and modifying existing ones can accelerate multi-site research. Standardization fosters collaboration, trust, and continued progress while meeting regulatory requirements that maintain human subjects' and institutional protections.
Keywords: Regulatory; Compliance

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D1-2:
A Novel Method for Calculating Aggregate Counts While Censoring Small Cells in Multi-site Studies

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Background/Aims: Healthcare research is often studied within small subgroups of a population where anonymity usually provided by aggregation breaks down due to small cell counts. In previous HMORN studies this problem has been handled by censoring counts if they are less than five, six or ten depending on the governing IRB or funding agency. Censoring small cells per site has the unintended effect of preventing calculation of the multi-site counts that are large enough to pose no reidentification risk. The proposed method censors small cells on a site-by-site basis while allowing the originating site to calculate aggregates unaffected by censoring. **Methods:** The proposed method splits data delivery into two steps. In the first step a small cell censored file is sent to the originating site as usual. Each site then also creates a file containing the non-censored datum along with four or more dummy values. In the second step a file with row numbers of the true data is sent to the coordinating center and the file with dummy values is sent by all sites to a third party for addition. The third party adds each permutation of records within the five-row dummy blocks received. The sum file is then sent to the coordinating center along with a column indicating which rows from each site contributed to the final total. The coordinating center can then use the address files received from each data site to identify which row total is made up of all real values as opposed to rows that include dummy values. This is the true aggregate value. **Results:** The proposed method allows discover true aggregate values while censoring small cell counts so as to preserve confidentiality of the members being represented. However, the anonymous third party handling does introduce logistical and privacy concerns that need to be managed carefully. **Conclusions:** This method increases investigators' ability to comply with the principle of releasing the minimum data necessary for medical research while not censoring more than needed. The approach also speaks to a growing concern about reidentification in nominally deidentified data.
Keywords: Informatics; Data collection

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D1-3:
Marshfield Dictionary of Clinical and Translational Science (MD-CTS): An Online Reference for Clinical and Translational Science Terminology

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Background/Aims: New terms are rapidly appearing in the literature and practice of clinical medicine and translational research. To catalog real-world usage of medical terms, we report the first construction of an online dictionary of clinical and translational medicinal terms, which are computationally generated in near real-time using a big data approach. This project is NIH CTSA-funded and developed by the Marshfield Clinic Research Foundation in conjunction with University of Wisconsin - Madison. Currently titled Marshfield Dictionary of Clinical and Translational Science (MD-CTS), this application is a Google-like word search tool. By entering a term into the search bar, MD-CTS will display that term's definition, usage examples, contextual terms, related images, and ontological information. A prototype is available for public viewing at http://spellchecker.mfldclin.edu/. **Methods:** We programmatically derived the lexicon for MD-CTS from scholarly communications by parsing through 15,156,745 MEDLINE abstracts and extracting all of the unique words found therein. We then ran this list through several filters in order to remove words that were not relevant for searching, such as common English words and numeric expressions. We then loaded the resulting 1,795,769 terms into SQL tables. Each term is cross-referenced with every occurrence in all abstracts in which it was found. Additional information is aggregated from Wiktionary, Bioportal, and Wikipedia in real-time and displayed on-screen. From this lexicon we created a supplemental dictionary resource (updated quarterly) to be used in Microsoft Office® products. **Results:** We evaluated the utility of MD-CTS by creating a list of 100 words derived from recent clinical and translational medicine publications in the week of July 22, 2013. We then performed comparative searches for each term with Taber's Cyclopedic Medical Dictionary, Stedman's Medical Dictionary, Dorland's Illustrated Medical Dictionary, Medical Subject Headings (MeSH), and MD-CTS. We compared our supplemental dictionary resource to OpenMedSpell for effectiveness in accuracy of term recognition. **Conclusions:** In summary, we developed an online mobile and desktop reference, which comprehensively integrates Wiktionary (term information), Bioportal (ontological information), Wikipedia (related images), and Medline abstract information (term usage) for scientists and clinicians to browse in real-time. We also created a supplemental dictionary resource to be used in Microsoft Office® products.
Keywords: Ontology; Lexicon

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Mental Health/Chemical Dependency

C4-5:
Behavioral Activation Therapy for Perinatal Depression: Preliminary Results from a Multi-site Randomized Trial

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Background/Aims: Perinatal depression is both prevalent and associated with adverse correlates and consequences for women and offspring. Women and their health care providers often face complex choices regarding treatment of depression during pregnancy. Although studies suggest that pregnant women express a preference for psychotherapy over antidepressants, the latter is most frequently provided. These treatment patterns highlight the need for evidence-based psychotherapies with broad dissemination potential. We report preliminary results from a multi-site randomized trial comparing the effectiveness of brief Behavioral Activation (BA) therapy to usual care for women with elevated depressive symptoms during pregnancy. **Methods:** Women receiving prenatal care at Kaiser Permanente Colorado and Georgia, Group Health Cooperative, and HealthPartners (N = 163) were screened for depressive symptoms prior to or at their OB visit. Those with scores ≥10 on the PHQ-9 were recruited, consented, and randomized to receive 10 sessions of BA (N = 85) or usual care (N = 78). Obstetric nurses and behavioral health providers were trained to deliver BA by telephone, in the obstetrics clinics, or in patients' homes. Participants' mean age was 28, 37% (64/163) were pregnant with their first child, 47% (76/163) were non-White, and 15% (25/163) were Hispanic ethnicity. A majority (63%, or 102/163) reported receiving prior treatment for depression. There were no differences in demographic or clinical characteristics between the BA and usual care groups. The primary outcome measure was change in depression symptoms on the PHQ-9, obtained via a centralized web-based survey 10 weeks following randomization. **Results:** Mean baseline PHQ-9 scores for the BA and usual care groups were 14.9 (95% CI 14.1, 15.7) and 14.4 (95% CI 13.7, 15.2), respectively. Women randomly assigned to BA reported significantly greater improvement than women in usual care; mean PHQ-9 scores for the BA and control groups were 8.5 (95% CI 7.2, 9.8) and 10.3 (95% CI 9.1, 11.5), respectively (P = .04), and 46.5% (33/71) of the BA group had a 50% or greater reduction in PHQ-9 scores, vs. 30.4% (21/69) of the control group (P = .05). **Conclusions:** Behavioral activation may be an effective and feasible treatment for depressed pregnant women, with broad dissemination potential.
Keywords: Perinatal depression; Behavioral activation

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