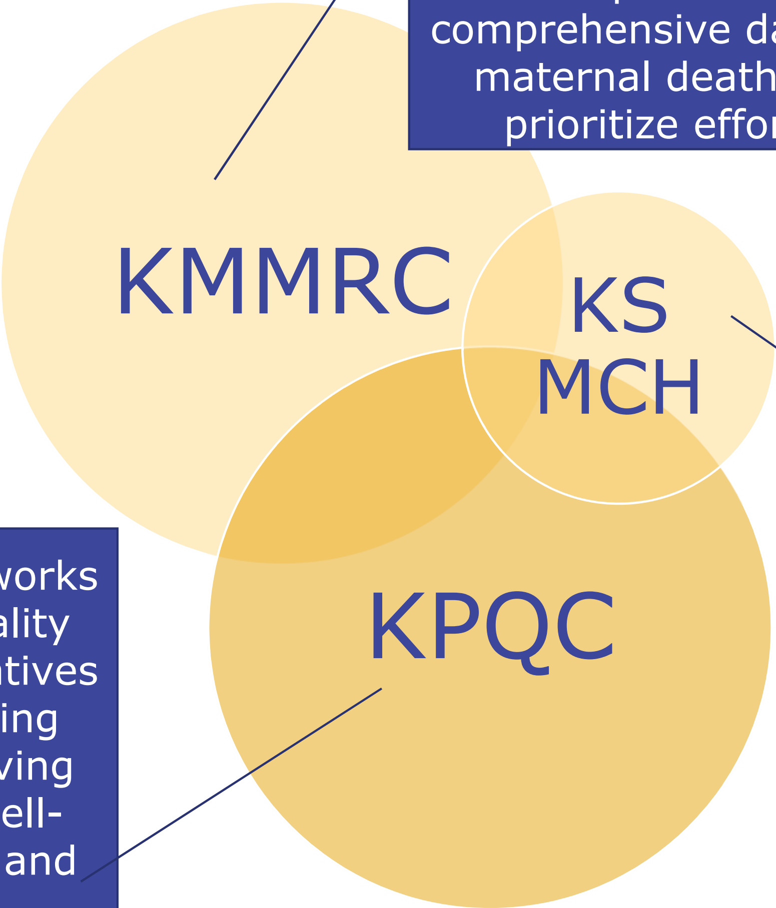
Alliance for Innovation on Maternal Health (AIM)

Jennifer Miller

Review deaths to get complete and comprehensive data on maternal deaths to prioritize efforts



Provide the vision and essential supports to monitor/assess and implement efforts to improve the health and well-being of mothers and infants

Mobilize state networks to implement quality improvement initiatives aimed at increasing safety and improving the health and well-being of mothers and infants

State PQCs and MMRCs*

- PQCs and MMRCs function to improve maternal and perinatal health (investing in the mother's health leads to a healthier birth/pregnancy outcome)
- Roles and Functions

  PQCs: Focus on efforts during the maternal and perinatal periods intended to improve birth outcomes and strengthen perinatal systems of care for mothers and infants

  MMRCs: Focus on reviewing maternal and pregnancy-associated deaths (pregnancy through 1 year after delivery) to identify gaps in health services and make actionable recommendations to prevent future deaths, improving maternal and perinatal health
- Lessons learned over time have resulted in the national recommendation (CDC) for states to intentionally and strategically align the review efforts (MMRC) with the action/QI efforts (PQC), creating a "culture of safety"

*Maternal Mortality Review Committees

What is AIM?

- AIM is a national data-driven maternal safety and QI initiative based on proven implementation approaches to improving maternal safety and outcomes in the U.S.
- AIM works through state teams and health systems to align national, state, and hospital level QI efforts to improve maternal and perinatal health outcomes
- Any U.S. hospital in a participating AIM state or hospital system can join the growing AIM community of multidisciplinary healthcare providers, public health professionals, and cross-sector stakeholders
  - Access to 12 “safety bundles”
  - Access to Patient Safety Tools
  - Access to the AIM Community of States

AIM States

AIM States

Current States Enrolled in AIM

What is a Bundle?

