The Neuroviruses Emerging in the Americas Network (NEAS): fostering research of Acute Neuroinflammatory Disorders (ANIDs) in healthcare settings in Colombia.

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*No conflict of interest to be disclosed*
The NEAS network

- Created after Zika outbreak in Colombia (2016).
- Led between J. Hopkins University and the Universidad del Valle.
- Observatory of the role of emerging viral infections and ANIDs.
- Bi-directional (combined retro- and prospective), longitudinal, meta-cohort study and case-control study (2016-2020)*.

Networking: the key

Team of neurologist, general practitioners (sentinels), epidemiologist, virologist, epidemiologist, molecular science experts, etc.

Networking (Training, meetings, coordination, supervision)

Guillain-Barré Syndrome, encephalitis, myelitis, meningitis, optic neuritis, cranial nerve palsy.
About the study

Case-control (2016) then Cohort study (2020)

- Approval by institutional review boards at each health center was obtained.
- Creation of SOP for field work, and training was done.
- Inclusion and follow-up up to 4 weeks.
- Participant information was consigned online on REDCap.
- Biological specimens from every site were taken and sent to the VIREM lab in Cali, Colombia to be processed.

Acute Neuroinflammatory Disorders
- Guillain-Barre syndrome
- Encephalitis
- Myelitis

Suspected case

Time

Initial visit
- Contact information
- NEAS 1
- Blood, CSF, urine, saliva
- NCS, MRI
- EDSS
- Rankin/Hughes scales
- IGOS A

4 weeks
- NEAS 1
- Blood, urine, saliva
- EDSS
- Rankin/Hughes scales
- IGOS B
The process

Active institutional search
- Done by general practitioner (sentinel)
- Retrospective search is also done

Inclusion
- Consent // Assent (7 y/o)

Data collection
- Demographic, symptoms, past medical history, neurological examination, laboratory, imaging.

Specimen collection
- Blood, urine, saliva, spinal fluid.
- Np and Op swab (2021)
- Laboratory analysis (PCR and antibodies)

Follow-up
- Data and samples
- Up to 4 weeks (T0, T1, T2, T3, T4)

NEAS forms (1 – 2)
IGOS form (A-B-C)
Treatment form
EGM form
Challenges

Community
- Early symptom recognition

Hospital
- Accessibility of patients to health services.
- Delay in diagnosis.

Hospital 2*
- Delay in diagnostic aids and laboratories.

Out patient follow-up
- Social determinants.

- Strategic differences between health centers.
- Accessibility to medical records.
Achievements

Clinical information from 914 patients with ANIDs included

Biobank of specimens of the patients

Bank of MRIs and EMG

Strengthening of the institutional research network

Monthly lectures on ANIDs

Creation on RehApp
Networking with different areas of expertise and different research sites lead to a strengthening of the technical capacity of the work team and general community.
Thanks to