al. Genetic Testing for Alzheimer's Disease and its Impact on Insurance Purchasing Behavior.
Health Aff (Millwood). 2005; 24(2): 483–490.

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Adverse Selection (cont'd)

- No significant differences in health, life or disability insurance purchases

- Those with positive APOEe4 were 5.76 times more likely to "have altered their long-term care insurance" compared with those who did not receive APOE test results

- However, given modest sample size, further analysis was performed to determine if the relationship between APOEe4 positivity and changes in LTC insurance was robust – analysis revealed that these results are only suggestive

- "Definitive confirmation of our result must await larger, more socio-demographically diverse samples"

- See Appendix A,B, and C

Source: Zick CD, Mathews CJ, et al. Genetic Testing for Alzheimer's Disease and its Impact on Insurance Purchasing Behavior.
Health Aff (Millwood). 2005; 24(2): 483–490

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Enhanced Mental Skills Test (EMST)

- 7-10 minutes to complete, face to face or via telephone
- Based the CERAD word list and the original Mental Skills Test developed and validated by the Medical Care Corporation
- First validated in peer reviewed Publication of National Academy of Science (PNAS) March 2005
- Sensitivity for MCI is 94%, 98% for mild dementia, and 100% for dementia
- Tests executive function (abstract reasoning, judgment, insight and concept organization), working and episodic memory, comprehension, attention, concentration, and language
- National Underwriter, November 2009
  - 9 major carriers, 209,000 applicants
  - Provided early claimant data – dementia claim w/in 3yr of issue
  - Claim rate of 1 out of 11,000 individuals (0.0091%)
- >600,000 tests administered

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Minnesota Cognitive Acuity Screen (MCAS)

- Cognitive screening tool developed specifically for insurance industry in 1999 by a group of experts from the University of Minnesota and the Mayo Clinic

- Non-onerous, 15 minutes screen by telephone or in-person – used extensively in Life and LTC insurance; new screening tool for NIH Alzheimer's Disease Registry

- First published in peer-reviewed journal in 2000; ongoing research at Brown University and growing body of peer-reviewed literature has validated the MCAS' ability to detect MCI, early dementia, functional decline and excess mortality

- Comprehensive test of 9 domains - orientation, attention, delayed word recall, comprehension, naming, computation, judgment, repetition, and verbal fluency

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Minnesota Cognitive Acuity Screen (MCAS)

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- Identifies mild/moderate cognitive impairment with Sensitivity/Specificity 98%

- Results to date: over 1 million MCAS performed over 13+ years
  - 5 year retrospective LTCI study of >250,000 cases <72 yrs old, >2 yrs post issue
    - Less than 1 in 10,000 initial claims were cognitive (0.008% prevalence)
    - False negative rate of 1 per 13,000 administrations
  - 10 year retrospective study: significant 10-year underwriting effect across all ages, gender, educational levels identifying excess mortality and mild cognitive impairment

Source: Courtesy of Dr. Stephen Holland, Chief Medical Officer, Univita

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Case 1

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71 F applying for 6 year benefit period, $250 per day maximum daily benefit, 90 day elimination period, applying for Preferred

- Application and face to face interview: 5'6" 109lbs BP 130/80. Osteoporosis, hyperthyroidism s/p treatment several yrs ago now on thyroid replacement, S/p right TKR 2 yrs ago. Broke arm in 2003 skiing. Lives alone. Widow. Retired RN. Walks 3x/week 30mins. Volunteers at church 2hrs/week. Meds: Levothyroxine, Alendronate, calcium, MVI

- Independent with IADLs and ADLs. Drives. Walking demonstration – stable, completes without difficulty

- Cognitive screen – passed

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Case 1 - APS

- 10/11 – Orthopedic consult

  - Vitals: 113lbs, BP 135/80. Prior jogger and skier. Past few yrs worsening knees pain. Bilateral morning stiffness, daily pain R>>L. R gives out at times. Having trouble with stairs. Taking daily NSAIDs with minimal effect. Xrays –moderate OA of the left knee, severe OA of the right knee. Discussed options – proceed with R TKR due to severity of pain and limitations in function

- 4/12 – Successful recovery from TKR, left knee stiff and aching at times but ok on NSAIDs. Taking care of husband with Parkinson's disease. TSH normal on current Levothyroxine dose

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Case 1 – APS (cont'd)

- 1/13 – Grief over recent loss of husband, died 6 weeks prior – can't sleep, poor appetite, tearful. Vitals: 105lbs, BP 130/70. MD recommended grief counseling and Celexa 20 mg/day

- 5/13 – Routine PE. Still tearful but coping. Remains in psychotherapy. Sleep and appetite are better. Stopped Celexa because didn't want to be on med. PE 5'6" 109lbs. BMI 17.6. BP 120/75. Exam: WNL. EKG WNL. Mammogram WNL. Colonoscopy 8/08 WNL. Routine labs WNL. cholesterol 180. Albumin 4.0

- BMD done- t scores:-2.5 spine, -3.0 hip. (stable compared with exam 2 years ago)

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Case 1 Discussion

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- Is this applicant a favorable risk for Life?