- Standardized evidence-informed processes to reduce variation in response to maternal care
- Developed by multidisciplinary work groups of experts in the field representing each of the Alliance partners and specialty organizations
- Consists of four parts
    - Readiness
    - Recognition and Prevention
    - Response
    - Reporting/Systems Learning

AIM Bundles

- Twelve Bundles Available
- Short List
  - Maternal Mental Health: Depression and Anxiety
  - Postpartum Care Basics for Maternal Safety
    - Transition from Maternity to Well-Woman Care
  - Reduction of Peripartum Racial/Ethnic Disparities
  - Severe Hypertension in Pregnancy

Readiness: Every Unit

- Standards for early warning signs, diagnostic criteria, monitoring and treatment of severe preeclampsia/eclampsia (include order sets and algorithms)
- Unit education on protocols, unit-based drills (with post-drill debriefs)
- Process for timely triage and evaluation of pregnant and postpartum women with hypertension including ED and outpatient areas
- Rapid access to medications used for severe hypertension/eclampsia: Medications should be stocked and immediately available on L&D and in other areas where patients may be treated. Include brief guide for administration and dosage.
- System plan for escalation, obtaining appropriate consultation, and maternal transport, as needed

Recognition & Prevention: Every Patient

- Standard protocol for measurement and assessment of BP and urine protein for all pregnant and postpartum women
- Standard response to maternal early warning signs including listening to and investigating patient symptoms and assessment of labs (e.g. CBC with platelets, AST and ALT)
- Facility-wide standards for educating prenatal and postpartum women on signs and symptoms of hypertension and preeclampsia

COUNCIL ON PATIENT SAFETY
IN WOMEN'S HEALTH CARE
safe health care for every woman

Response: Every Case of Severe Hypertension/Preeclampsia

- Facility-wide standard protocols with checklists and escalation policies for management and treatment of:
    - Severe hypertension
    - Eclampsia, seizure prophylaxis, and magnesium over-dosage
    - Postpartum presentation of severe hypertension/preeclampsia
- Minimum requirements for protocol:
    - Notification of physician or primary care provider if systolic BP =/> 160 or diastolic BP =/> 110 for two measurements within 15 minutes
    - After the second elevated reading, treatment should be initiated ASAP (preferably within 60 minutes of verification)
    - Includes onset and duration of magnesium sulfate therapy
    - Includes escalation measures for those unresponsive to standard treatment
    - Describes manner and verification of follow-up within 7 to 14 days postpartum
    - Describe postpartum patient education for women with preeclampsia
    - Support plan for patients, families, and staff for ICU admissions and serious complications of severe hypertension

Reporting/Systems Learning: Every Unit

- Establish a culture of huddles for high risk patients and post-event debriefs to identify successes and opportunities
- Multidisciplinary review of all severe hypertension/eclampsia cases admitted to ICU for systems issues
- Monitor outcomes and process metrics

Participation Phases

- Phase 1: Building
  - Lack of a timely data reporting infrastructure
  - Lack of an active MMRC or PQC
  - Planning Stage
- Phase 2: Positioning
  - In process of establishing leadership, implementation teams, and data infrastructure
  - Active engagement with the AIM State Team Leads to align state and birth hospital efforts to move towards onboarding
- Phase 3: Onboarding
  - Enrolled in AIM

Timeline

February/March 2020

July/August 2020

Enrollment in AIM

Selection of AIM Bundle

Preparation for Launch

Launch of AIM Bundle

December 2019

April-June 2020

Key MMRC Findings

Informing AIM Bundle Selection

Definitions

- **Pregnancy-Associated Death**: The death of a woman while pregnant or within one year of the termination of pregnancy, regardless of the cause. These deaths make up the universe of maternal mortality; within that universe are pregnancy-related deaths and pregnancy-associated, but not related deaths.
- **Pregnancy-Related Death**: The death of a women during pregnancy or within one year of the end of pregnancy, from a pregnancy complication, a chain of events initiated by pregnancy, or the aggravation of an unrelated condition by the physiologic effects of pregnancy
- **Pregnancy-Associated, but not Related Death**: The death of a woman during pregnancy or within one year of the end of pregnancy, from a cause that is not related to pregnancy

Key Findings (2016-2017)*

- Total Reviewed Cases: 36
- Pregnancy-Related: 9
- Pregnancy-Associated, but not Related: 22
- Pregnancy-Associated, but not able to determine relatedness: 6
- Pregnancy-Related Deaths
  - Most occurred within 42 days of the end of pregnancy
  - Entered care in 1st trimester
  - Causes of Death
    - Cardiovascular Conditions
    - Suicide/Depression
    - Chronic Hypertension
    - Disseminated Intravascular Coagulation (DIC)-Hemorrhage
    - Preeclampsia
    - Embolism-Thrombotic
    - Lupus

