

= Harvest ( Numbers ) =

" Harvest " is the 14th episode of the second season of the American television show Numb3rs . Inspired by a Christian Science Monitor article about organ tourists , people who travel to a different country in order to donate their organs for money , and an algorithm developed in the United States , the episode features Federal Bureau of Investigation ( FBI ) agents and mathematicians attempting to locate a missing organ tourist before she is killed .

After airing in the United States on CBS on January 27 , 2006 , the episode received mixed reviews . Critics enjoyed it while the medical community was concerned about the impact that the episode would have on organ donations . " Harvest " has inspired two academic case studies in which viewers were more likely to donate their organs after watching the episode . The episode also has won one award and has been nominated for another award .

= = Plot summary = =

On the same night that Dr. Amita Ramanujan ( Navi Rawat ) is presented with a prestigious mathematics award , FBI Special Agents Don Eppes ( Rob Morrow ) and David Sinclair ( Alimi Ballard ) respond to a disturbance call from a hotel and find a young Indian woman ( Noureen DeWulf ) cowering in a blood @-@ stained basement . Back at the office , she refuses to talk to anyone until Amita , wondering why the woman was there , asks to see the woman . The woman then tells Amita that her name is Santi and that she and her sister , Prita ( Azita Ghanizada ) , came to the United States from Chennai , India , as organ tourists , selling their kidneys to earn money for their families . Dr. Charlie Eppes ( David Krumholtz ) and Dr. Larry Fleinhardt ( Peter MacNicol ) determine the time of another victim 's death as earlier in the day .

Following tips from the bread delivery man ( P.J. Brown ) and from the Los Angeles Police Department ( LAPD ) , FBI Special Agent Megan Reeves ( Diane Farr ) goes to the hospital to see if Santi 's sister is there . She learns that a young Indian woman had been in the morgue for a couple of days , dead from complications involving the removal of one of her kidneys . When Megan and Amita show Santi the picture of the dead woman , Santi tells them that she was a friend of theirs , Sonali , who was a fellow organ tourist . Santi also tells the women that there was another missing friend , Jaya . While following up on the lead about the ambulance , David and FBI Special Agent Colby Granger ( Dylan Bruno ) chase the ambulance that was spotted at the hospital by the bread delivery man . The ambulance crashes , killing the driver . Charlie and Larry use the driver 's log to determine that the ambulance driver returned to the hospital during off @-@ hours . At the hospital 's morgue , the team finds Jaya dead and learns that a doctor had been behind the black @-@ market organ transplants .

Charlie , Amita , and Larry use Santi 's blood ( providing a familiar match to Prita 's human leukocyte antigen ( HLA ) type ) and an organ @-@ matching database to find the most likely person to receive Prita 's organs . Upon finding a link to a recipient who had paid to procure Prita 's organs on the black market , Don and the team track Prita and the doctor to another hotel , where they rescue Prita just before the doctor began surgery . The sisters are reunited . Amita decides to use her money from her prize to finance the sisters ' education and to take a trip to India with her grandmother , since the case has inspired her to learn about her heritage . Don and Charlie become organ donors . During the case , Don learns that his and Charlie 's father Alan Eppes ( Judd Hirsch ) had a friend who needed a transplant and could not find a match . Alan 's story about his friend inspires Don to make the decision to become an organ donor . During a discussion about the need for organ donors at the dinner table , Charlie decides to become an organ donor also .

= = Origin = =

An article in the Christian Science Monitor inspired Numb3rs series writer J. David Harden to write an episode about organ tourists . Harden contacted the Hollywood , Health & Society program to learn more about the need for organ donations and the process of organ matching . He initially

encountered resistance to the idea of a storyline about organ donations due to the medical community's assumption that misinformation about organ transplants could lead to increased public resistance to organ donations .

Harden also incorporated Dorry Segev and Summer Gentry's algorithm for matching transplant donors and recipients . In developing their algorithm , Gentry , a United States Naval Academy applied mathematician , and Segev , a Johns Hopkins University transplant surgeon , sought an improvement over the Top Trading Cycles and Chains ( TTCC ) algorithm , an algorithm developed by economists Alvin Roth , Tayfun Sonmez , and Utku Unver used to match kidney recipients with living organ donors who have different blood types from the recipients . TTCC was used to make the best possible matches during organ exchanges , a process where transplant recipient and organ donors would exchange healthy organs . To decrease the risk of organ rejection , the TTCC algorithm required a large number of organ donors and transplant recipients . The large number of people required by the algorithm was unrealistic . Using a modified version of Jack Edmonds' computational complexity algorithm , Gentry and Segev discovered that their algorithm could be used to create a national organ donor registry .

= = Reception = =

First airing in the United States on January 27 , 2006 , over 13 @.@ 22 million people watched " Harvest " on CBS . The episode received mixed reviews . Television critics liked the episode . Cynthia Boris of DVD Verdict stated that the episode had " nice twists " . In an article highlighting the rise of realistic Indian @-@ American characters on American television , Anil Padmanabhan , a writer for India Today , called the episode Rawat's " best exposure " . Opinions from the medical community were more mixed . Although he found the message about organ donations " positive " , Kevin B. O'Reilly of the American Medical Association's MedNews called " Harvest " " a mixed bag " . Other medical experts disliked the storyline of black market organ donations in the United States . On the other hand , Joyce Somsak of the Health Resources and Services Administration stated that " Harvest " was " really good " .

The episode inspired a couple of academic case studies . The first was a George Washington University School of Public Health and Health Services case study about the effects of television writers consulting medical professionals on the storyline of a television episode . Participants in a survey conducted by the University of Southern California and Purdue University felt that a black market for organs existed and that a person's place on the organ priority list can be influenced by money or fame . They , as a result of " Harvest " , also were more likely to become organ donors or to consider doing so . The second case study was about TV's influence on the discussion of organ donations . Participants in a Hollywood Health & Society online survey were also more likely to believe in the existence of black @-@ market organ trafficking and were more likely to donate organs after watching " Harvest " . They also were more likely to see the importance of organ donations .

" Harvest " has won one award and been nominated for a second . It won the University of Southern California Annenberg School for Communication's Norman Lear Center 2006 Sentinel for Health Award in the primetime drama category , winning over two episodes of Grey's Anatomy and one episode of Without a Trace . The Academy of Television Arts and Sciences nominated Jim Vickers' work on " Harvest " for a Creative Arts Emmy for " Outstanding Stunt Coordination " , but the episode lost to an episode of E @-@ Ring .