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Global Vector Hub

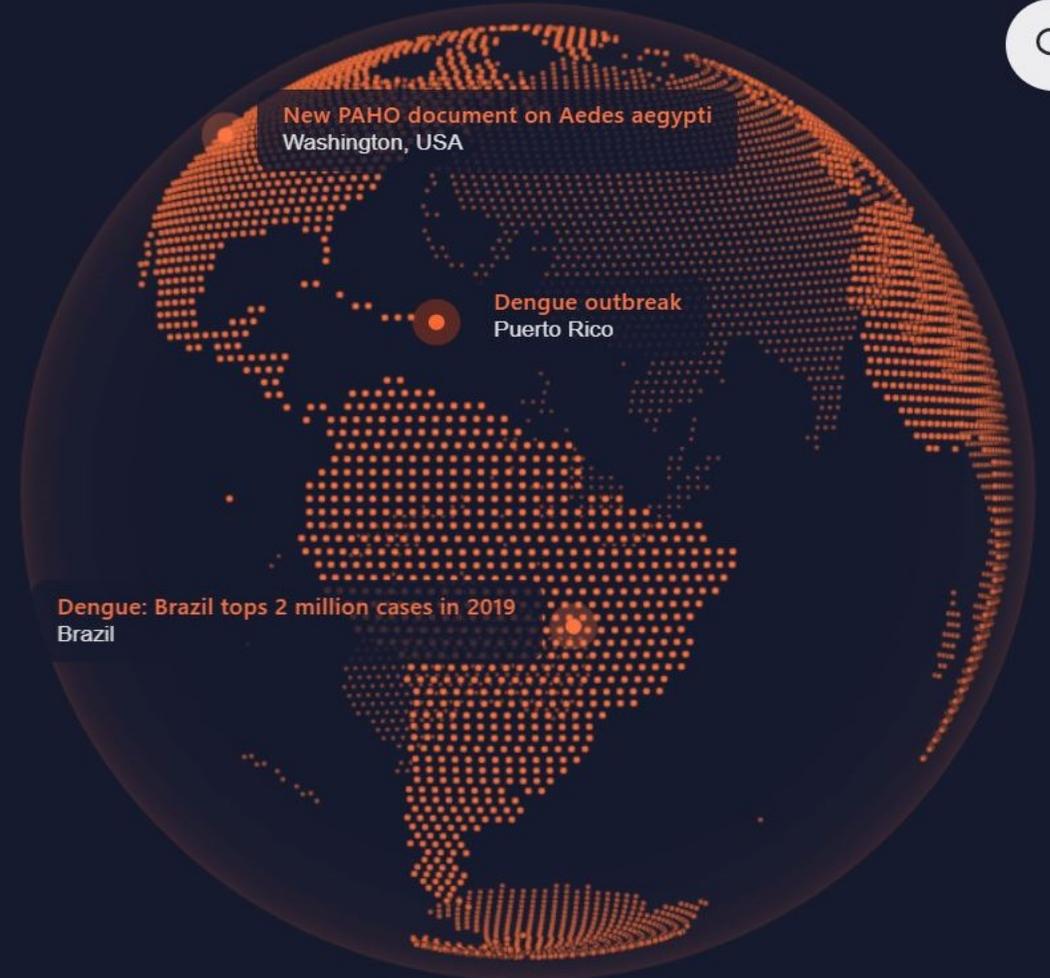


The global open access community for vector control information and research

Resources →

Data →

Network →



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MediLab Secure webinar 'The impact of COVID-19 on vector-borne diseases management'





- Introduction Global Vector Hub
- Survey on impact of COVID-19 on VBD research and VC operations worldwide
- Potential consequences on arboviral outbreaks occurrence
- Future outlook: measures to be taken to adapt future preparedness programmes

The Global Problem



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80%

of the world's population is at risk
of vector-borne disease

An estimated

445,000

people died of malaria in 2016 - these
were mainly young children in sub-
Saharan Africa

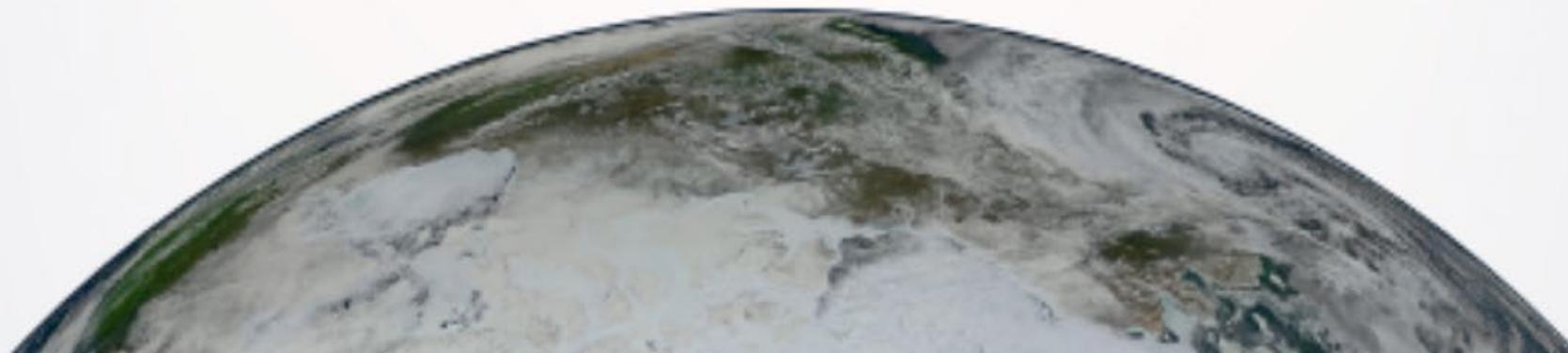
17%

of the global burden of
communicable disease is due to
vector-borne diseases

An estimated

390 million

dengue fever cases per year





The **Global Vector Hub (GVH)** will be instrumental in the elimination of vector-borne diseases, worldwide.

We will bring together researchers and health workers on the largest scale ever seen, cutting across disciplines, diseases and vectors.