*3 2017 cases are outstanding and will be reviewed in early 2020

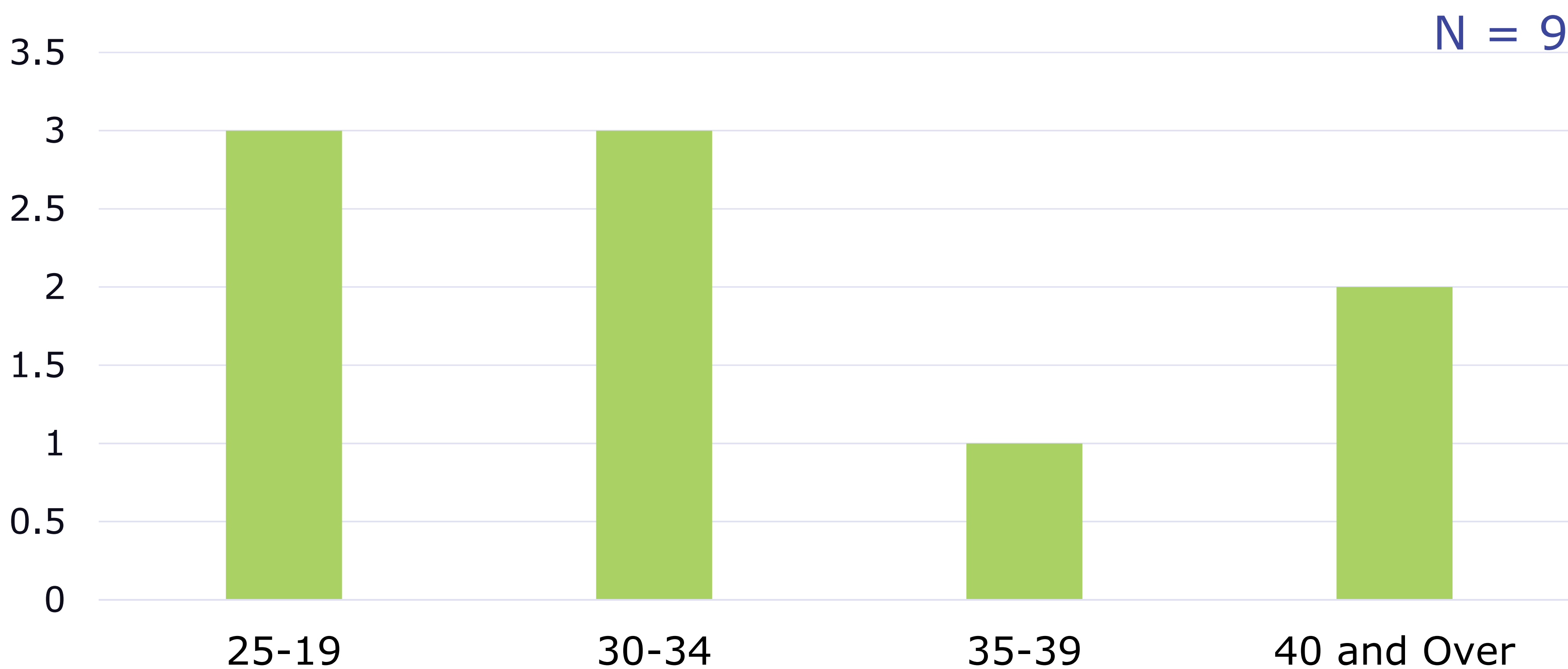
Preventable Deaths: Primary & Secondary Causes

Cause	Count
DIC	1
Suicide	1
Embolism	1
Pyschiatric Conditions	2
Chronic Hypertension/Preeclampsia	3
Cardiovascular Conditions	5
Cardiomyopathy	2

