Barna som ikke ble født...
Hva koster svangerskaps-avbrudd for Norge?

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Bakgrunnen for analysen.....

- Vi har selvbestemt abort i Norge...
- Økonomiske aspekter er en av flere faktorer ved valg av svangerskapsavbrudd...
  - Informasjonen skal beskrive inngrepets art og de medisinske virkninger/bivirkninger. Hun skal også sikres informasjon og veiledning om den bistand samfunnet kan tilby henne.
- Kostnader fra et samfunnsøkonomisk perspektiv
  - Hva tjener eller taper Norge på et svangerskapsavbrudd?
Induced Abortion on Demand (IAD) in Norway 1979-2009 and a Pre IAD Comparator. A Markov Model Based Cost-Effectiveness Analysis (CEA)

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Abstract

Objective: In the western world, there is a growing concern about an aging population. The number of births per women has been low for decades. The objective was to clarify the cost-effectiveness with regard to induced abortion on demand (IAD) and a comparator.

Methods: A Markov model was established, time perspective was 31 years (1979-2009) and two alternatives compared. A) The induced abortion on demand (IAD) as performed. B) A comparator where 2/3rds of the IAD were avoided to obtain pre IAD figures. Health care (C1), patient/family (C2) and other sectors (C3) costs together with production losses (C4) were calculated in both arms. Savings (S) in terms of life years gained (LYG), health care (S1), patient/family (S2) and other sectors (S3) savings together with production gains (PG) (S4) were included and based on data from Statistics Norway. A 4% discount rate (d.r.) was used.

Results: Between 1979 and 2009, a total of 452,112 pregnancies were terminated. In the comparator arm, 301,408 additional births were obtained and further 5,772 births were added as the children grew up. LYG was indicated 2,372,699 (4% d.r.). Based on the model, the cost/LYG (4% d.r., all resource use) was a saving of Euro 74. Excluding family costs/savings, the figure was Euro 5,187 saved/LYG. The major cost factors were family related costs (66%) and costs in other sectors (23%). Health related costs were negligible (2.5 %). The major saving was due to PG.

Conclusion: From a societal perspective, an intervention avoiding induced abortions is very cost effective and welfare services counteracting family costs are important.

Introduction

Induced abortion on demand (IAD) has been implemented in most western countries during the last decades. Since 1979, women in Norway have had the right to have an IAD performed. Despite the introduction of new contraceptives and several campaigns in the junior high school and high school to educate young Norwegians on the use of contraceptives, the annual abortion figures have been constant. At present every fifth known pregnancy in Norway is terminated by induced abortion (1). The corresponding figures in Denmark, Sweden and England have been reported 1/6, 1/4, 1/5, respectively (2). Similar figures (22 per 100 pregnancies) has been reported from the United States (3-4).

During the last years, Norwegian health care administrators and politicians have expressed a growing concern on how to meet the challenges of an aging population and an increasing dropout from the workforce due to disability. During the last three decades, low birth figures have altered the composition of the European population. In the future less young people will have to take care of an increasing number of elderly people. To handle this upcoming situation, three national reforms have been launched in Norway; A pension reform encouraging Norwegians to stay in the workforce until the age of 70 years, a national insurance reform aiming at less people being reported ill and finally a coordination reform where more patient care is taken care of in the primary health care, aiming to save economic resources and preserve quality of care (5). In a new trend with a strong need for a healthy young generation who can stay in the workforce and take care of the growing number of elderly, it is of interest to compare this development with the induced abortion on demand in Norway during the last three decades. In this study the cost effectiveness was focused and any ethical aspects were not concerned.
Norges og verdens befolkning
”Befolkningspyramide”

Norwegian population
weights 2008

Samlet fruktbarhetstall. 1970-2008
1979 – 2009 antall svangerskapsavbrudd 436.338
Konsekvenser

- **Pensjonsreform**
  - Flest mulig i arbeidslivet til 70 år
  - Ugunstig med tidlig pensjonering.

- **Helsereform**
  - Samhandlingsreform
    - LEON/BEON

- **NAV reformen**
  - Inkluderende arbeidsliv…
  - De som kan jobbe skal jobbe…
Figure 1. The figure shows the Markov model with three stages.
Materiale og metode

- Markov analyse
- Tidsperspektiv 31 år (1979-2009)
- Samfunnsperspektiv
- Kostnader
  - Helsetjeneste kostnader/gevinster (C1/S1)
  - Pasient/familie kostnader/gevinster (C2/S2)
  - Andre sektor kostnader/gevinster (C3/S3)
  - Produksjonstap/produksjonsgevinst (C4/S4)
- Fertilitetsrate
  - 1970-1978: 2.1 barn/kvinne
  - 1979-2009: 1.9 barn/kvinne
- 1 Euro = 7.782 NOK
- 4% diskonteringsrente
**Svangerskapsavbrudd**

