

Physical Health of Navajo Children on the Navajo Nation

Testimony for the Alyce Spotted Bear & Walter Soboleff
Commission on Native Children

Diana Hu, MD FAAP Maternal
Health Consultant :NAIHS
April 2022



Objectives

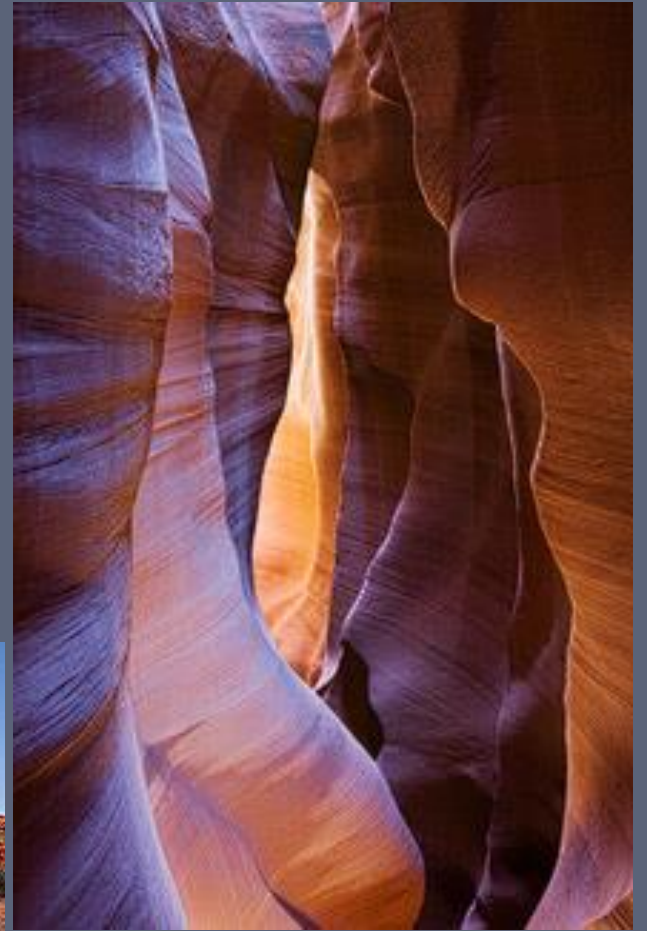
- To discuss the demographics of the Navajo Youth population and their families
- To highlight the current major clinical care issues for Navajo Children and youth
- To describe the maternal health issues that have significant impact on infant and child health through pregnancy, delivery, and infancy
 - Focus on successes, challenges and unmet needs

Land acknowledgement

- I respectfully acknowledge that this meeting is being conducted on the traditional lands of the Dine, Hopi and San Juan Paiute peoples and honor their commitment and generosity in sharing these lands
- I am grateful to be working on the traditional lands of the Navajo , Hopi, and San Juan Paiute people and to be allowed to serve their people

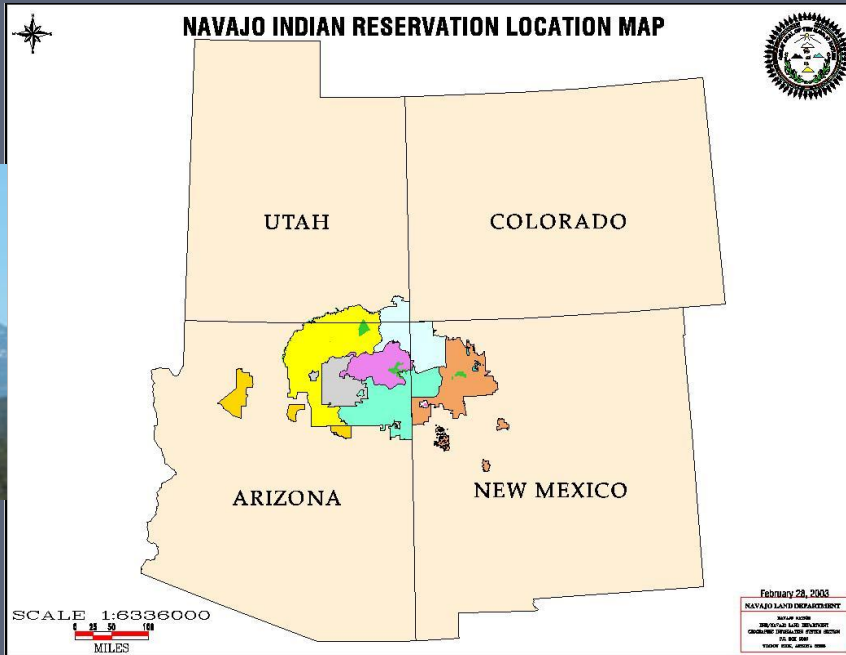
Disclosures

- My comments do not represent the official position of Tuba City Regional Health Care Corporation, Navajo Area Indian Health Service, the dept of Health and Human Services, or the federal government



