



Review

Current progress in public health models addressing the critical organ shortage



Kumaran Shanmugarajah ^{a,d,*}, Vincenzo Villani ^a, Maria Lucia L. Madariaga ^{a,c},
Joseph Shalhoub ^d, Sebastian G. Michel ^{a,b}

^a Transplantation Biology Research Center, Massachusetts General Hospital, Building 149, 13th Street, Charlestown, Boston, MA 02114, USA

^b Department of Cardiac Surgery, Ludwig-Maximilians-Universität München, Munich D-81377 Germany

^c Department of Surgery, Massachusetts General Hospital, 55 Fruit Street, Boston, MA 02129, USA

^d Department of Surgery & Cancer, Imperial College London, Exhibition Road, London SW7 2AZ, United Kingdom

HIGHLIGHTS

- The impact of presumed consent legislation for organ donation is undetermined.
- Public campaigns and supported transplant coordinators increase organ donation.
- Providing incentives to donors increases organ donation.
- Mandated choice models may offer a possible method of increasing donation.

ARTICLE INFO

Article history:

Received 27 July 2014

Received in revised form

6 November 2014

Accepted 11 November 2014

Available online 13 November 2014

Keywords:

Organ shortage

Policy

Donation

Presumed consent

Explicit consent

Mandated choice

ABSTRACT

Since its inauguration in 1954, the field of modern transplantation has made great strides in surgical technique, the prevention of acute and chronic rejection, the minimization of immunosuppression-related side-effects and transplant tolerance. As such, organ transplantation is used worldwide as a curative, life-saving treatment for people with end-stage organ failure. However, the successes of organ transplantation have resulted in the number of patients on transplant waiting lists far exceeding the number of organs available, with growing numbers of patients dying while awaiting transplants.

In order to address this critical organ shortage, a number of legislative changes have been implemented worldwide to increase the number of individuals registering as organ donors. These have included presumed consent donation, incentivized organ donation, commercial organ transplantation and mandated choice models.

This article will address these public health policies in turn. The implementation of these strategies and the evidence for their efficacy will be evaluated. Based on this, we have identified that well-supported transplant coordinators approaching next-of-kin, incentives and public health campaigns are key factors that increase organ donation. Finally we propose a modified mandated choice model that may be an alternative option to maximize the number of available organs for transplantation.

© 2014 Surgical Associates Ltd. Published by Elsevier Ltd. All rights reserved.

1. Introduction

The great success of modern-day organ transplantation has resulted in its biggest conundrum – the number of people waiting for transplants is simply higher than the number of organs

available. In the United States alone, even with over 30,000 organ transplants performed last year, 18 people die daily on transplant waiting lists [1]. In order to address this challenge, transplant surgeons have adopted Expanded Donor Criteria, including Donation after Cardiac Death with the aim of increasing the number of organs that can be retrieved from potential donors. But perhaps more significantly, various public health policies have been employed to increase the actual number of registered donors. Many of these policies have been associated with increased rates of organ

* Corresponding author. Transplantation Biology Research Center, Massachusetts General Hospital and Harvard Medical School, Boston, MA 02129 USA.

E-mail address: kumaran.shanmugarajah@tbrc.mgh.harvard.edu (K. Shanmugarajah).

donation. However, whether changes in legislation themselves have had a causative effect is controversial.

This article will review the literature concerning the implementation of various public health policies and aim to identify factors that increase organ donation. The implementation and efficacy of presumed consent organ donation, incentivized organ donation, commercial organ transplants and mandated choice models will be assessed.

2. Presumed consent organ donation

A no-action default in public policy is the condition imposed when an individual fails to make a decision. In an explicit consent or “opt-in” system, people will not become organ donors unless they register. By contrast, in a presumed consent or “opt-out” system, individuals are organ donors unless they register not to be. Opt-out systems have been described as “hard” when the stated wishes of the deceased patient are adhered to without consultation of the family. On the other hand, “soft” opt-out systems incorporate the wishes of family members.

A number of studies across Spain, Austria, Belgium and Singapore have observed an increase in organ donation following the implementation of opt-out legislation [2]. Similarly, comparison studies have shown increased donor rates in countries with opt-out systems compared with opt-in systems (Fig. 1) [3–6]. It has been suggested that adoption of an opt-out policy may increase organ donation for three reasons: (i) decision-makers identify the default choice as the recommended choice by the policy maker, (ii) demonstrating a choice requires effort, and many people would rather avoid making an unpleasant decision about organ donation and, (iii) loss aversion, or fear of change [7].

