



Rabies in Georgia

**National Center for Disease Control & Public Health (NCDC)
Georgia**

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Introduction

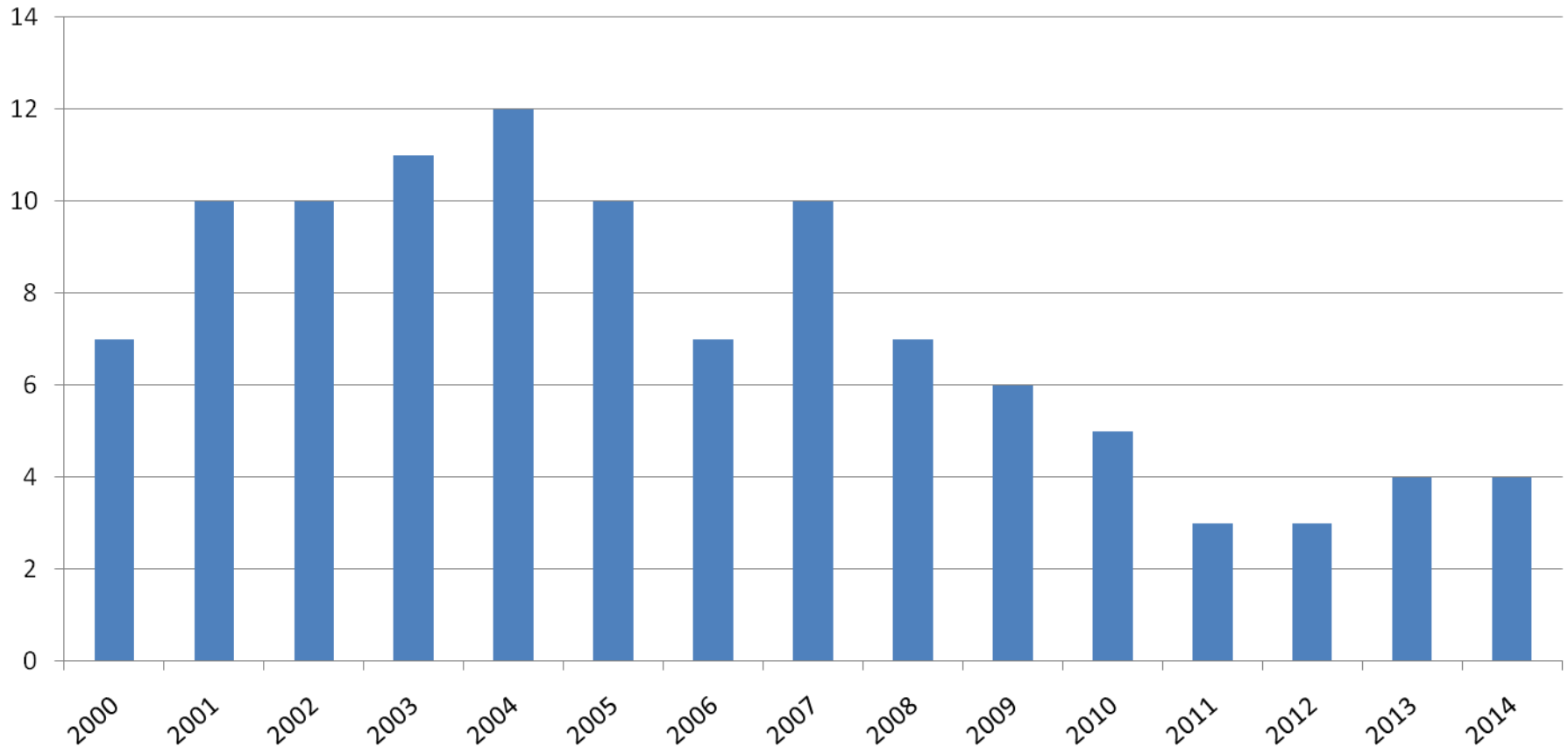
- Rabies data have been registered in Georgia since 1930
- Rabies is among the urgent notifiable diseases
- Rabies was a priority disease for the government in 2014
- Cases per year:
 - Humans: 3-10 (NCDC data)
 - Animals: 45-139 (LMA and NFA data)