Who we serve

- Navajo Nation
 - Largest reservation based tribe in the US
 - Total estimated US population:332,129
 - 2020 census population 173,558 residents on the reservation
 - 168,000 Native American or more than one race
 - Over 27,000 children/teens < 19yo- 27% of the population
 - In 1990 50% of the population was < 21yo



Navajo Nation

- Largest land mass Indian reservation in the US
 - 27,000 sq miles
 - Size of West Virginia
 - Geography- Colorado Plateau
 - High desert
 - Avg Elevation: 6000' above sea level
 - Avg Rainfall: 12" per annum (range 5-25")
 - In proximity to 14 national parks and monuments



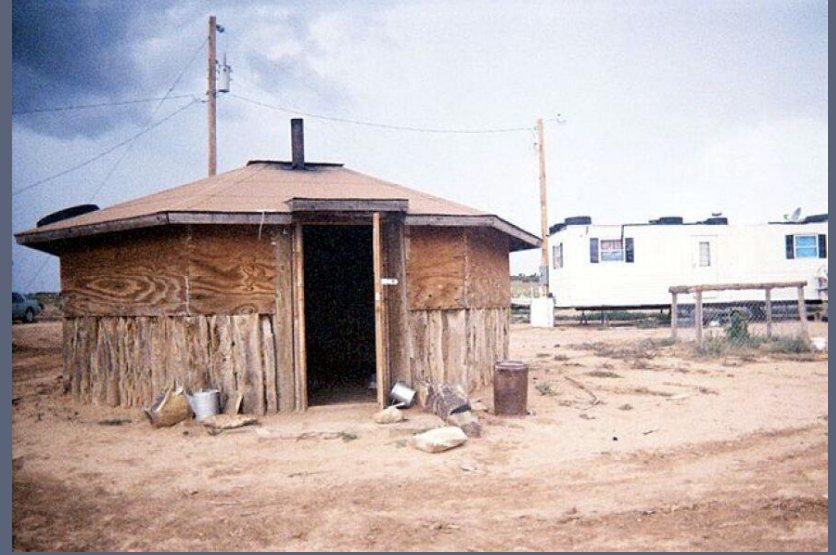
The Navajo Nation- ruralness

- 25% of households do not have electricity or natural gas
 - This is 75% of all the homes in the US that do not have electricity
- 30% lack indoor plumbing/running water
- 55% of households with a computer
 - 30% have broadband internet subscriptions
 - >90% have cell phones – but large areas of the reservation have no coverage

The Navajo Nation - economics

- 37.9% of households below federal poverty level (US 11.4%) (2020 census data)-
 - median household income \$28,765
 - 56% of adults > 16yo not in the civilian labor force

Census data – 16.0% unemployment



Ruralness

- Food deserts- 13 full service grocery stores for an area the size of West Virginia
 - For urban areas definition is > 1 mi from a grocery store. For rural areas definition is >10 miles from a grocery store
 - 40% of households feel “food insufficient” without access to healthy food options
 - Dine food sovereignty report: Dine policy Insitute 2014)
- Travel on the reservation
 - 66% of roads on the Navajo Nation are unpaved
 - Virtually no public transportation system

