

Section 1: System Wide Clinical Ultrasound Director and Committee

A.J. Dean, Mike Zwank, Robert Strony, Jen Marin

The System-Wide Clinical Ultrasound (SWCUS) Director will interact with individuals and/or groups of practitioners using Clinical Ultrasound (CUS) in a variety of practice environments. These include critical care units, operating rooms, procedural and interventional units, inpatient floors, and outpatient clinics. CUS practice patterns are likely to evolve due to changing medical practices at national, regional, and institutional levels. Similarly, the SWCUS Director's responsibilities are also likely to evolve over time. It is essential that the SWCUS Director develop a qualified team that has the support of the Institution as well as its workforce. This section discusses the formation of such a team.

Qualifications for role of the SWCUS Director

There are no specific paper qualifications, society credentials or fellowships that are either sufficient or necessary conditions for the SWCUS Director. The SWCUS Director should have experience leading a divisional or departmental CUS program, and be familiar and when possible, have experience/expertise with the majority of the CUS applications in use at their institution. In addition, experiences in leadership, education, mentorship, and administration will enhance the effectiveness of the SWCUS Director.

SWCUS Committee Formation

Often, the SWCUS Director will be a member of an emergency department (ED) with a robust departmental infrastructure to support the work entailed in this position; however, it is also possible that a suitably qualified clinician from other specialties could be directly engaged by the institution independent of the ED. The SWCUS Director will need to assemble a SWCUS Committee which will include representatives from each of the divisions/departments using Clinical Ultrasound. These individuals should be appointed either by their clinical service line director or by colleagues in their practice setting. We anticipate that such representatives would be chosen based on clinical excellence, ultrasound expertise and interest.

Other members of the Institutional SWCUS Team

In addition to the Committee, the CUS team will typically include a senior administrator appointed by the hospital/health system, an administrative assistant, an information security systems representative, and senior IT analyst (**Figure 1**). Members from other groups such as electronic medical records, purchasing, biomed, finance, billing and coding, and medical education/simulation may also be included as standing or ad hoc members, depending on institutional preference.

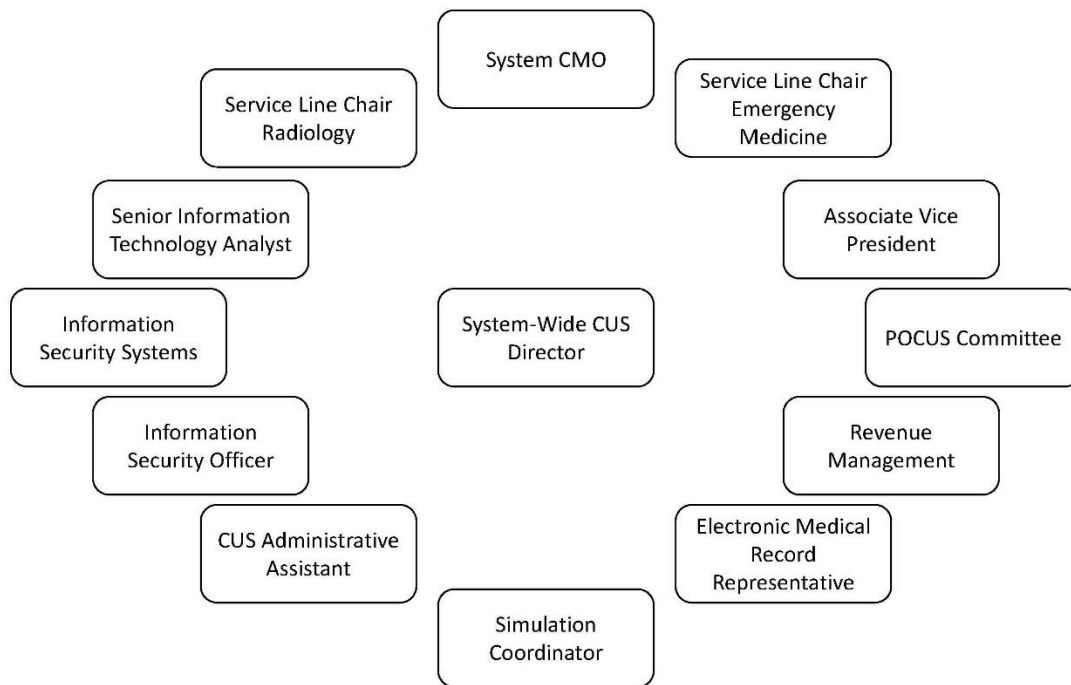


Figure 1.

