



# Utilizing Advanced Mobile Technology for Public Health Promotion and Education

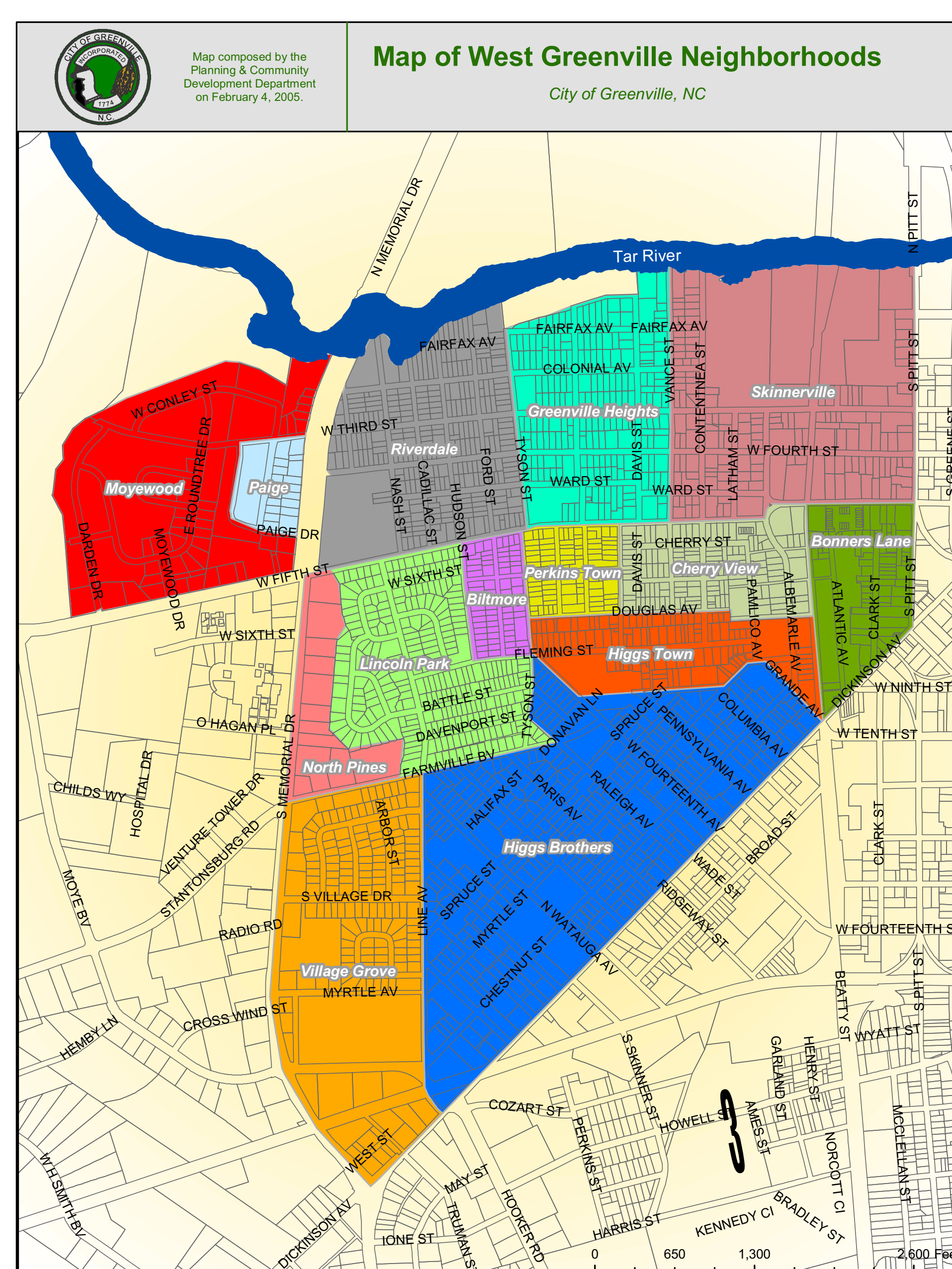
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## INTRODUCTION

