Methemoglobin exergy expenditures. Women without insurance paid a greater percent-
age (31.0%) compared to those with private insurance (13.7%); women who received
their mammogram at an outpatient facility (18.0%) and resided in the Southern
region of the U.S. (16.5%) also paid a greater percentage. CONCLUSIONS: Large
variations in out-of-pocket expenditures of expenditures were 40–64 years of age
and without insurance, between insurance types, geographic regions of the U.S. and
types of facilities where mammograms were received. Higher financial burden of
mammography screening among subgroups of women may act as a barrier to
future mammography screening.

PMID63
THE META-ANALYSIS OF THE IMPACT OF HEALTH INFORMATION TECHNOLOGY ON
MEDICATION SAFETY IN HOSPITALS: AN INTERRUPTED TIME SERIES STUDY
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OBJECTIVES: Several studies have examined the effects of intervention related to
health information technology like the Electronic Prescribing (eRx) system on hos-
pital medication safety. However, these studies had relatively small sample sizes
with highly variable results. The study objective is to perform meta-analyses sys-
tematically review and quantify the effects of intervention related to Electronic
Prescribing system on hospital medication safety. METHODS: MEDLINE, EMBASE,
and two other databases were searched from 1998 to 2010 for studies assessing the
usage of Electronic Prescribing in hospitals. Among 29 papers obtained using data
extraction, a total of 9 studies discussing pre and post (Time series study) utilization
of Electronic Prescribing were chosen to study their impact on the medication
safety of the patients. Out of the 9 studies, 6 studies involved inpatient settings and
the remaining 3 studies involved outpatient settings. In order to quantify the ef-
teffects of Electronic Prescribing system on hospital medication safety, we used the
Meta analysis by STATA@8SE version10. RESULTS: Overall, medication safety was
significantly improved in intervention group involving Electronic Prescribing sys-
tem (OR: 1.97, p=0.002) compared with control group utilizing handwriting sys-
tem. Specifically, medication safety in inpatient settings was significantly im-
poved in Electronic Prescribing system intervention group (OR: 2.08, p=0.01).
CONCLUSIONS: The usage of Electronic Prescribing allows entry and retrieval of
patient clinical information at the point of care, thereby enhancing delivery of
quality patient care services and lowering delivery costs for those services.

PMID2
MINI-HTA TRENDS FOR MEDICAL DEVICES IN THE NORDICS
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OBJECTIVES: A mini-Health Technology Assessment (mini-HTA) is a defined tool in
the form of a checklist designed to quickly advise evidence-based decision-making
for funding when medical devices are introduced or adapted. The purpose of this
study was to describe the existing structures and trends for mini-HTAs in the
Nordic countries. METHODS: A structured web-based search was performed to
identify and compile information from national, regional and local authorities and
agencies. The mini-HTA system could then be compared the different struc-
tures across the Nordic countries. RESULTS: Denmark has the most structured
process, which has been developed and refined since the early 1990s and is today
compulsory in some settings. The mini-HTA format is a national standardised therapy
and has pages based precedents for a limited systematic review and concerning
the prerequisites for and consequences of the medical device covering four per-
pectives: device, patient, organisation and economics. Non-compliance with
these four perspectives may lead to rejection of the medical device for funding.
Four mini-HTA units in Sweden have implemented and other regions are de-
veloping, standardised processes for mini-HTAs with a structure resembling the
Danish format. The Finnish Managed Uptake of Medical Technologies (MUTF) group
affirms the benefits of implementing a structured mini-HTA process. Until a Finn-
ish format is in place it has been proposed to use the Danish format for evaluating
medical devices. In Norway, experiences from reviews of other mini-HTA systems
are being used to establish a national process for assessing new medical devices.
CONCLUSIONS: Countries in the Nordics have seen advantages of using mini-HTAs
when time and resources are insufficient to execute a comprehensive HTA. Mini-
HTA is an important criteria and have facilitated a more standardised and quick
uptake process of medical devices in the Nordics and have given the industry new
market access possibilities.