Cases of Human Rabies

- 2000 - 2007 – 77 cases (average 9 per year)
- 2008 - 2014 – 32 cases (average 4 per year)

Number of human rabies cases reported in Georgia 2000 through 2014

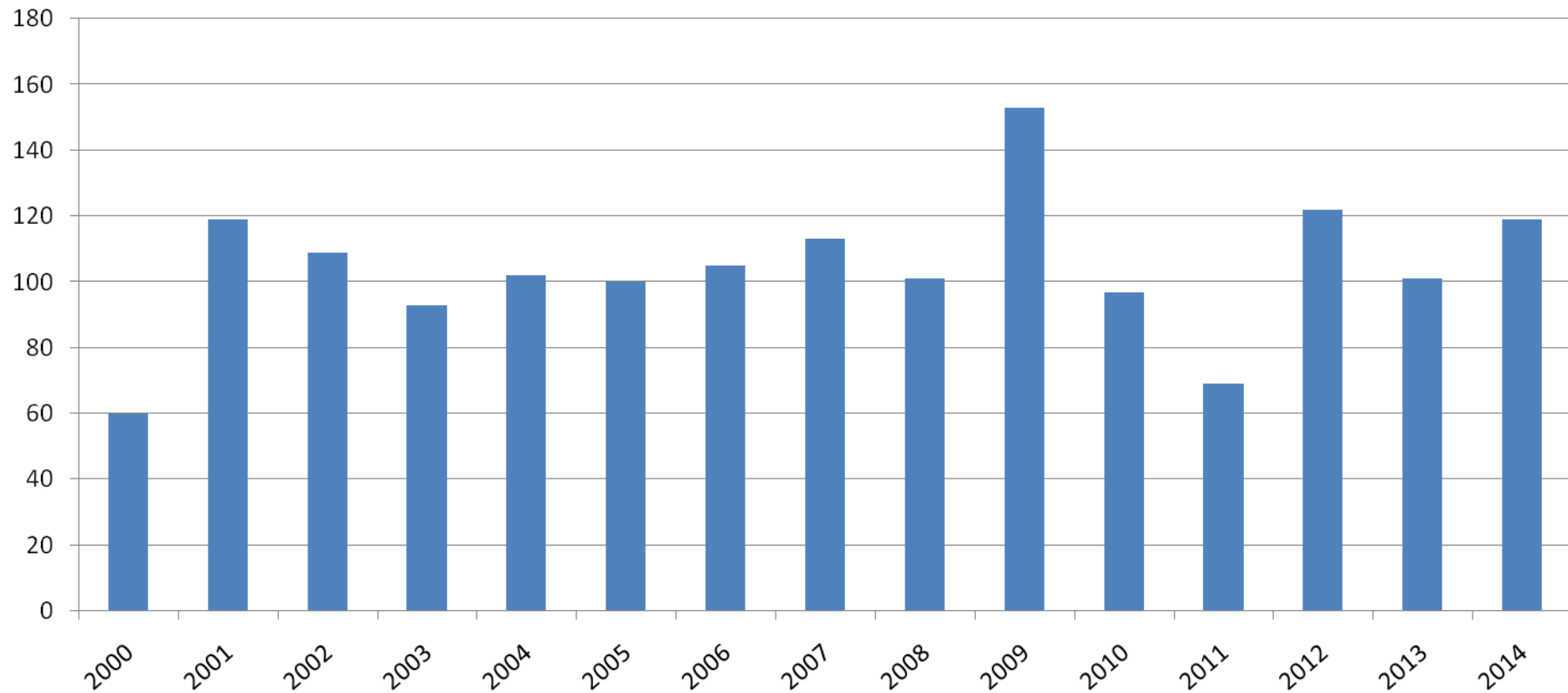




Cases of Animal Rabies

- 2000 - 2007 – 801 cases (average 100 per year)
- 2008 - 2014 – 762 cases (average 108 per year)

