



The Heart Institute of Spokane Continues to Enhance Practice Using Apollo Advance



The Heart Institute of Spokane

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Tamara Hedin, Clinical Data Coordinator
The Heart Institute of Spokane

The Heart Institute of Spokane Highlights

Streamlined registry participation. The Apollo cardiovascular information system serves as a straightforward and effective vehicle to submit data to the state and national registries.

Data-driven quality assurance programs. Apollo allows for highly customized views, making it easier and faster to capture the exact data needed to drive quality assurance efforts.

Fingertip access to data. Apollo delivers powerful database capabilities including fingertip ease in accessing all the data captured.

Data integrity ensured. Apollo fosters automated data collection—eliminating redundant data entry and the potential for manual errors.

Faster treatment of care. Apollo data management delivers more comprehensive reports to the chart faster; the result: fewer questions and fewer delays, helping to speed treatment of care.

Seamless Electronic Medical Record integration (EMR). Apollo works directly with EMR, contributing to improved workflow.

For over 40 years, breakthrough innovation and vigorous leadership in cardiac care and research have been hallmarks of the Spokane, Washington cardiology community. Beginning in the 1950's, Spokane surgeons were among the first to perform open-heart surgery, using a prototype of today's heart-lung machine. In the 1970s, Spokane's controversial early surgical intervention dramatically improved the outcome for patients having heart attacks. More recently, Spokane research changed the way physicians worldwide manage patients by demonstrating the presence of coronary thrombosis in the pathogenesis of acute myocardial infarction.

From this milieu of original thinking and discovery emerged The Heart Institute of Spokane, a not-for-profit organization founded in 1989. The Heart Institute of Spokane is a freestanding, independent, outpatient cardiovascular diagnostic/treatment and research facility providing diagnostic and therapeutic services in two catheterization labs, exercise testing, x-ray, cardioversions, and research. This comprehensive package of services at one site facilitates ultra-responsive patient focused pre- and post-procedure care.

Reports that Drive Clinical and Operational Excellence

Three years ago The Heart Institute of Spokane began using the Apollo cardiovascular information system (CVIS) as a straightforward and effective vehicle to submit data to the state and national registries. Supporting The Heart Institute's registry participation—as well as its clinical, research, and education departments—is the clinical database maintained by Tamara Hedin, clinical data coordinator. Hedin works closely with clinical staff, physicians, and the IS Department to coordinate the acquisition and input of relevant data, and to produce meaningful quality improvement reports that enhance the key functions of The Heart Institute of Spokane.

According to Hedin, "The Apollo database is a wonderful tool for our organization, and finding new ways to utilize all of the data we capture is very exciting." Over the years, Apollo has enabled The Heart Institute to:

- Generate patient reports concurrent to the patient's heart catheterization, resulting in faster and more accurate case documentation.
- Track complications relating to each patient case, as well as how long the case took and length of patient recovery. Thereby creating a means to benchmark quality outcomes.
- Track overall procedure volumes, helping The Heart Institute more effectively budget resources.
- Monitor inventory more effectively to ensure proper stock levels, minimize waste, as well as promote more accurate and timely billing of items.
- Manage staff utilization to promote efficiency and reduce workload.
- Produce quality improvement (QI) reports for the Clinical Department, enabling the staff to develop and implement quality assurance programs.
- Monitor application of medications—what was administered and when—to support patient care.

"We're able to generate many helpful reports because Apollo allows for highly customized views. Customized views make it easier and faster to capture the data we need, and act on that data to enhance patient care. What's great is that all the information is at our fingertips."

Speeds Treatment of Care

Hedin explains that the Apollo templates and picklists used to facilitate data collection and reporting were developed using "our physicians standard verbiage. We have personalized the reports to match the dictation style of our doctors, while at the same time ensuring all of the legal aspects of a patient report are met. The transcriptionists have been trained to capture the data at the time of the heart catheterization/percutaneous coronary intervention. The physician dictates to the transcriptionist as the case is going on and the report is on the chart immediately upon completion of the case. Clinical staff then has instant access to the report, which includes discharge orders."

Hedin notes that the surgeons are very pleased to have a report immediately available on the chart as well. In addition, "through more comprehensive case documentation, surgeons are able to see exactly what is going on with the case based on the detailed report generated by the cardiologist. The result: fewer questions and fewer delays, helping to speed treatment of care. Both physicians and medical records staff have remarked that there are no more delays in getting reports transcribed."

Reports Completed, Finalized at the Point of Care

Contributing further to a more accurate and inclusive picture of the patient's condition and treatment is Apollo's data auto-collection capability. Hedin explains "the automated data flow from our Quinton Hemodynamic System into Apollo eliminates redundant data entry, thereby limiting the potential for manual errors while ensuring accuracy and data integrity. The Quinton data can then be managed, analyzed, and reports generated through Apollo.

"Because data is being collected and a report is generated at the point of care, physicians can review the report as soon as the case is completed, make adjustments to the report and finalize it immediately. This is in stark contrast to the previous process of the physician dictating the results, a transcriptionist typing the report, the physician then going back to review, edit, and sign off on the document to complete the procedure. In addition, with a report completed at the point of care, nurses have a sheet with everything they need to start post-operative care without delay.