Despite the correlations between high donor rates and opt-out policies, the implementation of opt-out systems for organ donation has been controversial for a number of reasons. Firstly, the ethics of assuming consent from silence has been questioned. These concerns are particularly important to transplant recipients, who need to know that their organ was donated freely and altruistically,

and intensive care practitioners who have expressed fears that opt-out systems could damage vital end-of-life relationships between physicians, patients and families [8]. The removal of organs from patients who did not wish to donate, but did not explicitly opt-out raises the possibility of negatively impacting the public's perception of transplantation and may thwart efforts to increase organ donation rates. Such drops in organ donation rates have been observed in some countries, such as Chile, following passage of opt-out legislation [9].

Secondly, while the previously described association studies have shown a relationship between opt-out systems and higher numbers of organ donors, the true efficacy of opt-out legislation remains to be confirmed. The scientific evidence that legislation alone can increase organ donation is unclear as policy changes are not made in isolation and concomitant changes made with opt-out legislation may act as confounding factors. For example, implementation of opt-out systems have been followed by government funding for transplant programs, hospital-level reimbursement for identifying donors, improved infrastructure and coordination of transplant networks, increased public awareness and education on organ donation and positive public attitudes towards transplantation [3,10]. The fact that legislation itself does not change organ donation rates is well illustrated by the Spanish experience. Currently, Spain has the highest rate of organ donors in the world and utilizes an opt-out system which was introduced in 1979. However, the rate of organ donation only increased, from 14.3 to over 30 donors per million population, with the creation of Organización Nacional de Trasplantes in 1989 [2]. In particular, the introduction of well-trained transplant coordinators and public health campaigns helped influence this dramatic increase in transplant donors.

Finally, the practical implementation of hard versus soft opt-out systems is unclear. Despite the distinction, questionnaire studies involving transplant professionals have demonstrated that organ donor consent almost always involves consultation with the next-of-kin in both opt-out systems, as well as in opt-in systems [11]. Therefore, certain countries that use opt-out organ donation

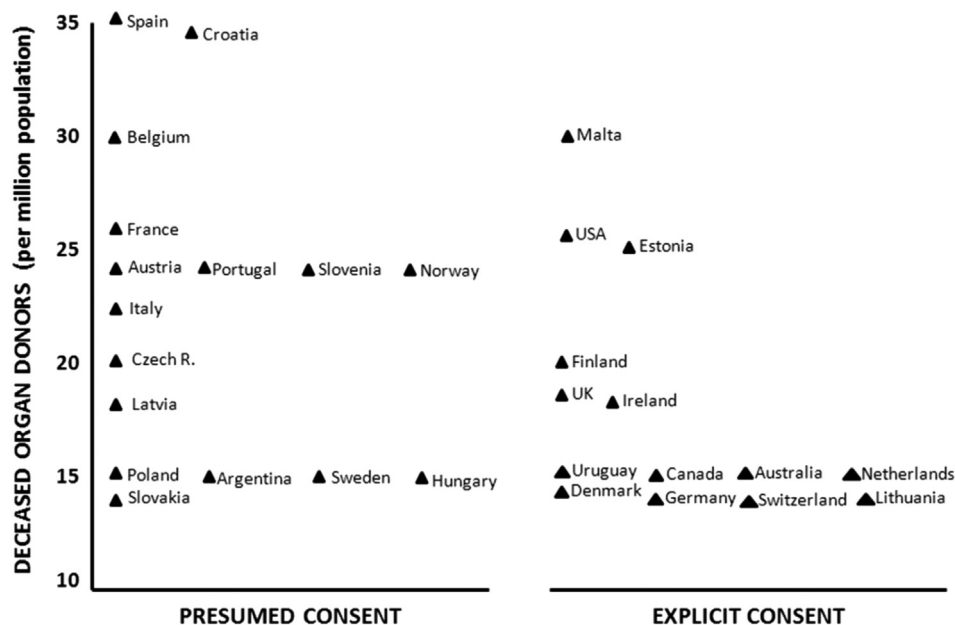


Fig. 1. Comparison of the donation rate with the donation system used (presumed versus explicit consent) among the 25 countries with the highest registered rate of deceased organ donation. These 2012 data are based on the Global Observatory on Donation and Transplantation data, produced by the WHO-ONT collaboration.

Download English Version:

<https://daneshyari.com/en/article/6251765>

Download Persian Version:

<https://daneshyari.com/article/6251765>

[Daneshyari.com](https://daneshyari.com)