

# Dünya'da ve Türkiye'de Fetomaternal Tıp ve Perinatolojinin Tarihi

**Prof. Dr. Oktay KADAYIFCI**



*Kurki*

*Sanat ve Zenaat ile ilgili her şey...*

*O. Kadayıfci*



*Demet SABANCI ÇETİNDÖĞAN  
kurucu...*

- “From the obstetric viewpoint, maternal survival was of primary importance and in some instances even living fetuses were sacrificed for the mother’s safety.”

*Burchell and Gunn, 1980*

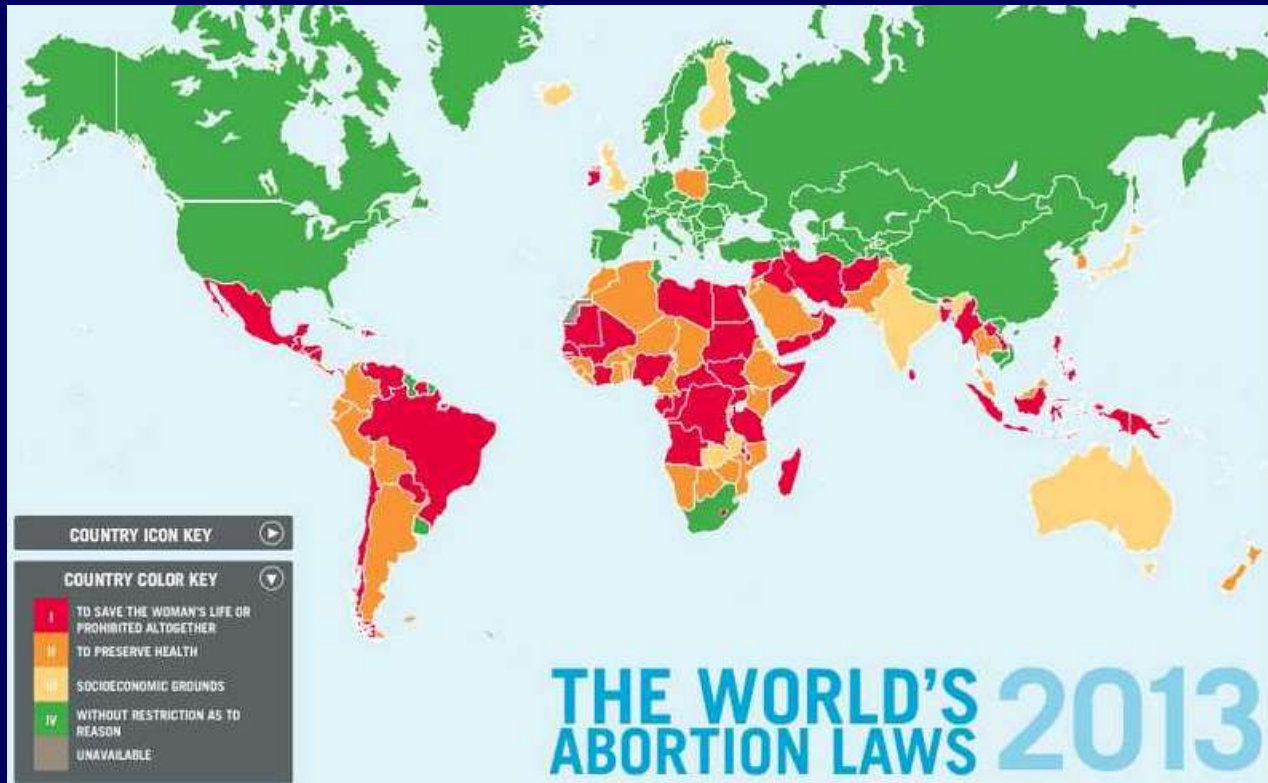
- “The perinatal death rate is ... like an iceberg, for we see only a portion of ill results, the deaths. But we must not forget the submerged and large fraction, the near deaths and the harm which they may cause.”

*Mixon, 1952*

- In many ways, morbidity as a result of exerts a more profound economic effect than mortality.”

