

# **Cardiac Care Teams: A Collaborative Practice Model with Non-Physician Providers**

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**Abstract:**

Innovative physician groups are looking for more effective ways to enhance their growing practices. Expanding the bounds of teamwork *through an effective professional partnership with Non-Physician Providers*, elicits excellent outcomes. This article provides an overview of the issues and a practical example of how a cardiology practice realized their goal.

*"Alone we can do so little; together we can do so much."* -Helen Keller

## **Introduction**

It will come as no surprise to a practice trying to recruit cardiologists that there is a workforce shortage plaguing the field of cardiology. As new technologies and new methods of treatment evolve, and the population ages creating more people with heart disease, the demand for cardiologists increases. Additionally, the desire for work-life balance is important to many physicians entering practice, which further exacerbates the work shortage issues. This creates exhausted and overworked physicians trying to meet the demands of a busy practice.

## **Materials and Methods**

Recognizing the need to increase their staffing, but unable to find cardiologists, some cardiology practices are choosing to enhance their services by hiring Non-Physician Providers (NPPs). The term NPPs encompasses nurse practitioners, certified nurse midwives and physician assistants as recognized by the American Academy of Family Physicians, which utilizes NPPs more than any other medical specialty.<sup>1</sup> In 2001 an estimated 103,612 nurse practitioners (NPs) and physician assistants (PAs) were in clinical employment in the United States.<sup>2</sup> It is not known how many of these are employed within cardiology or cardiothoracic surgery practices because there is no current method of tracking these individuals. However, the American Academy of Physician Assistants estimates that 3% of PAs practice in cardiology and an additional 3% in cardiothoracic surgery groups.<sup>3</sup>

NPPs provide a cost effective strategy for increasing staffing and reducing the burden on the cardiologist. Much of the cardiologists' time is spent with routine, uncomplicated activities, which NPPs are well equipped to handle. History and physical examinations, treatment of uncomplicated problems, ordering and interpreting routine lab and diagnostic tests, patient education and counseling, are some of the usual activities that take much of the cardiologists' time. These are the types of activities that NPPs are educated to provide, and render with quality and competence. This frees the physicians to devote themselves to more advanced diagnostic and therapeutic challenges.

As Table 1 outlines, NPP salaries are a fraction of the salary of a cardiologist. Despite receiving 85% of physician reimbursement for their services from Medicare, NPPs provide a strong revenue stream and are less costly than hiring a cardiologist. In fact, when "incident to" provisions are met the reimbursement can be equal to that received by physicians. Choosing to enhance their practice by utilizing NPPs, these professionals are playing an increasingly important role in cardiology practices nationwide.

**Insert Table 1.** Cardiologist and NPP Salary Data

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As the role for these providers intensifies in the evolving cardiology practice, innovative Cardiac Care Teams are being developed. NPPs have been used in a variety of areas from hospital and call coverage to ancillary testing. The duties of the NPP have been based on functional areas of the practice which were in need of additional

personnel. The roles and responsibilities of non-physician providers are determined by a combination of factors, including rules and regulations of the State, scope of practice as outlined by the NPP's particular association, and local traditions. Keeping these factors in mind, the role of the NPP is evolving into a more collaborative role in patient care rather than a functional area of responsibility.

### **Discussion: An Example**

One example of excellence in collaboration comes from a 12- physician cardiology practice called Collaborative Cardiology, Inc., or CCI. CCI was formed through the merger of two physician groups, one group of 4 cardiologists and one group of 6. The merged groups subsequently hired two additional cardiologists to focus on EP, a subspecialty they did not have previously. Each of the groups employed registered nurses and NPPs at the time of the merger who functioned in the following areas:

- ◆ Triage: All patient phone calls were directed to the Triage staff, all of whom were registered nurses. The nurses were responsible for answering questions using established protocols, determining if the patient needed to talk to an NPP or a cardiologist, or if the patient needed to be seen in the clinic or ER.
- ◆ Office Visits: NPPs were responsible for triaging add-on patients in the clinic. The NPP saw the patient, assessing the patient and determining whether or not a cardiologist needed to see the patient, or if the NPP could provide the care.
- ◆ Ancillary Services: Prior to the merger one group had NPPs monitoring stress tests, stress echocardiograms, nuclear stress tests and pharmacological stress tests. In the

other group the cardiologist performed these functions. In both groups prior to the merger, NPPs were responsible for calling patients with routine lab and radiology tests.

