

**GiveWell's notes on January 12 conversation between Holden Karnofsky and Elie Hassenfeld (GiveWell Co-Founders), Cari Tuna (President of Good Ventures) and Seth Berkley (CEO of the GAVI Alliance)**

- In 1974 <5% of children were immunized, and there was a big push from UNICEF and the goal was universal childhood immunization (80%) by 1990. The world got to ~75% or so and declared success, and after that immunization coverage went back down.
- GAVI was established in 2000 at Davos and the idea was to begin to work as an alliance with all the partners in the immunization field to procure the vaccines that might make a difference in the developing world. Over time it's moved into innovative financing mechanisms, making vaccines affordable, and aiming for sustainability. It's a public-private partnership.
- GAVI deals with the 73 poorest countries in the world. We will over time have countries graduating and we have 16 countries in the process of graduating. We've just started working with a new country, S. Sudan. We're working on finishing with the pentavalent vaccine, which protects against hepatitis and four other diseases, and we're now working on the two biggest killers of children, pneumonia and diarrhea, and we're in the process of trying to roll those out in an accelerated fashion with the expectation that we should be able to prevent 4.5 million future deaths between now and 2015. We just approved moving into HPV vaccine, which protects against cervical cancer.
- Most of these diseases have major burdens beyond death. Measles - about a 6% mortality rate once you get it, depending on nutritional status, but 30% end up with near-fatal cases.
- Most of the studies on vaccines were done in the developed world, where people are wealthier and more genetically homogeneous. We have funded Phase IV studies, applied research, etc. We haven't done basic research, and haven't done a lot of social science research (though we've done a little bit).
- We're winding down the ISS program and putting in a new program that's also going to reward countries for improvement; if they improve a lot it will start rewarding equity. It's called Performance Based Funding.
- One problem with ISS and programs like that is that they can provide incentives to distort reporting. It's hard to get accurate measurements of these types of things across large populations. There was a recent survey in Ethiopia where they found 36% DTP3 coverage compared to a 70% official figure. The Gates Foundation, WHO, etc. need to work on developing biomarkers to determine whether someone has been immunized and whether they have had a disease. One of the things that's important is making sure these vaccines are getting where they need to go. If they're not, we don't want to penalize a country, we want to give additional help, whatever is necessary.
- We've tried to keep funding from government donors as unrestricted and flexible as possible. For private donors we've thought of ways we could focus in on specific countries, specific challenges. Because of matching funds both from the UK and from the Gates Foundation, there's a nice leveraging effect. We are certainly well funded and scaling up our activities, but we do not have enough

funds to do all the good we could. We're trying to diversify our funding sources. We prefer not to be beholden to a small number of government donors and the Gates Foundation only. In the corporate sector we're looking at ways to find partnerships. Part of that means working with the partner and deciding what priorities they have.

- If we had truly unrestricted funding today, probably that would be focused on buying more vaccines and making more of a difference. But as we do that we will come across things that are out of our normal mandate. When that happens, we could go back to government donors and ask if certain funds can be reallocated, but what would be better would be to have new unrestricted donors.
- For any increase in funding, unless it's allocated to a specific project, on average it's reasonable to project that 80% will buy more vaccines and 20% will provide more infrastructure strengthening
- We've got a list of 56 countries for new vaccines, 73 for the existing vaccines. A funder could pick a certain country and a certain vaccine.
- On the topic of whether reducing infant mortality causally reduces fertility: there has been no "gold standard" study establishing causality. There have been attempts to control for confounders - maternal education, nutritional status, etc. - and the many I've seen over the years are generally finding that reducing infant mortality does in fact reduce fertility.