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Toxacariasis: The Neglected Parasitic Zoonosis

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Abstract

Toxacariasis is an infection by a roundworm parasite that lives in the intestines of cats, dogs, and foxes. Their eggs are shed in animal feces contaminating the ground around them. Infectious eggs can be ingested, hatch, and release larvae that penetrate the intestines and travel to the brain, liver, heart, lungs, muscle, and/or eye. Toxacariasis has been identified by the Centers for Disease Control as one of five neglected parasitic infections (NPI) as surveillance, prevention, and/or treatment are given little attention. About 85% of clinical physicians claim passing knowledge of Toxacariasis, however, when given a list of symptoms only half diagnosed correctly. This particular zoonosis affects poor or minority populations more. Playgrounds and schoolyards can elevate exposure risks for young children. Little testing is done by physicians, yet around 5% (16 million) of Americans test positive for the Toxocara antibody. This indicates exposure to the parasite eggs at some point in their lives. Currently, there are no grants from the National Institutes of Health (NIH) for the research of Toxacariasis. Larvae that travel to the brain may contribute to reduced learning ability and mental illness. In domestic pets, about 30% of dogs and 25% of cats carry Toxocara. The rate is higher in pets allowed outside and strays. Increase awareness of Toxacariasis with parents and pet owners. Promote vaccination and deworming treatments that are given out by veterinarians. Educate clinical physicians on the diagnosis and treatment of Toxacariasis in children. With the proper education of pet waste disposal and pet health options, Toxacariasis is a completely preventable parasitic infection. If exposed, there are current treatment options available that would prevent any long-term health effects. While it is known that larvae travel systemically in humans, little is known about the health implications. This wide-spread, common parasite needs more attention to prevent potential detrimental health implications.

Keywords

environmental sciences, One Health Creating Solutions, social and behavioral sciences

Comments

This research is part of the One Health Creating Solutions project.

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"Toxocara" image from CDC.gov