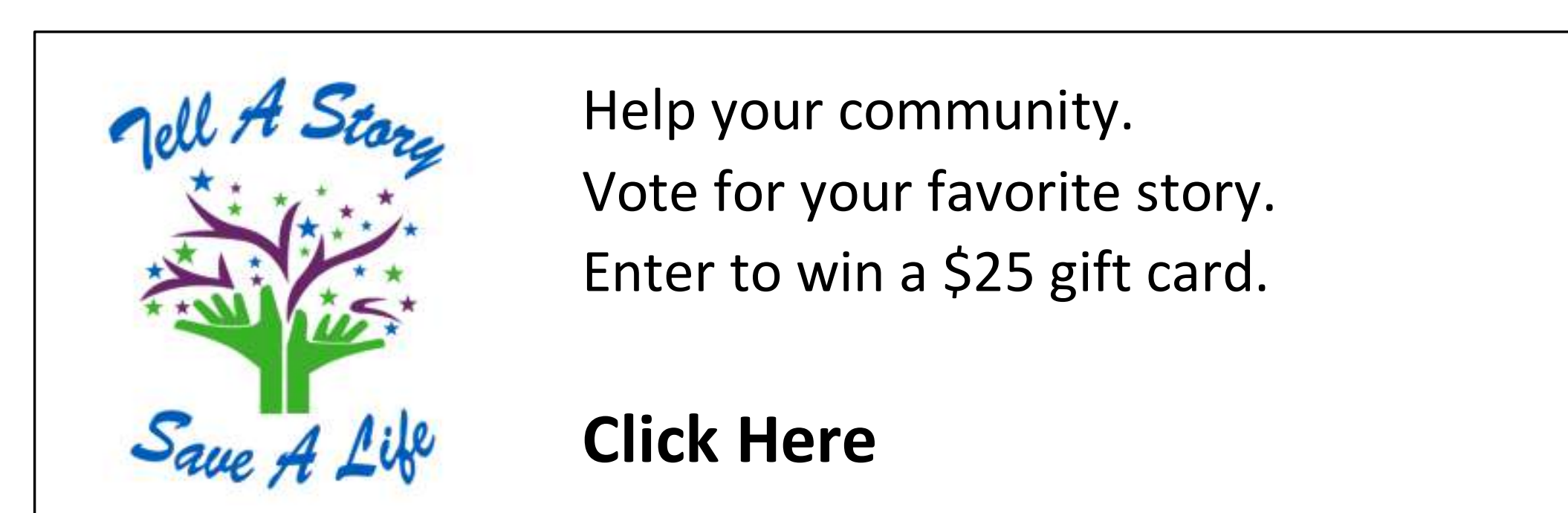
- Today's information economy presents new opportunities for health education specialists to promote health through social media.
- Geofencing is one such opportunity that sends banner ads to the electronic devices of those located in a restricted geographic area.
- The banner ads are image-based and contain a link to a website.
- Geofencing was utilized in West Greenville, a small community in Pitt County, to direct community members to participate in Tell a Story Save a Life, a diabetes education awareness campaign.
- The purpose of this poster is to explain what is known about the new technology and its potential for public health impact and what needs to be further understood.

## MAP OF WEST GREENVILLE



## INTERVENTION

- A virtual boundary was drawn around West Greenville, NC (~7,200).
- Banner ads that included a link to personally recorded diabetes narratives were disseminated using geofencing technology.
- Participants were instructed to listen to the stories, vote for their favorite, and complete a survey for a chance to win one of ten \$25 gift cards.
- The website also included resources for the prevention, management, and treatment of diabetes and prediabetes.



### Theoretical Basis

- Health communication theory supports the use of gain-framed messaging over fear-based messaging.
- In addition, we tested the message in the target population and found that there was a preference for the messaging displayed on our banner ad.

### Definitions

- Impressions: the total number of times your ad was displayed to someone
- Clicks: the number of times someone tapped on your ad
- Click-through rate (CTR) = clicks/impressions: percentage of impressions that generated a click

## RESULTS

- Impressions: 147,018
- Clicks: 223
- Click-through rate (CTR) of 0.15%.
- The most popular applications through which a banner ad was received were Pixel Art, TextNow, and Wordscapes.

### Benefits

- Restricting a population by exact geographic location
- Obtaining responses from a hard to reach population
- Leveraging a mobile application that the user already has downloaded

### Limitations

- What little is known about the quickly evolving technology for public health purposes and its effectiveness
- Health education specialists must have reliable communication with a tech expert to utilize the location-based marketing as a tool

## IMPLICATIONS FOR PUBLIC HEALTH

- Using geofencing to send effective health-related messages could result in positive implications for public health.
- Natural disasters and emergency response
  - Hurricanes and flooding in NC or wildfires in northern California
- Health promotion
  - High STD rate in a specified area; Community walking program

## CAVEATS

- Popular social media platforms like Facebook, Instagram, and Snapchat have their own geofencing system.
- Cost calculated in CPM = cost per 1,000 impressions (e.g. \$15.00/CPM - \$1500 would result in 100,000 impressions)

### Crash Course

- Understand the technology
- Test the messages
- Prepare the community to be receptive to the messages

## REFERENCES

Winterer, S. Geofencing marketing guide for Facebook, Instagram, Google, & Snapchat Marketing 2019. Published Jan 7, 2019. <https://www.digitallogic.co/blog/geofencing-geotargeting-advertising-online-marketing/>

White, SK. What is geofencing? Putting location to work. Cio. <https://www.cio.com/article/2383123/geofencing-explained.html>. Published Nov 1, 2017. Accessed October 28, 2019.

## ACKNOWLEDGEMENTS

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