

Organathon Foundation

QUO-VADIS

a pro-bono initiative

Dr Ajay K Sachdev

QUO-VADIS

- ▶ XENOTRANSPLANTATION (WHY PIG?)



- ▶ CURRENT SCENARIO



- ▶ STEM CELL-BANKING (www.cordlifeindia.com)



ORGAN DEVELOPMENT



~80 Diseases treated



ORGAN FACTORY/SHOW ROOMS ?? - **FACT & NOT A FICTION**

What “Are” Stem Cells & What can Stem Cells “Do”??

Stem cells are mother or master cells which can repair or replenish different tissues or organs in our body through transplant or therapy. It has the potential to aid the next generation treatment through regenerative medicine.

Stem cells derived from Umbilical Cord and Cord Blood are naive in nature and can be used for treatment of life threatening diseases not only for the baby but also for the immediate family members. An increasing number of expectant parents across the globe are opting for stem cell banking of their baby considering its benefits as a life saving resource.

Stem Cell Facts

- 1 in every 200 people will need to undergo stem cell transplantation in their lifetime.
- 1 of the top 10 common cancers in India, Non-Hodgkin's lymphoma, is a disease which can be treated with stem cells.
- 2 of the top 5 most common childhood cancers in India- leukaemia and lymphoma are treatable with stem cells.
- 1 in 500 babies in the world has cerebral palsy, a neurological disorder occurring at birth. The treatment of cerebral palsy with cellular therapy is under trial.
- 1 in every 68 babies born in USA suffers from Autism Spectrum disorder. Clinical trials are going on to treat the same with stem cells.
- Your baby's umbilical cord and cord blood will be processed under sterile conditions and stem cells harvested from them will be stored permanently at temperatures below -150°C .



What we are ?

- ▶ We are a Public Trust
- ▶ Registered on 17.2.2015
- ▶ Registration number :IN-DLI-162553298408930
- ▶ Registered with National jurisdiction
- ▶ Regd. Office : Delhi
- ▶ Corporate office : Gurgaon
- ▶ PAN No.-AAATO5228Q
- ▶ Organathon Foundation trademark has been registered under 3 heads :
 - ❖ Health
 - ❖ Education
 - ❖ Social Work

NOTE:- IT EXEMPTION UNDER 12A & 80G

Who we are ?



- ▶ **Settler & Chief Managing Trustee : Dr Ajay Sachdev, MBBS; MS; PhD (G.I Surgery), a senior, experienced & reputed GI surgeon at Delhi NCR**
- ▶ **Board of Trustees : Stalwarts in different fields , besides Dr Sachdev**
 - **Mr R Venkatramani, Senior Advocate, Advisor Legal, Member - Law Commission**
 - **Dr Mohsin Wali, senior Physician & Physician to the President of India;**
 - **Dr. T D Dogra - Ex Dean AIIMS & Currently Pro Vice Chancellor**
 - **Dr Prakash Khanduri - Credited of doing first liver Tx in India**
- ▶ **Advisory Board : Stalwarts in different fields**
 - ❖ **Jagdish Mukhi, former Finance Minister of Delhi, Chief Advisor;**
 - ❖ **Dr Prakash Khanduri, Advisor medical;**
 - ❖ **CA- H N V Associates**
 - ❖ **Mr Venkatramani, senior Advocate, Advisor Legal**
 - ❖ **Mr Virmani, Advisor public relations;**