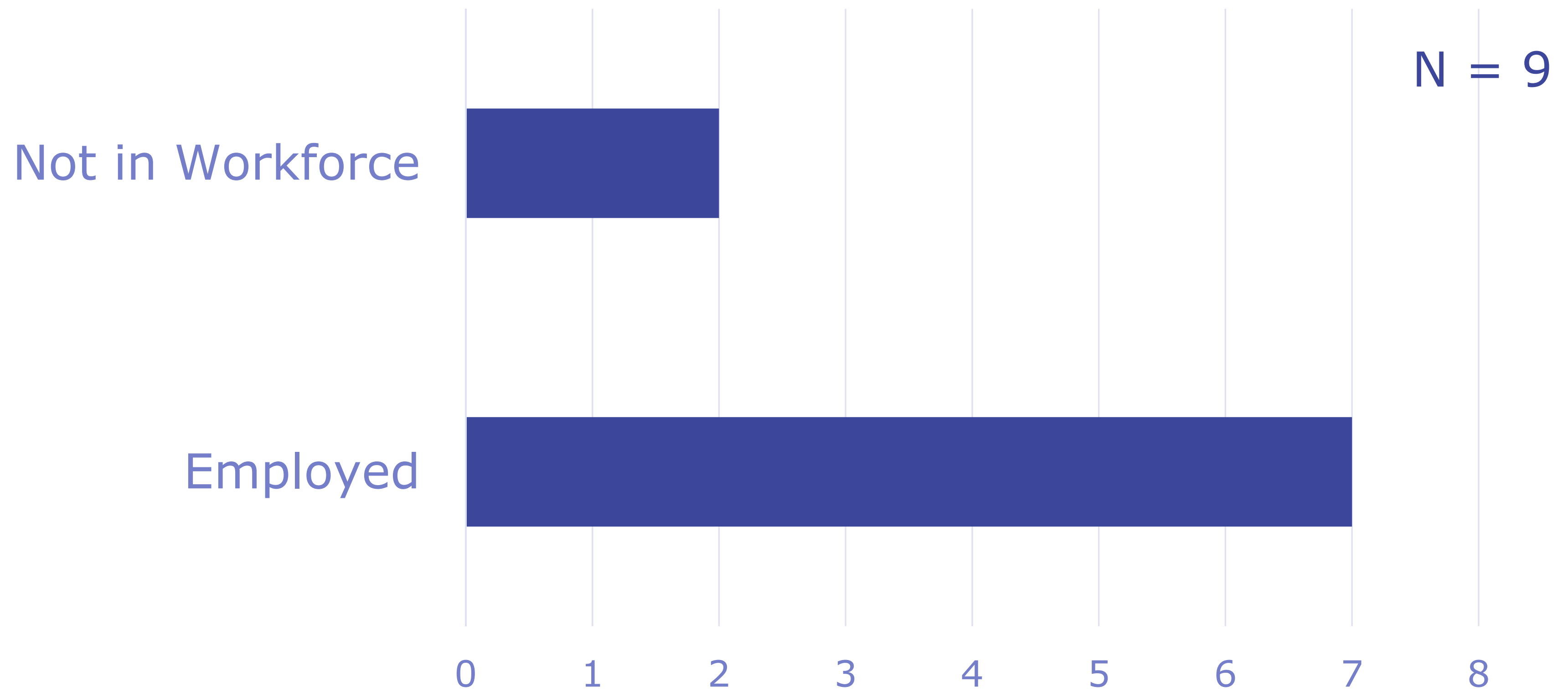
N = 8*

*8 of the 9 PR deaths were determined to be preventable

Pregnancy-Related Age at Death



Employment Status-Pregnancy Related Deaths



