November 12, 2020

The Honorable Lamar Alexander
Chairman, Senate Committee on Health,
Education, Labor and Pensions
428 Dirksen Office Building
Washington, D.C. 20510

The Honorable Patty Murray
Ranking Member, Senate Committee on
Health, Education, Labor and Pensions
428 Dirksen Office Building
Washington, D.C. 20510

The Honorable Frank Pallone Jr.
Chairman, House Committee on Energy and
Commerce
2125 Rayburn Office Building
Washington, D.C. 20515

The Honorable Greg Walden
Ranking Member, House Committee on
Energy and Commerce
2322 Rayburn Office Building
Washington, D.C. 20515

Dear Chairman Alexander, Ranking Member Murray, Chairman Pallone, and Ranking Member Walden:

The unprecedented and widespread nature of the COVID-19 pandemic has caused severe economic and societal impacts, leading Congress to make significant investments in response activities. To date, the federal government has distributed over $2.5 trillion for agencies to mitigate the spread of the virus, including $25 billion for states to increase testing capacity and more than $11 billion to develop and manufacture vaccine candidates.[1] Despite these extraordinary measures, the future effectiveness of these investments remain contingent on two key factors—contact tracing and the deployment of a vaccine once one has been developed. Success of these two goals requires the use of electronic systems that can correctly identify patients across the health care spectrum—also known as patient matching. Bipartisan legislation under consideration in Congress—the Patient Matching Improvement Act sponsored by Sens. Maggie Hassan and Bill Cassidy—would implement data-driven solutions to this challenge.

While patient matching issues are not unique to COVID-19, the pandemic has underscored the urgent need to address chronic failures with the ability to share patient information between hospitals, doctor's offices, laboratories, and public health agencies. For example, breakdowns in patient identification can not only threaten continuity of care and contribute to patient harm, but also significantly undermine the essential response strategy of relaying timely and complete patient health data to public health officials, and could even hamper the national distribution of a vaccine or vaccines. Although patient matching plays a foundational role in patient care and activities such as case investigations and immunizations, it has yet to be addressed in the federal response to the COVID-19 pandemic. When evaluating future investments to support the government's COVID-19 mitigation efforts, research shows that leveraging use of an existing, free government tool could serve as an immediate solution to improve patient matching issues.

The Pew Charitable Trusts is a non-profit research and policy organization with several initiatives focused on improving the quality and safety of patient care. Pew's Health Information Technology initiative focuses on advancing the interoperable exchange of health data and improving the safe use of electronic health records (EHRs).

Patient matching critical to COVID response efforts, yet remains a challenge

Patient matching is a perennial problem that health care has yet to solve. Given the foundational role that the identification and matching of patient records plays in the response to any public health crisis, addressing the underlying flaws in the process should be a priority. For example, the COVID-19 pandemic has further demonstrated that patient matching is central to the ability of laboratories and public health officials to do their jobs. Laboratory data is often the first indicator shared with public health authorities that can alert them to potential public health crises and provide them with the information needed to minimize disease spread through case investigation and contact tracing. However, patient phone numbers and addresses—key elements to effectively match patients—are not required data elements in lab orders.[2] As such, they are often not recorded at the time of specimen collection and therefore not shared with laboratories, and subsequently public health officials. This inaction means public health officials may not have the data they need to try and contact patients; in some instances, it may take days to track down enough information to locate an individual so contact tracing can begin—all while the virus spreads unimpeded.[3]

Furthermore, patient matching is critical to ensuring that the systems we have in place to distribute and deliver vaccines are accurate and precise. For example, prior to administering a vaccine, ideally clinicians and other health professionals check immunization information systems (IIS)—often referred to as vaccine registries—for a patient's record to determine whether the patent needs a dose or booster dose. After administration, information is then shared with the IIS to update the patient's immunization record and indicate that a vaccine dose was given. Absent any of these steps, clinicians may not have the information they need to provide the right number of doses to secure immunity, to say nothing of the risk that they may unintentionally cross-inoculate a patient with different vaccine types or provide too much of the vaccine to low-risk populations when supply is limited. To prevent these types of breakdowns, it is vital that health care professionals locate the right patient record. They do this by relying on demographic data—such as name, date of birth, and address—to correctly match patients' records. However, lack of standardization among demographic data leads to patient matching rates between hospitals as low as 50 percent.[4] Standardizing demographic data elements is key to safeguarding vaccine delivery systems from patient matching errors.