TOXOCARIASIS

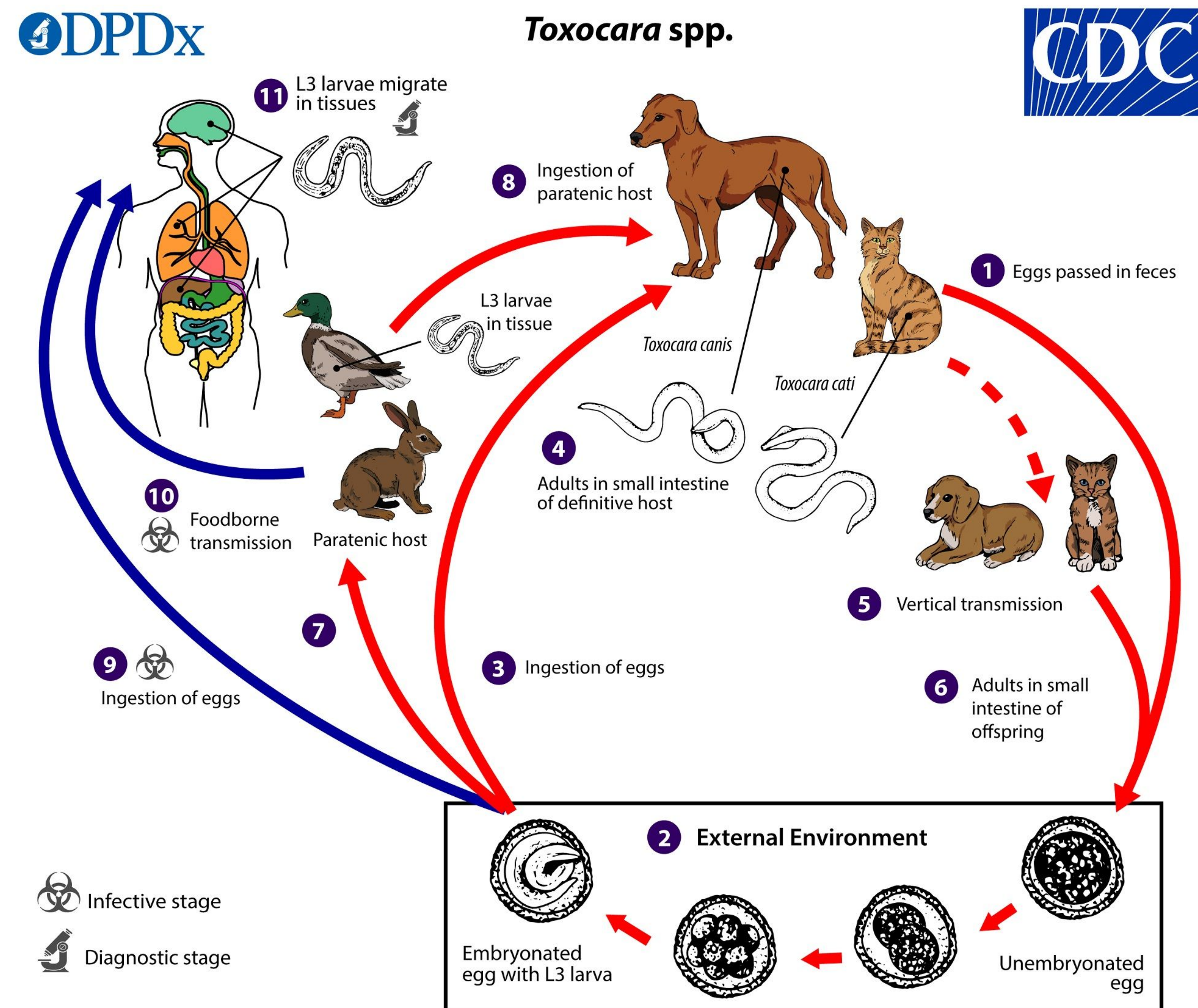
- An infection by a roundworm parasite that lives in the intestines of cats, dogs, and fox.
- Eggs are shed in animal feces, contaminating the ground around them.
- Infected eggs can be ingested, hatch, and release larvae that penetrate the intestines and travel to the brain, liver, heart, lungs, muscle, and/or eye.



<https://www.omicsonline.org/mexico/toxocariasis-peer-reviewed-pdf-ppt-articles/>

PROBLEM

- Identified by the Centers for Disease Control as one of five neglected parasitic infections (NPI) as surveillance, prevention, and/or treatment are given little attention.
- About 85% of clinical physicians claim passing knowledge of Toxocariasis, however, when given a list of symptoms only half diagnosed correctly.
- Poor or minority populations are at a higher risk for exposure.
- Playgrounds and schoolyards can elevate exposure risks for young children.



<https://www.emaze.com/@AOLWWCRR>

GOALS

- Increase awareness of Toxocariasis with parents and pet owners.
- Promote vaccination and deworming treatments that are given out by veterinarians.
- Educate clinical physicians on the diagnosis and treatment of Toxocariasis in children.

CONCLUSION

With the proper education of pet waste disposal and pet health options, Toxocariasis is a completely preventable parasitic infection. If exposed, there are current treatment options available that would prevent any long-term health effects. While it is known that larvae travel systemically in humans, little is known about the health implications. This widespread common parasite needs more attention to prevent potential detrimental health implications.

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PUBLIC HEALTH IMPACT

- Little testing is done by physicians, yet around 5% (16 million) of Americans have been infected with the parasite.
- No current grants from the National Institutes of Health (NIH) for the research of Toxocariasis.
- Larvae that travel to the brain may contribute to reduced learning ability and mental illness.
- In domestic pets, about 30% of dogs and 25% of cats carry Toxocara. The rate is higher in pets allowed outside and strays.

dogpoopsigns.com



ACADEMIC RESEARCH POSTER TEMPLATE



BOISE STATE UNIVERSITY

NAMES IN CONTRIBUTION TO THE PROJECT, BUSTER BRONCO, BUSTER BRONCO, BUSTER BRONCO, BUSTER BRONCO, BUSTER BRONCO, BUSTER BRONCO, BUSTER BRONCO