Insurance Status

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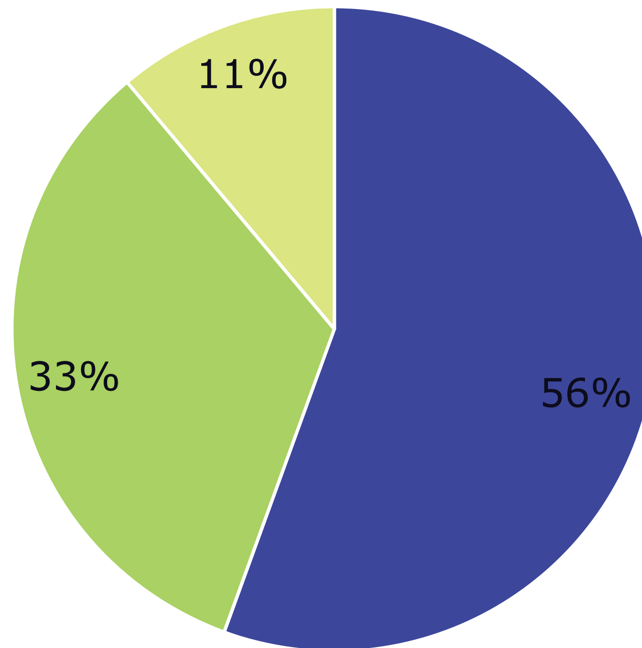
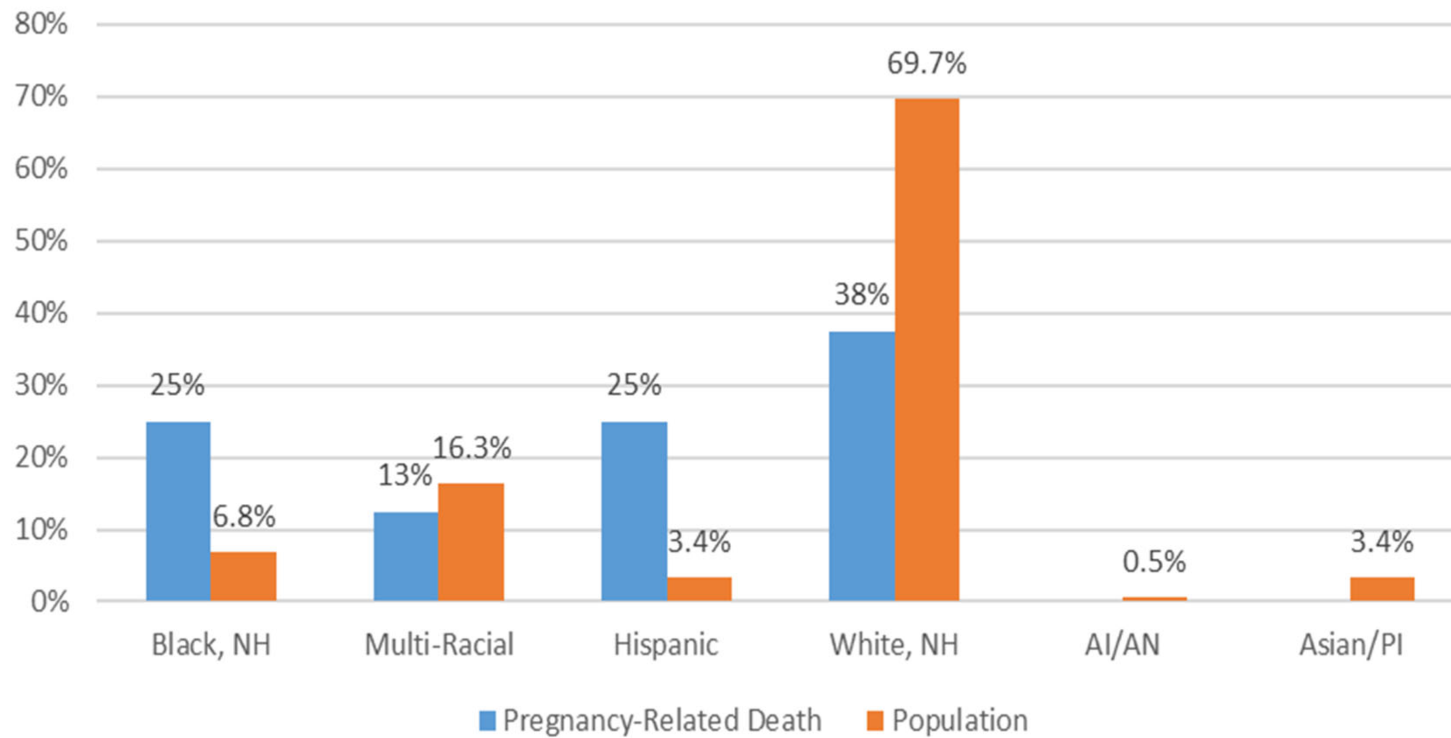