*Wallace, 1971*

# Abortion Laws Map, Center for reproductive rights



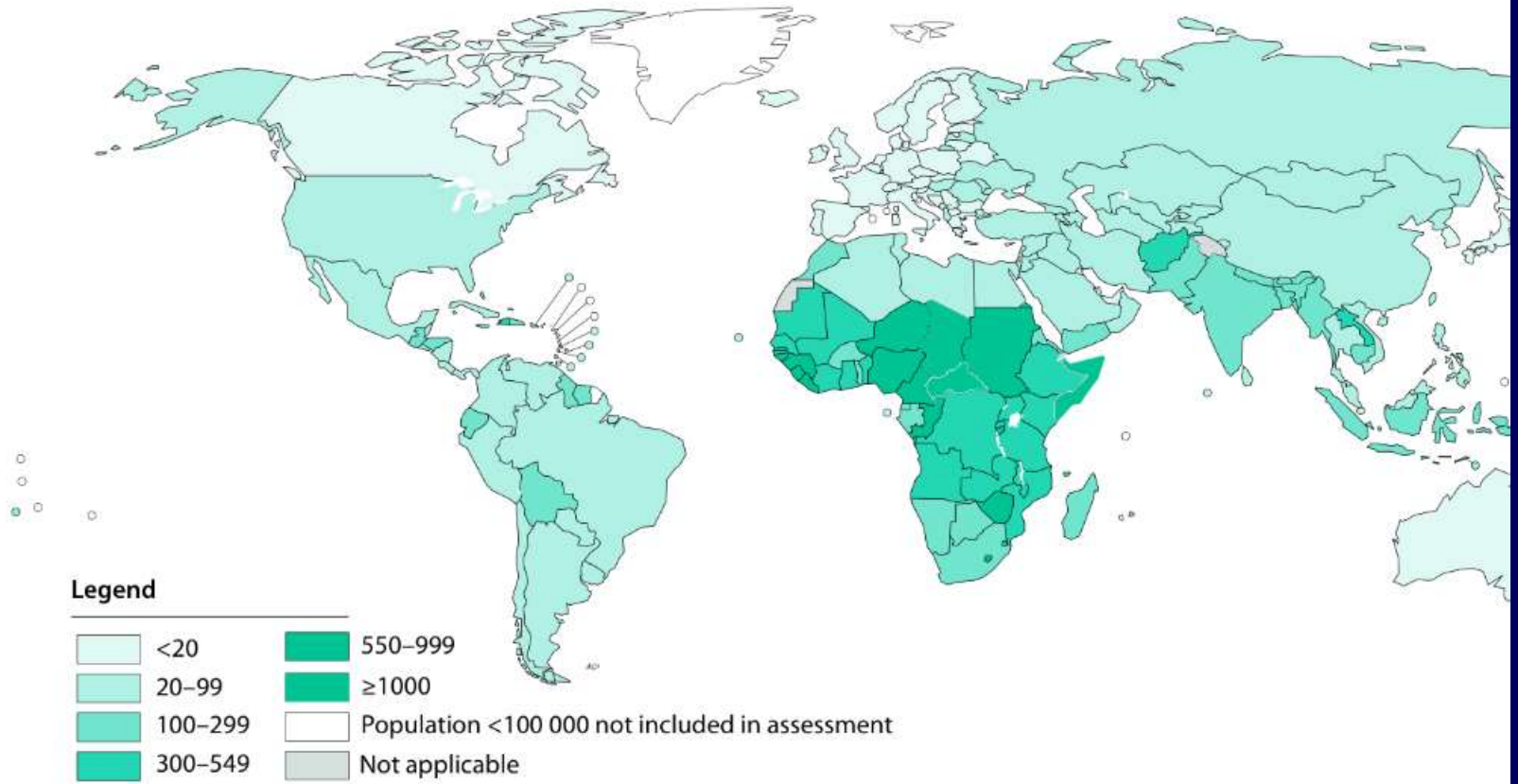
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# CHILE

In 1967, The Chilean Health Code formally legalized abortion when it was necessary to save the mother's life. The measure was reversed in 1989 by then-President Augusto Pinochet, who made abortion illegal in all circumstances. Pinochet's law is still in effect. In late 2006, President Michelle Bachelet authorized government distribution of the morning-after contraception pill to women ages 14 and older, but in April 2008, Chile's Constitutional Tribunal suspended the program.

- Sakat doğan çocuk 45 yaşına kadar yaşarsa, devlet yükü **1.000.000 \$** üstünde.

