Transplant Institute for New Mexico

Proposal for the Establishment of a Multi-Organ Transplant Program for the Citizens of New Mexico

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Legislative Health and Human Services Committee

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"You are not here merely to make a living. You are here in order to enable the world to live more amply, with greater vision, with a finer spirit of hope and achievement. You are here to enrich the world and you impoverish yourself if you forget the errand."

~ Woodrow Wilson

Discussion Topics

- Strategic Positioning
- Current Disadvantages for New Mexico
- Prior Challenges vs. Current Key Advantages
- New Mexico Volumes by Organ Type
- Five Year Financial Metrics
- Start up Requirements
- Policy/Bylaw Proposal

Strategic Positioning

New Mexico has the opportunity to position itself as a leader in liver transplant services through the creation of a NM Transplant Institute where it could provide excellent results combined with reduced waiting periods.

- No in-state competition allows access to a greater majority of donors.
- New Mexico is 1 of 12 states WITHOUT an active multi-organ transplant program (liver, kidney and pancreas).
- Significant demand based on the number of potential liver transplant patients and available organs.
- Provide education and training capabilities for local physicians, residents and medical students, promoting the retention of resources whom may otherwise leave the state.
- Increased opportunities for local medical research.

- 32 donors left the Donation Service Area (DSA) over the last 3 years and went to Lubbock and El Paso, Texas due to easy geographic access to these out of state hospitals and diversion due to bed and operating room capacity for an organ donor

- UNMH and PHS Health Systems providing post liver transplant care to recipients transplanted out of the state report that 70% to 80% are Medicaid

  - Medicaid pays for the liver transplants performed out of state and includes funding for travel and lodging
  - Reimbursement rates to out-of state hospitals for inpatient services is 70% of billed charges and for out-of-state outpatient services is 77% of billed charges

- NM Medicaid program is spending approximately:
  - $304,150 per inpatient case, including Organ Acquisition Charge (70% of charges)
  - $91,861 for outpatient services (77% of charges)
  - Total of $396,011 per NM Medicaid Liver Transplant Recipient

  - Medicare pays for transplant through two primary mechanisms
    - DRG (surgical procedure)
    - Organ Acquisition Cost Centers through the Medicare Cost Report

- Typically, 25 to 40 liver transplants annually are required to participate in the managed care networks

- Based on current NMOP donor volumes, the rate of liver organ procurement is 16.58 per million population in NM resulting in 34 livers available for transplant per year

- Chronic liver disease is the 4th largest cause of Mortality in NM

- Because liver disease is higher in NM than the national average, it is realistic to expect the need for liver transplantation to be greater than the national average

- Transplant centers must complete a formal UNOS application process for membership
  - CEO signature validating program specific business/implementation plan development
  - Identification of a Primary Physician and Primary Surgeon that meet certain requirements based upon their background and/or training
  - Documentation that the transplant program will provide 100% medical and surgical coverage by individuals credentialed by the hospital with similar backgrounds as the primary
  - A letter of agreement or contract with local Organ Procurement Organization

- Following UNOS approval, the transplant program will need to complete 10 liver transplants for full approval

