

The Organ Donation Referral Improvement Act *Studying Automated Electronic Deceased Donor Referral*

The Organ Donation Referral Improvement Act (H.R. 330) would direct HHS, acting through the Assistant Secretary for Planning and Evaluation (ASPE), to conduct a national study of automated electronic deceased organ donor referral to identify best practices and recommend steps for its broad adoption. Automated electronic deceased organ donor referrals are used by hospitals¹ to automatically² alert (OPOs) of patients who may become deceased donors. The technology uses hospital electronic health records (EHR) systems to flag patients who are potential candidates for donation and send an automatic message to the collaborating OPO. Automated electronic deceased organ donor referral replaces the standard practice of manually notifying OPOs of potential deceased donors, lifting the burden of reporting off busy hospital staff, reducing the risk of human error, and ensuring every potential donor is referred. Widespread use of automated electronic deceased organ donor referral could increase patient safety and reduce the number of Americans waiting for a lifesaving organ transplant.

Background

As of 2022, more than 170 million people are registered to be organ donors in the U.S., but less than one percent of them die in a way that allows for deceased organ donation³. In 2024, there were 24,018 organ donors, living and deceased, which enabled 48,149 patients to receive the gift of life. Today, there are more than 100,000 patients still waiting for a lifesaving organ transplant. Just one organ donor can save as many as eight lives, so increasing the number of potential donors remains incredibly important.

There are two kinds of organ donation, deceased and living. OPOs are the not-for-profit organizations responsible for recovering organs from deceased donors for transplantation in the U.S. There are 55 OPOs, each mandated by federal law to perform this life-saving mission in their assigned donation service area. Organs that can be donated include the heart, kidneys, lungs, pancreas, liver, intestines, corneas, skin, tendons, bone, nerve, vascularized composite allograft/ uterus, and heart valves.

How donors are referred today

CMS regulations⁴ require hospitals to notify OPOs of all imminent deaths in a timely manner to ensure OPOs can maximize the number of organs recovered for transplant. It is standard practice for hospital staff to manually determine patients that are indicating an imminent death. Hospital staff then notify the OPOs of those patients, usually by phone.

¹ Hospital: the hospital where the deceased or living donor is admitted.

² Organ procurement organization: An organization authorized by the Centers for Medicare and Medicaid Services, under Section 1138(b) of the Social Security Act, to procure organs for transplantation.

³ Health Resources and Services Agency (HRSA). (2024, March). Organ Donation Statistics. Organ donation statistics. <https://www.organdonor.gov/learn/organ-donation-statistics>

⁴ 42 CFR § 486.322 - Condition: Relationships with hospitals, critical access hospitals, and tissue banks. <https://www.ecfr.gov/current/title-42/chapter-IV/subchapter-G/part-486/subpart-G/subject-group-ECFR7bf39796b4a2c3d/section-486.322>

Hospital staff are busy and have varying ranges of training in donor identification and transplant science, which leaves room for variability and human error when identifying and referring potential donors⁵. Studies have found that OPOs are not consistently notified of all potential donors^{5,1}. Studies have also found that there is an association between delayed notification or failure to notify the OPO and the attitudes, knowledge, and behaviors of healthcare personnel regarding donation⁶, as well as their competing clinical duties⁷.

Automated electronic deceased organ donor referral technology was developed to increase recipient matches and transplants by increasing the quantity, accuracy, and efficiency of donor referrals. Automating the donor referral also supports hospital staff by reducing the amount of time they must spend referring potential donors to OPOs⁸.

How automated electronic deceased donor referral works

Automated electronic deceased organ donor referrals are generated from patient EHRs. When the technology detects certain clinical indicators in a patient's EHR, such as documented findings of severe brain injury or specific Glasgow Coma Score, it automatically transmits their information to the hospital's OPO. This allows OPOs to immediately begin evaluating potential donors for suitability and reduces the manual labor and potential for human error on the hospital side. There is no standard set of clinical criteria that must be included in an automated electronic deceased organ donor referral.

