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Planning for the Next Phase of Interventional Care: The Combined Interventional Platform

By James Burns

With continuing advances in catheter-based therapies, one thing is certain as a result — many types of changes are going to occur within interventional suites across the county. Considering that construction and equipment costs average over $4 million for one lab and its support space, as well as the additional on-call costs and lifestyle burdens for existing staff members, adding another specialty focused area is not always an option.

Recent study findings from the DAWN trial, 1 which Corazon believes will drive the development of formal thrombectomy programs across the county, will only add to the demand. This cross-sectional study has demonstrated the benefit of thrombectomy for large-vessel occlusion stroke and the effectiveness of interventional stroke care for an extended time period of up to 24 hours, which is much longer than current practice.

With the predicted transition from standalone traditional tPA therapy to thrombectomy, the overall number of stroke cases identified within the treatment windows is predicted to significantly increase. This will, in turn, create a greater demand for interventional space within hospitals. The cost of adding a new lab can be prohibitive and leaving specialty-based procedural areas underutilized is not cost effective.

One option, although not without challenges, is to begin to combine services into one group of "Interventional Platform" suites. While not necessarily feasible in higher-volume, large facilities, co-locating "like" interventional services into one main area can make sense for community-sized facilities. Corazon has assisted many hospitals in evaluating, and in some instances, implementing, this model of care. As a result of this experience, Corazon has condensed key considerations into the acronym **S.H.A.P.E,** outlined as follows:

S – Staffing Considerations. While the basic platform for interventional procedures is the imaging equipment, there are a number of nuances for the various case types that require specialized skills. Thus, any planning needs to consider the appropriate time and structure for staff cross-training. This will take an investment of time that may include some overlap of positions to ensure that all cases have experienced staff with the necessary skill set in the room. A good place to start is to define what the final expectations will be for each position, and then update job descriptions to match those expectations. A detailed education and skill evaluation program should follow.

Neither of these activities should be done in a vacuum; all physicians who will be using the suite should have input into who will be supporting their cases and what their expectations for these staff members will be.

It is important for all planning members to keep an open mind, as roles may change significantly in each case type and from what the historical expectations for those positions have been. It is also essential to roll out expectations for existing staff once decisions about those positions are complete. Be prepared for some dissent, and perhaps even the loss of an employee or two; but in Corazon's experience, the majority of team members will respond positively to the changes provided — IF the expectations, timelines and resources are clearly defined well before any changes are implemented. Program leaders must then be prepared to make some adjustments out of the gate, as some positions, based upon physician preferences, may not work well when combined, at least at first.

H – Hospital Commitment. While this may seem like an easy obstacle to overcome, hospitals moving toward shared platforms have experienced a number of challenges. As with staffing, a planned, stepwise approach, with the commitment of appropriate resources and capital investment, is essential. Most importantly, leadership structure for the department needs to be established. This person must be able to think abstractly in order to work through the challenges they will face while making the plans a reality. This leader needs to have hospital diplomacy skills that will allow them to "sell" physicians, executives, staff, and even board members on the model. In addition, an accountable project leader will need to be assigned. This may be the service line leader, depending on current workload and availability.

However, neither of these positions will be successful without a playbook. A well-researched business plan and timeline is an essential pre-planning step. While defining initial investments and desired outcomes at the beginning of the project, this plan can also lay the groundwork for facility and staffing needs that will be addressed during the implementation phase. In terms of facility planning, hospital leadership will need to consider upgrades to the current equipment and space, as well as address additional needs due to the new services. Ample support and post-care area space will be needed to allow for seamless patient experiences.

While a number of community-level hospitals currently use shared prep/recovery areas in addition to combined nursing units, capacity and staff skill sets in these areas should be considered. Changes to the current interventional area footprint will need to be planned to accommodate both the additional equipment and inventory.

Consideration must also be made for documentation systems and image storage capabilities and capacity, and then, how these can be integrated into the current electronic medical record. Finally, hospital leadership will need to ensure that the proposed space meets all criteria outlined by their state's department of health for each of the proposed case types. This may require additional facility investment to satisfy infection control and air handling standards that are more stringent for certain types of procedures.

A – **Accountability.** Accountability, in this scenario, equates to quality. A solid physician credentialing and privileging program will need to be developed in order to set the standards of "who is doing what" in the newly combined space. This should include solid inclusion/exclusion criteria for all case types to be performed in the area, as well as emergency protocols to address the need for a higher level of care potentially requiring an emergency transfer to the operating room or even to a tertiary partner.

Forums will need to be developed or adapted from existing structures to address quality monitoring and program oversight. The forums should include specialty-specific groupings to address issues and outcomes within specific case types, as well as an overall quality forum in which all practitioners participate. Hospital leadership for the program needs to assure that matrix relationships to nursing, radiology, rehabilitation, and other complementary departments are developed and maintained. This leader will also be charged with the operational, financial, and clinical performance of the area; goals for these areas should be defined early in the development process, preferably in the preplanning phase.

P – **Physicians.** The issues of training and experience should be clear and well-defined at the onset of the expansion project, in addition to the clinical and programmatic expectations. Physician collaboration is an essential component of the program's success. Obstinate and close-minded physicians, regardless of their skill sets, will not be a good fit for these types of advanced programs. The difficult physician may even hamper progression of the program, as physician input and collaboration is crucial in all phases of development to ensure ongoing success. It will be a primary responsibility of the program leader to engage physicians and outline expectations. Medical directorship is also an important consideration that should not be overlooked. Co-medical directors may be necessary to circumvent political pitfalls at program launch, but these directors need to be active positions that lead the program in clinical quality and operational performance. Directorships in name only will not suffice.

E – **External Environment.** A significant investment should be planned to re-educate emergency medical services (EMS) personnel as well as all community referring physicians and partner facilities. Historic referring and transport processes will, no doubt, have to change.
It is essential that a solid marketing plan around the "message" of improved clinical and customer experience be cornerstones of communications, both internal and external. The last thing that should happen after all of this planning and investment is to have a referring physician's office be told the cath lab is no longer operating and the referral sent elsewhere.

While these outlined steps may seem daunting, they are not all-inclusive. There are a number of additional steps that must happen to keep the project moving forward. The initial step should be a comprehensive plan that will help to ensure that the transition makes clinical and financial sense for your organization…and that sustained program viability in the form of clinical, operational, and financial excellence is the ultimate outcome.

Reference
1. Jovin TG, Saver JL, Ribo M, Pereira V, Furlan A, Bonafe A, et al. Diffusion-weighted imaging or computerized tomography perfusion assessment with clinical mismatch in the triage of wake up and late presenting strokes undergoing neurointervention with Trevo (DAWN) trial methods. *Int J Stroke.* 2017 Aug; 12(6): 641-652. doi: 10.1177/1747493017710341.

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