Figure 1. Map with countries by category according to their maternal mortality ratio (MMR, death per 100 000 live births), 2010



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Region	1990 <sup>a</sup>		2010 <sup>a</sup>		% change in MMR between 1990 and 2010 <sup>a</sup>	Average annual change in MMR between 1990 and 2010 <sup>a</sup>
	MMR	Maternal deaths	MMR	Maternal deaths		
World	400	543 000	210	287 000	-47	-3.1
Developed regions <sup>b</sup>	26	4000	16	2200	-39	-2.5
Developing regions	440	539 000	240	284 000	-47	-3.1
Northern Africa <sup>c</sup>	230	8500	78	2800	-66	-5.3
Sub-Saharan Africa <sup>d</sup>	850	192 000	500	162 000	-41	-2.6
Eastern Asia <sup>e</sup>	120	30 000	37	6400	-69	-5.7
Eastern Asia excluding China	53	610	45	400	-15	-0.8
Southern Asia <sup>f</sup>	590	233 000	220	83 000	-64	-4.9
Southern Asia excluding India	590	70 000	240	28 000	-59	-4.4
South-eastern Asia <sup>g</sup>	410	50 000	150	17 000	-63	-4.9
Western Asia <sup>h</sup>	170	7000	71	3500	-57	-4.2
Caucasus and	71	1400	46	750	-35	-2.1

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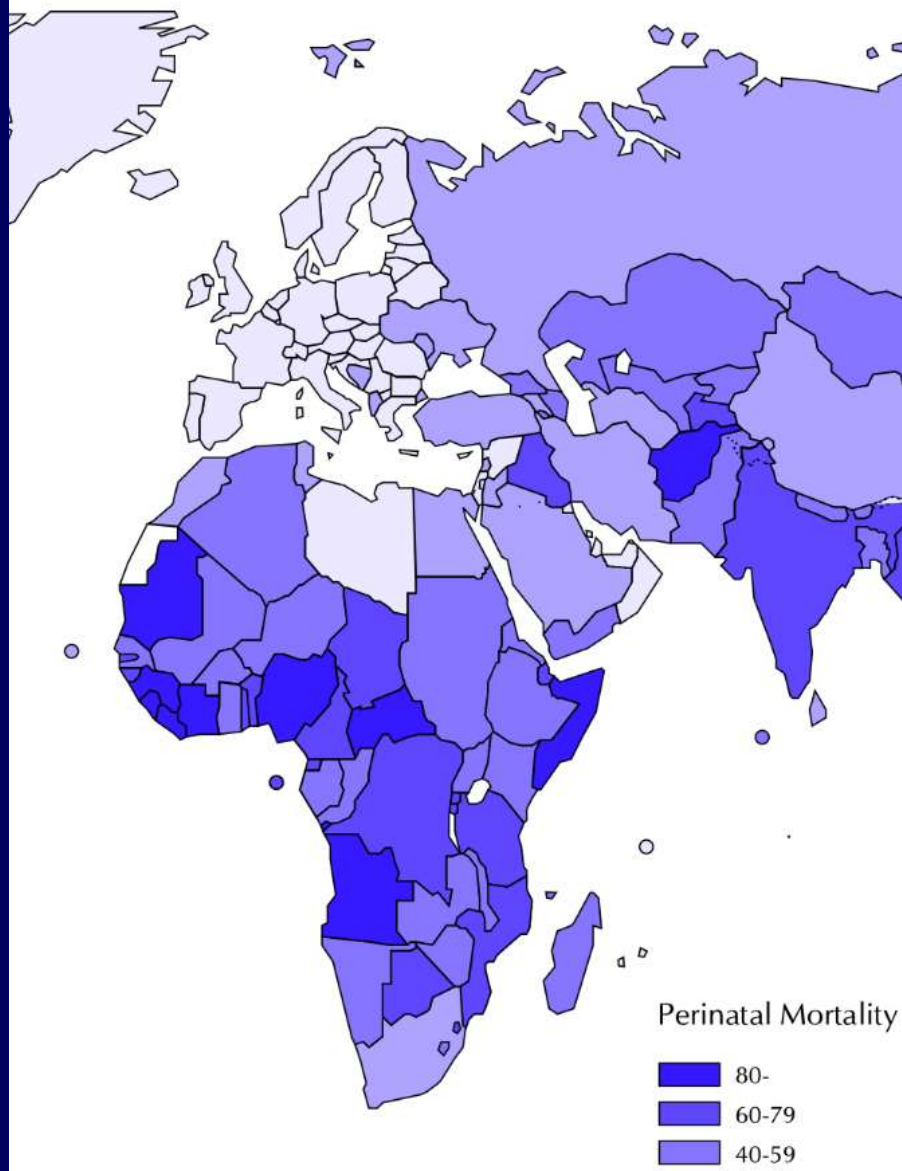
The Maternal mortality rate (MMR) is the annual number of female deaths per 100,000 live births from any cause related to or aggravated by pregnancy or its management (excluding accidental or incidental causes).