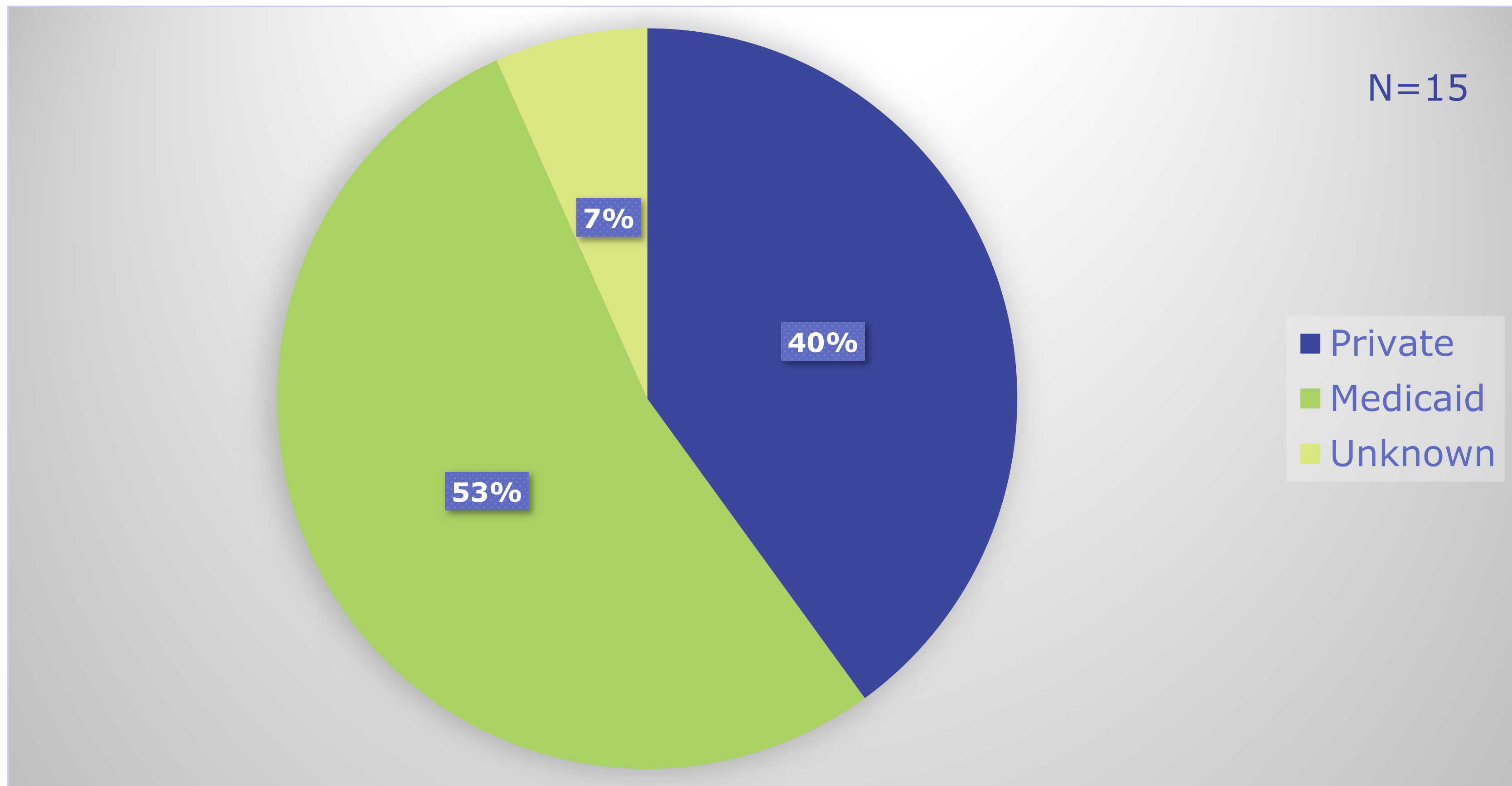


N = 9

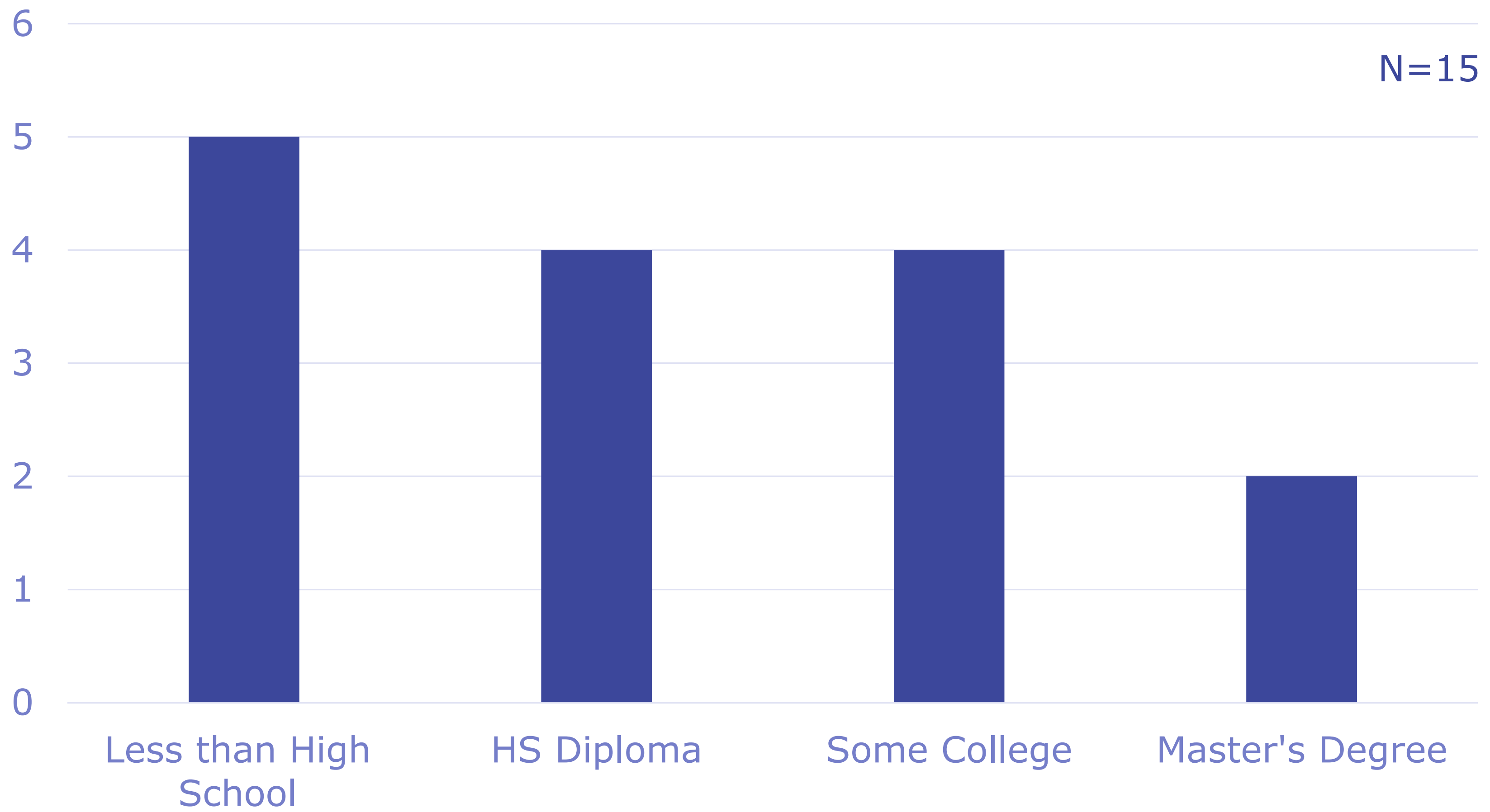
PA-Unable to Determine Relatedness

- Seizure Disorder, Cerebrovascular Accident
- Motor Vehicle Accident
- Suicide
- Sickle Cell Crisis
- Pulmonary Embolism
- Homicide