Our aims



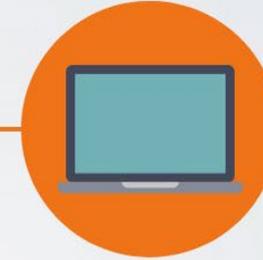
#1

Be the first port of call for researchers, public health workers, government agencies, policy makers and NGOs responding to threats of vector-borne disease



#2

Build a community of practice through hosting bespoke educational materials and learning packs for professionals working in vector control and research



#3

Provide a **platform for transparent data sharing** and worldwide information about vector species that transmit disease



#4

Build capacity and maximise preparedness for outbreak situations



#5

Connect vector control professionals through developing a network and discussion forums with search functions that are intuitive



#6

Reduce vector-borne disease incidence by making research more effective and less wasteful, worldwide

- An early version of **The Global Vector Hub (GVH-Beta)** was launched in June 2020, with a full version to follow in July 2021:

<https://globalvectorhub.lshtm.ac.uk/>

- This version includes **data, resources** and **networking** features, focusing on **capacity building** and systems strengthening for **vector control** globally, and establish a community of practice for vector control interventions.
- It also includes a global **directory** of training courses in medical entomology developed by GVH and ARCTEC for **WHO-TDR**.

Our resource repository



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A comprehensive repository of accurate and up-to-date resources, including training and **educational materials**, vector control **guidelines** and **research tools**, as well as extensive **information packs** and packages to support **training of staff** on the control of vector-borne diseases.

☰

🔍 Enter a search term.....

Author

- Carribean Public Health Agency (CARPHA)
- Centers for Disease Control and Prevention (CDC)
- European Centre for Disease Prevention and Control (ECDC)
- Global Vector Hub
- GNATWORK
- Innovative Vector Control Consortium (IVCC)

Continents 2 selected

Country

Disease 5 selected

Insecticide Name

Language 5 selected

EN

Resources

[Technical Documents](#) | [Key Information](#) | [Policy and Funding](#) | [Manuals](#) | [Summaries](#)

Welcome to the resources section of the Global Vector Hub.

Please select criteria linked to your chosen resources using the filters or search box on the left. The more filters you add the more refined the results will be.

Latest Resources

	Community-based health care, including outreach and campaigns, in the context of the COVID-19 pandemic [WHO, UNICEF, IFRC]	DOWNLOAD
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Resource Index

Section Title	Section Title	Section Title
Community-based health care, including outreach and campaigns, in the context of the COVID-19 pandemic [WHO, UNICEF, IFRC]	Community-based health care, including outreach and campaigns, in the context of the COVID-19 pandemic [WHO, UNICEF, IFRC]	Community-based health care, including outreach and campaigns, in the context of the COVID-19 pandemic [WHO, UNICEF, IFRC]
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Worldwide GVH network



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Registered users can **share** data and information about their fields of expertise, actively participate in online **discussion** forums and **collaborate** on future projects.

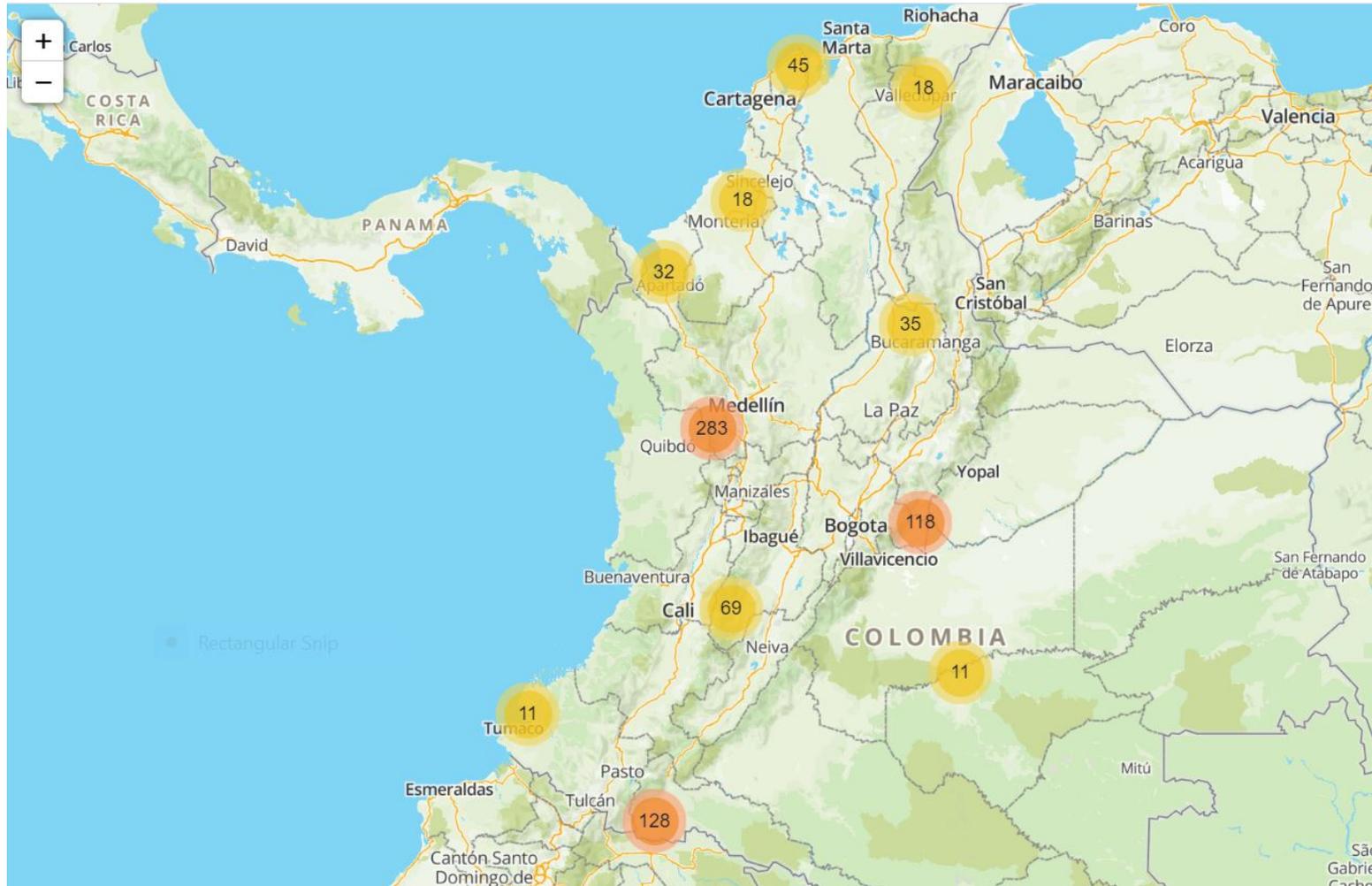
The network also includes information on relevant academic, government, not-for-profit, industry led-organisations and research **institutions**.

