Factors Influencing Expansion of Targeted cCMV Screening

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Agenda: Programmatic Challenges

- Program / protocol preparation
- Logistical / communication organization
- Legislative challenges
- Programmatic costs

- Primary intent to demonstrate cost relationships for various levels of CMV screening and highlight logistical considerations

Introduction: Program / Protocol Preparation

- Initial or 2nd test fail trigger for CMV screen
- May have separate protocols for NICU versus mother-baby nursery
- Identification of in-house screening team members
    - Hearing screener
    - Designated ward secretary for communication and coordination
    - Nursing staff
    - Attending physician

Logistical and Communication Organization

- Hearing screener (in-house or 3rd party company)
  - Electronic medical record
- Nursing staff
- Ward secretary
  - eReports (DOH)
- Laboratory (in-house or outside)
  - Orders
  - Documentation preparation
  - Specimen transport

Logistical and Communication Organization

- Notification of positive/negative CMV screen
  - Ward secretary
    - EMR documentation
    - eReports (DOH)
    - PCP and parents*
    - Early Steps (IDEA Part C Birth to Three Program)
- Audiologist for follow-up both of failed newborn hearing screening and positive CMV lab results.
  - Second screen (if not received before discharge)
  - Diagnostic evaluation
  - Follow-up interval

Logistical and Communication Challenges

- Medicaid patients.
  - Public health clinics and “physician du jour”
  - NO PCP
- Interdisciplinary examination if CMV positive
  - Symptomatic versus asymptomatic and probability of complicating diagnoses
  - Role of PCP

Disorder Domains => Need for Interprofessional Evaluation

Sensory and CNS

- Hearing loss (early and late onset)
- Vestibular disorders (with or without hearing loss)
- Visual impairment (Chorioretinitis, optic atrophy, optic nerve aplasia)
- Cerebral alterations (ventriculomegaly, microcephaly, calcifications, cortical atrophy)

Cognitive and Behavioral

- Intellectual impairment
- Specific learning disabilities
- Cerebral Palsy
- Developmental delays in language and learning
- ADHD
- ASD
- And there is more……..

Legislative Challenges: Who Will Pay for cCMV Screening?

The initial procedure for screening the hearing of the newborn or infant and any medically necessary follow-up reevaluations leading to diagnosis shall be a covered benefit for Medicaid patients covered by a fee-for-service program. For Medicaid patients enrolled in HMOs, providers shall be reimbursed directly by the Medicaid Program Office at the Medicaid rate.

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Cost Estimate

Florida 2022 data

Background Information (based on Florida Data)

Florida Infant Demographics

- Live births (2022): 224,487
- Failed newborn hearing screen: 8,891
- Approximately 52% are Medicaid-eligible
  - 116,773 Medicaid births
- Children born between 23 and 32 weeks GA: 8.7% of births (i.e., 19,531) (Source: CDC)

Logistical Costs

- Outside lab analysis:
  - Average $57 per screen
  - Range per test: $189 to $33 based on volume
- In-house lab analysis:
  - ~$89 to ~$12 volume dependent
  - Note: many Florida hospitals do not have in-house analysis capability for CMV

Background Information (based on Florida Data)

Targeted Screening Annualized Costs

- Estimated cost for targeted hearing screening failures: $506,787
- Factors:
  - 8891 screening failures
  - $57 per test average

Expanded Screening (NICU) Costs

- Estimated cost for expanded CMV screening: $1,620,054
- 8.7% of births (19,531)
  - Very low birth weight, prematurity, Level III NICU admit, etc. (Note: Child must be 34 weeks CA to screen for hearing loss)
- ~4% well-baby (8891)
- $57 per test average

Universal Screening Annualized Costs

- Estimated cost for CMV screening: $12,795,759
- 100% of live births (224,487)
- $57 per test average

Anticipated Yield for Positive CMV Through Incremental Expansion of Screening

- Total: 751
  - 44 from hearing screening failures
  - 707 from NICU and equivalent admissions

  - Statistics used: 2.1% for NICU infants (Yamamoto et al., 2001)
  - 0.5% for children who fail newborn hearing screenings (CDC.gov; CMV Foundation)

- Yamamoto AY, Mussi-Pinhata MM, Pinto PC, Figueiredo LT, Jorge SM. (2001). Congenital cytomegalovirus infection in preterm and full-term newborn infants from a population with a high seroprevalence rate. The Pediatric Infectious Disease Journal, 20 (2), 188-192.