What is Organ Donation



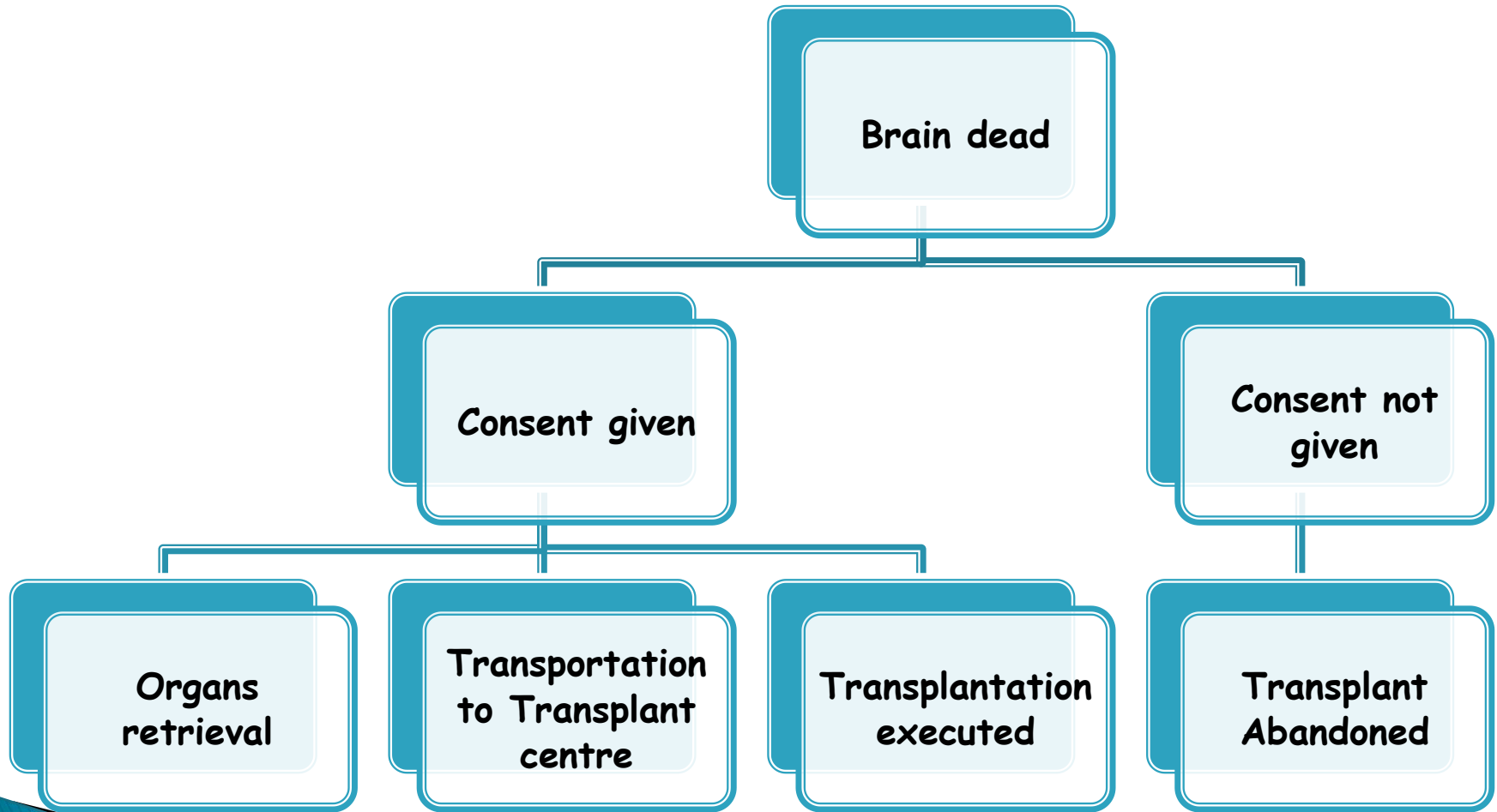
- ▶ The process of removing an organ or tissue from live, dead or recently dead person, to be used on another person
- ▶ The person who donates is Organ / tissue Donor
- ▶ The person who receives is Organ / tissue recipient

Types of Organ Donors



- ▶ Living person : near-relative of recipient
- ▶ Living person : not a near-relative of recipient
- ▶ Cadaver : Brain stem dead person with a beating heart
- ▶ Cadaver : Cardiac death with non beating heart

Cadaver transplantation



Any difference in the outcomes ?

- ▶ Graft survivals & acute rejections are comparable between live & cadaver kidney transplantations
- ▶ Slightly better compatibility in live related donors as compared to cadaver donors
- ▶ No risk or loss to cadaver as compared to liver donor
- ▶ Multi-organ transplantation feasible from a single cadaver donor

Difference between Live & Cadaver transplantation



Live

- ▶ Graft survival & acute rejection better
- ▶ Compatibility slightly better
- ▶ Some risk or loss to Donor present
- ▶ Single organ donation possible
- ▶ **Commercial trading** of organs an important issue