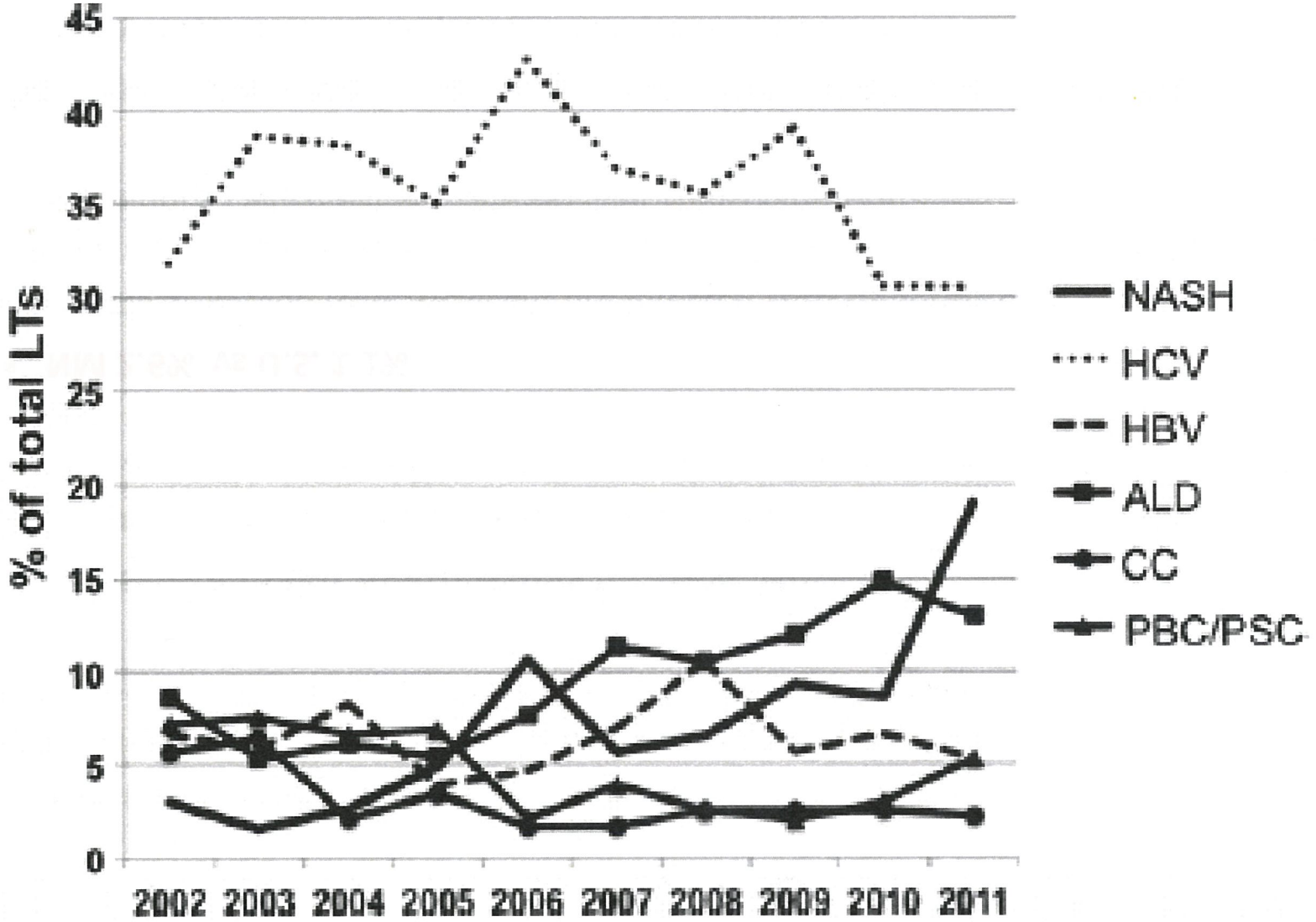
- Recruiting and maintaining a primary liver transplant surgeon and hepatologist with a 24/7 coverage plan are the minimal requirements for UNOS approval and ongoing compliance

- UNMH states that their hospital lacks available space in the ICU, Operating Rooms, ER and inpatient acute care beds

- Trauma patients are crossing borders for care because of lack of access to UNMH

- UMNH does have more 24/7 depth of expertise of services required to support a liver transplant program than PHS but space and staffing deficits would need resolution to move forward with a liver transplant program at that facility

Chronic Liver Disease and Liver Transplantation



Current Disadvantages for NM

- **Patients in the state are underserved**
  - 153 livers have been exported in the past five years, averaging 34 per year
  - 165 NM residents are currently listed in other states for liver transplants

- **Liver Disease is a major heath issues for New Mexico**
  - Alcoholism remains a primary cause of liver disease
  - Cirrhosis and Chronic Liver Disease are the cause of death more than twice the national average
    - **NM 2.6% vs U.S. 1.1%**
  - At least 2% or 40,000 New Mexicans are infected with Hepatitis C
  - Over the next 10 years, at least 25% of hepatitis C patients will develop cirrhosis, and several hundred will die if not offered liver transplantation

- **New Mexico citizens are forced to get liver transplants outside the state**
  - Necessary relocation for the patients and their families
  - Time is a limiting factor for New Mexico recipients when an organ is available
  - Limitations for medical follow-up in the pre and post-operative period
  - High MELD scores indicate that most of the patients are already hospitalized in New Mexico, making it more difficult to move the patient outside the state when an organ is available.
  - Increase cost and expenses for patients, families and hospitals

Prior Challenges vs. Current Key Advantages

Challenges faced by prior liver transplant program in New Mexico

- No MELD score for fair allocation of organs.
- Low number of procurement operations
- Low recipient pool for liver transplants
- Local expertise was not sufficient.

