Evaluation of folic acid supplementation guidelines in Mexico 2012-2013

(Prevalence of missed-opportunities of folic acid intake)

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Every time a reproductive aged woman attends to a medical consult, it represents an opportunity to recommend folic acid intake.
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• In Mexico physicians must know and apply the norm “NOM-034-SSA2-2002, For congenital defects prevention and control”.

Background
Background

Low risk
Folic acid 400 μg/day intake for every woman of childbearing age.

Both during 3 months prior conception, until 12th gestation week.

High risk
Folic acid 4 mg/day intake for every woman of childbearing age.
Background

NOM-034:

- Age <20 or >35 years.
- Multiple pregnancy (≥4).
- Previous children: metabolic or chromosomal disorders.
- Chronic maternal diseases: kidney, heart, epilepsy.
- Family history: Central nervous system defects.
Missed-opportunity of folic acid intake

Any situation which interferes with the compliance of the NOM-034.

Physicians, women and pharmacy.
General Objective

To measure missed-opportunities of folic acid intake in women attending obstetric consult in Mexico City's and State of Mexico’s primary health care centers, during 2012-2013.
Specific Objectives

1. To assess women’s knowledge about folic acid.

2. To assess physicians’ knowledge and accomplishment of the NOM-034.

3. To assess folic acid sufficiency in pharmacies.
Methods

1. Design: Cross sectional study.

2. Study population:
   - Reproductive aged women
   - Physicians
   - Pharmacies

3. Data collection:
   - Informed consent.
   - Questionnaire.
   - Informed consent.
   - NOM-034 questionnaire.
   - Sufficiency checklist.
FIELD WORK
# Results

## Patients

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>%</th>
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</thead>
<tbody>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>249</td>
<td>69</td>
</tr>
<tr>
<td>Married</td>
<td>111</td>
<td>31</td>
</tr>
<tr>
<td><strong>Scholarship</strong></td>
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<tr>
<td>Analphabet</td>
<td>1</td>
<td>0.3</td>
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<tr>
<td>Elementary</td>
<td>43</td>
<td>11.9</td>
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<tr>
<td>Junior High</td>
<td>175</td>
<td>48.6</td>
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<tr>
<td>High School</td>
<td>115</td>
<td>31.9</td>
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<tr>
<td>University</td>
<td>26</td>
<td>7.2</td>
</tr>
<tr>
<td><strong>Occupation</strong></td>
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<tr>
<td>Home</td>
<td>280</td>
<td>78</td>
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<tr>
<td>Employee</td>
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<tr>
<td><strong>Age average</strong></td>
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</tr>
<tr>
<td></td>
<td>23.2 Years</td>
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</tbody>
</table>

N= 360

- 34% State of Mexico
- 66% Mexico City
Knowledge about folic acid intake benefits

- 56% NO
- 44% YES

Information received by medical staff: 51.3%

N = 360
Knowledge about folic acid intake benefits

Folic acid benefits information source

<table>
<thead>
<tr>
<th>Source</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Health Staff</td>
<td>50.6%</td>
</tr>
<tr>
<td>Media</td>
<td>18.1%</td>
</tr>
<tr>
<td>Other</td>
<td>14.4%</td>
</tr>
<tr>
<td>Family</td>
<td>11.9%</td>
</tr>
<tr>
<td>Printed Information</td>
<td>4.4%</td>
</tr>
</tbody>
</table>

N= 360
Gestational age at the first prenatal control consult

- 3º Trimester: 11%
- 2º Trimester: 30%
- 1º Trimester: 59%

Only 0.3% of the patient received folic acid in the correct periconceptional period.

N = 360
Gestational age at the first prenatal control consult

Only 0.3% of the patient received folic acid in the correct periconceptional period

99.7% of missed opportunities
## Results

### Physicians

<table>
<thead>
<tr>
<th>Physicians’ sample description</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
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<td></td>
</tr>
<tr>
<td>Female</td>
<td>38</td>
<td>44</td>
</tr>
<tr>
<td>Male</td>
<td>48</td>
<td>56</td>
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<tr>
<td><strong>Specialty</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OB-GYN</td>
<td>17</td>
<td>20</td>
</tr>
<tr>
<td>Other</td>
<td>14</td>
<td>16</td>
</tr>
<tr>
<td>General</td>
<td>55</td>
<td>64</td>
</tr>
</tbody>
</table>

*State of Mexico: 36% - Mexico City: 64%*

*N= 86*
NOM-034 knowledge

91.4% of the physicians indicate folic acid during prenatal control
Physicians’ knowledge on dosage

- Low Risk: 46.9% (Yes) 53.1% (No)
- High Risk: 13.6% (Yes) 86.4% (No)
- Low & High Risk: 12.3% (Yes) 87.7% (No)

N = 86
Sufficiency:

a) Both presentations of folic acid available.
b) Stocked units must exceed supply requirements.
Folic acid sufficiency in pharmacies

- SUFFICIENT: 61.9%
- INSUFFICIENT: 4.8%
- UNABLE TO ASSESS: 33.3%

N = 21
Conclusions

• Most of the patients know that they must take folic acid during gestation.

• Intake indication, dose and treatment time are not registered in medical records.

• Most of the physicians know folic acid importance for neural tube defects prevention.

• Physicians do not explain folic acid intake benefits for neural tube defects prevention.
Conclusions

- Folic acid is indicated in most of the medical consults, without considering periconceptional period.
- Poor neural tube defect risk classification by physicians.
- Dose and administration time are not always correct.
- Folic acid is sufficient in 61.9% of the pharmacies.
- The 5 mg presentation is rarely distributed.
Recommendations

- Promote folic acid benefits.
- Promote early prenatal control start.

- Continuous training.
- Ensure document availability.
- Accomplishment supervision of NOM 034.

- Ensure both folic acid presentations sufficiency.
- Extend work schedule.
Training  Evaluation  Accomplishment  Information

NOM 034
Thanks