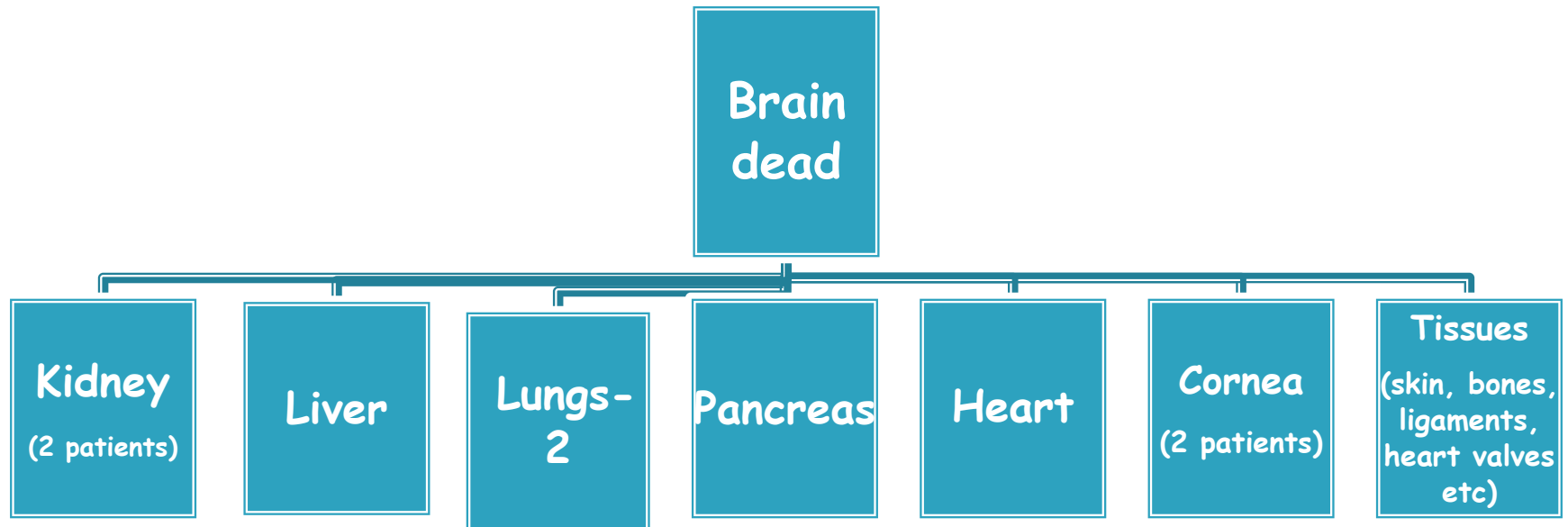
Cadaver

- ▶ Graft survival & acute rejection slightly poor
- ▶ Compatibility slightly poor
- ▶ No risk or loss to Donor at all
- ▶ Multi organ donation feasible (approx. 50 organs & tissues)
- ▶ Commercial trading of organs not an issue