Advantages for proposed NM liver transplant program

- MELD scores were created in 2002 improving the allocation of organs
- Hepatitis C and alcoholism are the primary reasons for liver transplantation
- Organ donation has increased due to enhanced educational programs promoting organ donation
- Recipient pool exists as 165 New Mexicans are on waiting lists in other states
- Local professional expertise is in place to support the program as follows:

✓Transplant surgeon
✓Transplant Hepatologist
✓Liver pathologist
✓Multi-organ transplant manager
✓Anesthesiologist
✓Intensivist
✓Interventional radiologist
✓Nephrologist
✓Pulmonologist
✓Cardiologist
✓Psychologist
✓Social workers

- Local Facilities and Services are available:
  - Blood Bank
  - HLA Lab

NM Volumes By Organ Type

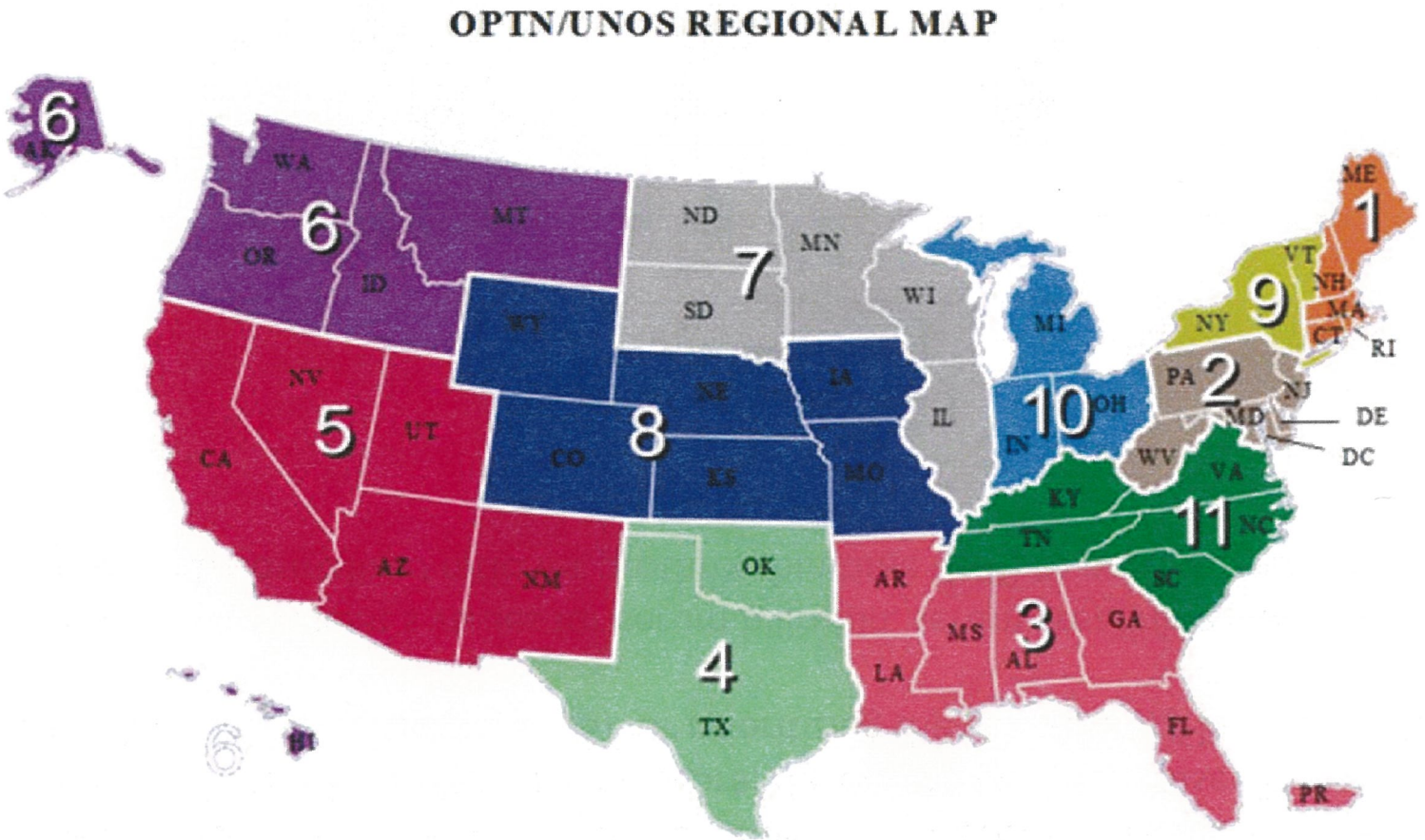
- The combination of liver and kidney transplant programs has the potential to achieve required volumes to support a multi-organ transplant program averaging 100 per year.
- Opportunities exist to increase liver transplants by using DCD (Donation after Cardiac Death) donors, thereby necessitating the education of ICU teams to identify DBD (Donor Brain Dead) and DCD donors as well as cooperation between principal hospitals
- 91% of recovered livers over the past five years have been successfully transplanted

