The Global Meningococcal Initiative (GMI): Efforts to control and prevent meningococcal disease in Latin America


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ABSTRACT

Background: The Global Meningococcal Initiative (GMI) is an international group of scientists and clinicians with expertise in meningococcal immunology, epidemiology, public health, and vaccinology. It aims to prevent meningococcal disease worldwide through education, research, and advocacy. The GMI recognizes that large geographical differences in disease epidemiology, prevention strategies, and control efforts should be country specific.

Methods: In May 2011, representatives from 7 Latin American countries participated in a GMI meeting, focusing on the burden of meningococcal disease and possible reducions in the region. Results: Meningococcal disease incidence varies widely (0.1 [Mexico] to almost 2 cases [Brazil] per 100,000). Consequently, the highest age-specific incidence is in infants, with high case fatality rates reported (10–20%). Unlike in the US and Europe, there is no peak in adolescence, but during outbreaks in some Latin American countries, serogroupes B, C, and X are the dominant serogroups. In meningococcal disease in Latin America, a uniform meningococcal case definition combining World Health Organization criteria with diagnosis by reverse transcription polymerase chain reaction was recommended. Replacement of polysaccharide vaccine with conjugate formulations (whenever possible) was unanimously recommended. To reduce cost, technology transfer agreements with manufacturers should also be considered.

Conclusions: Meningococcal disease burden in Latin America is largely underestimated. Control efforts should focus on educating physicians and regulators on the importance of the disease, its diagnosis, and the vaccine reaction safety data.

INTRODUCTION

Meningococcal disease is a leading cause of meningitis and septicaemia worldwide, causing an estimated 500,000 cases of invasion disease and 50,000 deaths annually.2

Meningococcal disease incidence varies widely (0.1–20 cases per 100,000). Approximately 80% of survivors develop long-term sequelae including blindness, neurological deficit or limb amputation.2

Although the disease is not common, occurring sporadically in most of the countries in the region, a single case of meningococcal disease frequently generates panic and fear among parents that is fueled by press coverage.3

Meningococcal disease incidence varies temporally and geographically, with the majority of the disease occurring in the African meningitis belt.2

Vaccination is considered the best strategy to prevent meningococcal disease. Polysaccharide vaccine (D-M, C, X and Y) can be used in the absence of available conjugate vaccines in Latin America at present.4

The GMI recommends that countries prioritize meningococcal vaccines for purchase, public health, immunology, and influenza.5

The GMI recommendations for preventing meningococcal disease are presented in Table 1.

THE GLOBAL Meningococcal INITIATIVE

The Global Meningococcal Initiative (GMI) was established to help prevent meningococcal disease worldwide through education, research, and advocacy. Countries should consider the global and national level importance of meningococcal disease.

Country-specific approaches to vaccine prevention are needed because of geographic and temporal variations in disease epidemiology.

Country-specific meningococcal policy should be based on local epidemiology and economic considerations.

Continued funding of the introduction of MenAfriVacTM is an important global and regional public health priority.

The GMI recommends that technology transfer agreements with suppliers be considered.

Currently the only meningococcal vaccine licensed for public health, immunology, and influenza.

The GMI recommendations for preventing meningococcal disease are presented in Table 1.

TABLE 1. Recommendations for Reducing the Global Burden of Meningococcal Disease

| Country-specific approaches to vaccine prevention are needed because of geographic and temporal variations in disease epidemiology. |
| Country-specific meningococcal policy should be based on local epidemiology and economic considerations. |
| Continued funding of the introduction of MenAfriVacTM is an important global and regional public health priority. |
| The GMI recommends that technology transfer agreements with suppliers be considered. |

Current Vaccination Strategies

Meningococcal case definitions vary from one Latin American country to another.6

In most vaccine-purchasing countries, vaccination policies are guided by the Ministry of Health.7

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GMI-Proposed Universal Case Definition for Meningococcal Disease in Latin America

With the exception of specific regions within Chile, meningococcal disease surveillance in Latin America is inadequate.8

To obtain accurate disease estimates, molecular diagnostics (eg, RT-PCR) should supplement routine diagnosis by meningococcal cultures.9

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A UNIFORM Meningococcal CASE DEFINITION FOR LATIN AMERICA

One way to improve surveillance—and thus gain a better understanding of the true burden of meningococcal disease—is to adopt a uniform meningococcal case definition.

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VACCINES

Polysaccharide, conjugate, and D-M meningococcal vaccines are available in Latin America.10

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Table 2. Meningococcal Vaccine Availability in Selected Countries in Latin America

<table>
<thead>
<tr>
<th>Country</th>
<th>Vaccine Available</th>
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</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>MenPol, MenC, MenB, MenW-135</td>
</tr>
<tr>
<td>Brazil</td>
<td>MenPol, MenC, MenW-135</td>
</tr>
<tr>
<td>Chile</td>
<td>MenPol, MenC</td>
</tr>
<tr>
<td>Mexico</td>
<td>MenPol, MenW-135</td>
</tr>
<tr>
<td>Panama</td>
<td>MenPol</td>
</tr>
</tbody>
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Suggested Readings