- ◆ Hospital Coverage: Prior to the merger one group utilized NPPs in the hospital to triage consults. In addition, the same NPPs provided first call coverage, which entailed taking patient phone calls and triaging or addressing them. The other group did not use NPPs in either area.
- ◆ Research and Specialty Clinics: Both groups utilized NPPs to manage the Device Clinic, Arrhythmia Clinic, CHF Clinic, and Coumadin Clinic in their practices. The NPP was responsible to manage patients based on established protocols and to consult with the clinic's Medical Director or the patient's cardiologist with any questions. The specialty clinic's Medical Director reviewed all patient charts with the NPP each week. During each clinic a cardiologist was available to address questions, or see the patient if needed. Research clinics functioned similarly, but utilized RNs, not NPPs. The PI was available for any issues, or to see patients if needed, but all routine research visits were conducted by an NPP.

### **After the Merger:**

When the groups merged they needed to address how to utilize their NPPs in the new practice. The merger had created an extremely busy practice where responsibilities were split between multiple inpatient and outpatient facilities. The cardiologists and NPPs met to discuss how best to meet the needs of their patients in the new group. They developed three principles upon which to create their new model:

1. To provide the highest quality patient care;
2. To provide efficient, cost effective care, while maximizing reimbursement; and,
3. To optimize work-life balance for both cardiologists and NPPs;

Based on these principles it was decided to adapt each group's previous model into a new model of care based on a collaborative approach rather than a functional one.

- ◆ Triage: It was determined that the triage model was working well based on patient satisfaction surveys, and input from the RNs, NPPs and cardiologists. The group felt that RNs were the appropriate professionals to provide this service.
- ◆ Cardiac Care Teams: The group determined that a model based on a team of cardiologists and NPPs would be preferable to the functional methodology they had previously utilized. *Rationale:* Teams would be designed *around the cardiologists' subspecialty*, offering the opportunity for the NPP to become more knowledgeable in that area. The Team could determine how best to utilize the NPP. Different Teams may use them in different ways, bearing in mind the scope of practice of the NPP and reimbursement. This would provide the NPP with a patient base and a subspecialty base, both of which were desirable to the NPPs.
- ◆ Non-Invasive Cardiac Care Team: This team was formed with the three non-invasive cardiologists and three NPPs. Two of the NPPs would be responsible for monitoring all types of stress tests based on a new algorithm the group developed to determine patient risk. One of the non-invasive cardiologists would be available on site when the NPP was conducting stress tests and would interpret the test. The

third NPP would always be assigned to support the clinic physicians generally seeing a full schedule of established patients for follow-up visits or walk-in patients.

- ◆ Invasive Cardiac Care Team: This team was formed with the five invasive cardiologists and three NPPs. The NPPs were responsible for patient teaching prior to the procedure; for pulling the sheath post-procedure; for discharge instructions, discharge dictation, follow-up appointments and assuring that the primary physician received communication. If the patient had a diagnostic cardiac cath and needed surgery, the NPP facilitated the surgeon reviewing the films and consulting with the patient.
- ◆ EP Cardiac Care Team: The team was formed with the two EP cardiologists and two NPPs. The NPPs were responsible for patient teaching prior to the procedure; for discharge instructions, discharge dictation, follow-up appointments and assuring that the primary physician received communication. The NPPs were also responsible for the management of the Device Clinic and the Arrhythmia Clinic.
- ◆ Research and Specialty Clinic Cardiac Care Teams: These Teams remained much the same as they were. Research patient visits were conducted by an RN and the study oversight was provided by the PI. Research used dedicated RNs to meet all the needs of the Research Department. The group decided to continue their other two specialty clinics, Coumadin and CHF, and to run them as they had been. Each clinic had one dedicated NPP who managed the clinic, saw the patients and consulted with the cardiologists as needed. These NPPs were also responsible for Office Visit Triage

of add-on patients, answering questions from the Triage staff, as well as for covering for the Non-Invasive Cardiac Care Team NPPs if absent, and vice versa.