Number of animal rabies cases reported in Georgia 2000 through 2014





Number of animal rabies cases According to species





Exposure

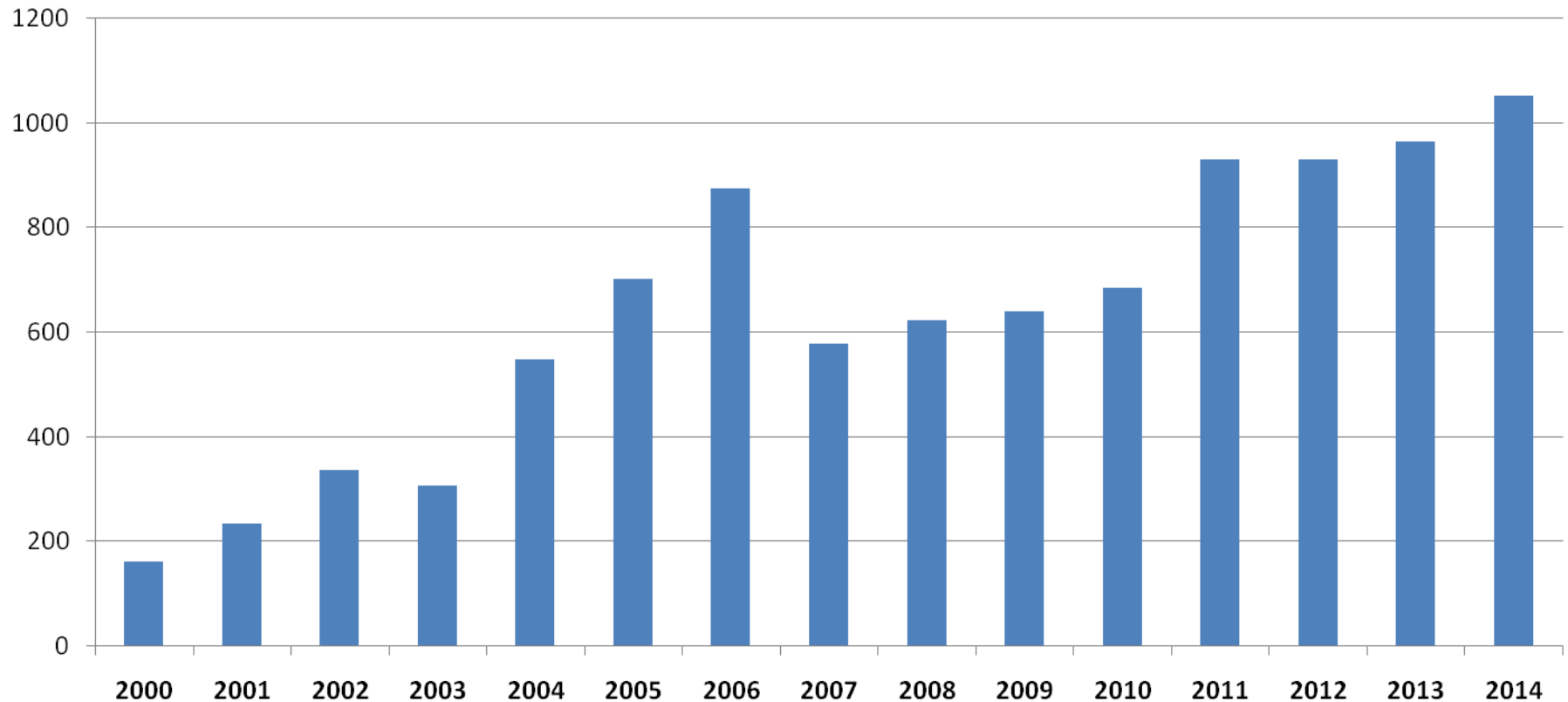
- Almost all cases were caused by dog bites
- Major risk factors:
 - in human : large population of stray dogs and unvaccinated pets
 - In animal: wild animals and stray dogs
- According to owners we have rabies cases in vaccinated animals