SUBTITLE ACADEMIC RESEARCH POSTER TEMPLATE

INTRODUCTION

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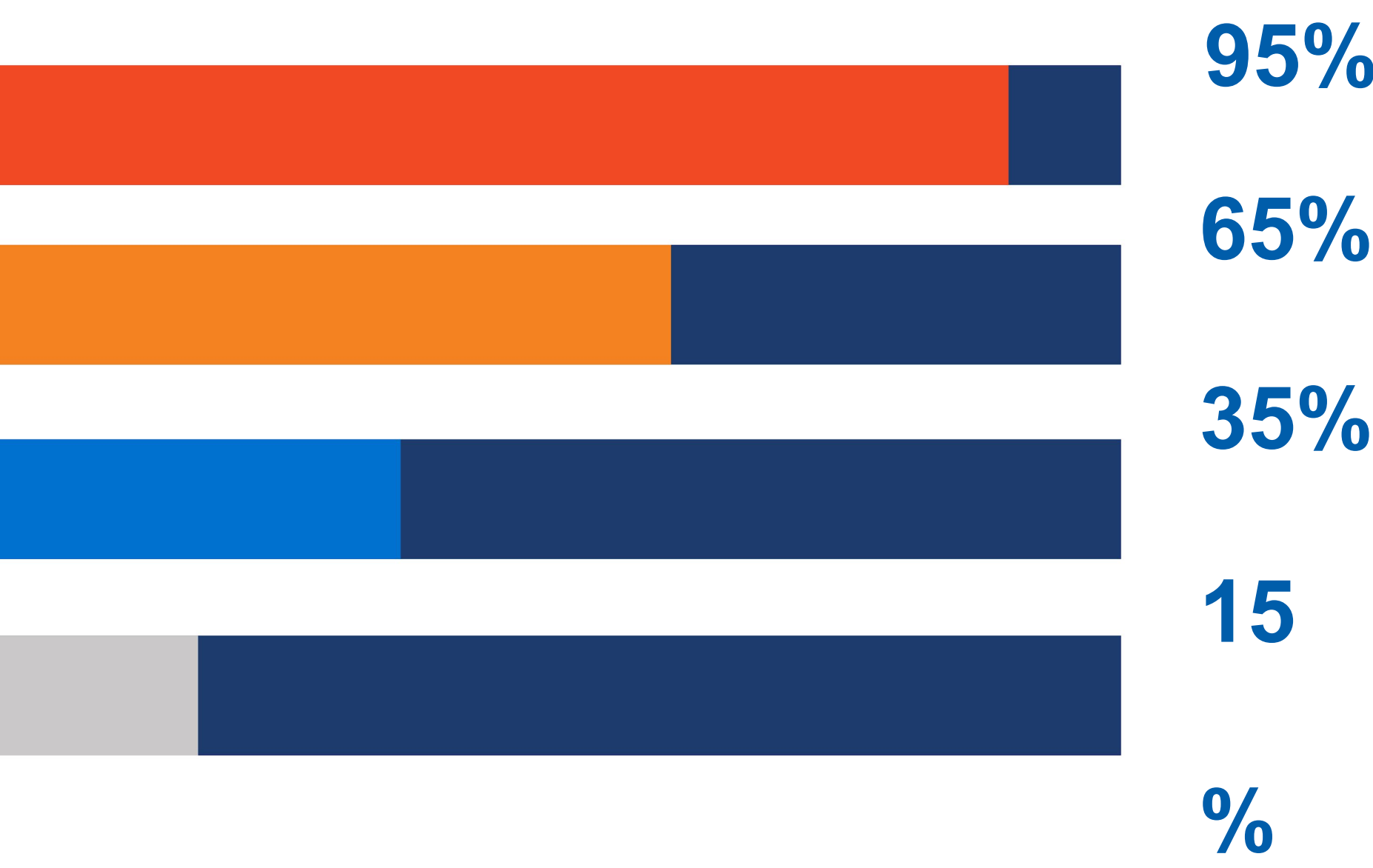
ANALYSIS / DATA