[DOWNLOAD DATA](#)

RANK	COUNTRY	(DEATHS/100,000 LIVE BIRTHS)	DATE OF INFORMATION
1	<u><a href="#">South Sudan</a></u>	2,054.00	2006
2	<u><a href="#">Chad</a></u>	1,100.00	2010
3	<u><a href="#">Somalia</a></u>	1,000.00	2010
4	<u><a href="#">Central African Republic</a></u>	890.00	2010
5	<u><a href="#">Sierra Leone</a></u>	890.00	2010
6	<u><a href="#">Burundi</a></u>	800.00	2010
7	<u><a href="#">Guinea-Bissau</a></u>	790.00	2010
8	<u><a href="#">Liberia</a></u>	770.00	2010
9	<u><a href="#">Sudan</a></u>	730.00	2010
10	<u><a href="#">Cameroon</a></u>	690.00	2010
11	<u><a href="#">Nigeria</a></u>	630.00	2010
12	<u><a href="#">Lesotho</a></u>	620.00	2010
13	<u><a href="#">Guinea</a></u>	610.00	2010
14	<u><a href="#">Niger</a></u>	590.00	2010
15	<u><a href="#">Zimbabwe</a></u>	570.00	2010
16	<u><a href="#">Congo, Republic of the</a></u>	560.00	2010
17	<u><a href="#">Congo, Democratic Republic of the</a></u>	540.00	2010
18	<u><a href="#">Mali</a></u>	540.00	2010

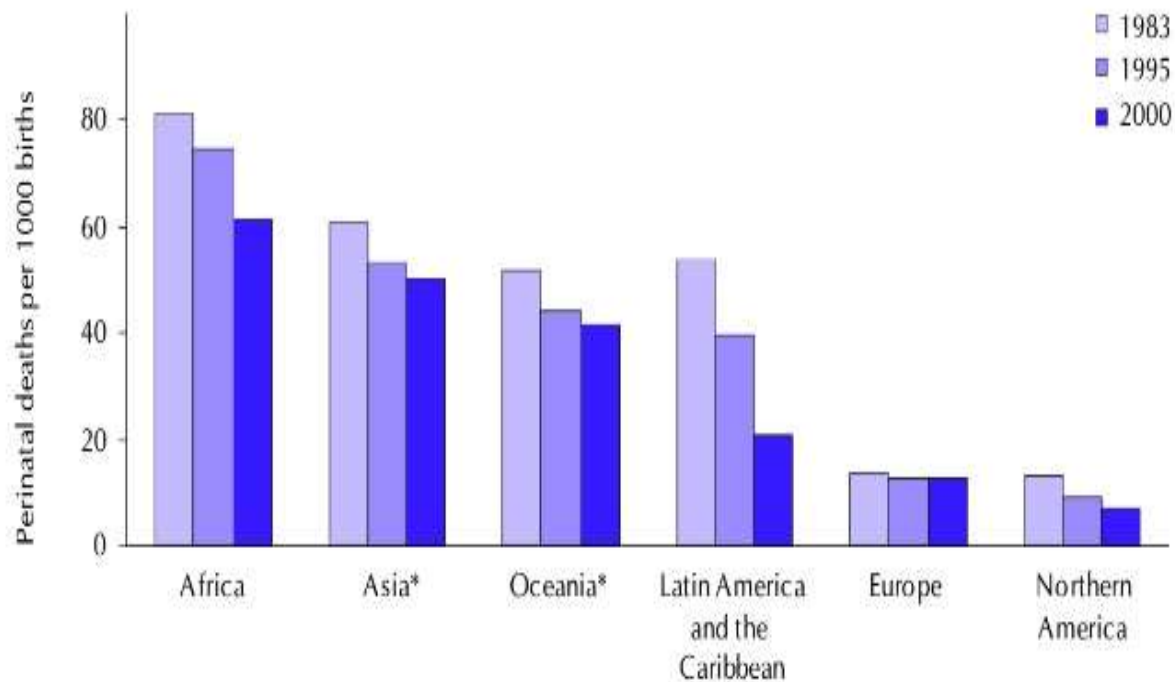
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Figure 6.2 Perinatal mortality rate, by country, 2000



