The WHO’s goal of eliminating dog-mediated human rabies by 2030: Challenges in Thailand

Aug 25, 2016

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WHO & OIE (2015): Elimination of dog-mediated human rabies cases by 2030

Update: Human & animal rabies in Thailand

Successful National Strategy to Eliminate Dog-mediated Rabies

Why still have human & animal rabies in Thailand
Rabies
(Source: OIE & WHO, 2004)

North America & Europe
<50 deaths <100 000 PEP

Middle & Near East
<100 deaths <100 000 PEP

Latin America
<40 deaths <500 000 PEP

Africa
24000 deaths <500 000 PEP

Asia
31 000 deaths >8000 000 PEP

India
1,000 in urban
18,000 in rural

Rabies
Main vector
>99% human cases transmitted

Countries/areas reporting rabies cases
Countries/areas for which no data are available

opportunities = เหมือนเดิม
(เม็ดตุ๋นจำนวน CDN ด้วยโรคพิษสุนัขบ้า)
55,000

Source: OIE & WHO, 2004
GLOBAL ELIMINATION OF DOG-MEDIATED HUMAN RABIES

Report of the Rabies Global Conference

10-11 December 2015

GENEVA, SWITZERLAND

STRATEGIC VISION: Zero human deaths from dog-mediated rabies by 2030 in participating countries
Dog-mediated Human Rabies

Not bite

Wound care
PEP

Pep

V. Tepsumethanon

H. Wilde

T. Hemachudha
“Rabies Free in Asia”

2012, WHO & OIE campaign & set a goal to eliminate rabies in Asia by 2020

2013, Thai government by MoPH, MoAC & MI have a policy to make the country rabies free by 2020

MoPH = กรมควบคุมโรค, MoAC = กรมปศุสัตว์, MI = กรมการปกครอง
Road map to Rabies free area 2020

2013
A = 27 provinces
RFA= 44 provinces

2014
A =18 provinces
RFA= 47 provinces

2015
A =15 provinces
RFA= 77 provinces

2017
RFA= 77 provinces

2020
RFA= 77 provinces
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Why still have human & animal rabies in Thailand
Human Rabies in Thailand, 1980 – 2016 (28 May)

“Declined but still endemic”

Thai rabies free area by 2020

ความเป็นไปได้? ใกล้เคียงความเป็นจริง

Veera Tepsumethanon
Animal Rabies in Thailand, 1980 – 2016 (10 August)

“Declined but still endemic”

Thai rabies free area by 2020

Animal rabies
Dog rabies

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OIE Conclusions: Global elimination of dog-mediated human rabies
WHO/OIE Conference on rabies 10-11 Dec 2015
WHO & OIE (2015): Elimination of dog-mediated human rabies cases by 2030

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Why still have human & animal rabies in Thailand
Why? Still Have Human Rabies in Thailand

Epidem. analysis 2009-2011 & 2012-2014. ~100% from dogs:

Patients neglect to wound care & bite dog.

(Wound did not serious. Puppy or owned dog may not be rabies.)

1. Neglect to wound care
2. Owned without RV
3. Puppies
4. Dead animals without lab diag.

Low education* (How to educate?)
Reduction of Human Rabies Death Corresponding the National Rabies Control in Animal

- % Dog vac coverage
- % Animal rabies
- Human rabies

Graph showing the reduction of human rabies death corresponding to the national rabies control in animals over the years from 1993 to 2012. The graph indicates the percentage of dog vaccination coverage and laboratory confirmed animal rabies. The goal is to achieve a coverage of 70% for dog vaccination and maintain the percentage of animal rabies below 70% to reduce human rabies deaths.
Animal Rabies in Thailand (Owned : Stray = 60:40)

(ThaiRabiesNet)

Number

2013 2014 2015 2016 (10 August)

Owned
Stray

(25%)
(42%)
(58%)
(59%)
(59%)
(75%)
(41%)
(41%)

