## ABSTRACT

### Supply and Normative Need Gap Analysis as the basis for Preparation of Capacity Plan in Central Sterile Supply Department

**Background:** Surgical site infections may occur when the site is exposed to non-sterile medical devices and materials. In 2018, the Surabaya Islamic Hospital Ahmad Yani CSSD report showed that, on average, the number of sterile linen shortage was 3 sets per month and sterile medical instruments shortage of 1 set per month in the operating room. While in 2016 to 2018, the average rate of rejects on the autoclave steam engine control load was 3.11% and the average rejects rate in the medical devices and sterilized linen products was 3.48%. These results indicated that the number of rejects in load control, and the number of rejects from sterilized medical devices and linens have not met the standards set by the hospital. This study aimed to develop a CSSD document capacity plan through a gap analysis of normative need and supply. **Method:** An observational study for 4 months through some reviews of hospital internal documents, interviews, observation, and focus group discussions. The research subjects were CSSD unit and other users. The forecasting formulas used were Trend Projection and Single Exponential Smoothing for determining normative needs. The gap is then measured between supply and normative need for CSSD services. **Results:** The finding shows a projection of increasing operating room visits and other units of CSSD user. So, more medical instruments and sterile linen are needed. To meet normative needs, the addition of medical instruments and linens is necessary for the operating room and outpatient care. The autoclave machine must be able to meet the needs until 2023, also paying attention to the number, qualifications, competencies and health protection systems of the CSSD officers. The building structures, facilities, infrastructure and supporting machinery, quality control standards and internal policies are made specially to support the CSSD services. The Capacity Plan document is structured through three strategies, increasing capacity, transfer capacity, and debottlenecking. **Conclusion:** The CSSD capacity plan is designed to alleviate the shortage rate of sterile medical instruments and linen. Also, to increase the guarantee of sterility of CSSD products so that CSSD quality standard is able to support patient safety.

**Keywords:** CSSD, Capacity Plan, Normative Needs, Supply

# ABSTRAK

## Analisis Kesenjangan *Supply* dan *Normative Need* sebagai Dasar Penyusunan Rencana Kapasitas CSSD

**Latar belakang:** Infeksi daerah operasi terjadi jika ada paparan alat dan bahan medis yang tidak steril. Tahun 2018, laporan CSSD Rumah Sakit Islam Surabaya Ahmad Yani menunjukkan angka rerata kekurangan stok linen steril sebesar 3 set perbulan dan instrumen medis steril sebesar 1 set perbulan di kamar operasi. Sementara tahun 2016-2018, angka rerata *reject* pada *control load* mesin *steam* autoklaf sebesar 3,11% dan rata-rata *reject* pada alat medis dan linen hasil sterilisasi sebesar 3,48%. Capaian tersebut membuktikan angka *reject* pada *load control*, dan angka *reject* alat medis dan linen hasil sterilisasi belum memenuhi standar yang ditetapkan oleh rumah sakit. Penelitian ini bertujuan untuk menyusun dokumen Rencana Kapasitas CSSD melalui analisis kesenjangan *normative need* dan *supply.* **Metode:** Penelitian observasional selama 4 bulan melalui telaah dokumen internal rumah sakit, wawancara, observasi, dan *focus group discussion*. Subyek penelitian adalah unit CSSD dan unit pengguna CSSD lain. Formula *forecasting* yang digunakan adalah *Trend Projection* dan *Single Exponential Smoothing* untuk menentukan *normative need*. Untuk kemudian diukur kesenjangan antara *supply* dan *normative need* layanan CSSD. **Hasil:** Penelitian menunjukkan kenaikan proyeksi kunjungan kamar operasi dan unit pengguna CSSD lain, sehingga membutuhkan instrumen medis dan linen steril dengan jumlah yang lebih banyak. Untuk memenuhi kebutuhan normatif, maka perlu ditambah set instrumen medis dan linen di ruang operasi, dan rawat jalan. Kapasitas dan kemampuan mesin autoklaf harus bisa memenuhi kebutuhan sampai tahun 2023, selain itu juga memperhatikan jumlah, kualifikasi, kompetensi SDM dan sistem proteksi kesehatan petugas CSSD. Teknis bangunan, fasilitas, sarana prasarana dan mesin penunjang, standar *quality control* dan kebijakan internal dibuat untuk mendukung proses pelayanan CSSD. Dokumen perencanaan kapasitas disusun melalui tiga strategi, menambah kapasitas, kapasitas transfer dan *de bottle neck*. **Kesimpulan:** Perencanaan kapasitas CSSD dirancang untuk menurunkan angka kekosongan instrumen medis dan linen steril serta meningkatkan jaminan sterilitas produk CSSD sehingga standarisasi mutu CSSD mampu mendukung keselamatan pasien.

**Kata Kunci:** CSSD, Rencana Kapasitas, *Normative Need*, *Supply*