Assessing the Potential for a Mobile Application for HIV Positive Patients in Atlanta, GA

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Abstract

A main focus of prevention of HIV transmission is through the use of antiretroviral therapy (ART). ART is very effective for reducing the transmission of HIV and the HIV viral load in patients, but only with proper adherence. A mobile phone application (app) has been proposed by Grady hospital to aid their patients with adherence. However, little is known about smartphone utilization among Atlanta, GA residents or among Grady patients. Thus, the objective of this study is to identify the demographics and mobile phone behaviors of adults in Atlanta and of Grady patients. Using secondary data from Scarborough Market Research collected from August 2012 - July 2013, the demographic characteristics and smartphone use among adults (18+) in Atlanta were analyzed. Smartphone ownership is highest among young adults (18-34) and remains high even among low incomes. More Hispanics own a smartphone than African Americans, who own smartphones more than Caucasians. Young adult men are more likely to see themselves as their own doctor and less likely to take their prescriptions exactly as prescribed than the rest of the population. The most popular types of apps used are weather, maps, social networking, search, and instant messaging. A mobile app might be an effective alternative to increase adherence, but, more research is needed on young adult men's health attitudes. Ways to increase usage of the app should be addressed, perhaps including another aspect within the app that people use more would be beneficial (social media or games).

Introduction

Approximately 50,000 people diagnosed with HIV every year in US(1). 2,911 people diagnosed with HIV in Georgia (2012)(2) Current efforts to reduce the incidence and transmission of HIV are to address these gaps in the HIV care continuum.

HealthySteps is a mobile app technology proposed by Grady hospital for its patients to aid in adherence, in collaboration with the CDC and the GDPH, as part of the CAPUS project. It aims to aid patients by providing direct communication, real time interactions, teaching opportunities, and reminders.

HIV Continuum for Adults and Adolescents in Georgia, 2012[2]

N=46,495
Diagnosed: 54 ART | Engaged in Care: 38 | Retained in Care: 34 | Viral suppression: 39
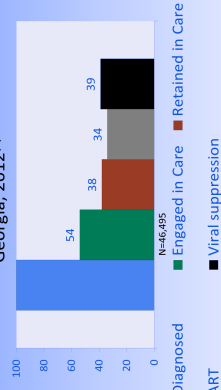
Purpose

To identify the demographics and mobile phone behaviors of adults in the Atlanta metro area and of Grady Hospital Patients. This project analyze consumer behaviors in Atlanta to determine the use of mobile devices, and other digital media devices including the type of mobile phone owned in terms of gender, race, and socio-economic status. Answers to health attitudes are also analyzed.

Hypothesis

Utilization of mobile phones, other digital media devices, and health attitudes for Atlanta residents and of Grady patients may differ by age, gender, and race/ethnicity. Further, the use of a mobile phone application would be a viable solution to aid young adult and adolescent HIV patients, as younger people tend to have more smartphones than older generations.

Methodology

> Secondary analysis from data collected by Nielsen- Scarborough Market Research to determine Atlanta and Grady consumer behaviors and digital media consumption. (3)
  - Scarborough Market Research measures shopping patterns, media usage across platforms, and lifestyle trends of adults.
  - Both local and national consumer research

> Data from the August 2012- July 2013 Survey was used
  - N = 2,921 respondents in the Atlanta Area
  - Survey included phone interview followed by a survey booklet. (3)

> Data for Grady came from respondents who had indicated in the survey that they had used Grady in the past 3 years (n=126).

Results
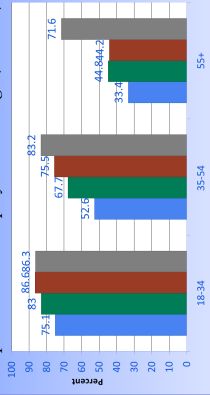
smartphone Ownership by Income/Age (Atlanta)

Less than $35,000 | $35,000-$49,999 | $50,000-$74,999 | $75,000+

18-34: 75.3, 83, 86.6, 86.3 | 35-54: 52.6, 67.7, 75.5, 83.2 | 55+: 33.4, 44.8, 44.2, 71.6

Fig. 1 Compares smartphone ownership and income by age

Smartphone Ownership of Adults by Race/Ethnicity(Atlanta)

White | Black | Hispanic

Own Smartphone: 53.9, 60.3, 66.4 | Android: 32.7, 34, 37 | iPhone: 22, 16.6, 17.4

Fig 2 Compares smartphone ownership by ethnicity

Most popular Apps Used, last 30 Days

Weather: 32.6 | Maps: 31.0 | Social Networking: 30.3 | Search: 24.6 | Instant Messaging: 23.3 | Medical Services/Info: 2.9
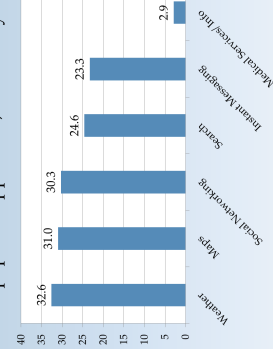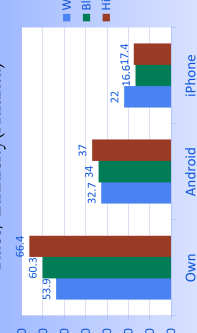
Fig 3. Looks at most used smartphone apps and percentage of smartphone owners who looked up medical services and information

Health Attitudes For Atlanta Residents

I'm My Own Doctor | Doctor Knows Best

Gender — Men: 127, 84 | Women: 115, 75
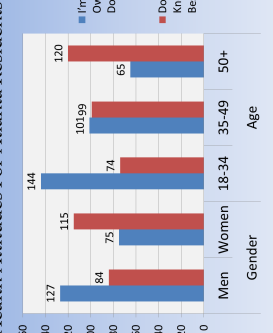Age — 18-34: 144, 74 | 35-49: 101, 99 | 50+: 120, 65

Fig 4. Compares Health Attitudinal Beliefs based on Age and Gender

Discussion

- Smartphone ownership is high among young adults, even among low incomes
- Androids account for a higher percentage of the market
- African American young adults and Hispanic young adults are slightly more likely to own a smartphone than Caucasian young adults
- Smartphone owners rarely use their smartphone for medical services and information, opting instead for other service apps and social media communication
- Young adults and men are more likely than the rest of the population to see themselves as their own doctor and are less likely to take prescriptions exactly as prescribed

Conclusion/Recommendations

- Mobile app might be a viable alternative to aid young adult Grady patients with adherence to HIV medication .
- Must account for young adults being more likely to see themselves as their own doctor and to not take their medicine exactly as prescribed
- Incentive might be necessary to increase compliance to medical services and information.
- Including another aspect in the mobile app (such as a social media aspect, rewards, games) might increase adherence
- Giving the patients a phone that is already paid for might increase compliance.

Limitations

- Data represent smartphone use in Atlanta and general patients at Grady and do not necessarily represent the population of HIV positive individuals at Grady Hospital.
- Grady patient data results are below 70 people, generalizations should be taken with caution.
- Qualitative research with HIV positive individuals at Grady Hospital can help understand Smartphone utilization for the target population.

Acknowledgments

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