Medical Device/Diagnostics – Research on Methods

PMID3
METHODOLOGICAL CONSIDERATIONS IN MODELING THE ECONOMIC VALUE
OF DIAGNOSTIC ACCURACY
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OUTCOMES: Critical research solutions, Inc., Bolton, MA, USA
BACKGROUND: Clinical evaluations of diagnostic tests focus primarily on the sen-
tivity and specificity of a test relative to a gold standard. When assessing eco-
nomic value, however, payers want to know of those tested, what percent are
accurately diagnosed? Thus, economic analyses often require the model to begin
with the population tested and apply the positive and negative predictive values
(FPV/NPV) of the test to determine the number of false-positives (FP) and false-
negatives (FN). Although FPV and NPV are functions of the sensitivity and specific-
ity of a test, they also function as well as the underlying disease prevalence.

PMID4
A NATIONAL STUDY OF OUT-OF-POCKET EXPENSES FOR MAMMOGRAPHY
SCREENING
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OBJECTIVES: To identify variations in screening mammography expenditures, pri-
marily out-of-pocket and total expenditures of women in the U.S. 40–64 years of age,
and factors associated with variations. METHODS: Retrospective analysis of
data collected from the 2007 and 2008 Medical Expenditure Panel Survey. Sample
included 2,000 women 40 – 64 years of age who received one mammogram in the
year 2007 or 2008. Ordinary least squares regression was used to describe regres-
sion between out-of-pocket expenditures, out-of-pocket expenditure as a percentage
of total mammogram expenditure, and total yearly out-of-pocket expenditure for all
health care services, and independent variables such as insurance status and type,
income, region of the U.S., and type of facility remained significant predictors of

PMID5
SHORT-TERM OUTCOMES ASSOCIATED WITH A CHANGE IN REIMBURSEMENT
FOR DEEP BRAIN STIMULATION IN PARKINSON’S DISEASE
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OBJECTIVE: Deep Brain Stimulation (DBS) in Parkinson’s disease (FD) treatment
that surgically implants vibrating probes in the brain to reduce symptoms. This
study examined whether patient characteristics, hospital characteristics, or out-
comes differ before and after a Center for Medicaid and Medicare Services National
Coverage Decision (NCD) for DBS in FD. METHODS: The Healthcare Coverage Un-
munication Project (HCUP) National Inpatient Sample for the years 2002-2004 was
used for this analysis. HCUP is sponsored by the Agency for Healthcare Research
and Quality. This observational, cross-sectional study examined 12-months before and
after the 04/01/2003 NCD. Inpatient stays were identified using the PD ICD-9 code
and the DBS CPT code. Multivariate analyses tested whether discharge status or
length of stay (LOS) differed after the NCD. RESULTS: This study evaluated 460
inpatient stays for PD DBS. This population had a mean age of 63.19 (range, 32-87);
was 66.09% male, and 84.13% of surgeries were in large hospitals. In the post-
period, period with the close-in-clinic facility where a mammogram was performed
in the previous trial and were used as a standard for this analysis. We com-
pared the ability of the ISO and our methods to predict when INR
measures were directly measured in the previous trial and were used as a standard for
this analysis. We assessed the performance of the ISO methods and a method that we
developed and validated. METHODS: In a previous trial, patients provided two INR measures at the same
clinic visit: one by point-of-care device and the other by venous sample analyzed at a
clinical lab. The resultant clinical decisions from the INR measures were
directly measured in the previous trial and were used as a standard for this analysis.
We compared the ability of the ISO and our methods to predict when INR
measures lead to different or different clinical decisions. RESULTS: The Shermock
method was significantly superior (62% of predictions correct) than the revised ISO
method (61% correct, p=0.003). CONCLUSIONS: This analysis suggests that compared to
the revised ISO, the Shermock method (61% correct, p=0.003) was superior.

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