

rooms, hereafter referred to, because the bedpans are washed and sterilized after use in the utility rooms. The compartments for blankets and bedpans are better heated by steam but the one for solutions will be better heated by electricity due to the fact that to keep solutions at the proper temperature for immediate use accurate automatic control of the temperature is necessary and the electric heating is best adapted for this purpose. This compartment for solutions is not generally necessary, however, except in the surgery and maternity departments.

Surgical dressing rooms must have provision for sterilizing water, instruments and utensils. Dressings may be sterilized at the central station. If it is adjacent to the main sterilizing room the equipment there may be utilized, but if not adjacent and in a large hospital, separate sterilizing equipment should be provided for this room. In case the sterilizing equipment of the operating rooms are used for this purpose a little liberality in their equipment should be practiced.

For surgical dressing room in a small hospital a 6 gal. water sterilizer, one 8 in. x 9 in. x 18 in. instrument sterilizer and 16 in. x 15 in. x 20 in. utensil sterilizer will suffice. For larger hospitals the next size larger equipment in each case should be provided.

In the laboratory there should be installed an autoclave, which is simply a dressing sterilizer without the jacket, for the wet sterilizing of material. A 16 in. x 24 in. will suffice for a 100 bed hospital. Two larger sizes, approximately 18 in. x 26 in. and 22 in. x 30 in. are available for larger hospitals or for very busy laboratories.

Utility Rooms

So called *utility rooms* should be provided in all hospitals, one or more on each floor, depending upon the area served, for all bed patients. Separate utility rooms should be provided for surgical ward and maternity departments.

Each utility room should contain, in addition to combination sink and tray, one 20 in. x 20 in. x 24 in. utensil sterilizer and one bedpan sterilizer. Those serving surgical and maternity patients should also contain an 8 in. x 9 in. x 18 in. instrument sterilizer and a 10 to 15 gal. water sterilizer.

The bedpan sterilizer is a combination bedpan washer and sterilizer and is available only for steam heating. If steam is not available simply a bedpan washer, which uses hot water but no steam, should be provided for washing bedpans and a 16 in. x 15 in. x 20 in. utensil sterilizer alongside the washer must be provided solely for the purpose of sterilizing bedpans. The utensil sterilizer of course may be for gas or electric heat.

Nursery

In the nursery equipment for pasteurizing milk and sterilizing milk bottles must be provided. In a small hospital this may be a combined pasteurizing and sterilizing outfit but in larger ones time will be conserved by installing separate pasteurizing and bottle sterilizing equipment. Pasteurizers are obtainable in 54-72-144 and 288 bottle capacity, 8 oz. nursing bottles. About one hour is required for a cycle as laws frequently require the pasteurizing process to consume 30 min. When bottle

sterilizing is done separately a pressure type sterilizer for nursing bottles is provided. Such a sterilizer must be used for no other purpose.

Sterilized water of course is required in the nursery and various considerations may decide whether or not a small water sterilizer must be installed there.

Special Sterilization

Where contagious diseases may be handled provision should be made for dish sterilization. On a large scale dishes from contagious patients are sterilized in special sterilizing dish washing machines. On a small scale however, a 20 in. x 20 in. x 24 in. utensil sterilizer fitted with special racks will serve the purpose. The sterilizing dish washing machines are referred to in the section on kitchen equipment.

For sterilization of mattresses, see the laundry equipment section of this chapter.

Specifying Sterilizers

The different manufacturers have sizes of sterilizers which are approximately the same but not absolutely standardized as to sizes. It is therefore advisable when specifying sizes to give approximate inside dimensions and minimum capacity in cubic inches and in cases, like the mattress sterilizer referred to, where for some reason there are certain limitations on certain dimensions these limitations should be stated.

Piping Systems and Pipe Sizes

Steam and return pipe sizes for sterilizers are almost nominal and the amount of steam used by such equipment is so small as to be negligible if drawn from a central plant for the heating. More detailed data is given in tabular form hereinafter.

A $\frac{1}{2}$ in. supply and return connection is ample for any utensil, instrument or dressing sterilizer. Water sterilizers up to 15 gal. use $\frac{3}{4}$ in. supply and $\frac{1}{2}$ in. return, above that size 1 in. supply and $\frac{1}{2}$ in. return. For the large mattress sterilizers use $1\frac{1}{4}$ in. supply and $\frac{3}{4}$ in. return. Water stills up to 6 gal. use $\frac{1}{2}$ in. supply and return.

When sizing the steam and return mains it may be assumed that all sterilizers will be in use at one time in a small hospital and half of them in a large hospital. The mains can then be sized by the usual table of equalization of pipe sizes. A return main one half the diameter of the steam main, with $\frac{3}{4}$ in. as minimum size, may be used.

The uniform practice is to provide a thermostatic trap on the return from each coil or unit of the size given previously for return connection. The return main should itself be vented and condensation should return by gravity to a vented receiving tank.

When gas is used a $\frac{1}{2}$ in. connection is made to each instrument, dressing and utensil sterilizer. Water sterilizers up to 15 gal. capacity should have $\frac{3}{4}$ in. gas line and above that size 1 in. line. The mains should be sized on an equalization basis same as explained for steam supply lines, assuming all sterilizers in use in a small hospital at the same time and half of them in a larger hospital.