A 2022 study evaluated the use of an automated electronic deceased organ donor referral technology, iReferral, in three hospitals which reported to the same OPO over a four-year period^{5,1}. The implementation of iReferral was associated with a 45% increase in referrals, an 83% increase in approaches for authorization, a 73% increase in authorizations, and a 92% increase in deceased donation compared to trends at other hospitals also reporting to the OPO during the same time.

The Study

The study required by the Organ Donation Referral Improvement Act would survey the hospitals and OPOs that have adopted automated electronic deceased organ donor referral. Such a survey would require a representative geographic distribution of hospitals in which automated electronic deceased

⁵ Levan, M. L., Trahan, C., Klitenic, S. B., Hewlett, J., Strout, T., Levan, M. A., Vanterpool, K. B., Segev, D. L., Adams, B. L., Massie, A. B., & Niles, P. (2022). Short Report: Evaluating the Effects of Automated Donor Referral Technology on Deceased Donor Referrals. *Transplantation direct*, 8(8), e1330. <https://doi.org/10.1097/TXD.0000000000001330>

⁶ Traino, H. M., Alolod, G. P., Shafer, T., & Siminoff, L. A. (2012). Interim results of a national test of the rapid assessment of hospital procurement barriers in donation (RAPiD). *American journal of transplantation: official journal of the American Society of Transplantation and the American Society of Transplant Surgeons*, 12(11), 3094–3103. <https://doi.org/10.1111/j.1600-6143.2012.04220.x>

⁷ Zier, J. L., Spaulding, A. B., Finch, M., Verschaetse, T., & Tarrago, R. (2017). Improved Time to Notification of Impending Brain Death and Increased Organ Donation Using an Electronic Clinical Decision Support System. *American journal of transplantation: official journal of the American Society of Transplantation and the American Society of Transplant Surgeons*, 17(8), 2186–2191. <https://doi.org/10.1111/ajt.14312>

⁸ Bryant, C. (2022, August 22). Transplant Connect and Cerner streamline organ donation and transplant process. The Organ Donation and Transplantation Alliance. <https://www.organdonationalliance.org/article/transplant-connect-and-cerner-streamline-organ-donation-and-transplant-process/>

donor referral is used. To explore effective practices regarding deceased donor referral processes and to investigate a potential nationally standardized set of donor referral data elements, the study should identify:

- Percentage of hospitals providing remote EHR access to OPO staff.
- Barriers encountered by the OPOs and hospitals establishing EHR remote access.
- Barriers encountered by the OPOs and hospitals when establishing automated electronic deceased organ donor referral.
- Strategies used to successfully establish and continue the use of automated electronic deceased organ donor referral (technologies, best practices, etc.)
- The benefits, if any, that hospitals and OPOs have experienced since adopting automated electronic deceased organ donor referral.
- The data elements (clinical criteria) captured by the automated electronic deceased organ donor referrals.
 - Nursing documentation
 - Demographic data
 - Inclusion or exclusion criteria
 - Use of predictive analytics models
 - How to ensure such data elements clearly identify potential donors so OPOs can accurately capture potential donors.
- How donor identification has improved in areas that have adopted automated electronic deceased organ donor referrals.
- Gaps in regulatory definitions or guidance for donor referrals.
- What barriers to establishing automated electronic deceased organ donor referral exist in areas where such technology has not been adopted.

The Report

Upon completion of the study, the HHS Secretary, acting through ASPE, shall develop and submit a report to the House Committee on Energy and Commerce, and the House Committee on Ways and Means, the Senate Committee on Finance, and the Senate Committee on Health, Education, Labor, and Pensions. This report should make recommendations concerning how to remove barriers to implementing automated electronic deceased organ donor referral nationally and improve its performance. The report should also identify costs of establishment, savings in staff time, the impact of automated electronic deceased organ donor referral on donation volumes, best practices for the use of the automated electronic deceased organ donor referral, and donor referral criteria that can be standardized across all automated electronic deceased organ donor referral technologies to promote its broader adoption.