Recovered and Transplanted Organs in New Mexico

By Units	2012	2011	2010	2009	2008	Average Per Year
Recovered Livers						
Deceased Donor (non DCD d	24	38	35	47	28	34
Living Donor	0	0	0	0	0	0
Total Recovered	**24**	**38**	**35**	**47**	**28**	**34**
Total Transplanted	**23**	**32**	**31**	**45**	**26**	**31**
Recovered Kidneys						
Deceased Donor	62	85	82	97	79	81
Living Donor	13	16	16	23	23	18
Total Recovered	**75**	**101**	**98**	**120**	**102**	**99**
Number Transplanted	**48**	**77**	**71**	**83**	**65**	**69**
Grand Total Recovered	**99**	**139**	**133**	**167**	**130**	**134**
Grand Total Transplanted	**71**	**109**	**102**	**128**	**91**	**100**

Source: U.S. Transplants Performed : January 1, 1988 - November 30, 2012
For Organ = Kidney and Liver, State = New Mexico
Based on OPTN data as of February 22, 2013

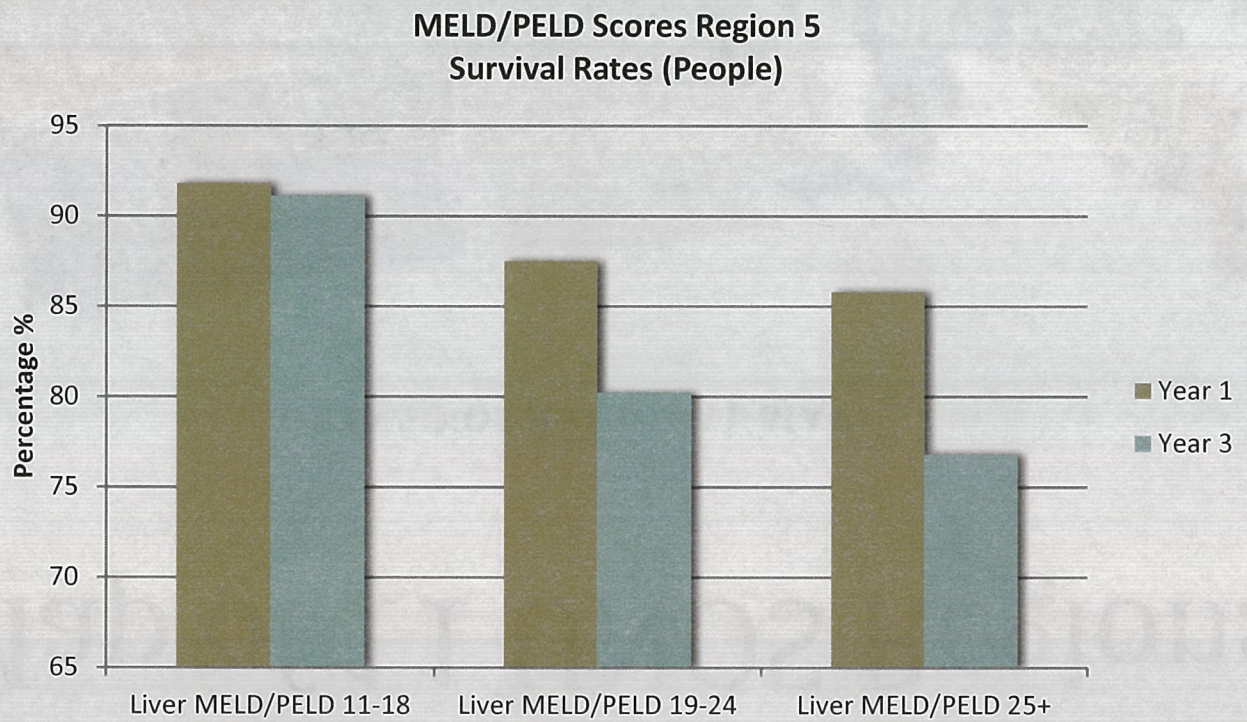
Map of 11 UNOS Regions



MELD Scores Region 5

The **Model for End-Stage Liver Disease**, or **MELD**, is a scoring system for assessing the severity of chronic liver disease. This score, developed in 2002, is used by the United Network for Organ Sharing (UNOS) for prioritizing the allocation of liver transplants.

MELD uses the patient's values for serum bilirubin, serum creatinine, and the international normalized ratio for prothrombin time (INR) to predict survival.