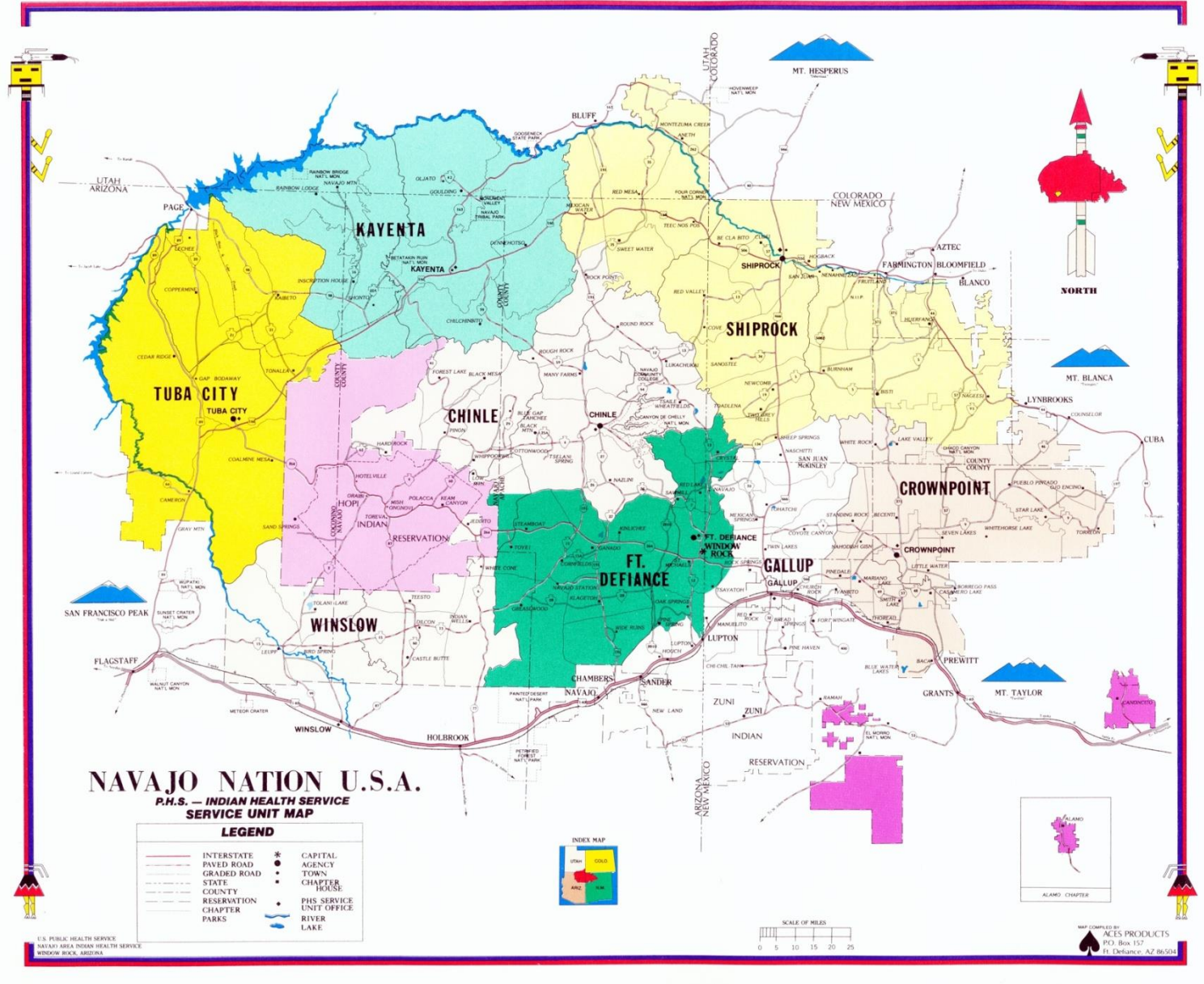


The Navajo Nation – education

- 75.7% have HS education or equivalent by age 25 yrs (US 91%)
- 8.8% have a bachelor's level education by age 25 years (US 37.5%)

Navajo Area

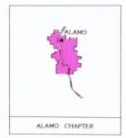
- 8 service units- 244,000 registered users
 - 6 hospital based service units (in descending order of size of population served)
 - 2 administered under tribal corporations :Tuba City Regional Health Care Corporation, Tsehootsooi Medical Center
 - 2 health center based service units (no inpatient beds)
 - Winslow Indian Health Care Center under tribal corporation
- 3 additional tribal entity facilities
 - UNHS- Montezuma Creek /Blanding/Monument Valley/Navajo Mountain Clinics
 - Navajo Health Foundation- Sage Memorial Hospital, Ganado-
 - Urban: Native Americans for Community Action (NACA) – Flagstaff, AZ



NAVAJO NATION U.S.A.
P.H.S. — INDIAN HEALTH SERVICE
SERVICE UNIT MAP

LEGEND

	INTERSTATE		CAPITAL
	PAVED ROAD		AGENCY
	GRADED ROAD		TOWNSHIP
	STATE		CHAPTER
	COUNTY		HOUSE
	RESERVATION		P.H.S. SERVICE UNIT OFFICE
	CHAPTER		RESERVATION
	PARKS		RIVER
			LAKE