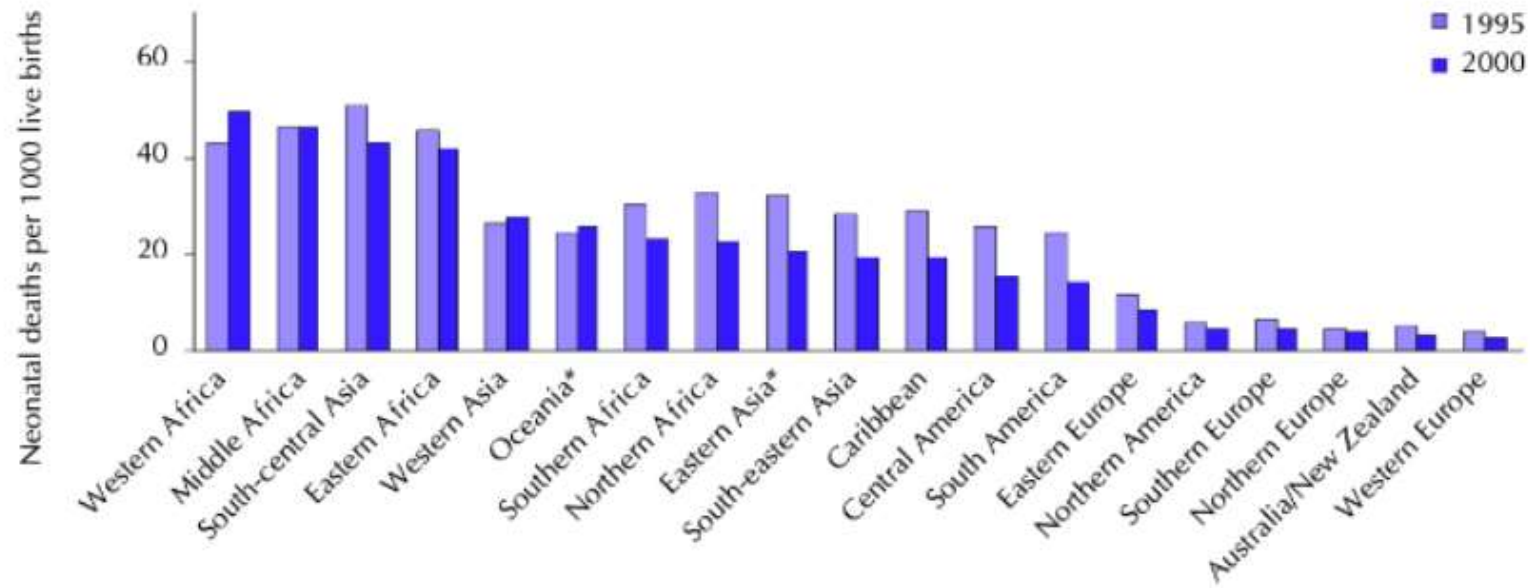
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Figure 7.4 Perinatal mortality by region, 1983, 1995 and 2000



\* Australia/New Zealand and Japan have been excluded from the regional estimates but are included in the total for developed countries.

### 3 Neonatal mortality by subregion, 1995 and 2000



New Zealand and Japan have been excluded from the regional estimates but are included in the total for developed countries.

133	<u>Saudi Arabia</u>	24.00	2010
134	<u>Grenada</u>	24.00	2010
135	<u>Hungary</u>	21.00	2010
136	<u>United States</u>	21.00	2010
137	<u>Iran</u>	21.00	2010
138	<u>Bahrain</u>	20.00	2010
139	<u>Turkey</u>	20.00	2010
140	<u>Puerto Rico</u>	20.00	2010
141	<u>Luxembourg</u>	20.00	2010
142	<u>Croatia</u>	17.00	2010
143	<u>Korea, South</u>	16.00	2010
144	<u>New Zealand</u>	15.00	2010
145	<u>Kuwait</u>	14.00	2010
146	<u>United Arab Emirates</u>	12.00	2010
147	<u>Canada</u>	12.00	2010
148	<u>United Kingdom</u>	12.00	2010
149	<u>Serbia</u>	12.00	2010
150	<u>Slovenia</u>	12.00	2010
151	<u>Denmark</u>	12.00	2010
152	<u>Bulgaria</u>	11.00	2010
153	<u>Macedonia</u>	10.00	2010
154	<u>Cyprus</u>	10.00	2010

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- Hypotermie

El yıkama

1581, François Rousset

14 Cesarean

1882, Max Sanger closed the uterus  
8 out of 17 patients survived.