Additional Budget Considerations

Hospital

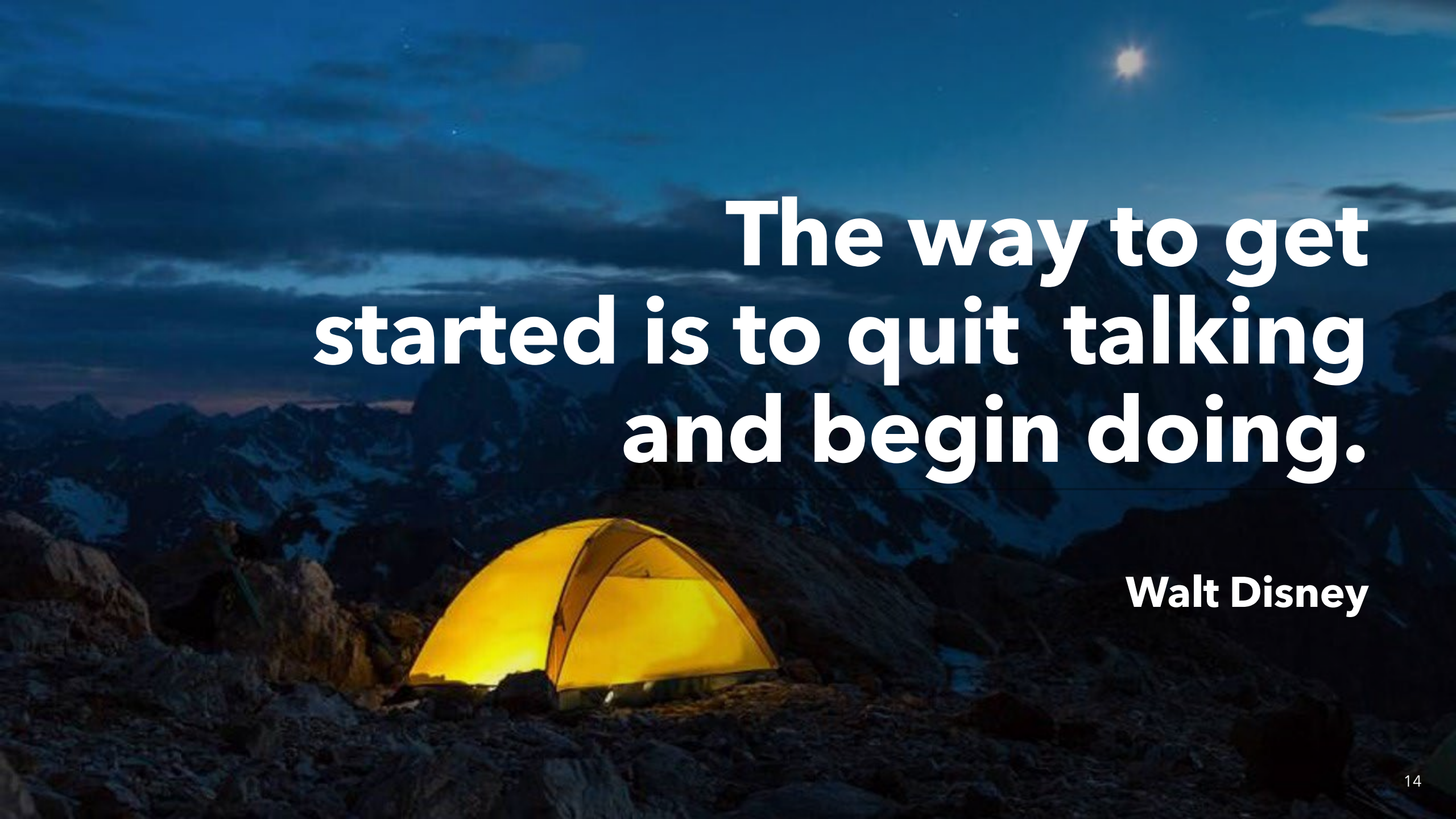
- FTE re-allocation for documentation, specimen tracking, reporting, coordinating follow-up notifications
- Disposable supplies

State Department of Health

- Increase staffing to accommodate for tracking and follow-up monitoring

General

Payment responsibility for hospital screening protocols


The way to get started is to quit talking and begin doing.
Walt Disney

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Thank you