Can be sporadic activity

Can be a mass activity

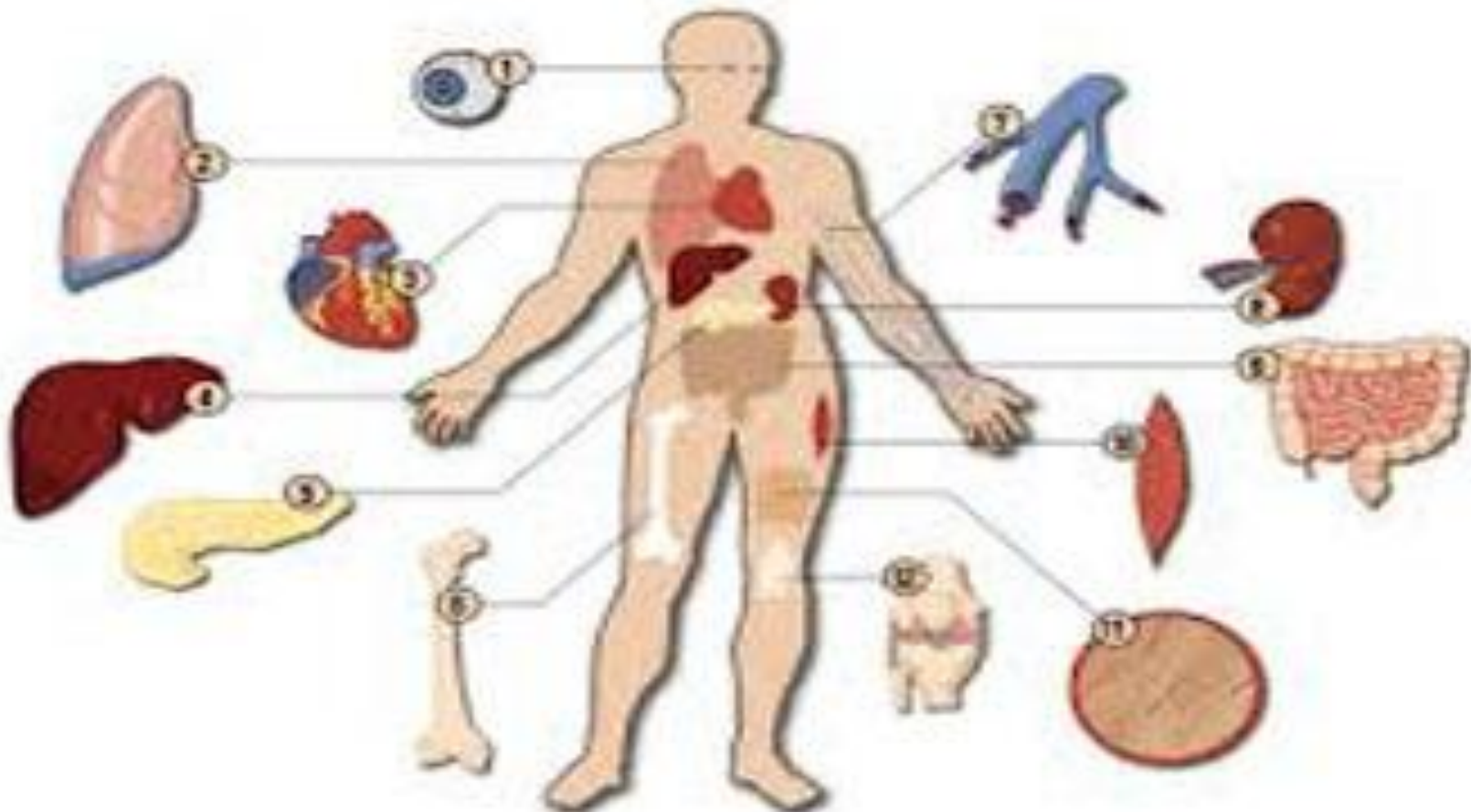
Organs & tissues which can be donated



Common organs & tissues available for cadaver donation

GIFTS OF DONATION

Organs and Tissues: Their Functions



Cadaver organ Donation (some meaningful slogans)



- ▶ Instead of taking organs to heaven, better to help create heaven on earth.
- ▶ You can 'live' even after your death
- ▶ Helps to carry your life beyond your death, through some fellow human beings
- ▶ Virtually a life beyond death

Reasons for organ shortage



- ▶ Lack of awareness in the public
- ▶ Lack of sensitivity among the doctors, nurses & hospital managers, in hospitals dealing with critically ill patients
- ▶ Myths related to religious beliefs
- ▶ Fear, apprehensions & misunderstandings
- ▶ Legal restrictions
- ▶ Media hype about scandals involving organ trading
- ▶ Other factors

Road Traffic accidents



- ▶ WHO : road traffic accidents caused 1.25 million deaths worldwide in the year 2010. That is, one person is killed every 25 seconds.
- ▶ In New Delhi, the frequency of traffic collisions is 40 times higher than the rate in London, [Indian Economy](#). FK Publications. p. 457. [ISBN 978-81-87140-37-5](#). Retrieved 3 May 2012.
- ▶ In 2015, one person dies every 4 minutes in roads accidents in India, according to NGO 'Indians for Road Safety'. Murali Krishnan (29 April 2010). ["India has the highest number of road accidents in the world"](#). [Deutsche Welle](#). Retrieved 3 May 2012

RTA- Statistics



- ▶ In 1998, India had 1% of the world's road vehicles and 6% of the world's road accidents. These accidents have increased to 10% in 2006. The total number of road accidents is approx. 90000 per annum.
- ▶ **In nearly 40-50% of all fatal accidents, the leading cause of death is head injury**
- ▶ This implies that there is a huge potential for deceased organ donors in India from road traffic accidents alone- Brain dead (Cadaveric)
- ▶ Even if 5%-10% of all these deceased patients become organ donors, there would be no requirement for a living person to donate an organ

(Legal and ethical aspects of organ donation and transplantation. Indian J Urol., 2009; 25(3): 348-355.).

