# Dialysis and Transplantation at PBBH 1960’s -1976

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<td>Dr. Doug Norman</td>
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How hemodialysis and peritoneal dialysis were developed as treatment options for large populations of patients with renal failure
Northwest Kidney Center Dr. Belding Scribner

Georgetown University Dr. George Schriner

Peter Bent Brigham Hospital Dr. John Merrill

Major Dialysis Centers in US in late 1960’s – Early 1970’s
MEDICAL PROGRESS

THE ARTIFICIAL KIDNEY

John P. Merrill, M.D.*

BOSTON

THE NEW ENGLAND JOURNAL OF MEDICINE

Fig. 3. Schematic Diagram of the Alwall Apparatus as Modified by Westinghouse.

Coils of cellophane tubing are wound between two sets of metal screens. The rotary pump provides pressure flow through the tubing from artery to vein. In practice three such units are placed in series.

Fig. 4. Dialyzer as Modified by Skeggs and Leonards.

In operation a spacing bar is placed between two sheets of cellophane (B) so that blood flows through these in one direction while dialysate flows on either side of the cellophane sheets in a countercurrent. (Redrawn from Skeggs and Leonards.41)
Travenol Tank Dialyzer
~ 1956 - 1975

Fig. 12. Typical tank-type hemodialysis system.
Dialysis Unit
A Main
Peter Bent Brigham Hospital

Kill Dialyzer

Device primarily used in Northwest Kidney/Scribner dialysis.
Kiil Dialyzer
~1958-1975
At Peter Bent Brigham Hospital in Boston in 1964, Barbara Fulton, RN, cares for a home training patient.

Elizabeth Cameron, RN, trains a home peritoneal dialysis patient at Peter Bent Brigham Hospital in Boston in 1964.
Hemodialysis in the Home

J. P. Merrill, MD, E. Schupak, MD, E. Cameron, RN,
and C. L. Hampers, MD, Boston

JAMA, Nov 2, 1964

Fig. 4. "Home dialysis." The patient is a 36-year-old accountant who has been maintained on home dialysis for one year. The entire operation is conducted by his wife. The procedure begins shortly after supper two or three times a week and is ended between 12 and 1 a.m. The patient is ready for work the next morning.

SURVIVAL OF PATIENTS UNDERGOING CHRONIC HEMODIALYSIS AND RENAL TRANSPLANTATION

Edmund G. Lowrie, M.D., J. Michael Lazarus, M.D., Altair J. Mocelin, M.D., George L. Bailey, M.D., Constantine L. Hamper, M.D., Richard E. Wilson, M.D., and John P. Merrill, M.D.

Figure 4. Survival Curves Comparing Home-Dialysis Patients with Recipients of Cadaver, Parental and Sibling Transplants. $\chi^2$ indicates the significance of the difference between the total curves. *Yearly decrement significantly different ($p<0.001$).
SHORT-TERM CONTINUOUS TRANSPERITONEAL DIALYSIS*

A Simplified Technic

Marcel Legrain, M.D.,† and John F. Merrill, M.D.‡

BOSTON
The use of an inlying plastic conduit for chronic peritoneal irrigation.
Merrill JP, Sabbaga E, Henderson L, Welzant W, Crane C.

Peritoneal dialysis and acute renal failure.
Hager EB, Merrill JP.

The Clinical Application and Technique of Peritoneal Dialysis.
Flannigan WJ, Henderson LW, Merrill JP.

Further experience with the inlying plastic conduit for chronic peritoneal dialysis.
Henderson LW, Merrill JP, Crane C.
Jack Moncrieff and Bob Popovich, developers of the concept of continuous ambulatory peritoneal dialysis (CAPD) 1976
Dr. John P. Merrill (right), Director of PBBH Cardiorenal Section, presenting Dr. William E. Hassan, Jr., Director, with a grant check in the amount of $100,000 from the American Medical Association Education and Research Foundation. The money was a bequest from Miss C. Doreen Youngs. The grant will finance construction of an additional floor, in the new medical research building, to be used in research in renal transplantation.
Kidney Foundation Makes Donation. The Massachusetts Kidney Foundation made a donation of $24,000 to the PBBH Cardiorenal Fund to be used for support of the inter-hospital organ bank. There was a meeting of the Women's Committee on January 28, attended by columnist Ann Landers, at which Dr. Merrill expressed thanks for the donation. From left to right standing: Dr. C. B. Carpenter; Dr. George Bailey; Mrs. Yanofsky, President of the Women's Committee of the Kidney Foundation of Massachusetts; Mr. Robert Abramson, Kidney Foundation President; Dr. John P. Merrill; and seated, Dr. Ramon Patel, Director of the Tissue Typing Laboratory.
AV Shunt
~1960

AV Fistula
~1968

AV Graft
~1970
Hollow-fiber dialyzer developed in 1968

The first family of hollow-fiber dialyzers (C-DAK, “Cordis Dow Artificial Kidney”)