Post exposure prophylaxes in Georgia

The incidence of rabies post-exposure prophylaxis (PEP) in Georgia is very high

PEP/100 000 population in Georgia, 2000-2014





Rabies Control and prevention in Georgia

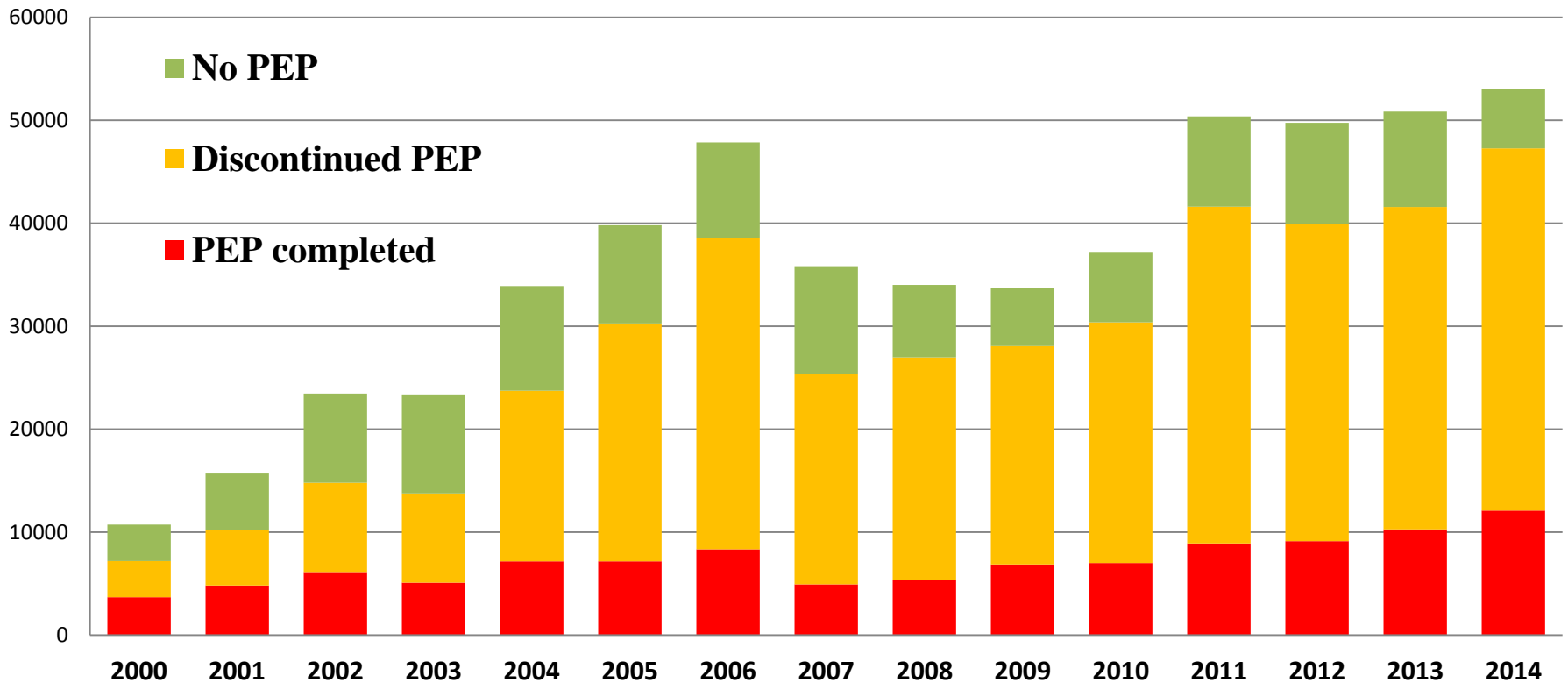
Admissions following potential rabies exposure and the PEP received

