An Innovative Use of Simulation in Healthcare Market Research

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Q. Do you want to use this product?





Who will be on this drug, how many?



"There are so many different kinds of patients... How can I estimate..."



Question 147

Please estimate the percentage of each medications after all these products X, Y, Z, and Z1 are launched in 15 years.

| | Now | Future |
|--------|-----|--------|
| Drug A | % | % |
| Drug B | % | % |
| Drug C | % | % |
| Х | % | % |
| Υ | % | % |
| Z | % | % |

Surveys often fail to engage respondents





What if we could eliminate the questionnaire and observe behavior directly through simulation?





The Virtual Patient Simulation



Simulated patient updated based on physician action



Our Pilot Test in Alzheimer's Disease

50 Primary Care Physicians 50 Psychiatrists 50 Primary Care Physicians 50 Psychiatrists / Neurologists



Two types of data generated



 Data related to diagnostic and treatment decisions - when viewed over multiple visits, these data enable the creation of virtual patient algorithms or flows.

 Data related to the diagnostic and treatment decision-making process (e.g. patient characteristics viewed, signs and symptoms focused on, or insurance coverage)



Treatment Decisions





Comparison of Treatment Flow: Japan and USA



Max 山口さん

- Max/山口さん
 - 80 year-old male with moderatesevere symptomatology (MMSE 14)
 - Part-time caregiver
 - Condition is stable from first visit to second, then declines moderately



Comparison of Treatment Flow: Japan and USA



Treatment Decision-Making Process





Overall, Japanese and American physicians show a similar pattern of accessing information throughout the course of the simulation



Average # of times category accessed per visit

Visit 1 Visit 2 Visit 3

Overall, Japanese and American physicians also showed a rapid learning curve, and showed no evidence of respondent fatigue

Average number of seconds spent on visit



The Majority of Physicians in Both Countries Found the Simulation More Interesting than the online surveys they are used to.



Conclusions

- Simulation offers a useful and engaging alternative to standard questionnaires in research with physicians
- The method works equally well with Japanese as with American physicians
- Our research demonstrates specific utility in Alzeimer's Disease, a therapeutic area of significance to both Japan and the US



Thank You

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