Further sections on funding and employment **opportunities** are also included to allow for **capacity building** and improve staff retention.

GVH vector data example: Colombia



Vector abundance – *Aedes aegypti*



- [View Data Index](#)
- [Save Search](#)
- [Reset Criteria](#)

Current Filters:

Country: Colombia

Can't find what you're looking for? Upload your own data [here](#).

768 Data Entries

Download

Abundance

Hide Map

TDR partnership with GVH



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In January 2021, the GVH launched a **global directory of medical entomology training courses**, developed in partnership with the Special Programme for Research and Training in Tropical Diseases (TDR) and ARCTEC.

This new resource will strengthen the capacity of scientists combating **neglected tropical diseases** and other **vector-borne diseases**.



TDR For research on diseases of poverty
UNICEF • UNDP • World Bank • WHO

NEWS ABOUT US RESEARCH FOR IMPLEMENTATION STRENGTHENING RESEARCH CAPACITY GRANTS PUBLICATIONS & RESOURCES GLOBAL ENGAGEMENT AND PARTNERSHIPS DISEASES & TOPICS

News

Latest news

A new resource for building medical entomology capacity to fight neglected tropical diseases

TDR news item
26 January 2021

TDR and the Global Vector Hub have developed a web-based directory of medical entomology courses available globally as a new resource for strengthening the capacity of scientists combating neglected tropical diseases and other vector-borne diseases.

Related links

- From the laboratory to the field: Updating capacity building in medical entomology



RBM, October 2020:

Life-saving malaria campaigns on track in the majority of malaria-affected countries despite COVID-19

But:



Bringing science & development
together through news & analysis

24/03/21

People shun malaria testing over 'COVID-19 fears'

- More than 30 per cent of Africans with fever did not seek malaria treatment in 2020
- Experts blame COVID-19 lockdowns and fears of infection in healthcare facilities
- 'Education programmes needed' to end myths around infection, vaccination

Dengue—an Epidemic Within a Pandemic in Peru

News and Press Release

Source: IPS

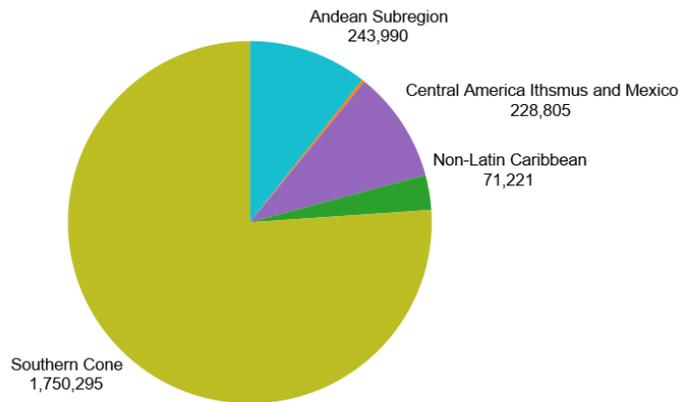
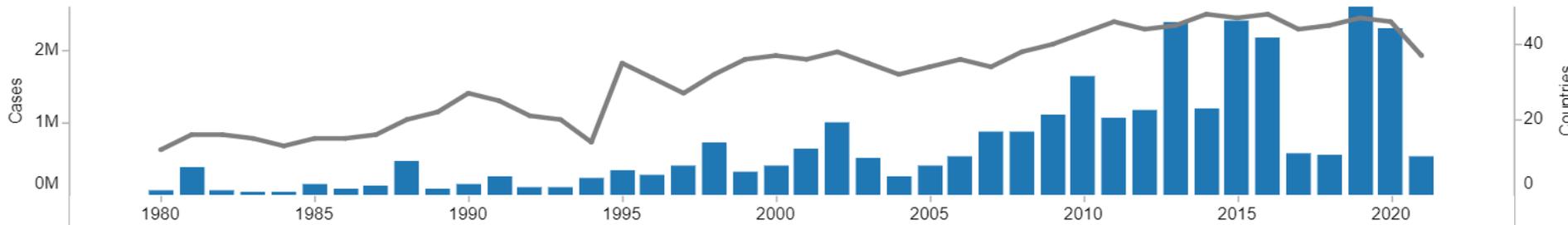
Posted: 15 Jan 2021

Originally published: 15 Jan 2021

VBDs during COVID-19 – dengue



Dengue Cases		Year: 2020		
Region	Total	Confirmed	Severe	Deaths
The Americas	2,300,558	1,007,939	5,681	1,019



- Dengue cases in 2020 at record level, almost matching 2019
- Majority of cases in Southern Cone (Argentina, Brazil, Chile, Paraguay, and Uruguay)
- Peak in first half of year

Online workshop, July 2020



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'The impact of COVID-19 on global vector control efforts'¹

Panelists from WHO, Kenya, Puerto Rico & LSHTM

Attended by >400 participants from 60 countries.

Global Vector Hub
The global open access community for vector control information and research

Global Vector Hub workshop series

The impact of COVID-19 on global vector control efforts

This workshop aims to establish the impact of COVID-19 on the current vector control situation in different settings. We will identify gaps in our knowledge and data availability, assess funding and communication needs, and propose mitigation efforts. We will also address how vector control operations might need to change to improve epidemic preparedness and prevent future outbreaks.