Number of cases			Incidence/100 000			Annual increasing rate %	
2012	2013	2014	2012	2013	2014	2013	2014
Admission to special care centers after exposure or suspected exposure to potentially rabid animal							
49735	50840	53077	1105,8	1133,9	1182	2.5	4.2
Discontinued PEP received							
32706	32781	35177	729,4	731,1	783.4	0.2	7.15
Complete PEP received							
9183	10462	12090	204,2	233,3	269,2	14.2	15.4
Total PEP received							
41889	43243	47267	931,4	964,4	1052,6	3.5	9.14



Rabies control and prevention in Georgia

The number of reported admissions for treatment following exposure or suspected exposure to potentially rabid animals has increased each year since 2000, along with an increase of discontinued PEP



The number of admissions to special care centers following exposure or suspected exposure to potentially rabid animals and the PEP received (children 34%)



Laboratory capacity

- Limited laboratory diagnostic of human rabies in Georgia until 2011
- October, 2011 implementation of laboratory diagnostic methodology in collaboration with CDC, Atlanta
- Since 2011 all human cases are diagnosed using:
 - ✓ Reverse Transcription (RT) Polymerase Chain Reaction (PCR)
 - ✓ Nested PCR
 - ✓ Sequencing of Nested PCR products



Laboratory capacity

Sequence techniques have become useful tools to:

- Study the molecular epidemiology of rabies viruses
- Determine the reservoir variant in human rabies cases
- Study the phylogenetic of rabies viruses and relatedness to non-rabies lyssaviruses



Laboratory capacity

Diagnostic Methods of animal rabies in Georgia

- To identify rabies virus in sick animal's pathological material IFA, Bioassay
- Post-vaccination research in order to identify antibodies through ELISA



Enhancement of Rabies Control and Prevention in Georgia

To assist improvement of PEP policy and practice as well as enhance priorities for national rabies control and surveillance the following materials were developed:

- Standard case definitions; Case registration; Notification; Reporting requirements;
- Data analysis; Case/outbreak investigation and response;
- Feedback and supervision of surveillance activities;
- Protocols for sample collection; Storage.
- Communicable Disease Surveillance Guidelines





`One health` concept for rabies in Georgia

- In 2014 that Ministry of Agriculture and the Ministry of Labor, Health and Social affairs elaborated joint approach in fighting against Rabies and prepared the “Decree of the Government of Georgia on measurements to be implemented for prevention of Rabies in 2014-2018”.
- Notification system among human and animal health is working properly.
- Was established Rabies committee, which includes NFA and NCDC representatives.



Challenges in Rabies control and prevention in Georgia

- Way of husbandry system (free roaming dogs, uncontrolled breeding) in villages
- Stray dogs
- Animal owners low awareness regarding necessity of vaccination
- No experience of vaccination of wild animals





Preventive Measures in Rabies control in Georgia

- To evaluate informational level of population and conduct awareness campaign
- Recording and vaccination of domestic and shelter animals (from 2014)
- Recording stray dogs and elaborate data base (2015-2016)
- To conduct preventive measures in stray dogs in cooperation with the Ministry of Regional Development and Infrastructure and local government (2015)
- To collect data regarding susceptible species, areas and density in cooperation with the Ministry of Environment (2015)
- To plan pilot project in high risk regions of oral vaccination in wild animals – 2016



Conclusion

New guideline and protocol was approved by MOH, based on WHO recommendations

World Health Organization. (Updated 2013). WHO Guide for Rabies Pre and Post Exposure Prophylaxis in Humans.

World Health Organization. (2013). WHO Expert Consultation on Rabies: second report. WHO Technical Report Series; no. 982.

Vaccines – CCEEVs - WHO, FDA, EMA

Next step - Intradermal regimen for rabies PEP that reduce the volume of vaccine required and vaccine cost