"An added benefit of Apollo is that it works well with EMR. We send Apollo reports directly to an EMR and the seamless integration between the two programs helps expedite operations, improve workflow, and eliminate wasteful duplicate efforts.

"In using Apollo, our vision was to work with the physicians to track that information that would directly and significantly improve their practice—extending beyond registry participation. Taking it a step further, our continued use of Apollo supports The Spokane Heart Institute's mission of *Serving the community—contributing to the world.*"

About LUMEDX: With over 500 heart center clients worldwide, LUMEDX is the market leader in fully integrated cardiovascular information systems and the No. 1 independent integrator of cardiology information solutions. LUMEDX offers the most proven, comprehensive package of clinical information tools, cardiovascular products, and services to help medical institutions enhance quality of patient care, reduce costs, streamline workflow, increase patient volume, and grow revenue.





THE HEART INSTITUTE OF SPOKANE

122 West 7th Avenue
Spokane, Washington 99204-2325
(509) 625-3090

Patient:		Birthdate:	
Physician:		Procedure Date:	11/26/02
HI Acct:	SHMC Acct:	Page:	4
CD#:	SS#:		

CARDIAC CATHETERIZATION PERCUTANEOUS CORONARY INTERVENTION REPORT

PROCEDURE PERFORMED: Left heart catheterization, coronary angiography and left ventriculography, and stenting of the distal right coronary artery by Dr. Artery.

INDICATIONS:

Positive functional tests.
Ischemic heart disease, known coronary artery disease.

PROCEDURE NOTE: After obtaining informed consent the patient was brought to the catheterization lab in a fasting state. The right femoral area was prepped and draped in the usual manner. The right femoral artery was localized without difficulty and a sheath was placed. A #6 French JL4 catheter was used to engage the left coronary artery, and it was imaged in multiple views. A #6 French JR4 catheter was used to engage the right coronary artery, and it was imaged in multiple views. A #6 French straight pigtail catheter was used to perform ventriculography. Ventriculography was performed and recorded in the RAO 30 projection using single plane cineradiography.

Hemostasis will be obtained using manual pressure followed by a Syvek patch.

Heparin given: None.

COMPLICATIONS: No complications.

LEFT VENTRICULOGRAPHY: The estimated ejection fraction was 65%. There was no mitral regurgitation noted. No obvious wall motion abnormalities were noted.

HEMODYNAMICS

State: REST

PRESSURES:

Site			Mean	Heart Rate
LV	136,	12,	21	67

State: POST ANGIO

PRESSURES:

Site			Mean	Heart Rate
PB LV	134,	13,	25	68
PB AoA	140,	74,	100	68



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CORONARY ARTERIOGRAPHY

CORONARY DOMINANCE: Right.

LEFT MAIN: Moderate caliber vessel with no disease.

LAD: Large caliber vessel producing multiple small diagonal branches, there is a stent in the proximal to mid vessel with no stenosis.

LCX: Moderate caliber producing single large obtuse marginal with no disease.

RCA: Moderate caliber dominant vessel with a distal 60-70% stenosis.

IMPRESSIONS:

1. No evidence of restenosis in the left anterior descending stent.
2. 60-70% stenosis of the right coronary artery coordinating with the ischemia identified on the thallium.

PLAN:

Intervention of the right coronary artery. Alternatives of following this and treating medically were discussed with the patient. The patient expressed a preference for percutaneous intervention with stenting.

Thank you for asking The Heart Institute of Spokane to be involved in the care of your patient.

Dictated and Authenticated By:
Dr. Artery

DA:th
D/T: 11/26/02 10:12
CC: Dr. Artery
Sacred Heart Medical Center
Dr. Coronary



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Spokane, Washington 99204-2325
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CD#:	SS#:		

INTERVENTION: Coronary intervention was performed by Dr. Michael Ring via the right femoral approach using the standard Judkins technique. 5000 units of Heparin and 300 mg of Plavix was administered. A #6 French sheath was placed and a #6 French JR4 guiding catheter was utilized. The distal right coronary lesion was crossed with a 0.014 BMW guidewire. Aggrastat was initiated. The lesion was stented with a 3.5 x 15 mm Zeta stent and deployed at 10 atmospheres x 35 seconds with reduction of the 70% lesion to 0% residual.

The patient was given light sedation with a combination of Versed 4 mg and Fentanyl 200 mcg., which was tolerated well. The patient was continuously monitored with ECG, blood pressure, and pulse oximetry. The patient left the catheterization lab in stable condition having experienced no complications. For complete details please refer to the procedure log.

Post Procedure ACT: 227.

The sheaths were sutured in place and hemostasis will be accomplished using manual pressure in the patient's room.

IMPRESSION: Successful stenting of the distal right coronary artery using a 3.5 x 15 mm Zeta stent.

PLAN: Aggrastat drip overnight, recommend Plavix for approximately 2 months.

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