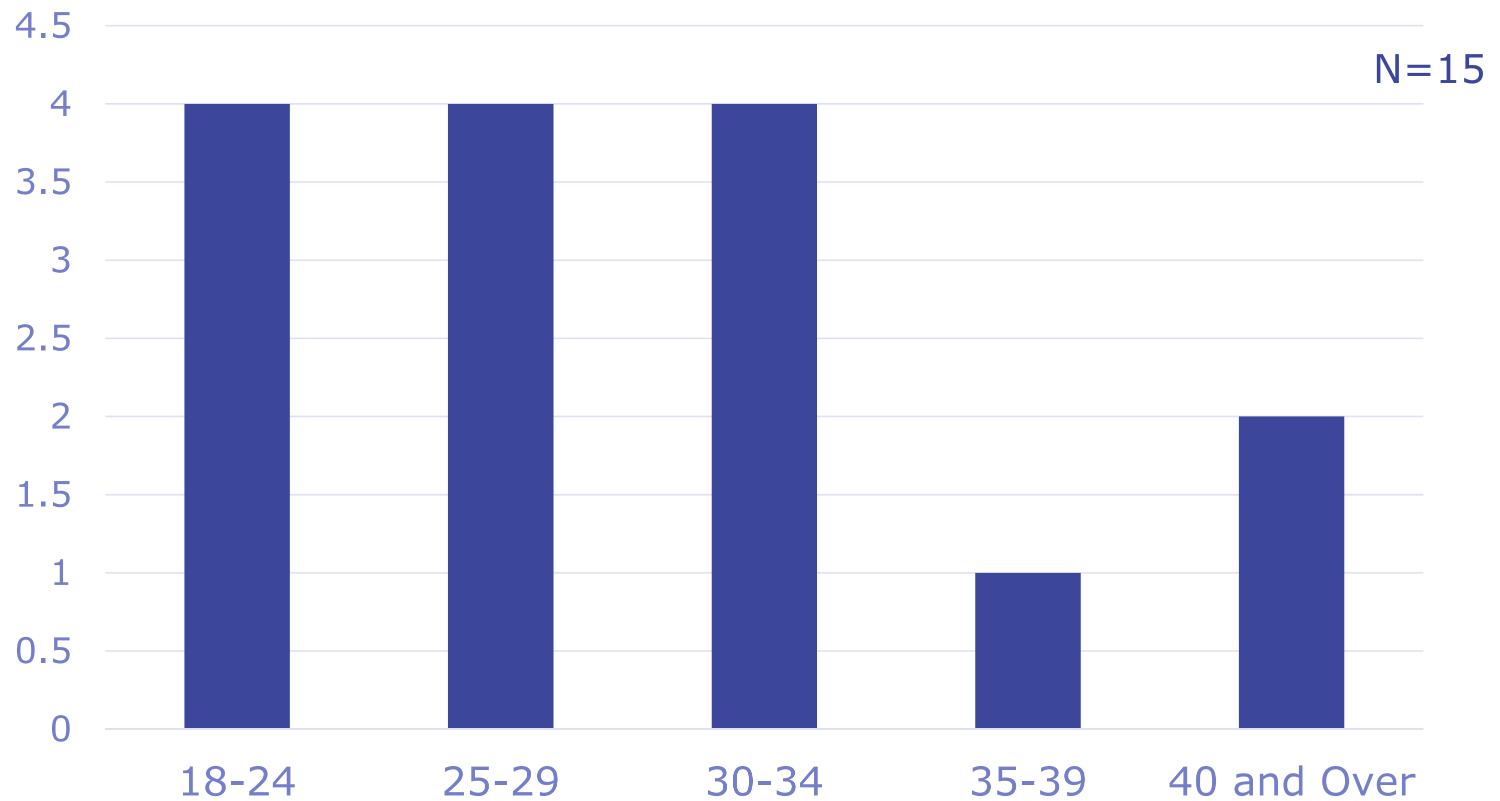
PR & PAU Combined: Insurance



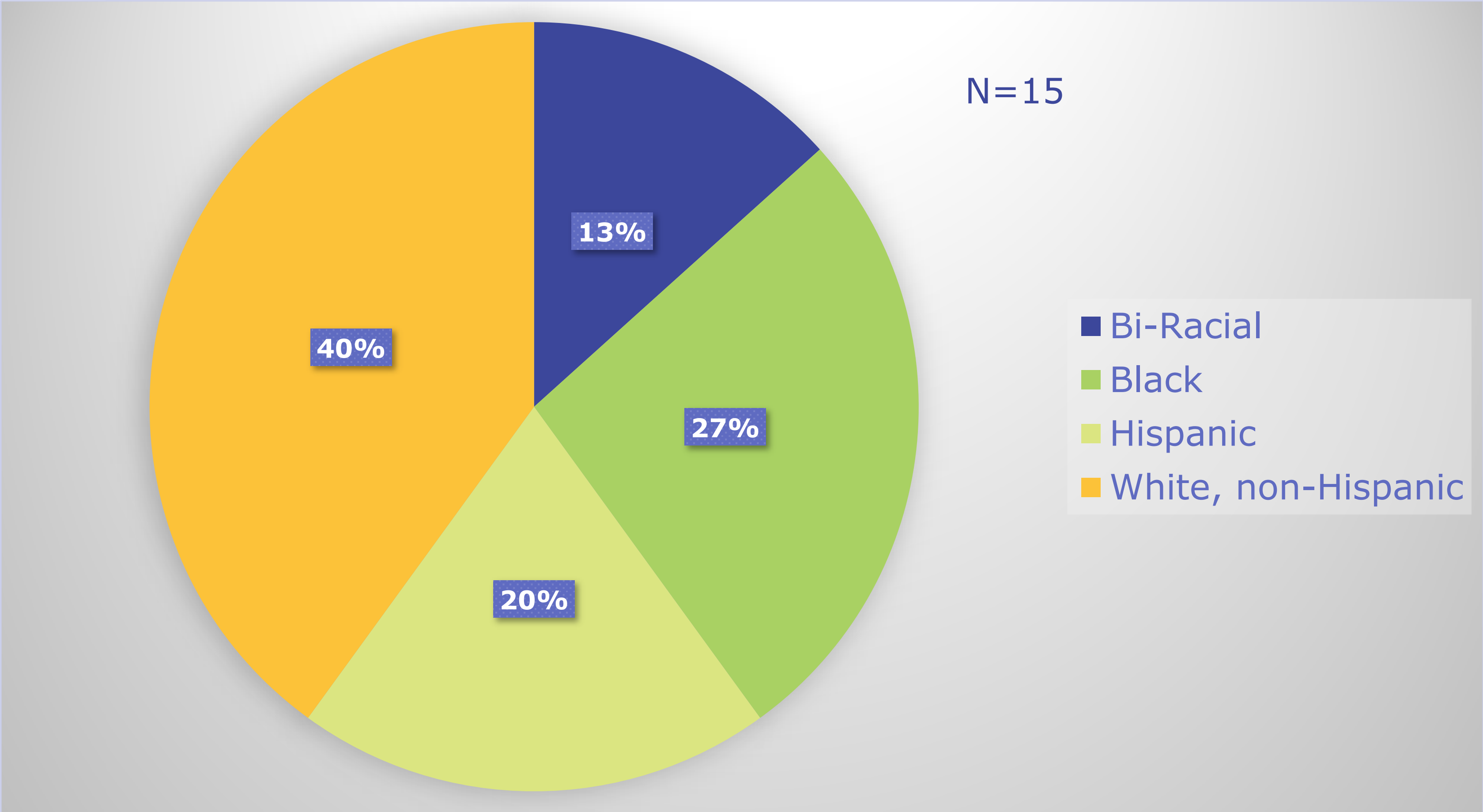
PR & PAU Combined: Education



PR & PAU Combined: Age



Racial/Ethnic Breakdown of Pregnancy-Related and Pregnancy-Associated Unable to Determine Relatedness Deaths Combined



Next Steps and Questions

Joint KMMRC & KPQC Meeting

Bundle Selection

Recruit QI and Clinical Champions

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