Current Scenario



**India-200000 people need a new Kidney /Year
-100000 people need a new Liver/ Year**

BUT

ONLY 2-3 % of the demand for new Organs is met

While in western countries around 70-80 percent of people pledge their organs, in India only about 0.01 percent do so

? VIP Syndrome-fact or fiction



- ▶ Mr Vilas Rao Deshmukh, a well known senior political leader, was listed as a hyper-ultra-critical case in need of a liver and kidney transplant and that put him ahead of over 200 patients registered. His actor son Riteish Deshmukh was registered as a part-liver donor, but doctors said the Congress leader needed a full liver which could only come from a brain-dead person.



- ▶ "Had we got a liver he would have had a chance. Last night, a brain-dead donor died before we could transplant. Three donors were available today, but it was too late," said Dr K Ravindranath, Chairman of the Global Hospital Group.

AIIMS trauma centre study



ORGANathon
GIVE GIFT, GIVE A LIFE

- ▶ Of 205 patients declared brain dead at the trauma centre in the past five years, only 10 were potential donors.
- ▶ It admits over 6,500 patients every year, analysed the number of cadaver donations between September 2007 and August 2012.
- ▶ **90 percent** of donors were middle-aged males. The cause of brain death in 70 percent of cases was injuries sustained in road accidents, 20 percent after falling from heights and 10 percent due to being gored by animals, particularly cows.
- ▶ **The average time recorded from certification of brain death to organ harvesting was 33 to 46 hours & this gap is 72-96 hours from time of accident to harvesting-Cause Multifactorial**
- ▶ the organs harvested were kidneys, hearts, heart valves, livers and corneas.
- ▶ In case of live donations, it was **mostly women** who were donating their body parts like kidneys. The ratio of male versus female in live donations was around **20:80**.

Some statistics

India (2009)

RTA cases : 4.22 lacs

Fatalities from RTA cases : 1.27 lacs

i.e, One RTA reported every minute and
One Death from RTA occurs every 4 minutes

Haryana

Population : 2.7 cr

15 to 59 age group : 56 % ie 1.5 cr

1 % of this group : 1.5 lacs

Focus on North Zone



- ▶ Commendable work being done in South India
- ▶ Why North Zone cannot do better esp when, there are more number of Transplant Centres and More number of Road Traffic Accidents in this Zone
- ▶ NCR/Haryana is fast emerging as a Transplant State with lot of hospitals in public & private sector doing organ transplants
- ▶ NCR-Haryana is part of the North Zone ROTTO, which maintains the regional transplant registry but there is no State registry for Haryana. It should start a SOTTO / HOTTO to cater to this State.

Our target



- ▶ One percent of eligible population to pledge their organs per year. Initially in Haryana & North Zone. Later spread to other zones
- ▶ One percent of all brain deaths to be converted to organ donation (0.05 %)
- ▶ Education of the young population esp at school & college level about organ transplantation and the need for pledging organs
- ▶ Sensitization of the doctors, care givers & hospital management -brain death & cadaver organ transplantation

Our Target-Contd...



- ▶ Inclusion of Chapter on Organ Donation in the CBSC/NCERT
- ▶ Tsunami Obesity- Childhood Obesity- NASH
- ▶ Involvement of Politician- to decrease red tapism
- ▶ Sensitisation of Police / Public to reduce gap-RTA to Harvesting & for Green Corridor
- ▶ Involvement of other NGO /Clubs /Societies etc.
- ▶ Others / Miscellaneous

National Organ and Tissue Transplant Organization (NOTTO)



- ▶ NOTTO is a National level organization set up under Directorate General of Health Services, Ministry of Health and Family Welfare, Government of India.
- ▶
- ▶ It maintains a central registry for end stage organ failure patients, transplantation centers & procedures as well as pledging of organs and their conversions.
- ▶ It controls the Regional Centres (ROTTTO) and the State Centres (SOTTO)

Regional Organ and Tissue Transplant Organization (ROTTTO)



Post Graduate Institute, Chandigarh

- ▶ Punjab
- Haryana
- Himachal Pradesh
- Jammu & Kashmir
- Chandigarh
- Rajasthan
- Uttarakhand
- ▶ Delhi / NCR ???

