

Analysis of Utility Trends and Implications in Ghanaian Patients

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Outline

- Background on QALYs, utilities, and past trends
- Results
- Discussion/Explanations



Value-Based Medicine

- Now widely accepted
- Goal: choose health interventions that maximize improvements in quality of life, length of life, or both
- Implications in developing countries
 - Immense health challenges with limited budget
 - Need to prioritize

Background/Methodology

- QALY = Quality Adjusted Life Year
- QALYs gained from a health intervention = (Increase in **Utility**) x (Years to benefit)
- This study looks at trends in the **utility states** of patients receiving care by Crystal Eye Clinic at Unite For Sight outreaches

Question

Past findings suggest that utility analysis is *innate to human nature*, rather than group specific.

- Independent of:

- gender
- marital status
- age
- education
- income level.....

Does this finding hold true for the patients in Ghana?

Utility Calculation

- Time trade-off method
- Imagine that you have (20/10) years left to live. If you could give up some of these years in order to have perfect eyesight, how many would you give up?

Calculation

- Utility = $1 - (\# \text{ of years willing to give up})/20$
- Ex: If willing to give up 5 out of the 20 years:
 - Utility = $1 - (5/20) = 0.75$

Interview Details

In addition to asking the QALY question, interview asked for:

- Age
- Occupation
- Sex
- Wealth (through standardized items)
- Number of living children
- Visual Acuity (VA)

Extreme difficulty: use of translator

Characteristics of Sample

- Number of respondents: 165
 - 13 excluded because would not answer QALY question
- Average age: 51
 - Limited to 18 and over
- Gender Composition: 49% F, 51% M
- Most common occupation: Farmer and Trader

Results

Average Utility: 0.80

- Similar to past UFS results (Blair Irwin 2009)

Correlation between utility and VA = 0.197

Regression Results

- Visual acuity significant alone, but not after the inclusion of other control variables ($p < 0.001$).
- Only significant variable in 5-var model: number of living children.
 - Coefficient significantly *negative* ($p < 0.10$)
 - Practical explanation

Why is visual acuity not a very significant predictor of utility?

- 1) Qualitative factors skewing results in Ghana
 - Religion
 - Views towards old age
- 2) Support for all-inclusive model?
 - UFS

Qualitative Factors

Religion

- “In G-d’s hands”
- “G-d will decide”
- “I’m not the creator”

Views towards old age

- “Can’t tell”
- “Don’t need eyes at this age”

Room for further research.

Conclusions

- Similarities to past research
 - Positive correlation between VA and utility
 - Similar average utility
- Differences
 - VA not statistically significant predictor
 - Number of living children?

Further Research

- Qualitative research on religion, difference in beliefs
- Should QALY utilities thus be analyzed differently in developing countries?
- Effects on health policy?

Thanks

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