2013 2014 2015 2016 (10 August)
ผลการสำรวจจำนวนประชากรสุนัชประจำปี 2559 ของสำนักงานปศุสัตว์ทั่วประเทศ พบว่า

เมืองไทยมีสุนัข >6.7 ล้านตัว

ในจำนวนนี้เป็น สุนัขมีเจ้าของ 6.05 ล้านตัว สุนัขไม่มีเจ้าของ 7.5 แสนตัว

และมีแนวโน้มว่าจำนวนสุนัขจรจัดจะทะลุหลักล้านตัวภายในสิ้นปีนี้
### 70% dog vac. coverage in Thailand

<table>
<thead>
<tr>
<th>ประชากรสุนัข</th>
<th>มีเจ้าของ</th>
<th>ไม่มีเจ้าของ</th>
</tr>
</thead>
<tbody>
<tr>
<td>7,000,000</td>
<td>6,000,000</td>
<td>1,000,000</td>
</tr>
<tr>
<td>*4,900,000</td>
<td>+ 1,100,000</td>
<td>1,000,000</td>
</tr>
<tr>
<td>(ต้องฉีดวัคซีน)</td>
<td>(ไม่ได้ฉีด)</td>
<td>(ไม่ได้ฉีด)</td>
</tr>
</tbody>
</table>

* 70% of 7,000,000
## Review on Dog Rabies Vaccination Coverage in Africa: A Question of Dog Accessibility or Cost Recovery?


<table>
<thead>
<tr>
<th>Reference</th>
<th>Country</th>
<th>Vac. Coverage (%)</th>
<th>Financial arrangement Charged</th>
<th>Financial arrangement Free</th>
</tr>
</thead>
<tbody>
<tr>
<td>De Balogh, 1993</td>
<td>Zambia</td>
<td>20</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>Kitala, 2001</td>
<td>Kenya</td>
<td>29</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Cleaveland, 2003</td>
<td>Tanzania</td>
<td>9</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>Kayali, 2003</td>
<td>Chad</td>
<td>19</td>
<td>74</td>
<td></td>
</tr>
<tr>
<td>Ratsitorahina, 2009</td>
<td>Madagascar</td>
<td>22</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Kaare, 2009</td>
<td>Tanzania</td>
<td>-</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>Durr, 2009</td>
<td>Chad</td>
<td>24</td>
<td>71</td>
<td></td>
</tr>
<tr>
<td>Van Sittert, 2010</td>
<td>South Africa</td>
<td>56</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Dzikwi, 2011</td>
<td>Nigeria</td>
<td>17</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Touihri, 2011</td>
<td>Tunisia</td>
<td>-</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>Gsell, 2012</td>
<td>Tanzania</td>
<td>-</td>
<td>78</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td>9-56</td>
<td>64-80</td>
<td></td>
</tr>
</tbody>
</table>

>70%!!
**Effectiveness of dog rabies vaccination programmes: comparison of owner-charged and free vaccination campaigns**


<table>
<thead>
<tr>
<th>N’ Djamena, Chad</th>
<th>Owner charged</th>
<th>Free vacc^n</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(US$ 4.13 / dog vaccinated)</td>
<td></td>
</tr>
<tr>
<td>Vacc^n Coverage</td>
<td>24%</td>
<td>64-87%</td>
</tr>
<tr>
<td>*Societal cost/vac. animal (US$)</td>
<td>19.40</td>
<td>3.80</td>
</tr>
<tr>
<td></td>
<td>* = Public + Private sector</td>
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Sustainable

Affected by Transportation
Jigsaw Puzzle of Provinces & Neighboring Countries

“All together, we reach the RFA”

Inner Area = 77 Provinces

Outer Area = ≥4 Countries
Conclusion

Human rabies
Dog bite prevention & treatment

Animal rabies
Dog vac^n (70% coverage) & Free vacc^n campaigns
Owned & stray dog

“Education”
THANK YOU FOR YOUR ATTENTION!