U.S. PUBLIC HEALTH SERVICE
 NAVAJO AREA INDIAN HEALTH SERVICE
 WINDOW ROCK, ARIZONA

MAP COMPILED BY
ACES PRODUCTS
 P.O. Box 1527
 Ft. Defiance, AZ 86504

Pediatric Services in NAIHS I/T/U

- Ambulatory care
 - Services vary based on the site of care
 - School based health centers
- Inpatient care
 - Level 1 and level 2 nursery care
 - High risk OB services in 5 delivering hospitals
 - Inpatient pediatrics/consults for surgery/ortho
- Emergency room- consultation
- Dental
- Public health/community health
 - Community based health programs
 - Home visitation
 - Pandemic response

Coordination of pediatric care

- Chief clinical consultant in Pediatrics
- Maternal Child Health Consultant
- Area immunization consultant

- Annual/biannual meetings/networking to establish best practices across the Navajo Nation facilities
- Our scope of practice is more encompassing than other IHS areas
 - Current pediatric trainees may need a different skill set

What has changed in our practice

- Old morbidity
 - Infectious disease/vaccine preventable diseases
 - Respiratory syncytial virus
 - Pneumococcal infections
 - Hib infections
 - Hepatitis A
 - Shigella dysentery/Rotavirus diarrhea
 - Malnutrition
 - Accidents
 - Riding in the back of pickup trucks
 - Ash pit burns

What we see now

- New morbidity- “social determinants of health”
 - Obesity and T2DM
 - A different kind of “mal” nutrition
 - Medically fragile/chronic disease
 - Genetic illnesses- genetic bottleneck
 - Mental health issues
 - Depression/anxiety/suicidal ideation
 - ADHD/ODD/conduct disorder
 - Trauma informed care- Events, experience, effect
 - Historical and generational trauma

Well Child Care/Immunizations

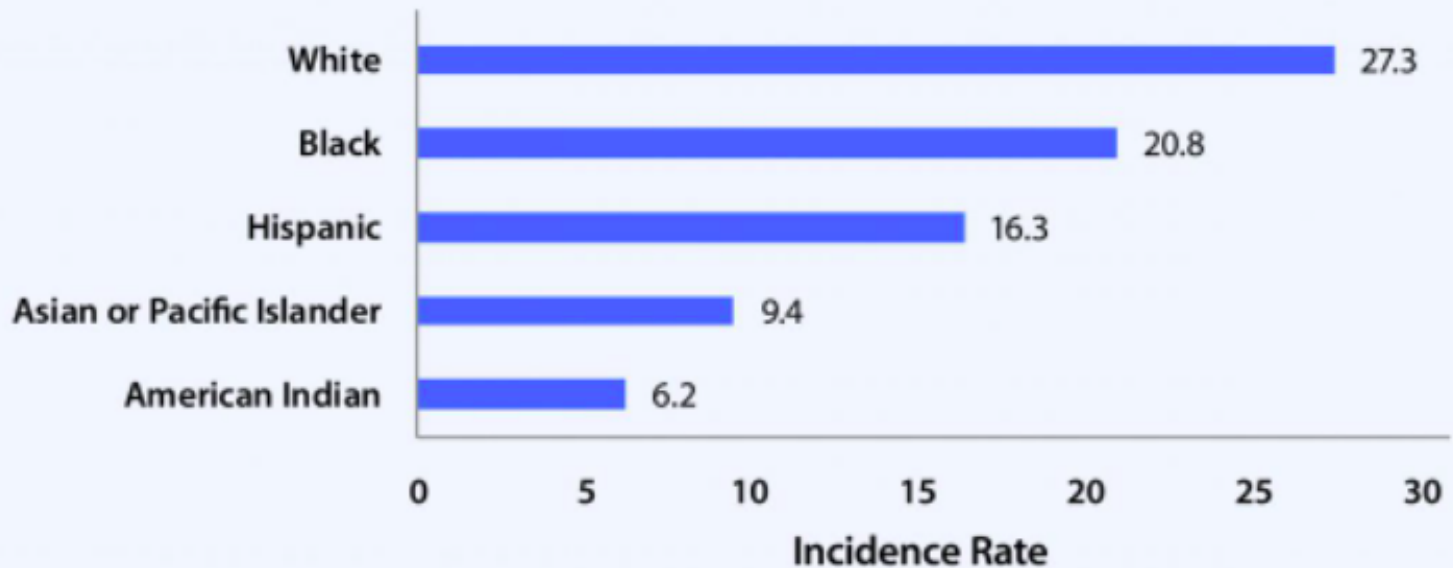
- Success- some of the highest levels of childhood and adolescent vaccination in Indian Country, and superior to 4 corners states
 - Virtual elimination of invasive pneumococcal and Hib disease
- Challenges- dropping immunization rates with the COVID19 pandemic and decreased access to care.
- COVID19 immunization delivery

