Abstract: P5237

Continued financial benefits of LATIN telemedicine program from avoiding unnecessary transfer of patients

Authors: S Mehta, R Botelho, S Niklitschek, F Fernandez, J Cade, R Cavalcanti, C Dusilek, A Estrada, MA Lacativa, R Cardoso, A Frauenfelder, C Matheus, D Vieira, MA Torres, I Vallenilla, Lumen Foundation - Miami - United States of America,

Topic(s): Health Economics

Citation: Background: Latin America Telemedicine Infarct Network (LATIN) employed telemedicine to construct a population-based AMI program in Brazil, Colombia, Mexico, and Argentina. It increased access, accuracy and guidelines-based care and addressed fiscal issues. Previously, we demonstrated a cost and benefit analysis (CBA) of LATIN based upon avoiding unnecessary transfers and hospitalization. We have performed a scrupulous follow up of this initial observation with a long-term follow up from all expanded LATIN sites.

Purpose: To demonstrate that telemedicine avoids unnecessary transfer of patients.

Methods: 784,947 patients at LATIN spokes (small clinics in remote areas) were screened and CBA measured at hubs, spokes and telemedicine centers. Technology, transfer, inpatient, and procedure-related costs were included. A sensitivity analysis was performed for worst and best scenarios of costs, revenues, and savings. A comparison with Avera e-Emergency (Sioux Falls, SD) Telemedicine program, involving 85 rural hospitals in 7 states, is provided (13% transfer avoidance).

Results: Of 784,947 screened patients, 8,448 had STEMI (1.08%); 3,911 (46.3%) were urgently reperfused, 3,049 (78%) with PPCI. Time to Telemedicine Diagnosis was 3 min. With efficient triage, costs for non-AMI patients was controlled. LATIN expenses, including for IT and experts, were $272, and for transfer and indirect care, $1,068. Net savings/patient were $796. Savings, till date, range between $187.4 million - $62.4 million (Best scenario - 30% transfer avoidance; Worse scenario -10% transfer avoidance).

Conclusions: Longitudinal analysis firms the trend of enormous cost savings with LATIN. Telemedicine avoids unnecessary transfers and hospitalization and it is a cost-effective strategy for population-based AMI programs.
Abstract:
P5237
Continued financial benefits of LATIN telemedicine program from avoiding unnecessary transfer of patients

Authors:
S Mehta 1, R Botelho 1, S Niklitschek 1, F Fernandez 1, J Cade 1, R Cavalcanti 1, C Dusilek 1, A Estrada 1, MA Lacativa 1, R Cardoso 1, A Frauenfelder 1, C Matheus 1, D Vieira 1, MA Torres 1, I Vallenilla 1
1 Lumen Foundation - Miami - United States of America,

Topic(s):
Health Economics

Citation:
Background: Latin America Telemedicine Infarct Network (LATIN) employed telemedicine to construct a population-based AMI program in Brazil, Colombia, Mexico, and Argentina. It increased access, accuracy and guidelines-based care and addressed fiscal issues. Previously, we demonstrated a cost and benefit analysis (CBA) of LATIN based upon avoiding unnecessary transfers and hospitalization. We have performed a scrupulous follow up of this initial observation with a long-term follow up from all expanded LATIN sites.

Purpose: To demonstrate that telemedicine avoids unnecessary transfer of patients.

Methods: 784,947 patients at LATIN spokes (small clinics in remote areas) were screened and CBA measured at hubs, spokes and telemedicine centers. Technology, transfer, inpatient, and procedure-related costs were included. A sensitivity analysis was performed for worst and best scenarios of costs, revenues, and savings. A comparison with Avera e-Emergency (Sioux Falls, SD) Telemedicine program, involving 85 rural hospitals in 7 states, is provided (13% transfer avoidance).

Results: Of 784,947 screened patients, 8,448 had STEMI (1.08%); 3,911 (46.3%) were urgently reperfused, 3,049 (78%) with PPCI. Time to Telemedicine Diagnosis was 3 min. With efficient triage, costs for non-AMI patients was controlled. LATIN expenses, including for IT and experts, were $272, and for transfer and indirect care, $1,068. Net savings/patient were $796. Savings, till date, range between $187.4 million - $62.4 million (Best scenario - 30% transfer avoidance; Worse scenario - 10% transfer avoidance).

Conclusions: Longitudinal analysis firms the trend of enormous cost savings with LATIN. Telemedicine avoids unnecessary transfers and hospitalization and it is a cost-effective strategy for population-based AMI programs.

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>COMPARATOR</th>
<th>LATIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tele-Emergency Encounters</td>
<td>9,048</td>
<td>784,947</td>
</tr>
<tr>
<td>Avoided Transfers</td>
<td>1,175</td>
<td>235,484/78,495</td>
</tr>
<tr>
<td>Telemedicine Costs</td>
<td>$1,739</td>
<td>$272</td>
</tr>
<tr>
<td>Cost of Transportation/Indirect Costs</td>
<td>$5,563</td>
<td>$1,068</td>
</tr>
<tr>
<td>Net Savings for Patients</td>
<td>$3,823</td>
<td>$796</td>
</tr>
<tr>
<td>Total Savings</td>
<td>$4.5 Million</td>
<td>$187.4 Mil/$62.4 Mil</td>
</tr>
</tbody>
</table>