Chair: Dr Frederik Seelig
London School of Hygiene and Tropical Medicine/ Global Vector Hub

Prof James Logan
London School of Hygiene and Tropical Medicine/ARTEC

Dr Raman Velayudhan
World Health Organisation

Dr Damaris Matoke-Muhia
Kenya Medical Research Institute/Pan-African Mosquito Control Association

Dr Grayson Brown
Puerto Rico Vector Control Unit

22 July 2020 at 12:00 GMT+1 (London)

REGISTER NOW

@GlobalVectorHub
@info_TGHN

Learn More: globalvectorhub.tghn.org

THE GLOBAL HEALTH NETWORK

¹: Recording available here: <https://globalvectorhub.tghn.org/online-workshops/>



Negative effects of pandemic & lockdown:

- Lack of funding, diversion of resources and staff due to Covid-19
- Lack of community knowledge of VBDs - need to raise awareness
- Stigmatisation of suspected patients
- Routine operations (eg. vector surveillance) postponed
- Treatment of breeding sites had to be abandoned (especially in urban areas, crucial for *Aedes* vectors)
- Lack of media interest for non-Covid-19-related topics
- Remaining challenges of accurate diagnostics of VBD patients, case management in primary health care (PHC), treatment of dengue patients.



Positive lessons & experiences:

- Continued or increased use of community health workers equipped with PPE
- Availability of **online training** to ensure surveillance capacities
- Encouraging examples of entomological surveillance in quarantine centres, eg. of migrating workers returning home
- Community and family engagement of VC efforts: house cleaning, rubbish removal; greater emphasis on prevention
- Need to build capacities, using outreach activities and enrolling external partners.

Future challenges and solutions I



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- Need for **clear communication** - emphasise that not all diseases are Covid-19
- Need to preserve gains made in VBD control; strengthen coverage, momentum
- Need to decentralise VC activities, empower county-level communities to address VBDs (eg. target breeding sites at local levels)
- **Empower community health workers**, provide resources, (eg. bednets, larvicides).
- Empower women, minorities
- Break down silos.

Future challenges and solutions II



- Need to strengthen local-level capacity for vector surveillance, VC. Need to track moving vectors (WNV in India, *An. stephensi* in Africa); need to adapt.
- Target hotspots, integration of epidemiology & entomology to track down local outbreaks (eg. dengue) to manage vector densities.
- Willing to learn from positive experiences, also involvement from private sector, need for extra hands!
- **GVCR 2017-2030** emphasises all these recommendations. Encouraging integration of GVCR into national strategies.

Assessing the impact of COVID-19



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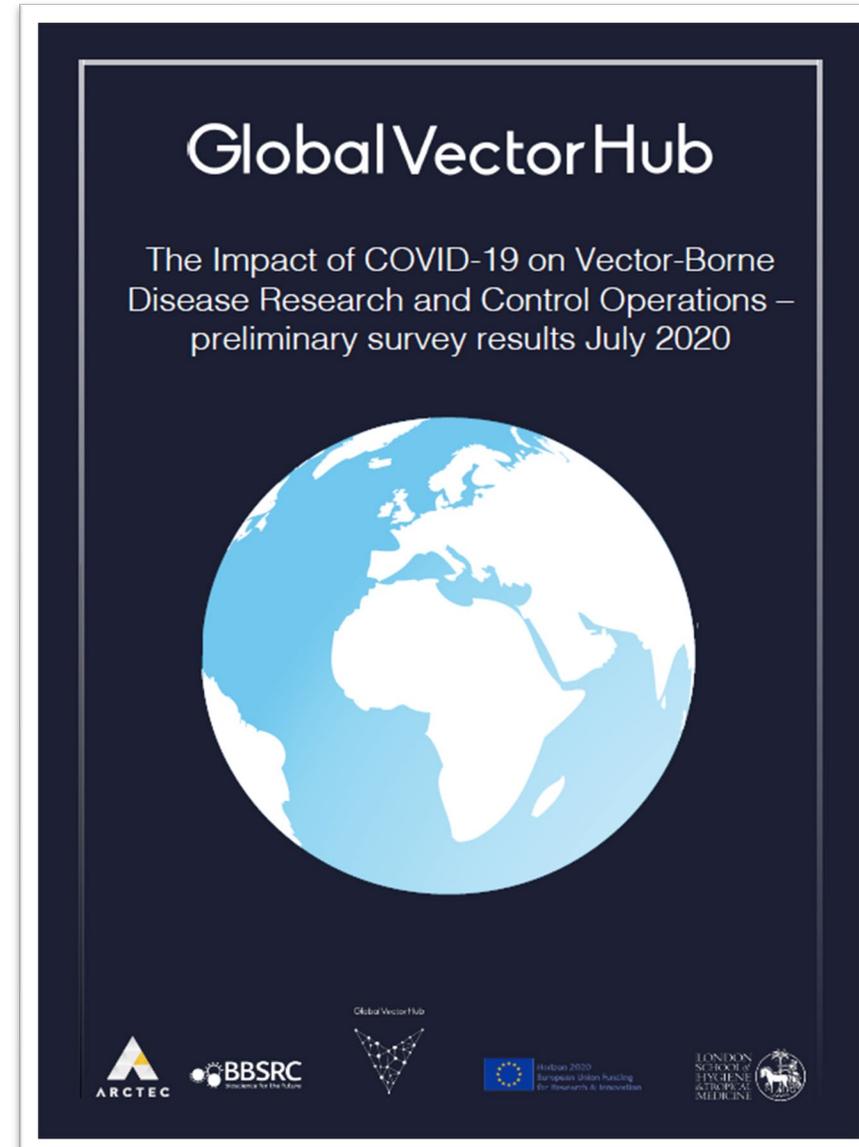


In July-August 2020, the GVH ran a survey to establish the potential **impact of COVID-19** on **global vector control efforts**, including:

- How different sectors and stakeholder groups are affected;
- The control and surveillance of which VBDs are most strongly affected;
- Characterise gaps in knowledge and communication;
- Develop robust recommendations for future epidemic preparedness;
- Identify common narratives and experiences.