- Is this applicant a favorable risk for LTC?

- What are the long term care concerns with this case?

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Osteoporosis

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- 10 million in US have osteoporosis, 33 million have osteopenia

- > 2 million fractures annually as a result of osteoporosis or osteopenia, including 300,000 hip fractures, 547,000 vertebral fractures, and 135,000 pelvic fractures

- Up to 50% of patients with osteoporotic hip fractures have permanently impaired mobility, and 25% lose the skills necessary to live independently

- Vertebral fractures can lead to functional impairment with difficulty bending or reaching, lifting, or ambulating down stairs

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LTC Underwriting Challenges

Life Underwriting
- >100 years of industry data
- Mortality as an end-point
    - Common measurement in medical literature

LTC Underwriting
- 25 + years of industry data
- Morbidity as an end-point
    - Loss of ADLS uncommon end-point in medical literature
- Co-morbidities
- Anti-selection risk

Appendix A

Exhibit 1

Socio-Demographic Characteristics

Demographic Characteristics	No APOE Disclosure (N=46)	ε_4 Negative (N=54)	ε_4 Positive (N=48)	Total Sample (N=148)
Fraction Currently Married	.63	.63	.73	.66
Mean Respondent Age (measured in years) [a]	54	53	50	52
Fraction of Male Respondents [b]	.22	.40	.21	.28
Respondents' Mean Years of Schooling	17	17	17	17
Fraction Who are Past or Present AD Caregiver	.78	.80	.67	.75
Mean Baseline Worry About Developing AD (5=strongly agree, 1=strongly disagree) [c]	3.9	3.8	4.2	4.0

Source: REVEAL Study.

[a]An ANOVA test for age differences by testing status was statistically significant: F=2.29, p< .10.
[b]A Chi-square test for sex differences by testing status was statistically significant: I^2 = 6.4, p<.05.
[c]An ANOVA test for baseline worry about developing AD differences by testing status was statistically significant: F=2.48, p<.10.

Source: Genetic Testing for Alzheimer's Disease and Its Impact on Insurance Purchasing Behavior
Health Aff March 2005 vol 24 no.2 483-490.

Appendix B

Exhibit 2

Fraction of Participants Who Thought about Changing Insurance Coverage or Actually Changed Insurance Coverage Over a One Year Period Stratified by Testing Status.

	Percentage Reporting an Actual Change			Percentage Reporting S/he is AThinking About@ Making a Change		
	APOE Genotype			APOE Genotype		
	No APOE Disclosure	ε_4 Negative	ε_4 Positive	No APOE Disclosure	ε_4 Negative	ε_4 Positive
Health Insurance	6.52	5.56	12.50	23.9	13.0	25.0
Life Insurance[a]	6.52	7.41	2.08	4.35	5.56	16.67
Disability Insurance	4.35	3.70	4.17	8.70	7.41	18.8
Long-Term Care Insurance[b]	4.35	1.85	16.7	32.6	22.2	45.8

Source: REVEAL Study.

[a]The Fisher's Exact Test for thinking about making changes in life insurance coverage by testing group was statistically significant at p< .10.
[b]The Fisher's Exact Tests for actual changes in long-term care insurance coverage and thinking about making changes in long-term care insurance coverage by testing group were both statistically significant at p<.05.

Appendix C

Exhibit 3

Odds Ratio Estimates from the Logit Regressions (95% confidence intervals in parentheses).

Independent Variables	Changed Long-Term Care Coverage (1=yes) (N=143)	Thinking About Changing Long-Term Care Coverage (1=yes) (N=123)
Currently Married (1= yes, 0=no)	0.64 (0.13 B 3.17)	1.34 (0.59 B 3.03)
Age (measured in years)	1.03 (0.95 B 1.12)	0.98 (0.93 B 1.02)
Sex (1= male; 0=female)	1.22 (0.20 B 7.58)	0.73 (0.30 B 1.82)
Education (measured in years)	1.08 (0.78 –1.50)	1.24[**] (1.04 B 1.48)
Has Long-Term Care Insurance At Baseline (1= yes, 0=no)	6.79[**] (1.45 B 31.24)	0.36[*] (0.12 B 1.09)
Past or Present AD Caregiver (1= yes, 0=no)	1.00 (0.21 B 4.70)	1.03 (0.42 B 2.51)
Baseline Worry Scale About Developing AD (5=strongly agree, 1=strongly disagree)	1.13 (0.54 B 2.38)	1.07 (0.73 B 1.57)
ε_4 Negative[a] (1= yes; 0=no)	0.36 (0.028 B 4.58)	0.62 (0.24 B 1.60)
ε_4 Positive[a] (1= yes, 0=no)	5.76[*] (0.99 B 33.50)	1.56 (0.63 B 3.90)
Equation χ^2	18.44[**]	19.48[**]

Source: REVEAL Study.

[*]p < .10
[**]p < .05
[a]The omitted group in this sequence of dummy variables are those individuals who did not receive APOE disclosure.

11