Better patient matching also a boon to care coordination, quality

Even outside of a pandemic, patient matching underpins health care continuity and safety, and could even provide meaningful cost savings. For example, if an allergy listed in one record is not documented in another, or if records for two different individuals are incorrectly merged, patients may face the possibility of a severe medical oversight. Failures to effectively match patients can also be costly for both the patient and the provider. In one survey, duplicate records cost an average of $1,950 for each patient per hospital stay.[5] Additionally, health care providers

currently spend significant resources, including staff time, to merge duplicate records for the same individual and fix records that are incorrectly combined. Children's Medical Center Dallas found that having duplicate records cost $96 per record on average. Separately, the Mayo Clinic has spent hundreds of thousands of dollars to resolve some of these errors.

USPS provides a near-term solution

Proposed solutions to patient matching shortfalls—such as unique identifiers assigned to each patient or the use of biometrics—require development, deployment, and implementation that will take far too long to affect the current pandemic. However, there is an immediate solution the government can take to boost matching in the short term and improve efforts to seamlessly share patient data. Research demonstrates that formatting addresses according to U.S. Postal Service (USPS) specifications—the same ones used by online retailers to indicate, for example, appropriate street suffixes—would help accurately link an extra 3% of patient records.[6]

Although seemingly small, that change could translate into tens of thousands of additional correct matches a day. A hospital system with a match rate of 85 percent, for example, could see its unlinked records reduced by 20 percent with standardization of address alone. In fact, many immunization registries used for the flu shot and other vaccinations already use a third-party tool that standardizes and validates addresses in adherence with USPS specifications—leading to improvements in patient matching and de-duplication within their systems.[7] However, in order to achieve nationwide improvements in patient matching, all registries and the electronic record systems used in pharmacies, doctor's offices, laboratories, and hospitals must use the same universal standard. Without all systems using the same format, data exchanged between them will not reap the full benefits from the standardization.

The roadblock is that although USPS offers a free tool for retail and shipping companies to format addresses using the agency's standard, the health care industry is prevented from using the technology due to USPS' existing terms of service.

Evaluation of the Patient Matching Improvement Act

The recently introduced Patient Matching Improvement Act (S. 4456) recognizes the importance the USPS address standardization tool can play in mitigating the COVID-19 pandemic. The legislation takes three key steps: opening up USPS' tool to health care; encouraging labs to use the standard; and mandating that EHRs format addresses according to the standard.

First, the legislation authorizes the Office of the National Coordinator for Health Information Technology (ONC)—the federal agency established to oversee EHRs—to make the USPS tool available to health care providers, including hospitals, EHR vendors, state and local health departments, and registries, within 90 days. Furthermore, the legislation provides use of the tool at no cost to health care, mirroring the terms for online retailers.

Also included within the legislation is the ability for laboratories to access the USPS address standardization tool. Even though it is only recommended, not required, for laboratories to collect patients' addresses, empowering them with the USPS tool would ensure that the

collection and exchange of data is being done in a standardized manner—further contributing to the universe of systems that send and receive data that adheres to the same standards. This ultimately results in more reliable data elements for contact tracing and matching patients across systems, while also ensuring that more accurate and complete patient information will be shared with public health officials.

Lastly, the Patient Matching Improvement Act requires EHRs to use the USPS address standardization tool in order to meet federal certification requirements. In absence of such standards today, individual EHR vendors instead determine the format and structure of the data documented within their systems. This means that the same address could be entered differently between various EHRs, complicating cross-vendor matching and making accurate identification more difficult. With the USPS address standard as part of the certification requirements for EHRs, addresses would instead be a standardized data element that could help increase match rates when shared with vaccine registries, labs, or public health agencies.

Conclusion

The approaches the government has established to reopen our country rely heavily on systems that have been demonstrated to fail. For public health agencies to track the spread of COVID-19 and slow its spread through activities like contact tracing, and to ensure that a future vaccine (or vaccines) reach every American, accurate patient identification is essential. Research shows that use of a simple, free government tool can make a meaningful difference—not only with COVID-19 response efforts, but day-to-day patient safety and care coordination. The federal government can take steps—as demonstrated by the Patient Matching Improvement Act—to implement data-driven, straightforward solutions to this problem.

Thank you for your attention to this important issue. Should you have any questions or if we can be of assistance, please contact Elise Ackley at 202-540-6464 or eackley@pewtrusts.org.

Ben Moscovitch
Project Director, Health Information Technology

cc: Speaker Pelosi
        Senate Majority Leader McConnell
        Senate Democratic Leader Schumer
        House Majority Leader Hoyer

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