## Understanding Preeclampsia, Through Community Outreach, to **Suggest Possible Interventions** Kishon Joseph

# Humana

#### **Overview/Introduction**

In recent decades, maternal mortality rates in the US have been consistently rising; these rates are currently higher than any other developed nation. Preeclampsia, a disorder of pregnancy involving hypertension, protein in urine, and water retention, affects about 18% of pregnancies worldwide [6]. Some of the most important risk factors for Preeclampsia include chronic hypertension prior to or during the pregnancy, previous history of preeclampsia or family history of preeclampsia, multiple pregnancies, race (especially Black and Asian women), lack of prenatal care, and advanced maternal age[5]. Preeclampsia/eclampsia result in 6.8% of maternal deaths in the United States [7]. Considering there are about 700-900 maternal deaths per year [1], this means that every year about 48 - 61 women die due to preeclampsia. About 60% of preeclampsia deaths had a good to strong chance of being prevented [8].

#### **Objectives**

We worked in collaboration with Humana and members from the community to create a model which will help people who live in the community as well as healthcare professionals understand this issue and allow them to see the connection between social determinants of health and preeclampsia in a more visually compelling way. A bottom up approach was used as a base of reference through the data collection. Our model allows people to see the way preeclampsia overlap with other social determinants of health which are often overlooked when dealing with this issue, such as racial and income disparities.

#### Methodology

Primary and secondary articles concerning preeclampsia and preeclampsia risk factors were analyzed for relevant content. Stories from women who were currently or recently pregnant in the last two years was collected. A Directed Acyclic Graph was created after data collection from articles and the community. Possible interventions were designed using the DAG to determine possible intervention sites and the data to determine how to best target the necessary population.

Using a bottom up approach as a base of reference through our data collection rather than a top down help created a more realistic and personal intervention.

This Logic model showcases the detailed process in which we will carry out the intervention.

University of Houston 2019 Summer Collaboration with Humana

## **Bottom Up Approach**

## **Community Outreach**

Stories were collected from women in the community who were currently or recently pregnant. Each women gave their in personal stories on pregnancy and preeclampsia. A series of standardized questions were asked to each women.





### Conclusions

Community outreach was successful in acquiring valuable data to build various models of how preeclampsia works and who is more affected by the disorder. Using a bottom up approach in conjunction with going in the community to get stories and perspectives made a more realistic and tailored intervention for the people in our community.

It was determined that community health workers (CHWs) would be the best way to address the disparities in trust and knowledge. We also felt the need to address health professionals to make sure they were aware of the issues patients were having. For healthcare workers, we created a CEU to make sure they understand the intricacies of the disease and the issues the patients were facing. For the patients we created the curriculum for a class that can be held by CHWs in order to inform them about the preeclampsia and hypertension management and prevention.

#### References

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