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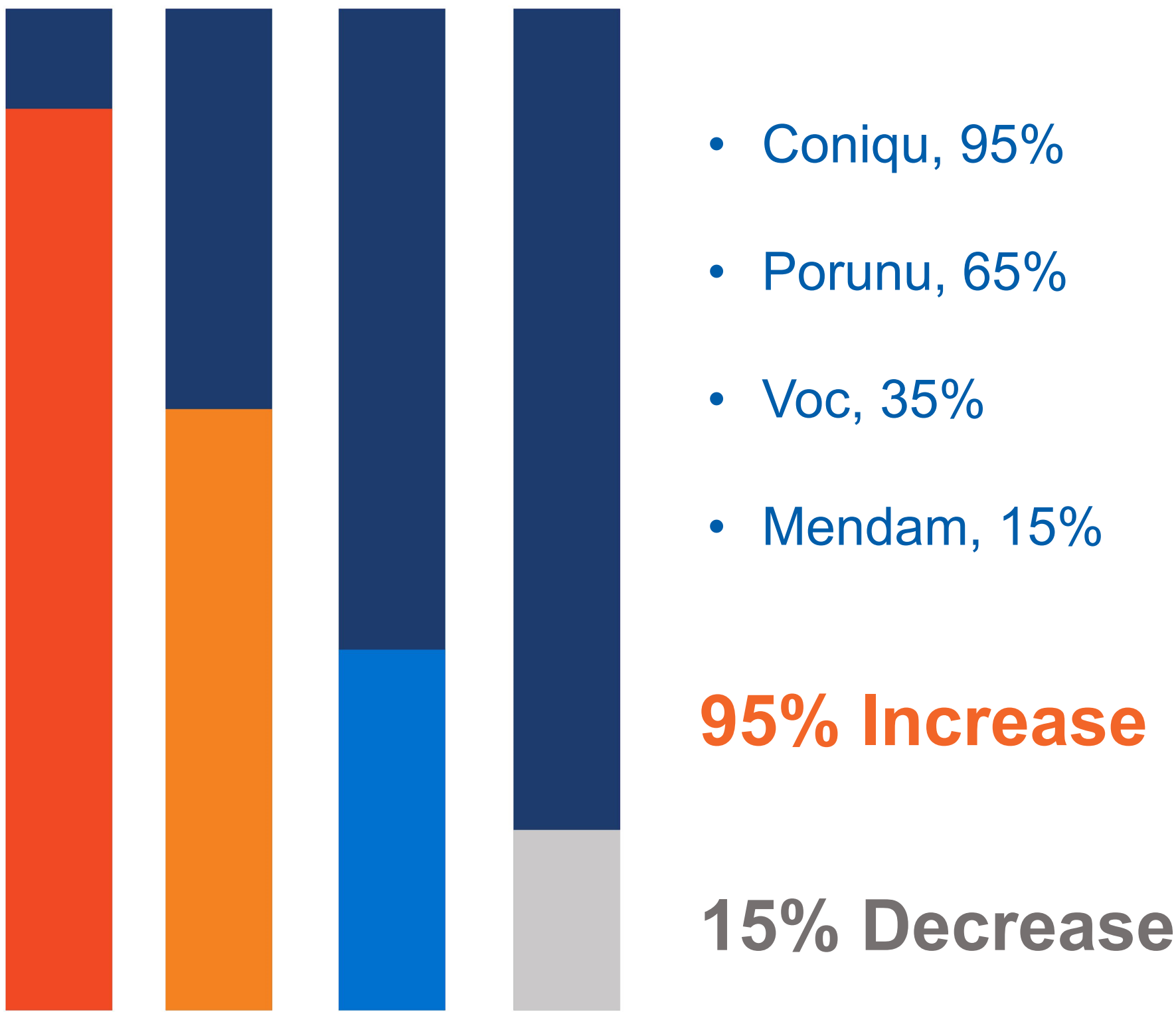
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SURVEY / DATA

Survey information.

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Data analysis results.

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