Our findings² were used to **provide recommendations** to numerous agencies including the WHO, NGOs, policy makers and industry during the pandemic.

2: The Impact of COVID-19 on Vector-Borne Disease Research and Control Operations – preliminary survey results July 2020. Available here: <https://tinyurl.com/y5hv4jee>



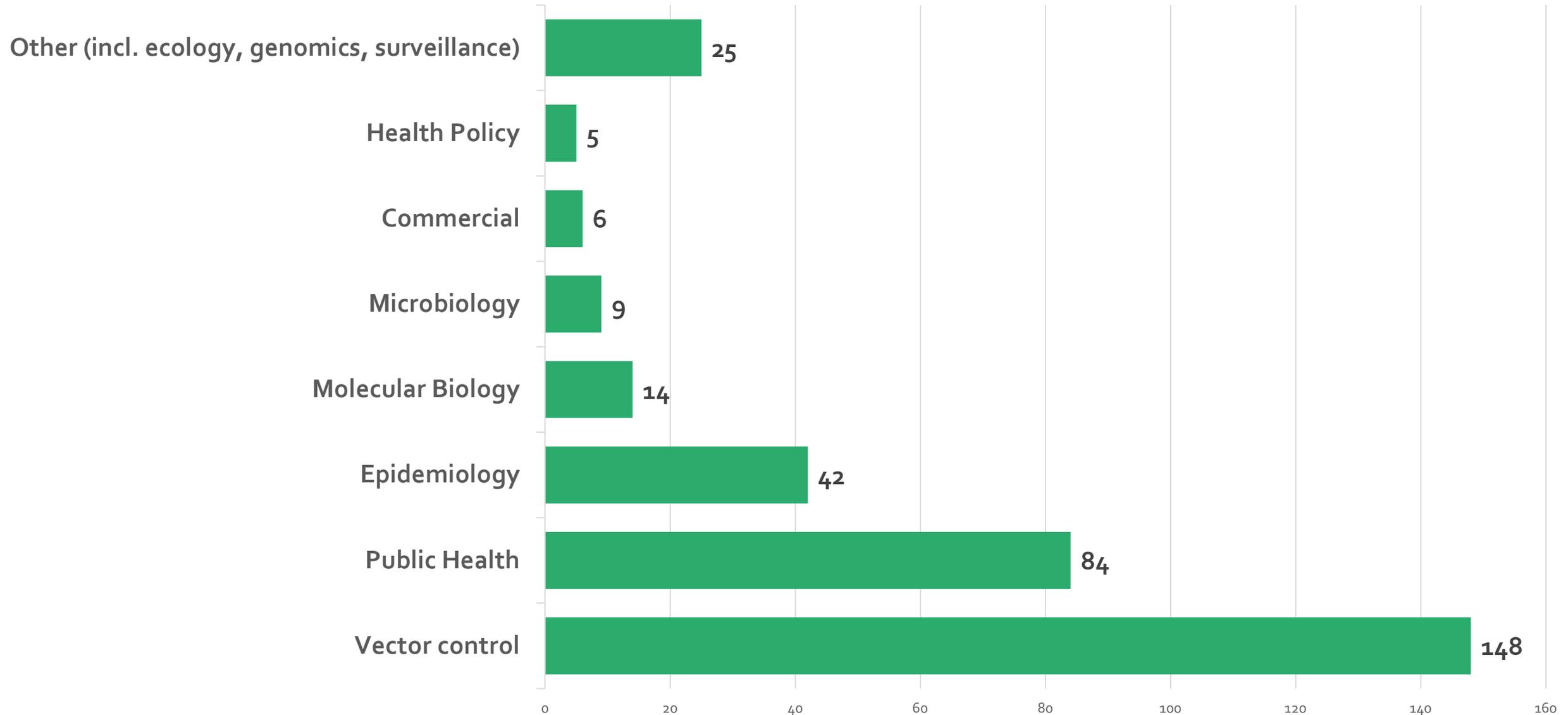
Survey report: key findings



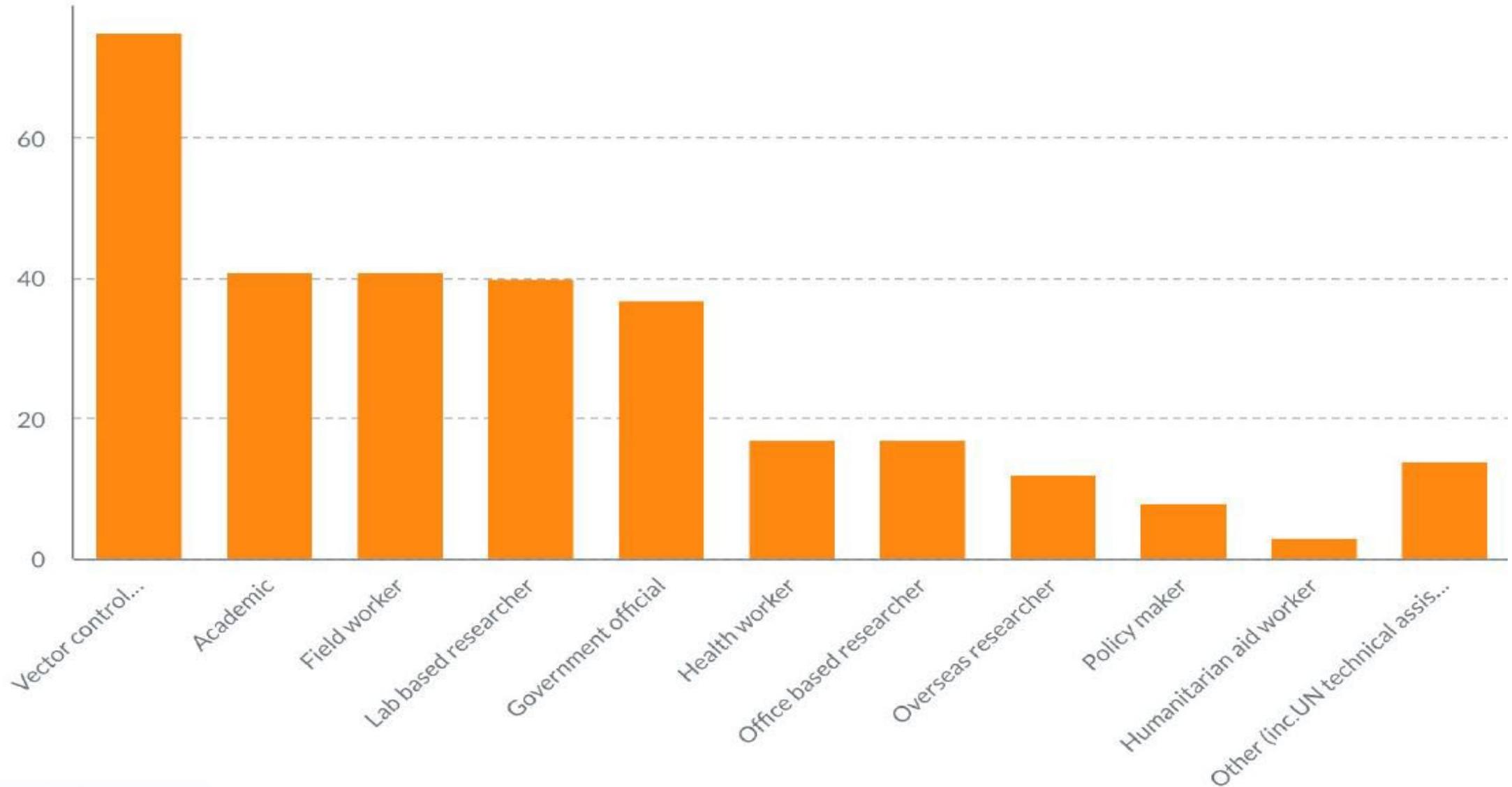