- ◆ Hospital Coverage: The group determined that NPPs were helpful in the hospital; however, they felt that they played a more important role in other areas, which freed up physician time to provide hospital care. The group had already distributed the current NPPs throughout the Cardiac Care Teams, therefore, the group decided not to use the NPPs in the hospital at this time. Nonetheless, the group felt very strongly that the next area they would utilize NPPs was in the hospital. The NPP would provide support in the form of performing H & P's, discharge summaries, and serve as the triage person for all new consults. This design followed what one group had done prior to the merger and found to be very successful, freeing the physician to do advanced diagnostic testing and treatment.
- ◆ Call Coverage: One of the most significant areas of dissatisfaction for NPPs is call coverage. NPPs do not typically plan on taking call when they enter their training. Many feel they are not paid well enough to take on this burdensome workload, and some leave practices when call coverage is instituted. The group decided not to move forward with having first call NPPs at inception of the merger. The NPPs were not in favor of instituting first call coverage, but agreed to consider it as an additional, optional responsibility if the cardiologists could develop a plan that would provide a financial incentive for the additional workload.

**After six months:**

The group agreed to try the new format for six months and reevaluate it at that time, along with considering the first call option. The group met after six months and determined that their Cardiac Care Teams were a success. They measured their success in the following ways:

- ◆ Patient Satisfaction: Their patient satisfaction scores had typically been high, so their measure was not to decrease in patient satisfaction. The scores remained the same at six months.
- ◆ NPP Satisfaction: Though they did not perform an actual survey, the NPPs anecdotally said they were satisfied. The group agreed to conduct an online survey of the NPPs satisfaction at one year, and agreed to postpone the first call concept until that time.
- ◆ Cardiologist Satisfaction: Again, the group did not perform a survey, however, anecdotally; the cardiologists felt the new system was working well.
- ◆ Efficiency: The group was able to see more patients per day than previously with no increase in cardiologists' time.
- ◆ Revenue: The group noted a slight increase in revenue and was hopeful that this trend would continue.

### Summary

In summary, the use of non-physician providers in cardiology practices is on the rise. The way in which these individuals are utilized, the skills they possess, and the

way in which they perform as part of the collaborative model are critical to the success of the practice. It is also important to the success of the model that the NPP understand the scope of their responsibilities and their role within the Cardiac Care Team.

Busy physicians have a limited amount of time at their disposal and the addition of non-physician providers can ease this burden. One should use the same care in hiring a non-physician provider as in hiring a cardiologist. These individuals provide a crucial service to the patient and are often viewed by them in the same light as the physicians. The NPP reflects to the patient and family the philosophy and values of the practice, just as a physician whom they represent.

In business, there is an increasingly higher value placed upon innovation. As a practice owner or manager, one can approach practice profitability through revenue enhancement or cost reduction. *Perhaps it would be wise to view the use of NPPs as a "practice innovation" that will allow you to provide more services in a new way.* Innovation boosts earnings, speeds growth, provides competitive advantage and appeals to those who seek our care. In fact, the value of innovation has always been recognized by cardiologists and it is one of the reasons cardiologists usually are so quick to adapt to new technology. In this instance the innovation is not technological, but process-focused.

*"Just as energy is the basis of life itself, and ideas the source of innovation, so is innovation the vital spark of all human change, improvement and progress."* - Theodore Levitt

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**Table 1.** Cardiologist and NPP Salary Data

	<i>Average Salary</i>	<i>Low</i>	<i>High</i>
Non- Invasive Cardiologist	\$362,497	\$254,840	\$558, 918
Nurse Practitioner	\$67,516	\$65,333	\$81,453
Physician Assistant	\$55,515	\$64,708	\$69,389
Registered Nurse	\$42,075	\$20,540	\$52,260

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