Responsibilities of the SWCUS Director and the SWCUS Committee

It is likely that the SWCUS Director and SWCUS committee will have more of a consultative and facilitative role with the various CUS user-groups, than one of direct authority or supervision. Such an arrangement coheres with the traditional organizational patterns in medicine in which medical specialties determine their own practice and quality assurance standards as mandated by the American Medical Association and other professional organizations. In each practice setting, the person designated as the representative on the SWCUS committee should be responsible for overseeing the quality of SWCUS examinations within his/her division/department This is likely to include the following areas of focus:

In addition to interfacing with representatives from various divisions/departments, the SWCUS Director and SWCUS committee will coordinate continuing CUS education, help assess competency, assist with creating institutional CUS guidelines, ensure effective quality improvement, coordinate capital purchases, develop system wide CUS workflow/archiving solutions, and assist with CUS revenue management. The goals will be easy and coherent communication among providers, avoidance of duplication of services, and high standards across the institution in all settings and at all times.

Support from Hospital Administration

The SWCUS Director and other members of the CUS team will require support both from the Administration as well as the Medical Executive Board of the institution. Depending on institutional preference, the appointment should come from one or both of these, or a committee of equivalent stature. We suggest that the Director should report to a system -

level administrator such as a CEO, CMO, or president of the Medical Executive Committee depending on the relevant organization of the institution and/or institutional preferences.

The wide-ranging responsibilities of the SWCUS Director require a significant commitment of time. We recommend a 0.5 full time equivalent (FTE) for this role. The exact commitment will vary depending on additional departmental responsibilities and the overall size of the health system. The responsibilities and estimated time commitments of the SWCUS Director are summarized in **Table 1**. In addition, the team supporting the SWCUS Director’s efforts, as well as the work of the SWCUS Committee, will extend the manpower requirements of this task. In addition to financial support, the SWCUS Director will require clerical/administrative support and IT resources. If institution-wide QA/QI duties are assigned to the SWCUS Director, they will need additional assistance and quality resources.

Table 1: SWCUS Director Responsibilities

Duty	Upfront or Recurring	Commitment
Program establishment (including development of SWCUS Committee, credentialing documentation, middleware/workflow pathway, quality assurance policies)	Upfront	5-10 hours per week for up to six months
Education (multidisciplinary CUS conference, division/department CUS courses, teacher/instructor workshops, ultrasound journal club, system curriculum creation, simulation training sessions)	Recurring	2-4 hours per week 4 hours monthly (conference) 16 hours bi-annually (internal course)
Chair, SWCUS committee Meeting	Recurring	2 hours per month or quarter
Quality assurance oversight	Recurring	8 hours per week
Hospital administration meetings (eg. credentialing committee, Medical Executive Committee)	Recurring	2-4 hours per quarter
Ultrasound equipment monitoring and purchasing, inventory monitoring and replacement	Recurring	2-4 hour per month
Workflow/middleware maintenance and integration into departments, IT analyst meetings	Recurring	6 hours per week (significant increase when integrating middleware into other departments)
Additional responsibilities: (eg. Outreach performing CUS consultative shifts at various departments and hospitals across health system)	Recurring	8 hours twice a month

Because CUS is a reimbursable procedure with both professional and technical fees, it is of financial benefit to institutions. Financial support will be needed for initial and future equipment, infrastructure, standardized IT workflow development as well as ongoing maintenance, upkeep, QA/QI review, education, and capital purchases. In many cases, it will be necessary to provide some form of compensation for practitioners who are dedicating time to extending their clinical practices into the field of CUS. It is recommended that the SWCUS Director develop a budget based on likely revenues and costs generated through CUS at the time of inception of the program, with annual adjustments based on evolving needs as well as yearly reportable, operationalized metrics.

Summary

The formation of a team to coordinate CUS services requires extensive planning, preparation and investment of resources. It involves a Committee that includes representatives from every division/department provider group that performs CUS in the institution. In addition to the Committee, other stakeholders and non-medical resources (from Finance to Information Technology) will need to be part of the CUS team. Investment in such a team supported by appropriate infrastructure is likely to result in improved CUS services, efficiency, quality, compliance and revenue.