Context:

Government to provide kidney dialysis at home under PMNDP.

In other words, the Centre plans to establish peritoneal dialysis services across states to provide door-step dialysis services for kidney patients.

Aim:

With home-based peritoneal dialysis service, the Centre seeks to –

A. Bring down the overall cost of treatment
B. Achieve equity in patient access
C. Bring in consistency of practice
D. Develop a clinically-safe and effective programme

Problems:

Every year about 2.2 Lakh new patients of End Stage Renal Disease (ESRD) get added in India resulting in additional demand for 3.4 Crore dialysis every year.

ESRD continues to be a result of existing and emerging burden of non-communicable disease.

The burden of Non-Communicable Diseases (NCDs) has been alarmingly increasing and was flagged in the special UN convention for Health.

Peritoneal dialysis:

Peritoneal dialysis is a process to remove excess fluid, correct electrolyte problems and remove toxins using the lining of the abdomen, or peritoneum, in patients suffering from renal failure.

There are two main types of dialysis, which are haemodialysis and peritoneal dialysis.

Haemodialysis:

Haemodialysis (HD, commonly known as blood dialysis): In HD, the blood is filtered through a machine that acts like an artificial kidney and is returned back into the body.

HD needs to be performed in a designated dialysis centre. It is usually needed about 3 times per week, with each episode taking about 3-4 hours.

Peritoneal dialysis:

Peritoneal dialysis (PD, commonly known as water dialysis): In PD, the blood is cleaned without being removed from the body.

The abdomen sac (lining) acts as a natural filter. A solution (mainly made up of salts and sugars) is injected into the abdomen that encourages filtration such that the waste is transferred from the blood to the solution.

There are 2 types of PD - continuous ambulatory peritoneal dialysis (CAPD) and automated peritoneal dialysis (APD). CAPD needs to be done 3 to 5 times every day, but does not require a machine. APD uses an automated cycler machine to perform 3 to 5 exchanges during the night while the patient is asleep.
Close medical supervision is not required for most PD cases, thus making it a feasible option for patients who may want to undergo dialysis in the home setting. Each treatment option has its advantages and disadvantages, which vary with the condition of the patient and presence of underlying diseases. It is therefore important for every patient with ESRD to discuss various treatment options in detail with his doctor before starting treatment.

The majority of patients in India receive renal replacement therapy in hemodialysis center. The number of patients on Hemodialysis and the number of hospital based and free standing units is steadily growing.

A dialysis unit delivers patient care, and has specific requirements of treated water, electricity, medical gases and waste disposal. It additionally requires accommodating all the workers involved in patient care, allow emergency procedures, permit adequate hygiene and maintenance of specialized equipment. The design and layout of a unit must take into account all the above features in order to function smoothly and prevent development of complications. Proper planning of a dialysis unit is therefore essential.

**About Pradhan Mantri National Dialysis Program**

It was rolled out in 2016 as part of the National Health Mission (NHM) for provision of free dialysis services to the poor.

**Public Private Partnership for Hemodialysis services**

As per the guidelines, the private partner is to provide medical human resource, dialysis machine along with Reverse Osmosis (RO) water plant infrastructure, dialyzer and consumables, while the space, power, and water supply within District Hospitals is to be provided by the State Government.

**Financial support**

Currently, under NHM 100 % of the service procedure fees for patients from below poverty line (BPL) economic group is covered. However, non BPL patients would have the benefit of accessing the services close to the community at the district hospitals at same rates as paid by the Government for the BPL patient.

While there exist health schemes such as Rashtriya Swasthya Bima Yojana (RSBY) funded by Govt. of India which cover hemodialysis procedure, it is evident that due to high cost and recurring sessions required over the life time, the total cost for providing dialysis cannot be adequately covered. However, for BPL families registered under RSBY, the cost of dialysis care shall be catered through RSBY funding upto its maximum coverage. The additional resources required would be provided to the state under the National Health Mission.