1846, Ether

# The Work of Dr. Ignaz Semmelweis

- Dr. Ignaz Semmelweis worked at the Vienna General Hospital's maternity clinic on a 3-year contract from 1846-1849. There, as elsewhere in European and North American hospitals, puerperal fever, or childbed fever, was rampant, sometimes climbing to 40 percent of admitted patients. He was disturbed by these mortality rates, and eventually developed a theory of infection, in which he theorized that decaying matter on the hands of doctors, who had recently conducted autopsies, was brought into contact with the genitals of birthing women during the medical examinations at the maternity clinic. He proposed a radical hand washing theory using chlorinated lime, now a known disinfectant.
- At the time however, the germ theory of infection had not been developed and Semmelweis' ideas ran contrary to key medical beliefs and practices. His ideas were rejected and ridiculed. Quite unusually, his contract was not renewed, effectively expelling him from the medical community in Vienna,.

# Puerperal fever- a modern disease

- An 1841 account of epidemic childbed fever states that insofar as existing historical documents permit one to judge, childbed fever is a modern disease. The cases reported by Hippocrates that are generally identified as such are not puerperal fever. There are only examples of bilious fever, then common, which among maternity patients was no different from its appearance among non-maternity patients or men, Hippocrates himself never identified it as a separate and distinguishable disease.