- **C1 (Helsetjenesten)**
  - DRG 381O = € 556

- **C2 (Pasient/familie)**
  - Egenandel/reise

- **C3 (Andre sektorer)**
  - Ingen

- **C4 (Produksjonstap)**
  - Abort 3 dgr fravær-70% yrkesaktiv

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**Fødsel**

- **C1 (Helsetjenesten)**
  - 9 sv.skapskontroller (takst fastlege og DRG 914Q,
  - Fødsel (DRG 373, DRG 372, DRG 371, DRG 370,

- **C2 (Pasient/familie)**
  - Egenandel transport
  - **Kostnader knyttet til barns oppvekst (SIFO)**

- **C3 (Andre sektorer)**
  - NAV kostnader barnetrygd/permisjoner
  - Utdanningskostnader

- **C4 (Produksjonstap)**
  - Produksjonstap inkludert i C3 (NAV).
Svangerskapsavbrudd

- S1 (Helsetjenesten)
  - Ingen svangerskapskontroll/fødsel…
- S2 (Pasient/familie)
  - Ingen egenandeler transport
  - Ingen oppvekstkostnader
- S3 (Andre sektorer)
  - Ingen barnetrygd/permisjoner/utdanningskostnader
- S4 (Produksjonsgevinst)
  - Ingen

Fødsel

- S1 (Helsetjenesten)
  - Kostnader v/abort.
- S4 (Produksjonsgevinst)
  - Produksjonsgevinst.
    - I Norge: 70% i arbeid
      - inntekt €79,808/år.
      - Ungdom lavere inntekt. Derfor beregnet 50% (av 70%)
  - Leveårsgevinst (Statistisk sentralbyrå)
Leveårsgevinst

Dødelighet i Norge 2008, 98.8% er i live ved alder 30 år.

![Survival Graph](image)
Forventet levealder i Norge for barn født i 2009
Tapte leveår
(1970-78 vs. 1979-2009)

- 452,112 svangerskapsavbrudd
- Dersom 2/3 hadde vært unngått
  - 301,408 fødsler
  - I perioden 5,772 nye fødsler av barn født.
  - Leveår: 5,099,338 leveår (diskontert 2,372,699)
- I et livsperspektiv 15,2 millioner leveår.

Realistisk? Beregnet pris/leveår gjør at årlige antallet er uvesentlig...
Diskonteringsrente (d.r.) = 0, 4 og 5%
Effekt. E (0% d.r.) = 5.1 million LYG, E (4% d.r.) = 2.4 million LYG, E (5% d.r.) = 2.4 million LYG
Kostnadseffektivitets analyse (C/E): Kostnad per vunnet leveår (LYG)

<table>
<thead>
<tr>
<th></th>
<th>Cost* 0% d.r.</th>
<th>Cost* 4% d.r.</th>
<th>Cost* 5% d.r.</th>
<th>C/E (0%d.r.)</th>
<th>C/E (4%d.r.)</th>
<th>C/E (5% d.r.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helsetjenesten (C₁)</td>
<td>817</td>
<td>467</td>
<td>415</td>
<td>160</td>
<td>197</td>
<td>208</td>
</tr>
<tr>
<td>Helsetj. + familie kostnad (C₁+C₂)</td>
<td>26,948</td>
<td>12,730</td>
<td>10,739</td>
<td><strong>5285</strong></td>
<td>5365</td>
<td>5374</td>
</tr>
<tr>
<td>Total kostnad (ekskl. C₂) (C₁+C₃+C₄)</td>
<td>12,502</td>
<td>6,424</td>
<td>5,554</td>
<td>2,452</td>
<td>2,707</td>
<td>2,779</td>
</tr>
<tr>
<td>Totale kostnader (C₁+C₂+C₃+C₄)</td>
<td>38,633</td>
<td>18,686</td>
<td>15,878</td>
<td>7,576</td>
<td>7,876</td>
<td>7,946</td>
</tr>
<tr>
<td>Samfunnskostnader (C₁+C₃+C₄-S₁-S₂-S₃-S₄)</td>
<td>-41,850</td>
<td>-12,307</td>
<td>-8920</td>
<td>-8,207</td>
<td>-5,187</td>
<td>-4,464</td>
</tr>
<tr>
<td>Alle ressurser (C₁+C₂+C₃+C₄-S₁-S₂-S₃-S₄)</td>
<td>-15,718</td>
<td>-175</td>
<td>1,405</td>
<td>-3,082</td>
<td>-74</td>
<td>703</td>
</tr>
</tbody>
</table>

*Sum i millioner Euro (€).
Hva har betydning for resultatet?

![Illustration 5](http://www.webmedcentral.com)

- **Discount rate (0-5%)**
- **Production gain (+25%)**
- **Abortions (33-100%)**
- **Family costs (-25%)**
- **Costs in other sectors (-25%)**
Det er meget lønnsomt for samfunnet å unngå svangerskapsavbrudd....

Gevinsten ca kr. 40.000,- (udiskontert kr. 64.000,-) per vunnet leveår