Welcome to the 1st WiNHR Newsletter publication! We look forward to announcing notable updates regarding WiNHR’s progress and current studies. It is expected that the frequency of publication will be 3-4 issues per year as needed. Thank you for your interest in learning about WiNHR!

WiNHR Announces Recent Journal Publications

Statewide Study Implicates Mycoplasma Infection in Preterm Births

Despite a seven-year improving trend in Wisconsin’s preterm birthrate, the rate among African Americans is still 50% higher than the overall Wisconsin average (March of Dimes, 2014). Such premature births can give rise to health challenges, including lifelong breathing problems and cerebral palsy, among others. Significantly, premature birth is a leading cause of infant mortality and ~54% of infant deaths in Milwaukee are associated with premature birth, according to the Milwaukee Health Department.

Enter a team led by William Agger, MD, at Gundersen Health System in La Crosse. To identify host factors associated with preterm birth in Wisconsin and correlate these factors with urogenital infections, Agger and colleagues worked with the Wisconsin Network for Health Research (WiNHR) to perform an epidemiological cohort investigation across four statewide study sites. Because of the known disparity in preterm births across racial and ethnic groups, it was essential that the study encompassed more diverse populations than from La Crosse alone.

Agger comments, “With help from WiNHR and an ICTR-based primary study coordinator, our team collected and analyzed data from 676 participants at large urban, midsize urban, small city, and rural city clinic locations.” He continues, “We were able to demonstrate a strong association of preterm birth with prior preterm birth and with urinary tract infections. The association was strongest in births prior to 35 weeks and infection with Mycoplasma hominis – a species usually considered commensal.”

Laurel Rice, MD, Chair, UW Department of Obstetrics and Gynecology, comments, “Decreasing the infant mortality rate in Wisconsin is one of the top goals for the UW SMPH and the OB/GYN department. This important study highlights the association between mycoplasma urinary tract infections and preterm delivery in at-risk populations and may provide a marker to allow for early identification and intervention. It is very exciting work.”

Agger adds, “Rates of Mycoplasma infection or “carriage” were very high in our large urban cohort. While other factors such as maternal smoking and chronic stress contribute to preterm births, understanding the role played by Mycoplasma hominis infection and how to decrease those rates will be key to making needed progress in this very challenging public health crisis.”

Wisconsin Network for Health Research Newsletter

WiNHR Announces Recent Journal Publications

**WiNHR Assists Pilot Study for Rare Disease**

Known for over 100 years, calciphylaxis is a rare, but highly morbid syndrome seen exclusively in patients with stage 5 chronic kidney disease. Calciphylaxis is characterized by calcium accumulation in small blood vessels of the fat and skin tissues and by non-healing skin wounds.

Three sites, UWHC, Marshfield Clinic, and Gundersen Health Systems, collaborated in an open-label pilot study led by Micah Chan, MD, MPH, associate professor of Medicine at UW SMPH, to determine if lanthanum carbonate (Fosrenol®), an FDA-approved inhibitor of phosphate absorption, could be effective in eliciting remission in dialysis patients with confirmed calciphylaxis.

WiNHR played a key role in evaluating the ability of each site to identify and enroll dialysis subjects with confirmed calciphylaxis. Enrolling subjects for rare disease trials, such as this one, can be a difficult proposition at just one site and requires networking of clinical investigators on a state- or region-wide basis.

Chan comments, “Our results showed an improvement for the first time in both skin lesions and quality of life and documented complete remission over a 12-week treatment period. Although our study results were limited by very low enrollment, we were able to show the feasibility of short-term treatment using a medication having both patient tolerability and a proven safety history.”

Co-author Brad Astor, PhD, MPH, associate professor of Medicine and director of research for the Division of Nephrology, notes, "Despite the small sample size, we found statistically significant improvements in several quality-of-life components, including those related to personal relationships and symptoms and feelings. These results underscore the substantial impact this disease can have on patients and the potential benefit to be derived from successful treatment.”

Chan continues, “A multicenter randomized, placebo-controlled trial will be the next step to determine the safety and efficacy of this novel therapeutic regimen. Working with WiNHR and its statewide partners will be essential to identifying and enrolling sufficient numbers of patients suffering from this rare disease.”

This work was published as a pilot study in the *Journal of Nephrology and Therapeutics* (Chan et al. 2014. “Pilot Study of the Effect of Lanthanum Carbonate (Fosrenol®) In Patients with Calciphylaxis: A Wisconsin Network for Health Research (WiNHR) Study.” J Nephrol Ther 4(3):1000162.)

**History**

In response to the 2004 NIH Roadmap for Translational Research, investigators from the University of Wisconsin-Madison and other healthcare systems in the state realized the potential benefits of a statewide collaborative research network and formed WiNHR. In 2006, WiNHR received startup funding from the UW School of Medicine and Public Health (UW SMPH) Medical Education and Research Committee, part of the Wisconsin Partnership Program. WiNHR joined the UW Institute for Clinical and Translational Research (ICTR) in 2009. This relationship expands opportunities for WiNHR to conduct statewide projects, as ICTR offers administrative, fiscal and information technology support to the network. ICTR is funded by an NIH Clinical and Translational Science Award (CTSA).

For a listing of past and current WiNHR studies and research publications, please visit https://www.ictr.wisc.edu/WiNHRProjects.
Efficiency in Collaboration

WiNHR has been a catalyst for infrastructure refinements at its network sites including:

- Standard operating procedures across sites
- Memorandums of understanding
- Intellectual property protections
- Clinical Research Management software
- Streamlined IRB approval through the Wisconsin Institutional Review Board Consortium (WIC)

Geographic Reach and Diversity

- Patient populations from urban, rural, and ethnically diverse communities
- Increased opportunities for patient (subject) accrual
- Access to more than 3 million residents statewide in more than 50 counties

Broad Research Sponsorship

- Investigator-initiated
- Federally-funded
- Industry sponsored
- Medical research foundations

Currently Recruiting Studies

- Pharmacologic Interventions for Cardiovascular Disease in Obstructive Sleep Apnea (PI: Dr. John Dopp)
- The Effect of Solifenacin on Post Void Dribbling in Women: Results of a Randomized Controlled Parallel Trial (PI: Dr. Tova Ablove)
- How Do Nephrologists and Patients Communicate about Chronic Kidney Disease? (PIs: Dr. Micah Chan and Dr. Margaret Wise)
- Neuropsychological Progression in New Onset Epilepsy (PI: Dr. Bruce Hermann)

If you have questions regarding these currently recruiting studies, please contact Greg Guilfoil, Senior Research Coordinator with WiNHR:

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The mission of WiNHR is to foster research throughout Wisconsin via a collaborative, multidisciplinary statewide research network. Through WiNHR, the network conducts clinical, translational, comparative effectiveness, and health outcomes research studies involving multiple health-care institutions.