183 respondents from 47 countries



Respondent backgrounds



Respondent employment types



Impact on vector control operations



- Large proportion reported severe impacts on their own work
- 57% felt that COVID-19 affected VBD research and control operations in general 'greatly' or 'extremely'

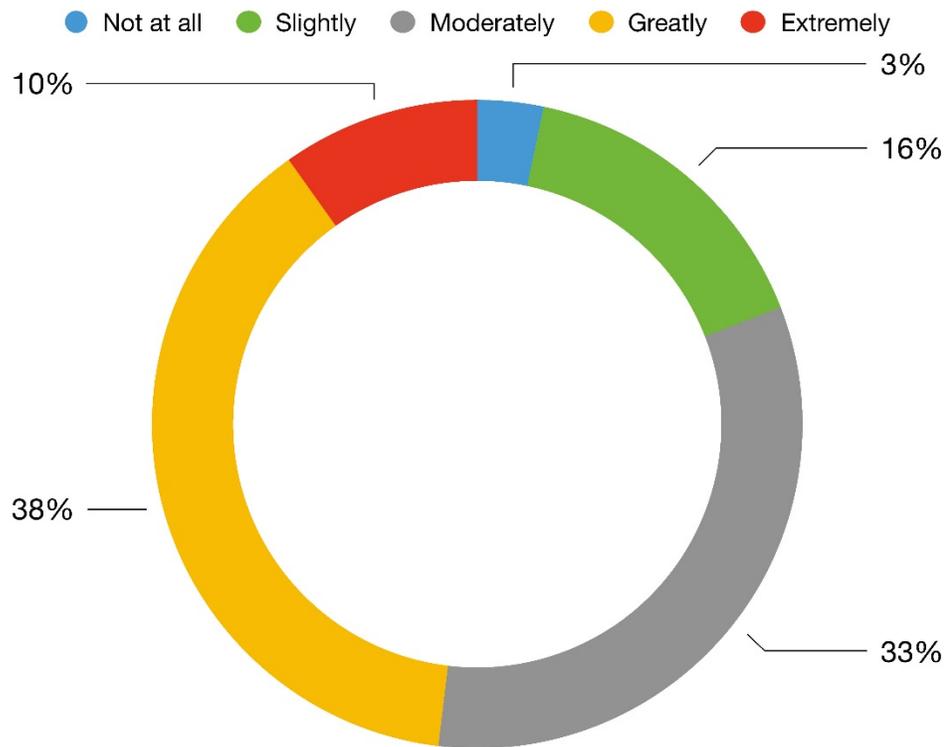


Fig. 5. Respondents' perception on how COVID-19 has affected their own work.