Voluntary cadaver donation



- ▶ Opt in type : The donor gives consent to donate his organs
- ▶ Opt out type : Anyone who has not refused is presumed to be willing to donate his organs.
- ▶ In India, we follow the Opt in policy, though many people feel that we should adopt opt out policy to increase the number of cadaver transplants
- ▶ **Option Suggested**-Inclusion in Driving License / Adhar Card for opt out option

Suggestions



- ▶ Develop a culture of Pledging Organs for donations
- ▶ Structured education of school & college students about organ transplantation and pledging of organs. A chapter on organ transplantation be included in the text books at different levels
- ▶ **Non Organ Transplant Retrieval Centers (NOTRC) :any hospital with > 50 beds and a working OT & an ICU should be declared NOTRC-OF Suggestion & for implementation - Protocol will be developed.**
- ▶ Brain death declaration to be done as per protocol. Retrieval of organs may be done by the local team or by the team from the transplant hospital. Transplant coordinators and grief counselors should professionally handle the situation
- ▶ In MLC cases, the police needs to be sensitized to speed up the inquest proceedings, once the family has agreed for organ donation. Police should also facilitate the post mortem (may be performed in the same hospital where death has occurred) & handover of the body respectfully
- ▶ While transferring a body from one State to another for the performance of last rites, NOC is required from the hospital & the police. This may be issued promptly.

Incentives & Miscellaneous



- ▶ Public **salutations** & awards to the deceased persons who donated their organs (posthumously)
- ▶ Presumption of consent (opt out system)
- ▶ Development of SOTTO / HOTTO for Haryana,
- ▶ We should undertake measures to reduce the incidence of organ failures (**Multidisciplinary**) approach. At the same time ensure that no such patient dies for want of an organ

Incentives & Miscellaneous



- ▶ Family of **Organ Donor** be given **priority** in the waiting list, should they ever need organ transplantation in the future
- ▶ We can have dedicated teams of air / surface ambulances (specially designed) for moving to a centre for organ harvesting and then for taking the organs to the destination hospitals via the green **corridor** / **Drones**, for transplantation
- ▶ Which organ to go where is decided by the Central registry of the Nation / State / Region.

ORGAN TRANSPLANT- QUO- VADIS

Scientific Programme

Day-1

PARA ORGAN TRANSPLANT MEDICS

- A. INAUGURATION
- B. GUEST OF HONOR SPEECH
- C. CHAIRMAN OF FOUNDATION SPEECH
- D. Session-1(Police)
 - Sensitization / training of Police—How much,how often& by what means ?
 - Protocol / SOP for above
 - Speech by CP/ DCP
- E. Session-2 (HRD)
 - Inclusion Syllabus / Chapter on Organ Transplantation
 - Lecture by VC Delhi University
 - Lecture by HRD Representative
- F. Session-3
 - Harvested Organ transport by :-
 - Green Corridor—Police Perspective
 - By Drones—DRDO / IIT Speaker
 - Concluding Remarks ? Speaker
- G. Session-4
 - Student Perspective—Principal DPS/AMINITY/ANY ?
 - Student Perspective—By a Student
- H. Session-5
 - RTA / Brain related death Vs. Overall Incidence—SOPs - whom to target ?
 - Nearest place to Harvest Organ-SOP & Ministry approval By Which team (OF team Vs. nearest Hospital team)& where to transport as per Registry

Day-2 (Doctors)

1-Xenotransplantation—Debate

FOR / AGAINST

2-Current Perspective

A-Landmark publications during past 5 years that have significant impact on Surgical Policy of Organ Transplant & its outcome , Immunosuppressant etc .

- Liver
- Kidney
- Heart
- Pancreas
- Small Intestine
- Lung
- Uterus

B- Donor-Recipient matching- How much & How little(Organ Wise)

C- Pancreas Transplant Vs. Artificial Pancreas – Can we put the needles away ?

D-Small Bowel transplant—Current status &Where we are obstructed ?

E- Stem Cell-Current perspective & future role

F- Stem Cell Organ Cloning- Pros & Cons / Could we? Should we?

G-Cloning Human Organs for Transplant—Social Advantages

---Social Disadvantages

H-Stem Cell to Organ factory- Fact OR Fiction

I-Free paper Session

J-Posters hours

K-Meet your Professors

L-Transplant Society launch- including not only Medical team but also technicians,coordinators , staff nurses etc



► Thanks...

► www.organathonfoundation.org