

## **A conversation with the Centre for Pesticide Suicide Prevention, June 14, 2018**

### **Participants**

- Professor Michael Eddleston – Director, Centre for Pesticide Suicide Prevention
- Dr. Leah Utyasheva – Policy Director, Centre for Pesticide Suicide Prevention
- James Snowden – Research Consultant, GiveWell

**Note:** These notes were compiled by GiveWell and give an overview of the major points made by the Centre for Pesticide Suicide Prevention.

### **Summary**

GiveWell spoke with Professor Eddleston and Dr. Utyasheva of the Centre for Pesticide Suicide Prevention (CPSP) for an update on its work. In August of 2017, CPSP received a GiveWell Incubation Grant of \$1,336,409 to start work aimed at reducing deaths from deliberate ingestion of pesticides. Conversation topics included CPSP's progress since our last update in February of 2018, its collaboration with the Food and Agriculture Organization of the United Nations, its monitoring activities, and the importance of randomized study design.

### **Progress since our last update in February of 2018**

#### **Progress in Nepal**

##### *Data collection*

CPSP has collected pesticide suicides data from two hospitals in Nepal, enabling it to better understand the quality of medical records and the process that patients undergo after being admitted to a health facility. It is the first part of CPSP's two-year-long study in Nepal (retrospective data collection). The information CPSP has gathered, although incomplete, will be useful for improving recordkeeping in the future.

CPSP is currently waiting for institutional approvals from several remaining hospitals to continue retrospective data collection. It believes this will occur shortly, before it is able to expand its data collection efforts in Nepal.

#### **Progress in India**

##### *Waiting for approval to begin data collection*

CPSP does not yet know when it may receive approval from the Indian Council of Medical Research to begin data collection in India.

### *Employees in North India*

CPSP has hired a part-time data manager, based in North India, who is responsible for overseeing data collection in both Nepal and India. Records from Nepal are already being sent to the data manager, who will enter them into a database and relay the aggregated data to stakeholders in Nepal.

CPSP also employs a project coordinator based in North India.

### *Support of public interest litigation*

A committee chaired by Dr. Anupam Verma released a report in 2016 that listed 99 pesticides used in India but banned in other countries. The report recommended that approximately 50% of the 99 pesticides not be banned, six pesticides be eliminated gradually by 2020, 12 pesticides be banned by 2018, and the remaining pesticides be reviewed again in 2018.

In response to a lack of action following the 2016 report, the Alliance for Sustainable & Holistic Agriculture (ASHA)—an association of individuals and organizations from India's non-profit sector—filed public interest litigation with the nation's Supreme Court. The Supreme Court then authorized a committee chaired by Agriculture Commissioner Dr. S.K. Malhotra to make decisions by June of 2018 regarding the pesticides listed in the 2016 report.

Dr. Utyasheva from CPSP has been engaged with civil society groups working on pesticide issues in India and was able to connect specifically with Kavitha Kuruganti from ASHA. Ms. Kuruganti believed that input from CPSP could encourage Dr. Malhotra's committee to implement the 18 pesticide bans recommended by Dr. Verma's 2016 report. To bolster ASHA's litigation, CPSP authored a paper in which Dr. Utyasheva presented the case for banning pesticides as a human rights concern and Professor Eddleston listed data on the dangers presented by the 18 pesticides and 20 additional pesticides not reviewed by the 2016 report. Professor Eddleston also cited case studies demonstrating how bans of each pesticide resulted in major benefits for other nations. Dr. Malhotra's committee is currently reviewing CPSP's report.

It is possible that Dr. Malhotra's committee may ban at least some hazardous pesticides.

### *Interaction with journalists*

As a result of its work on ASHA's public litigation case, CPSP has received media attention from publications including the Times of India, a major newspaper in the country.

### *Meeting in New Delhi*

Dr. Utyasheva will visit New Delhi shortly to meet with Chandra Bhushan, the Deputy Director General of Centre for Science and Environment, which advocates for banning highly hazardous pesticides (HHPs) designated as Class I Toxicity.

## **Progress in Sri Lanka**

### *Suspension of original proposal for a randomized controlled trial*

CPSP has gathered data demonstrating that carbosulfan and profenofos are the two core pesticides causing death in rural areas of Sri Lanka. It was previously considering the possibility of conducting a randomized controlled trial (RCT) on the effects of banning carbosulfan and profenofos in Sri Lanka. However, CPSP believes that this RCT is not currently a possibility.

The public believes that HHPs banned in Sri Lanka may be continuing to circulate within the country through exposure from imported Indian goods such as chilis.