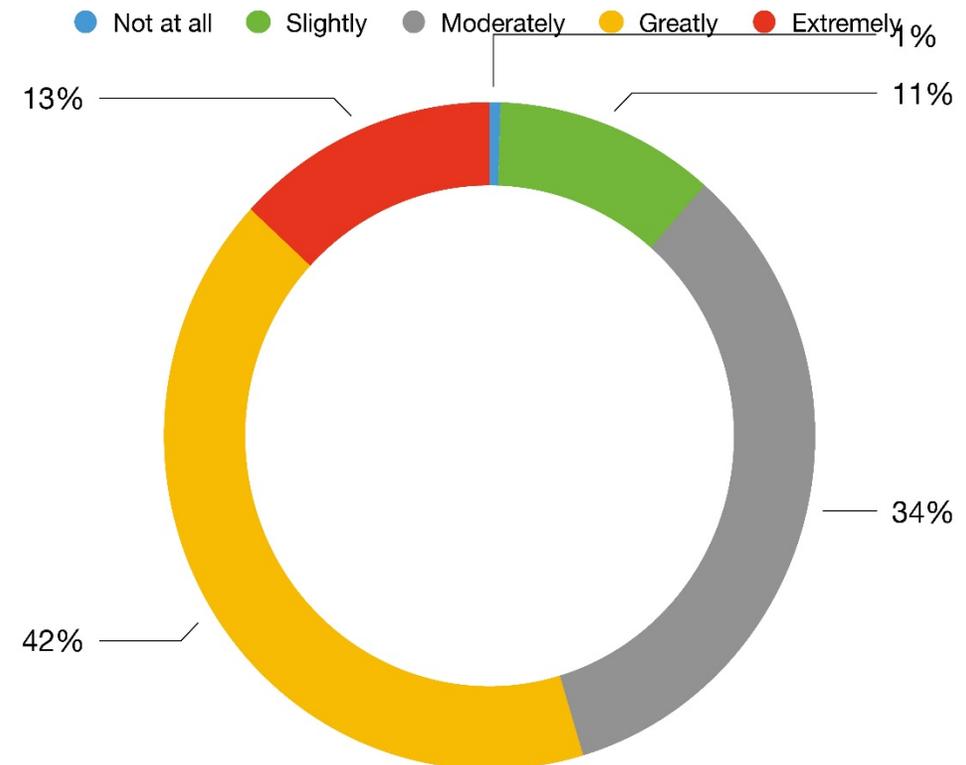
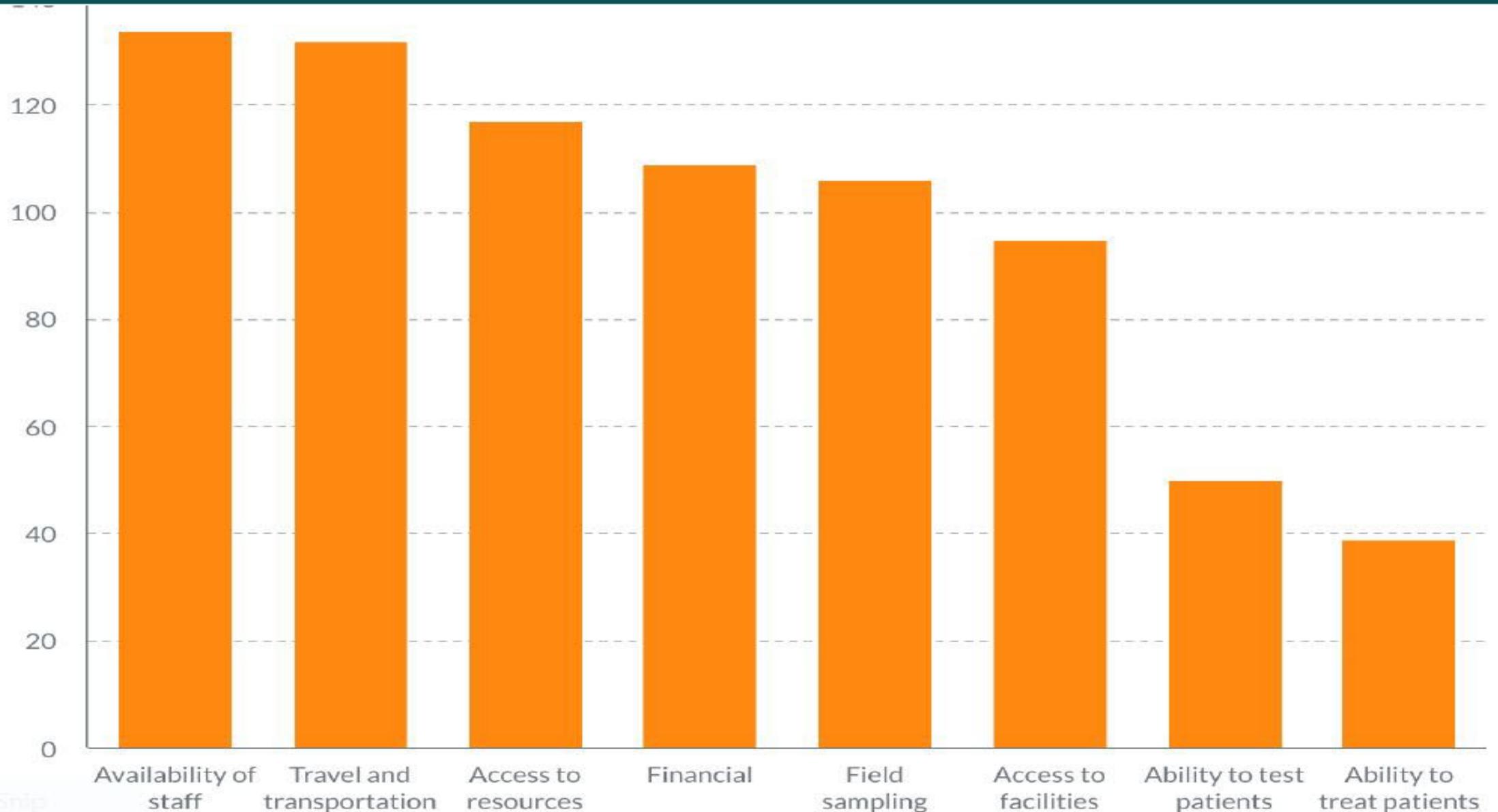


Fig. 6. Respondents' perception on how COVID-19 affects VBD research and control operations.

