day. Overall, the cost was $466 (SD = $1361) per woman ($2.59/woman/day), with productivity loss accounting for 40% of the total, physician visits for 21% and medi-
cations for 11.6%. Statistically significant differences were found between pre- and
perimenopause (P = 0.003) and between pre- and post-menopause (P = 0.01). CON-
CLUSIONS: The two-year intervention study was based on data reported by women 46–54
years of age, presenting at primary care practices in Canada. Perimenopause was the
period with the highest burden. The major limitation was recall by subjects but the
recall period was limited to a usually acceptable 6-month timeframe.

ESTIMATING THE BURDEN OF WOMEN SUFFERING FROM PMS/PMDD:
ANALYSIS OF A CROSS-SECTIONAL DATASET

OBJECTIVES: Pre-menstrual dysphoric disorder (PMDD) is a severe form of Pre-
menstrual Syndrome (PMS). Limited data exist to quantify the burden of PMDD on
individual women and society, especially in a European setting. To investigate the
relationship between symptom severity, cost and impairment in women with moder-
ate/severe PMS or PMDD. METHODS: A model was constructed to quantify costs of
symptom and impairment, based on analysis of a cross-sectional dataset. Heterogeneity
was assessed and data included from 9 OECD countries. Analyses were reported applying
Swedish cost from a societal perspective to the cross-sectional dataset. Data were analyzed
in five severity categories of symptom severity based on the DRS score and their
symptom score. Five severity categories were defined: Category 1 comprised women with
DRS scores 21–41.9, Category 2, 42–62.9, Category 3, 63–83.9, Category 4,
84–104.9, and Category 5 scores of 105+. The output of the analysis was an estimate of
mean annual cost and impact on quality of life (measured by utility) by category.
Consequences incurred by births in Canada over the next five years. The direct medical costs
were generated through non-parametric bootstrapping.
RESULTS: A total of 756 women were included in the analysis, 225 provided data on
quality of life. Total annual costs (direct and indirect) were estimated at: SEK 8894
(95% CI 7137, 10,745), SEK 14,393 (95% CI 11,629, 17,505), SEK 24,178 (95% CI
17,961, 30,819), SEK 23,809 (95% CI 17,240, 40,144) and SEK 48,201 (95% CI
26,103, 75,635) for categories 1 to 5 respectively; utility at 0.81 (95% CI 0.78, 0.84),
0.72 (95% CI 0.67, 0.76), 0.71 (95% CI 0.64, 0.77), 0.63 (95% CI 0.47, 0.76) and
0.78 (95% CI 0.70, 0.95). CONCLUSIONS: Our analysis, modeled from a Swedish societal
perspective, found a substantial burden associated with moderate/severe PMS and
PMDD increasing with severity of symptoms. Further quantification of the mon-
etary impact and research into geographical interactions is needed to better understand
the burden of PMDD.

SOCIO-ECONOMIC ASPECTS OF THE PRENATAL DIAGNOSIS OF
CYTOMEGALOVIRUS (CMV) INFECTION IN GERMANY: A BURDEN OF
DISEASE STUDY

OBJECTIVES: Cytomegalovirus (CMV) can be transmitted to a developing child
during pregnancy. In Germany, seropositivity rate is around 50%, risk of reestablish-
sion during pregnancy 1% and congenital infection resulting from primary infection
about 50%. Every year 450 infants will be born with congenital CMV-syndrome and 180
infants with their first birth asymptomatic at birth but developing neurological
abnormalities (hearing loss, mental retardation etc.) due to primary CMV infection.
RESULTS: We estimated the potential cost savings by reducing the number of multiple pregnan-
cies and term and pre-term birth and the costs of disabilities due to pre-term/low weight birth.
The analysis was conducted from the perspective of a third party payer in Canada. All
parameters were based on recently published literature. The results were expressed as
age-specific incremental costs per live birth. RESULTS: Given the reductions in mul-
tiple birth rate equivalent to those reached recently by selected European countries,
we estimated that, over the next five years in Canada, the direct medical costs
of twins and HOM could be reduced from 86.2%, 77.5% and 1.3% to 86.6%, 12.8%
and 0.6%, respectively. The potential cost savings are estimated to reach $266 million.
The over-all incremental cost per live birth could be reduced by $15,228. For women under
35, aged 35–39, and over 40, the incremental cost rise was $17,023, $13,860 and $10,749,
respectively. The bulk of cost reductions (over 70%) would be attributable to reductions in
disability costs related to perterm/low weight births. Extensive sensitivity analysis has been
conducted. CONCLUSIONS: In the context of limited resources and ever-expanding need for health care services, prudent policies
regarding multiple birth reductions are highly desirable.

THE COST-EFFECTIVENESS OF REDUCING MULTIPLE BIRTHS: IN-VITRO
FERTILIZATION STRATEGIES IN CANADA

OBJECTIVES: To assess the economic burden of women suffering from PMS/PMDD:
analysis of a cross-sectional dataset. Data were derived from a systematic literature review and clinical trials for the vaginal
barrier and natural methods) following the use of oral contraceptives. Effectiveness
parameters were based on recently published literature. The results were expressed as

ECONOMIC BURDEN OF POSTMENOPAUSAL OSTEOPOROSIS
IN GERMANY: A SYSTEMATIC REVIEW

OBJECTIVES: Postmenopausal osteoporosis (PMO) increases the risk of fractures.
However, studies have shown that only 20% of German osteoporosis patients receive
osteoporosis-specific therapy and for many the adherence to medication is poor. This
study assessed the economic burden of PMO in Germany. METHODS: We applied a
systematic review of literature utilizing German data based to quantify osteoporosis-
related costs. Our analysis considered both direct costs (inpatient care with/without fracture nursing care) and indirect costs (absence from work, early retirement and mortality) attributable to PMO. RESULTS: We identified and analyzed eight cost studies and two administrative databases published between 1999 and 2009. Administrative data sources revealed annual direct and indirect costs of PMO amounting to $2205 million (direct costs: $1687–1879 million). Direct inpa-
tient costs resulting from osteoporosis-related fracture are three times higher than
osteoporosis without fracture. Mean hip fracture costs were $7109–142,526 and mean costs of vertebral fractures were $4400–6671. Ambulatory nursing care results
in about $132 million per year. Annual impact on rehabilitation costs and up to $477
million. Annual costs of medication range between $338 million and $664 million.
Annual indirect costs due to sickness absence were calculated at $146 million and early death at $34 million. CONCLUSIONS: PMO costs
have a considerable economic impact on the current health care system, which will increase with projected demographic changes. Strategies should be aimed
at improving the management of this disease.

THE COST-EFFECTIVENESS OF ETONOGESTREL/ETHINYL ESTRADIOL
VAGINAL RING IN SCOTLAND

OBJECTIVES: To estimate the cost-effectiveness of the vaginal ring.
RESULTS: The cost-effectiveness ratio (ICER) of the vaginal ring versus a weighted, average second-line method (including the transdermal patch, long-acting methods,
barrier and natural methods) following the use of oral contraceptives. Effectiveness
data were derived from a systematic literature review and clinical trials for the vaginal
ring. Costs were based on UK National sources. RESULTS: Versus a weighted, average second-line method, the vaginal ring cost an additional GBP5.53 per woman and
reduced the rate of unintended pregnancy by 0.0158. The incremental cost-effective-
ness ratio (ICER) of the vaginal ring versus a weighted, average second-line method
was GBP3337 per pregnancy averted. This ICER can be viewed as a conservative estimate as this study only assessed the weighted cost per pregnancy and was unable
in the context of limited resources and ever-expanding need for health care services, prudent policies
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