Obesity and Type 2 DM

- Almost 50% of the Navajo Nation school aged children are at an unhealthy weight- over the 85th %ile for BMI for age
 - 25-30% are over the 95th %ile for BMI = obese
 - Type 2 DM rates have increased year to year with 1:660 Navajo youth with DM in 2009 and an estimated new case rate of 1:3400 children
 - (Dabelea, et al SEARCH for Diabetes in Youth 2009)
 - 46.5 cases/100,000 children 80% of pediatric DM
 - 8.9% increase per year (incidence)
 - Type 1DM rates are also increasing nationally and on Navajo as well
- (Jensen and Dabelea, Curr Diab Rep 2019)

T₁DM in youth

Figure 7. Incidence of Type 1 Diabetes per 100,000 Persons Among Children and Adolescents Younger Than Age 20 Years, by Racial or Ethnic Group, United States, 2014–2015



Obesity and Type 2 DM

- DM control – AI/AN youth significantly more likely to have POOR glycemic control after dx.
 - Complication rates are higher with younger dx
- Other risk factors- MATERNAL DM in gestation
 - OR 5.7 (95% CI 2.4, 13.4)
- Pandemic issues- US youth increase in DM dx associated with COVID 19 infection /time frame of pandemic- 2-3X higher than pre pandemic
 - Weight gain with pandemic
 - Less access to obesity related services
 - Autoimmune triggers

Obesity and Type 2DM

■ Successes

- Comprehensive Obesity treatment models are in study
 - Home visitation
 - DPP model- healthy lifestyles
- Screening for pre DM/DM
- Treatment options for youth with DM
- Policy: junk food tax 2014
- Baby friendly hospital status to promote breastfeeding

■ Challenges

- Obesity treatment programs very labor and resource intensive with limited outcomes.

role of more intensive interventions- bariatric surgery

Food deserts /food insecurity and access to healthy affordable food

Adapting programs to families and youth

Mental health issues with chronic illness

Mental health /behavioral health

- Suicide rates / SI/Depression are significantly higher for AI/NA youth than national averages
 - Engagement in MH services is difficult
 - Pandemic- medical concerns, isolation, and lack of in person school increased depression and anxiety
- Substance abuse-
 - use of marijuana ever higher in Navajo youth
 - Use of alcohol ever is lower than 10 years ago

(NNYRBS 2017 data)

(https://www.aastec.net/wp-content/uploads/2020/10/MaternalChildHealth.V7.HiRez_Sept_30_20.pdf- 2020 Navajo Nation maternal child health assessment)

Mental health /behavioral health

- Sexual health /transgender services
 - Two spirit persons
 - Specialized medical and mental/social health supports
 - Specialized services for YOUTH
- Educational services/struggling students
 - Increased dx of autism and ADHD
 - Split between educational community and medical community
- Abused and neglected children

Mental health /behavioral health

- Successes-
 - School based health centers increasing access to confidential care
 - Telemental health services
 - Specialized adolescent health venue
 - Screening with all encounters
 - Referral clinics for transgender care
 - Primary care training for depression and ADHD care

Mental Health /behavioral health

- Challenges
 - Trauma informed care
 - Substance abuse treatment options locally and off reservation
 - Family engagement/acceptance of services
 - Community engagement /resources for suicide prevention
 - Personnel shortages for ongoing services
 - Increased volume with pandemic
 - inpatient care networks/Aftercare
 - Communication and coordination of care for children and families affected by abuse

Chronic disease/special needs children

- Increasing survival of medically fragile special needs children in the past decades
 - Navajo population has some rare and unique conditions
 - Increasing education of local and surrounding area medical network about these conditions
 - Technology/connections with PCPs and specialists