1928, Alexander Fleming

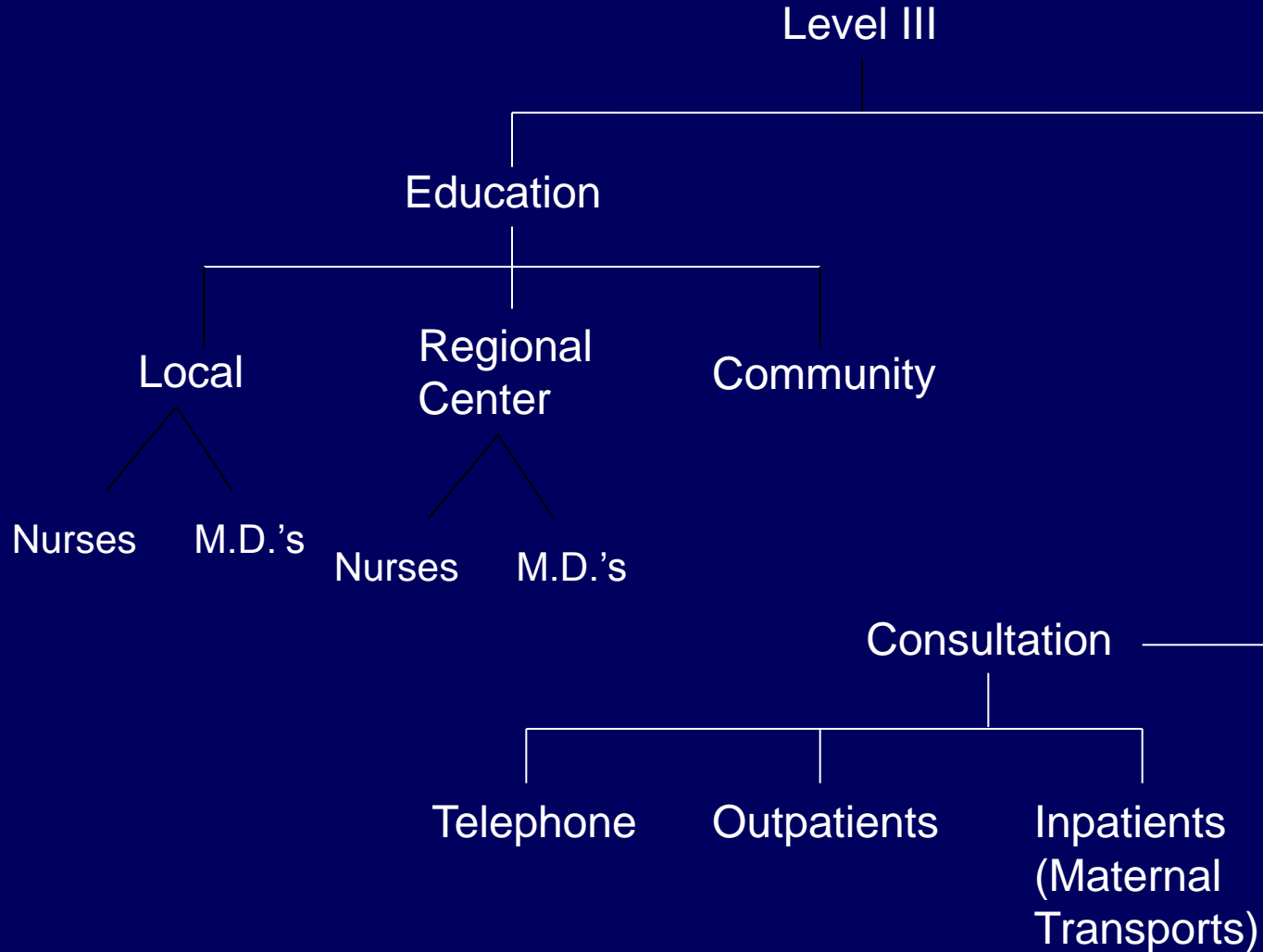
Penicilin



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- “Regionalization of perinatal health care can be described as the organization of a region in which there are defined levels of perinatal care consisting of at least one tertiary care hospital whose primary concerns are education, consultation and transportation.”

# Schematic for regionalization of perinatal health care



- “In August of 1976, Berger et al. reported that 28 states had regionalization programs in operation.”

# Inpatient Referrals

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Reason for Referral	Percentage
Premature labor	53%
Hypertension	15%
Bleeding	7%
Rh disease	3%
Diabetes	2%
Other	20%
TOTAL	100%

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# Outpatient Referrals

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Reason for Referral	Percentage
Genetic counseling	56%
Infertility history	5%
Diabetes	3%
Antepartum testing	3%
Hypertension	3%
Postdates	2%
Other	28%
TOTAL	100%

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# Literature Survey of Determinants of Perinatal Morbidity and Mortality

Investigators

Factors

Lilienfeld and Parkhurst (1951) and  
Lilienfeld and Passamanick (1955)

Donnelly et al. (1957) and Wells et al.  
(1958)

Butler and Bonham (1963) and Butler  
and Alberman (1969)

Niswander and Gordon (1972)

1. Prematurity
2. Multiple birth
3. Previous stillbirth or infant death
4. Toxemia
5. Placental abnormalities
6. Socioeconomic status
7. Maternal age
8. Birth interval
9. Parity
10. No prenatal care
11. Prolonged labor
12. Short labor
13. Breech
14. Smoking
15. History of infertility
16. Organic heart disease
17. Diabetes
18. Urinary tract infection
19. History of vaginal bleeding
20. Incompetent cervix
21. Hydramnios

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“It has been estimated in Tennessee to cost an average of \$ 5500 to identify and manage a high-risk pregnancy.”

State	Before Regionalization	After Regionalization	Source of Data
Kansas	1974 12.0/1000	1979 7.7/1000	Cho et al., 1982
Minnesota	1978 9/1000	1980 5.5/1000	Hoekstra et al., 1981
Mississippi	1965 41.5/1000	1977 18.3/1000	Morrison and Rhodes, 1980
Colorado	1971 13.4/1000	1978 6.9/1000	Bowes, 1981

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# Vanderbilt University Hospital Neonatal Intensive Care Unit Admissions

Year	Inborn (%)	Mortality (%)	Outborn (%)	Mortality (%)
1975	20.9	16.5	78.8	15.4
1976	32.9	10.8	67.1	15.2
1977	36.3	8.8	63.7	15.3
1978	37.2	8.9	62.8	12.0
1979	45.8	8.3	53.7	11.2
1980	52.0	5.0	48.0	7.0
1981	51.0	4.0	49.0	7.0

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<u>Doğum zamanı</u>	<u>Maliyet</u>	<u>Hastanede Kalış süresi</u>
<i>Doğumdan önce</i>	6473 \$	19 gün
<i>Doğumdan sonra</i>	12208 \$	27 gün

1000 g altında kalan 1 çocuęu yařatmak için yapılan masraf;

- 1981 yılında \$33,019,00 (Killam ve arkadaşları)
- 1978 yılında \$88,000,00 (Pomerance ve arkadaşları)

First C Section in Turkey  
1900 by Cemil Topuz

# Team Approach



# Ana Çocuk Saęlıęı – Rıfat Kse

- 1986-1990 yıllarında Dr. Barbar ile başladı.
- Perinatal tanı merkezi “PERİTAM” kuruldu.