### *Small-scale agricultural research*

CPSP, during its conversation with the Director General of Agriculture in Sri Lanka, was able to demonstrate that certain organophosphorus pesticides, such as chlorpyrifos methyl, are likely much less hazardous than the currently used profenofos, carbamate, and carbosulfan. CPSP is now exploring the possibility of conducting small-scale research to determine whether chlorpyrifos methyl would be as effective for agricultural use as the pesticides it would like to ban. Provided its research is successful, CPSP believes that the Director General of Agriculture may be interested in an RCT on the effects of replacing profenofos and carbosulfan with an organophosphorus insecticide such as chlorpyrifos methyl.

CPSP is also considering conducting small-scale research on the possibility of making carbosulfan and profenofos available only through a prescription. It recently published a paper, which employed data from the North Central Province of Sri Lanka, presenting four solutions to pesticide suicides—one of which was requiring prescriptions to purchase hazardous pesticides.

### *Vendor cluster RCT*

Data that CPSP has reviewed suggests approximately 20% of individuals who attempt suicides using pesticides purchase the product from a store, likely having a higher level of intent to die than individuals who consume whatever pesticide is already in their home. Furthermore, CPSP found that of individuals who purchase pesticides from a store in order to attempt suicide, 75% are either inebriated or possess no knowledge of farming. CPSP does not know what percentage of pesticide suicide deaths can be attributed to individuals that purchased the product from a store, but it suspects that the percentage may be higher than 20% due to a higher level of intent to die.

The Director of CPSP has been awarded \$1.3 million from the American Foundation for Suicide Prevention, with which it has worked for the past five years, to conduct a stepped-wedge, three-year RCT on the effects of educating pesticide vendors on how to avoid selling to individuals who will use pesticides for suicide. The RCT will be conducted in North Central Province of Sri Lanka and will commence near the end of 2018 or beginning of 2019, after ethics approval has been received.

The study's aim is to reduce, by 50-60%, the number of people that die by suicide using pesticides they purchased from a store. CPSP is relatively confident in the success of the vendor cluster RCT, as pesticide vendors do not wish to be responsible for suicides and therefore have a strong incentive to comply with the intervention.

## **Collaboration with the Food and Agriculture Organization of the United Nations**

The Food and Agriculture Organization of the United Nations (FAO) employs representatives in each of its member nations and is engaged with agricultural issues across the world, although CPSP has not been up to date with the specific work FAO undertakes regarding hazardous pesticides.

CPSP has begun having monthly conference calls with a staff member from FAO to inform the organization of updates with its work and to coordinate activities on pesticide control.

### **International meeting on HHPs**

FAO has informed CPSP that it intends to hold a large international meeting together with the Strategic Approach to International Chemicals Management (SAICM) and UNEP to formulate policy that directly addresses HHPs. CPSP is advocating strongly for this meeting and believes it could contribute significantly, particularly by demonstrating how bans of HHPs have affected suicide rates.

## **Monitoring activities**

### **Monitoring in Sri Lanka**

The Director of CPSP was able to confirm the success of pesticide bans in Sri Lanka by reviewing hospital admissions for pesticide poisoning or suicide and determining that cases of poisoning from recently banned pesticides had decreased significantly.

### **Monitoring in Nepal**

CPSP is actively investigating potential monitoring activities to ensure compliance with pesticide regulation in Nepal. It believes that it will be particularly important to understand how policies on pesticides are implemented at the national, state, and municipal levels, as Nepal appears to be transitioning to a more decentralized approach to regulation and enforcement.

## **Importance of randomized study design**

CPSP believes that the effectiveness of interventions can only be definitively demonstrated through RCTs, which are able to best address confounding variables. However, conducting RCTs also requires significant infrastructure and funding as well as a conducive political environment. For example, CPSP's RCT on the effectiveness of household lockable pesticide storage to reduce pesticide self-poisoning in rural Asia cost approximately £1.5 million. However, due to the high

validity of the study's results—which found no evidence of the intervention's effectiveness—lockable pesticide storage is no longer a prominent global policy.

### **Feasibility of RCTs in Sri Lanka and India**

CPSP believes that an RCT in Sri Lanka of the effects of pesticide bans on suicide rates would produce compelling results that could guide global practice. Furthermore, the study would be relatively inexpensive and politically uncomplicated.

An RCT in India may also be possible.

*All GiveWell conversations are available at <http://www.givewell.org/conversations>*

*If you or anyone you know are feeling depressed, anxious, upset, or are just needing to speak to a professional hotline counselor, GiveWell encourages you to use the following resource, available worldwide: <https://www.befrienders.org>.*