Chronic disease /Special needs children

- Successes-
 - outreach and referral networks with tertiary care
 - Telehealth options
 - Patient centered medical home
- Challenges
 - Specialized services may not be available locally
 - Decreased funding for field clinics/increased travel to tertiary care
 - Case management
 - Support network for families is not available
 - Interface with schools and care agencies

Other special issues

- Dental care
 - 4x higher rates of dental caries in Navajo children than urban White population
 - Innovative programs for use of fluoride varnish and Silver diamine Fluoride in primary care
 - Access to dentists varies by location
- Developmental pediatrics
 - Autism /ASD diagnoses have increased in the past 10years
 - Telehealth links with tertiary care for earlier diagnosis
 - Non school based Services for ASD children on reservation do not exist

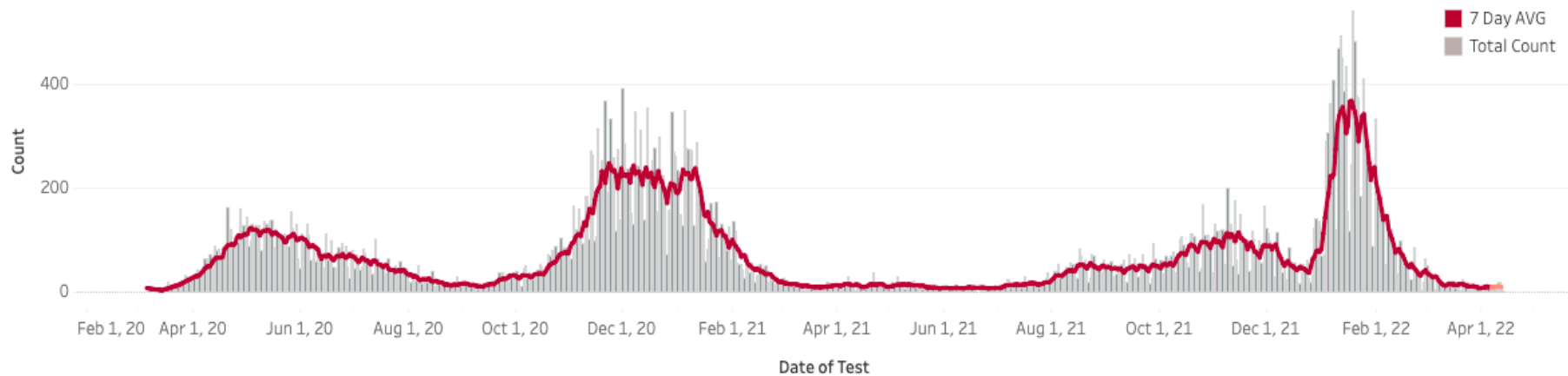
Maternal Health

- Birth rates have dropped by over 60% since peak in 1990-91
- Complexity of OB care has increased
 - 20-25% preexisting or gestational DM
 - Pregnancy induced hypertension/preeclampsia
 - Obesity in pregnancy
- Prematurity and teen pregnancy are static
- Substance abuse in pregnancy has increased
 - Methamphetamine, marijuana
- STI in pregnancy has increased in the past 3 years
 - Rise in congenital syphilis 2020-2021
- Intrafamilial violence / personal safety issues do not have comprehensive solutions



COVID₁₉ on the Navajo Nation

Daily Confirmed Cases on Navajo Nation in All⁷



COVID19 and the effect on Navajo Children

- 1740 lives lost to COVID19 on the Navajo Nation
 - Every family personally knows someone who has died or lost a family member to COVID19
 - Many children lost primary caregivers /immediate family
 - All were out of in-person school for one year or more
 - Significant academic impact
 - Many children have not returned to in person school
 - Medical follow up is just recovering with reopening of services

Summary

- Navajo children and youth no longer have a very different spectrum of illness than non Navajo peers
 - But the system needs to evolve to support care for the “new morbidity”
 - Coordination of care- local and tertiary
 - Community and tribal engagement
 - Sadly, no easy solutions
 - Primary care pediatricians in rural areas will need to adapt their skill set

Summary

Where to go in the future...

- Special DM project /funding for healthy lifestyles teaching
 - With outcome assessment to create best practices
- Home visitation projects
 - Evidence based interventions for high risk pregnancies/parents
- Case management /care coordination
- Telemedicine/internet connectivity
- Outreach/partnerships with the academic/tertiary care/private sector
- Assist with tribal consultation to strengthen tribal/medical partnerships, education policy, and economic development



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