White Paper: Expanding Access to Covid-19 Convalescent Plasma using Incentives <u>Parag Pathak</u>, <u>Tayfun Sönmez</u>, <u>Utku Ünver</u> July 1, 2020

Covid-19 Convalescent Plasma is plasma obtained from the recovered Covid-19 patients. Currently, convalescent plasma can be used directly as a therapeutic agent for Covid-19 or as a raw material for hyperimmune globulin (HiG), which may be effective for treatment or for passive immunity. There are currently several clinical trials evaluating the effectiveness of these treatments, and preliminary evidence is encouraging. This raises the question of how to expand the supply of Covid-19 Convalescent Plasma. This white paper proposes two incentive systems to expand supply.

- 1) Under the first incentive arrangement ("**pay-it-backward**"), donors receive "community credits" when they donate convalescent plasma. Accumulated credits can be used by family members of the donor for priority access either to convalescent plasma if they need it for their treatment, or to HiG which can be used either for their treatment or prophylactically as a short-term vaccine. The community credit could be awarded in a tiered manner to encourage continuity of donation. For example, credits for HiG priority might be available only after certain number of donations.
- 2) Under the second incentive arrangement ("**pay-it-forward**"), current Covid-19 patients obtain priority for a plasma product by pledging to donate in the near future, once they recover and are eligible to donate. The pay-it-forward incentive could be based either on a pledge to donate once or a pledge to make multiple donations.

FAQs

1) Isn't there already enough convalescent plasma in the US for transfusions?

As of this white paper, the best estimates suggest there is enough Covid-19 convalescent plasma for transfusions in the United States. But as the pandemic evolves, so does the need for plasma. We expect the demand for plasma is likely to increase for other therapeutic uses, such as hyperimmune globulin (HiG).

2) Would the use of community credits override clinical decision-making?

No. The credit provides heightened priority for the plasma product to eligible patients, but decisions about eligibility are made by healthcare institutions.

3) Do community credits create a "market" for plasma?

The largest source of COVID-19 convalescent plasma is voluntary donation. Currently, the <u>Covid</u> <u>Plasma Initiative</u>, which relies on voluntary donors, is responsible for more than half of total convalescent plasma in the United States. The community credit we propose would honor and encourage voluntary contributions. While many countries, including the United States, permit payment for ordinary, non-convalescent plasma, this is neither required nor prohibited by a system of community credits.

4) How does a community credit differ from directed donation?

Unlike directed donation, pay-it-backward credits do not direct a specific unit of donated plasma to a particular patient. Rather, the community credit grants a particular recipient heightened priority for a different unit of plasma or a plasma product in the future.

5) Do community credits comply with FDA regulations?

Community credits are parallel to FDA-recognized Blood Assurance programs, which provide credits to blood donors. These credits can be used to guarantee access to blood for family members or to defray the costs of obtaining blood products. Although community credits should raise fewer concerns than cash payments, FDA also permits payment for blood products like plasma, so long as the donated products are labeled as coming from paid donors.

6) Has the pay-it-forward system been used elsewhere?

Many recipients of convalescent plasma are happy to donate once they recover. The pledge simply establishes an expectation of donation. It is a milder version of the "no give, no take" rule for organ donation used in Israel. In that system, patients who do not pledge in advance to donate their organs posthumously go to the back of the queue for organ recipients. Our idea should less controversial because the pledge can be made at the time of need.

- Which loved ones may redeem community credits? One possibility is those who are eligible to receive living solid organ donation by law.
- This also prevents sale of community credits.

Additional details

- Not all patients will be eligible to donate, but because each donor provides multiple donations and multiple units per donation, the incentive will likely produce many more units of plasma. For non-directed kidney chains, a similar pay-it-forward idea is currently in practice, and reneging is very low (only 6 out of 1,700 donors renege in one study).
- More details are in: Kominers, Pathak, Sönmez and Ünver, <u>Paying It Backward and</u> <u>Forward: Expanding Access to Convalescent Plasma Therapy Through Market Design</u>, NBER working paper 27143, May 2020.

Contributors: We are a team of economists who teach at MIT and Boston College, who study market design. Pathak received the 2018 John Bates Clark Medal as the top American economist under age 40. He directs the NBER's Market Design Working Group, a group of over 50 academic economists around the United States who study practical resource allocation mechanisms. Sönmez and Ünver pioneered the market design approach to <u>kidney exchange</u>. They set up the first organized kidney exchange clearinghouse in the world in 2004 (the New England Program for Kidney Exchange), and they have supported several others including the Alliance for Paired Donation.