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EXPERTS ADDRESS WAYS TO SUPPORT LATEST SCIENCE EDUCATION STANDARDS

JULY 18, 2018 - The Next Generation Science Standards (NGSS) are K–12 science content standards, with three dimensions that are integrated in instruction at all levels: core ideas, science and engineering practices, and cross-cutting concepts. A new article in the *Journal of Research Science in Teaching* focuses on how to support enactment of the NGSS in diverse educational systems, including the challenges faced when some of those systems are fragmented and resource-poor. The article appears in a forthcoming JRST special issue on the NGSS, to be released online August 20, 2018.

The article highlights the Carbon TIME project, which focuses on teaching carbon cycling and energy transformations at multiple scales, as an example of a design-based implementation research approach that can achieve this goal. Carbon TIME includes publicly available teaching units, teacher professional development, and teacher networks based in local education agencies.

“The NGSS present us with both great opportunities and important challenges. I believe that we are both gaining insight into the challenges and designing systems that help students achieve three-dimensional learning at scale,” said lead author Prof. Charles W. (Andy) Anderson, of Michigan State University.

Full citation: “Designing educational systems to support enactment of the Next Generation Science Standards.” Charles W. Anderson, Elizabeth X. de los Santos, Sarah Bodbyl, Beth A. Covitt, Kirsten D. Edwards, James Brian Hancock II, Qinyun Lin, Christie Morrison Thomas, William R. Penuel and Mary Margaret Welch. *Journal of Research in Science Teaching*; Published Online: July 17, 2018. (DOI: 10.1002/tea.21484).

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WHEN SHOULD EMERGENCY DEPARTMENTS ORDER IMAGING TESTS FOR EPILEPTIC SEIZURES?

JULY 18, 2018 - Emergency department visits for patients with seizures often have them undergoing neuroimaging, typically CT scans. Imaging in adult patients presenting with onset index seizures leads to a change in care for 9 to 17% of patients, however if any changes are made following imaging in the emergency department for seizures among adults with known seizure disorders is uncertain.

An Epilepsia study involving 822 emergency department visits for non-index seizures showed that neuroimaging was performed in 46% of all patients; of these 3% of imaging tests led to an acute change in patient management, 2% after excluding false positive scans. Each visit researchers abstracted details of clinical presentation, whether imaging was obtained and results, as well as results of previous imaging when available to determine if emergency

department neuroimaging led to acute change in patient management. Factors associated with obtaining the imaging and yield of imaging were evaluated by multivariate logistic regression.

Increased yield of emergency department neuroimaging was associated with prolonged alteration of consciousness, acute head trauma, and a focal neurological examination at time of presentation. Without any of these three clinical factors true positive yield of neuroimaging was zero, according to the researchers.

Epilepsia is a leading and authoritative source for current clinical research on all aspects of epilepsy, presenting scientific evidence and clinical methodology in: neuroimaging, clinical neurology, molecular biology, neurophysiology, neurochemistry, neuroepidemiology, neurosurgery, and therapeutic trials.

Researchers say findings suggest a more conservative use of emergency department neuroimaging for non-index seizures is supported, based in clinical factors at time of presentation.

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