IMPORTANT REVIEW INAUGURATES IMPLEMENTATION SCIENCE, A PROMISING NEW JOURNAL

Implementation Science is one of the publisher BioMed Central’s newest peer-reviewed journals that provide open online access to all content. The multi-disciplinary journal publishes research on “methods to promote the uptake of research findings into routine healthcare,” with an interest in quality improvement at professional, organizational, community, and policy levels. It is available from: http://www.implementationscience.com/

The journal’s inaugural research report¹ was a structured review of evidence from systematic reviews about the impact of quality improvement interventions at the organizational level on professional performance, patient outcomes, and cost. The authors, international leaders in the evolving field of research implementation, included in their report 36 reviews that collectively summarized hundreds of studies. Most reviews (n = 21), were rated as being of good quality. The report sheds light on the impact of the following strategies: revision of professional roles, multidisciplinary teams, integrated care services, knowledge management, quality management, and mixed interventions.

The review found evidence that enhancing roles of non-physicians and the use of computer systems for reminders and decision support improved professional performance. Multidisciplinary teams, integrated care service, and computerized decision support improved patient outcomes. Reviews of integrated care services only consistently reported cost savings. There was little evidence for the effectiveness of quality management, the focus of just two reviews. Unfortunately, just one included review appears to have focused on any aspect of maternal, newborn, or women’s health, which would be optimal for application in those areas.

The citation list includes several other important overview papers on best evidence for bringing about quality improvement in related areas.


FROM COCHRANE DATABASE OF SYSTEMATIC REVIEWS (CDSR), ISSUE 4, 2006

New Systematic Reviews

- Antithrombin for respiratory distress syndrome in pre-term infants
- Caesarean section versus vaginal delivery for preventing mother to infant hepatitis C virus transmission
- Elective repeat caesarean section versus induction of labour for women with a previous caesarean birth
- Exercise for women receiving adjuvant therapy for breast cancer
- Hormonal versus non-hormonal contraceptives in women with diabetes mellitus type 1 and 2
- Induction of labour for improving birth outcomes for women at or beyond term
- Intra-uterine insemination for unexplained subfertility
- Intrapartum interventions for preventing shoulder dystocia
- Massage intervention for promoting mental and physical health in infants aged under six months
- Multiple-micronutrient supplementation for women during pregnancy
- Oral contraceptives for functional ovarian cysts
- Progesterone for premenstrual syndrome
- Progesterone for preventing pre-eclampsia and its complications
- Sequencing of chemotherapy and radiation therapy for early breast cancer

UPDATED SYSTEMATIC REVIEWS

- Complementary and alternative therapies for pain management in labour
- Conservative management of pelvic organ prolapse in women
- Drugs for preventing malaria in pregnant women
- Formulas containing hydrolysed protein for prevention of allergy and food intolerance in infants
- Local oestrogen for vaginal atrophy in postmenopausal women
- Screening for breast cancer with mammography
- Soy formula for prevention of allergy and food intolerance in infants

Cochrane Reviews are available by subscription to The Cochrane Library, and review abstracts are available without charge. See: http://www.thecochranelibrary.com
FROM DATABASE OF ABSTRACTS OF REVIEWS OF EFFECTS (DARE)

Featured review: Coomarasamy A, Connock M, Thornton J, Khan KS. Accuracy of ultrasound biometry in the prediction of macrosomia: A systematic quantitative review (abstract 12006008066).

This systematic review assessed the accuracy of ultrasound as a predictor of >4,000 g birthweight. Sixty-three studies of 19,117 women were included in the analysis, which presents likelihood ratios for 16 formulas. No formula was “very useful” for identifying normal birthweight range. The authors found high levels of inaccuracy, could not recommend one formula over others, and concluded that over-reliance on ultrasound prediction of macrosomia increases medically unnecessary intervention. DARE reviewers found that the data presented support these conclusions.

Comment: Although fetal “macrosomia” has become a common rationale for labor induction and cesarean section, ultrasound is a poor predictor of birthweight and questionable decision tool.

Recent Abstract Entries Assessing Quality of Systematic Reviews

- Accuracy of urinalysis dipstick techniques in predicting significant proteinuria in pregnancy
- Aspirin for the primary prevention of cardiovascular events in women and men: a sex-specific meta-analysis of randomized controlled trials
- Delayed versus immediate exercises following surgery for breast cancer: A systematic review
- Hormone replacement therapy and risk of venous thromboembolism
- Ibuprofen 400 mg is effective in women, and women are well represented in trials
- Obstetric outcomes after conservative treatment for intraepithelial or early invasive cervical lesions: Systematic review and meta-analysis
- Rofecoxib for dysmenorrhoea: Meta-analysis using individual patient data
- Supplementation of infant formula with long-chain polyunsaturated fatty acids does not influence the growth of term infants
- The treatment of lymphedema related to breast cancer: A systematic review and evidence summary

DARE abstracts are available without charge from: http://www.york.ac.uk/inst/crd/crrdatabases.htm#DARE

EVIDENCE-BASED REVIEWS FROM OTHER SOURCES


This review assessed the interest of nulliparous pregnant women in medically elective cesarean section. The 9 included studies involved 3737 women from 8 countries. Results could not be pooled because of study heterogeneity. Leaving aside the 2 studies that recruited only women with a morbid fear of childbirth, other studies reported prenatal interest ranging from 0% (United States) to <13% (Brazil). The authors describe methodologic, conceptual, and cultural issues requiring further research and conclude that levels of interest among women without obstetric risk or a history of trauma may be quite low.

Comment: Estimates of first-time mothers’ interest in medically elective cesarean that collect data from women themselves find little support for the belief that this is a major factor in rising cesarean rates.


This overview assessed the best available evidence about effects of 27 treatments for debilitating premenstrual symptoms. Interventions involved pharmacologic, hormonal, psychological, physical, dietary, complementary, or surgical therapies. Conclusions were based on available adequate systematic reviews, randomized controlled trials, and adequate cohort studies as well as harms surveillance data. Authors classify pyridoxine (vitamin B6) and spironolactone (Aldactone) as “beneficial” and the following interventions as “likely to be beneficial”: calcium supplements, alprazolam (Xanax), buspirone (BuSpar), gonadorelin analogues, metolazone (Zaroxolyn), nonsteroidal anti-inflammatory drugs, hysterectomy with oophorectomy, and laparoscopic oophorectomy. Other treatments were classified as involving trade-offs between known benefits and harms or as being of unknown effectiveness. The overview provides evidence of identified harms and/or inadequate attention to harms in therapies assigned to the two beneficial categories.

Comment: Authors report that premenstrual syndrome (PMS) affects about 5% of reproductive age women. The current evidence base clarifying safe, effective PMS treatments is inadequate.

Recent Evidence-Based Reviews

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