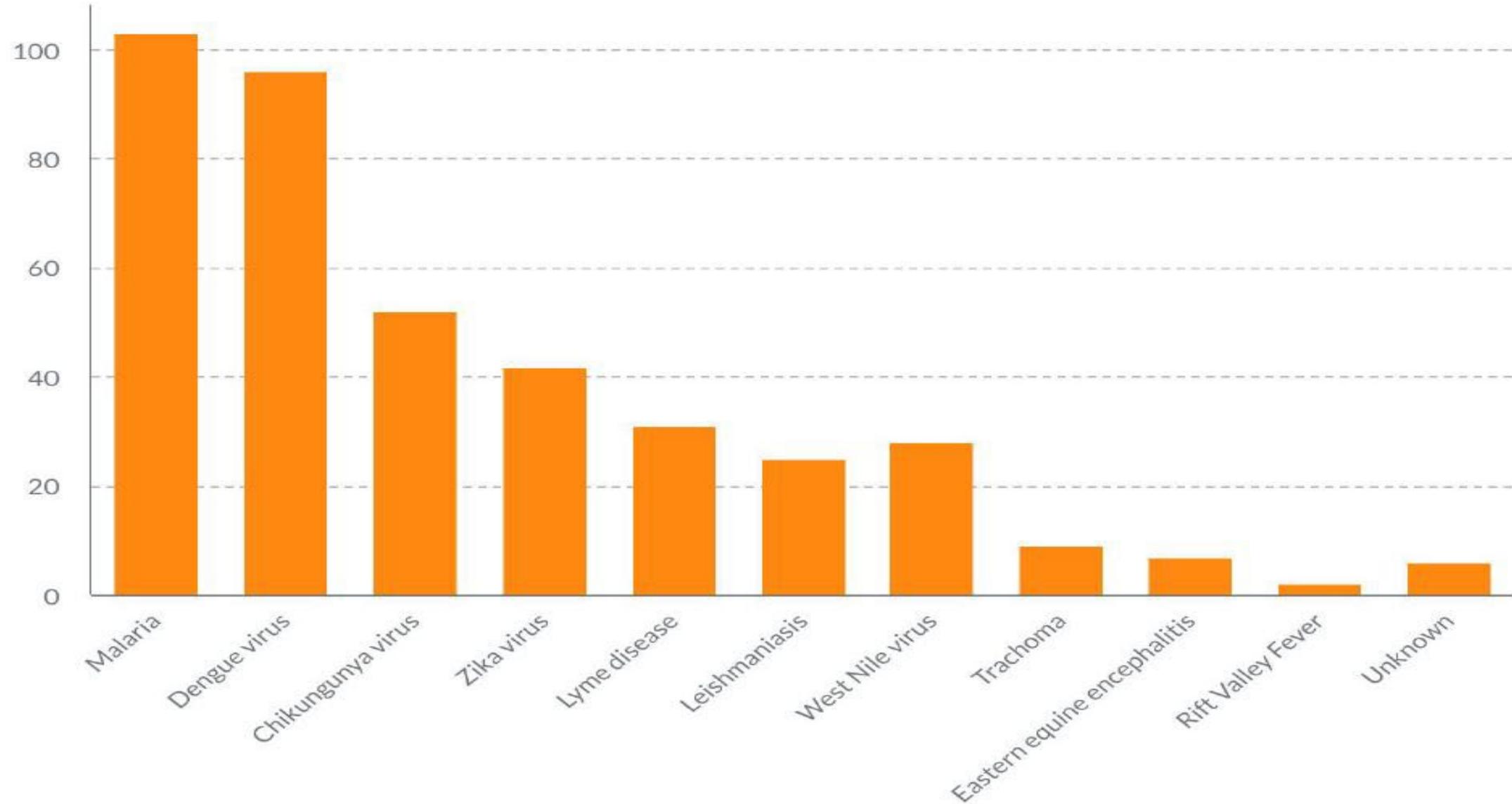
Impact on VBD research & VC operations



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Impact on VBDs



- Accurate and up-to-date entomological and epidemiological surveillance data
- Specific and localised guidance for COVID-19 mitigation during vector surveillance and vector control activities
- How and where to obtain such accurate information
- How COVID-19 interacts with specific VBDs
- Lack of training activities due to physical distancing measures
- Extent of misconceptions and misinformation in the general population
- Lack of clear gov't guidelines and accurate information severe shortcoming

Encouraging new tools



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ORIGINAL ARTICLE

Efficacy of Wolbachia-Infected Mosquito Deployments for the Control of Dengue

Adi Utarini, M.D., Ph.D., Citra Indriani, M.D., M.P.H., Riris A. Ahmad, M.D., Ph.D., Warsito Tantowijoyo, Ph.D., Eggi Arguni, M.D., Ph.D., M. Ridwan Ansari, M.Sc., Endah Supriyati, M.Sc., D. Satria Wardana, B.Sc., Yeti Meitika, B.Comp.Sci., Ingrid Ernesia, B.Sc., Indah Nurhayati, B.Sc., Equatori Prabowo, B.E., [et al.](#), for the AWED Study Group*

June 10, 2021

N Engl J Med 2021; 384:2177-2186

DOI: 10.1056/NEJMoa2030243

RESEARCH ARTICLE | HEALTH AND MEDICINE

Combining contact tracing with targeted indoor residual spraying significantly reduces dengue transmission

Gonzalo M. Vazquez-Prokopec^{1,2,*}, Brian L. Montgomery^{3,4}, Peter Horne³, Julie A. Clennon⁵ and Scott A. Ritchie^{6,7}

+ See all authors and affiliations

Science Advances 17 Feb 2017:
Vol. 3, no. 2, e1602024
DOI: 10.1126/sciadv.1602024

Trial results show a

77% 

reduction* in dengue
incidence and

86% 

reduction** in dengue
hospitalizations

in *Wolbachia*-treated
communities.

Valneva Completes Recruitment for Phase 3 Lot-to-Lot Consistency Trial of its Chikungunya Vaccine Candidate

FAO and IGAD alert countries in **eastern Africa** to enhance preparedness for **Rift Valley fever**

May 31st, 2021

- National and international health authorities should provide **clear, evidence-based guidelines**, specifically adapted to local circumstances, on how to safely conduct vector surveillance and control operations.
- Provide **increased funds** for capacity building and epidemic preparedness, including comprehensive preparedness planning, increased training, and strategic reserves of resources

- Strengthen **local capacities** & community health workers
- Support intra-/intersectoral **collaboration** & break down silos
- Adhere to **OneHealth** approach
- Support **new tools** (digital, *Wolbachia*, TIRS, vaccines) shown to be effective
- Changes in policy and practice should be based on evidence generated by vector community, thus leading to improved preparedness against future pandemic outbreaks

Thank you!

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Enabling research by sharing knowledge

Funded by



Horizon 2020
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