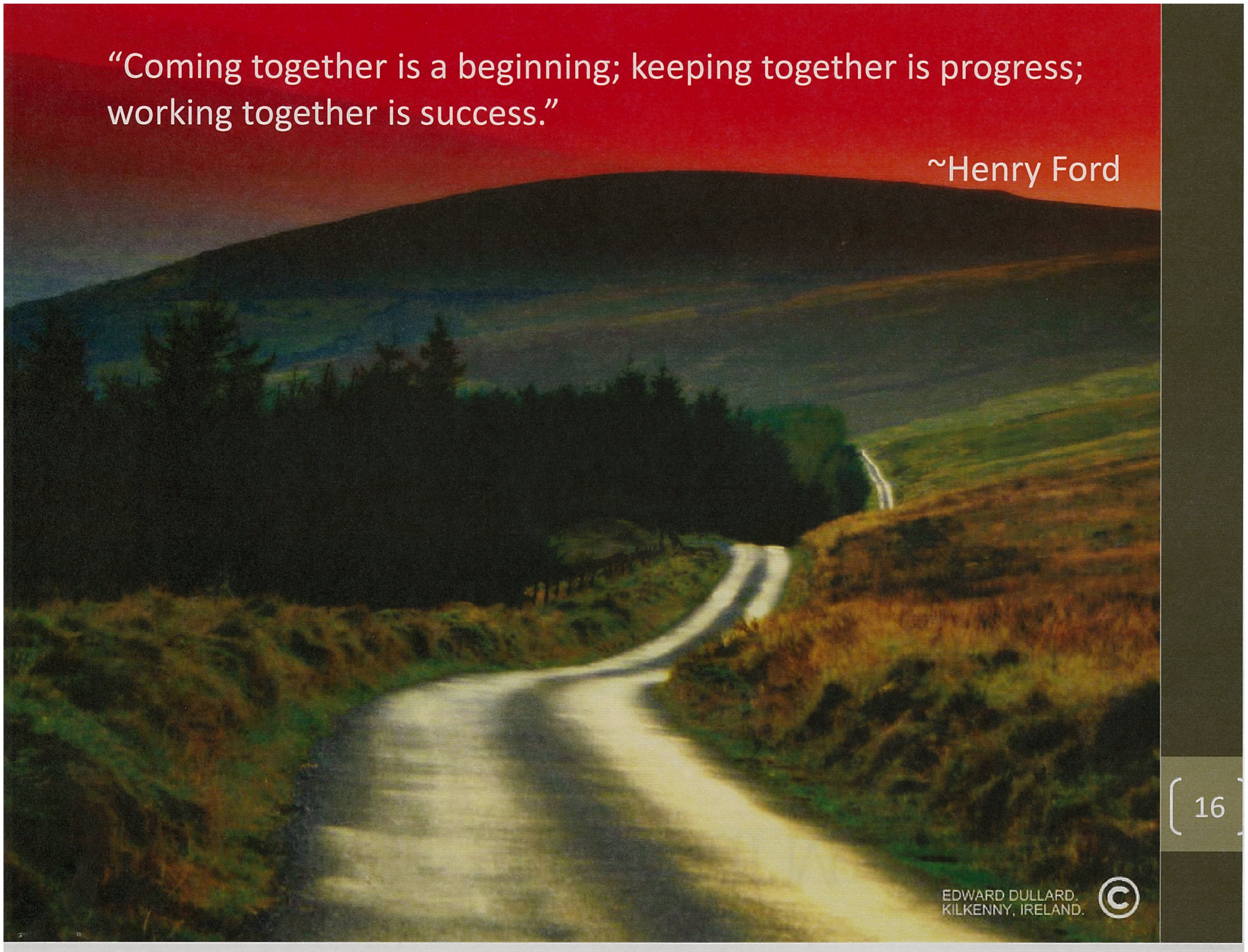


Five Year Financial Metrics

- Similar liver transplant programs with both Clinic and Hospital facilities experienced the following financial results **over a five year period**:
  - 32% increase in transplants performed
  - 120% increase in gross revenue
  - 7% net profit contribution as a percentage of total revenue
- Ten (10) liver transplants would need to be performed per annum in order for the program to be viable. 80% of transplant centers perform less than 60 liver transplants per year.
- NM data suggests this target is attainable coupled with additional opportunities to harvest from DCD donors. It is estimated that an additional 8-10 DCD donors per year could be attained.

Potential Financial Forecast - Similar Programs

(millions)	Year 1	%	Year 5	%
Clinic				
Gross Revenue	9	100%	22	100%
Total Payments	3.9	43%	7.4	34%
Costs	4.8	53%	10.4	47%
Net Contribution	***-0.9***	***-0.1***	***-3***	***-14%***
Hospital				
Gross Revenue	38	100%	99	100%
Total Payments	17	45%	35	35%
Costs	15	39%	24	24%
Net Contribution	***2***	***0.05***	***11***	***11%***
Combined Clinic & Hospital				
Gross Revenue	47	100%	121	100%
Total Payments	20.9	44%	42.4	35%
Costs	19.8	42%	34.4	28%
Total Combined Contribution	**1.1**	**0.02**	**8**	**7%**


"Coming together is a beginning; keeping together is progress; working together is success."
~Henry Ford
EDWARD DULLARD.
KILKENNY, IRELAND.
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Proposal For Regional Distribution of Livers for Critically Ill Candidates

- **Specific Requests for Comment:** The Committee asks the following:

  Do you support a regional share for candidates with MELD/PELD scores of 35 or higher?

  Do you feel that a Sharing Threshold is needed for regional distribution to of livers to patients with high MELD/PELD scores?

Number of Potential Candidates Affected

During 2010, there was a total of 2,032 candidates (7.7% of total candidates) waiting for a liver were at some point listed with a MELD/PELD score of 35 or higher.

Policy or Bylaw Proposal

- **Combined Local and Regional**

  1. Status 1A candidates in descending point order
  2. Status 1B candidates in descending order.

- **Local and Regional**

  3. Candidates with MELD/PELD Scores >=35 in descending order of mortality risk (MELD) scores, with Local candidates ranked above Regional candidates at each level of MELD score

- **Local**

  4. Candidates with MELD/PELD Scores >=15-34 in descending order of mortality risk scores (probability of candidate death)

- **Regional**

  5. Candidates with MELD/PELD Scores >=15-34 in descending order of mortality risk scores (probability of candidate death)

- **Local**

6. Candidates with MELD/PELD Scores < 15 in descending order of mortality risk scores (probability of candidate death)

- **Regional**

7. Candidates with MELD/PELD Scores < 15 in descending order of mortality risk scores (probability of candidate death)

- **National**

8. Status 1A candidates in descending point order
9. Status 1B candidates in descending point order
10. All other candidates in descending order of mortality risk scores (probability of candidate death)

Thank you

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