Prof. Dr. Oktay Kadayıfçı

Prof. Dr. Tuncay Özgülen

Prof. Dr. Cüneyt Evrücke

Prof. Dr. Cansun Demir

Prof. Dr. Selim Büyükkurt

O. Kadayıfçı

Kadın Doğum  
Cerrahisi

Yenidoğan

Çocuk Hematolojisi

Çocuk Enfeksiyon

Çocuk Metabolizma

Çocuk Nörolojisi

Çocuk

Ortopedi

Genetik

Biyokimya

Patoloji

Devlet Planlama

O. Kadavut

- Kypros Nicolaides

- 1990 – Hacettepe Tıp Fakültesi – Prof. Dr. Sinan Beksaç  
Ankara Üniversitesi – Prof. Dr. Acar Koç ve Bora  
Cengiz

ÇAPA Tıp Fakültesi – Prof. Dr. Atıl Yüksel

Sayın Dağoğlu

Cerrahpaşa Tıp Fakültesi –

- Vildan Ocak
- Cihat Ően

- Perinatoloji Derneđi (1982)
- Fetomaternal Tıp ve Perinatoloji Derneđi (1998)

## **PIONEERS IN FETAL MEDICINE**

Members of our team have been pioneering advances in fetal therapy since the field originated several decades ago. In 1995, we recruited top fetal surgeons, obstetricians and advanced practice nurses to create the Center for Fetal Diagnosis and Treatment (CFDT) at The Children's Hospital of Philadelphia. Our program quickly became recognized as an international leader in fetal care.

A small, white rectangular box containing a handwritten signature in black ink. The signature appears to be "O. Kadavath".

# MORE OPTIONS IN FETAL SURGERY

As a field of fetal medicine continues to advance, more and more babies will be treated before they are born. At our Center, fetal therapies range from open fetal surgery to minimally invasive procedures.

Birth defects we have successfully treated with fetal therapies include:

- Amniotic band syndrome
- Bronchopulmonary sequestration of the lung
- Congenital cystic adenomatoid malformation of the lung (CCAM)
- Congenital high airway obstruction syndrome (CHAOS)

Birth defects we have successfully treated with fetal therapies also include:

- Intrauterine transfusion (IUT)
- Lower urinary tract obstruction (LUTO)
- Mediastinal teratoma
- Neck mass
- Pulmonary agenesis
- Sacrococcygeal teratoma
- Spina bifida/ myelomeningocele
- Twin reversed arterial perfusion sequence (TRAP sequence)
- Twin- twin transfusion syndrome (TTTS)

- Our fetal medicine staff members continue to work to improve maternal safety, refine surgical and imaging techniques, and offer new solutions to conditions developing in *utero*.
- Researchers at the Center are actively pursuing stem cell and gene therapies as new options to treat specific birth defects and congenital conditions before birth.
- One day soon, we hope to offer more fetal therapies to more expectant mothers and ultimately, help the next generation of babies enjoy healthier lives.

## EXPERTISE AND EXPERIENCE

As one of the most active maternal fetal centers in the nation, the expertise and experience of our Center staff is evident in our numbers;

- **More than 15,700 patients** have been referred to our Center.
- **More than 1,140 patients have undergone fetal surgery** at our Center, including almost 100 ex utero intrapartum treatment (EXIT) procedures.
- More than 750 combined years of research have been accumulated by Center staff.
- More than 5,000 reports about fetal Center, expert team, fetal medicine research and patient stories have been featured in mainstream media outlets.
- More than 500 articles about our basic and clinical research and fetal therapy discoveries have been written by our staff and published in medical journals.

A small, handwritten signature in the bottom right corner of the slide, which appears to read "O. Kadavil".

‘Normal Doğum Retrograd  
bir tanıdır.’

Prof. Dr. Oktay Kadayıfçı

O. Kadayıfçı