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Physician Assistants and Nurse Practitioners in Specialty Care: Six Practices Make It Work

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by

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About the Foundation

The **California HealthCare Foundation** is an independent philanthropy committed to improving the way health care is delivered and financed in California. By promoting innovations in care and broader access to information, our goal is to ensure that all Californians can get the care they need, when they need it, at a price they can afford. For more information, visit www.chcf.org.

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I. Executive Summary

IN CALIFORNIA, AS IN OTHER STATES, consumers are having difficulty getting access to physicians in some specialties, including gastroenterology, orthopedics, and dermatology.¹ The challenges may be particularly acute for patients of community clinics and public hospitals. Many specialty medical practices have incorporated physician assistants (PAs) and nurse practitioners (NPs) into their outpatient settings to improve access to care, reduce wait times, and improve quality of care.

A study by the Center for the Health Professions at the University of California, San Francisco, examined these emerging models to evaluate their success and identify strategies that could be replicated. The study focused on outpatient care in three specialties with particularly high demand rates: orthopedics, gastroenterology (GI), and dermatology. The research found that utilization of physician assistants and nurse practitioners varied across these specialties. For example:

- **Orthopedics.** Orthopedic practices commonly rely on physician assistants to do many orthopedic assessments and procedures. The prevalence and long track record of this model throughout the United States suggests it will become even more widely adopted.
- **Gastroenterology.** A growing number of GI practices employ NPs and PAs to increase follow-up patient volume, freeing physicians to do high-level procedures. The business model is strong, suggesting that this approach will become more widespread.

- **Dermatology.** Some practices employ PAs as clinical providers for routine cases, allowing supervising physicians to focus on complex cases and surgeries.

The study found that these models generally improved access, reduced wait times, and proved financially sustainable. Although quantitative evidence is scarce, qualitative information points to maintenance or improvement in quality of care.

The successful models have implications for practitioners and delivery site managers, including those at community clinics and public hospitals where some patients experience significant delays in getting specialty care. Some sites might want to develop a system relying on teams of physicians, NPs, and PAs to provide specialty care. Others could benefit from fully understanding how such systems work to facilitate efficient and effective referrals.

There are challenges to implementing these models. Most PAs and NPs must be trained on the job because of the small number of postgraduate medical specialty programs. In addition, all practitioners — physicians, PAs, and NPs — must be aware of everyone's strengths and limitations, must be able to work collaboratively, and must keep lines of communication open.

Sustainable financing can be accomplished with attention to the details of the practice model, including incorporating time for supervision and mentoring into the daily routine. Although state laws and regulations regarding legal scopes of practice for NPs and PAs should be considered, the legal environment was not found to be a significant barrier to implementing these models.

II. Introduction and Background

Limited access to specialty care calls for new thinking around provider roles and practice models.

DELAYS IN GETTING ACCESS TO SPECIALISTS IN gastroenterology, orthopedics, and dermatology are primarily driven by changing disease patterns and gaps between physician supply and population demand. When demand for care exceeds capacity, practices typically look to add another doctor. But this is not always feasible, due to either a shortage of specialists or prohibitive salary requirements, so new thinking has emerged regarding provider roles and practice models. This study was designed to explore medical practices across the United States that are integrating physician assistants and nurse practitioners to provide high-level specialty care and reduce backlogs. The movement appears to have gained some traction, as evidenced by workforce data and education and training opportunities.

Specialty PA and NP Workforce Data

Approximately 80,000 PAs practice in the United States. The American Academy of Physician Assistants (AAPA) estimates that over 60 percent of physician assistants practice in specialty (non-primary) care areas, and most of these are in surgery—including orthopedics—and emergency medicine. An estimated 10 percent of PAs practice in internal medicine (which includes the subspecialty of gastroenterology) and 4 percent in dermatology.² An estimated 140,000 NPs were practicing in the U.S. in 2004.³ Given the current NP data collection methods, it is difficult to estimate how many NPs practice in medical specialties.

A limited but growing body of workforce analysis confirms the integration of PAs and NPs into specialty care practices. One study predicted that increased demand by older patients for specialist gastroenterology treatment will put significant pressure on the existing workforce. It argued that research is urgently needed to determine the best practice model for delivery of gastroenterological care, including looking at models that utilize NPs and PAs in clinic and hospital settings.⁴ A 2008 study concluded that U.S. dermatologists are increasingly employing NPs and PAs, though with significant variations in supervision and utilization patterns.⁵ Data from the

American Academy of Dermatology indicate that an unmet demand for NPs and PAs likely persists, as practice patterns differ significantly among dermatologists of different ages.^{6,7}

General Education

The rationale for integrating PAs and NPs into medical specialty practices is grounded in an understanding of the education, training, and competence of these practitioners. The average physician assistant curriculum is 26 months of didactic and clinical education under a generalist medical model of care. Students may participate in specialty rotations, typically a few weeks in duration, while in school. PAs receive a general license and may practice in primary care or in any specialty. California requires national certification for initial licensure and continuing education for re-licensure. Physician assistants who choose to maintain national certification must pass the national PA examination every six years.

Nurse practitioners in California must have at least a master's degree in nursing. They are educated and trained to practice independently and collaboratively with other practitioners such as physicians. With few exceptions (such as nurse anesthetists and nurse midwives), NPs are not licensed in any particular specialty. NP specialty certifications tend to be in primary or hospital-based care, including such areas as family practice, pediatrics, geriatrics, women's health, and acute care. They are not usually certified in medical specialty areas. Licensed NPs must meet general continuing education requirements every two years for re-licensure.

California Nursing Practice Act

Nurse practitioners in California must work in collaboration with a supervising physician under written standardized procedures. Within parameters spelled out in the standardized procedures, they may diagnose patients, order tests, and order or furnish drugs.⁸ California law requires that a physician may supervise no more than four NPs who are furnishing drugs. There is no legal limit on the number of NPs a physician may supervise if the NPs are not furnishing drugs.

California PA Practice Act

Physician assistants in California work with physician supervision under a delegation of services agreement that allows physicians to delegate duties within the physician's scope of care, the PA's competencies, and state law. PAs may take patient histories, perform physical exams, order laboratory tests, establish treatment plans, prescribe medications, and provide patient education.⁹ A physician may supervise no more than four PAs at a time.

Specialty Training Programs

While NPs have responded to specialty opportunities and physician shortages with comprehensive doctoral-level training programs, PAs have focused on establishing specialty-specific programs.^{10,11} The Association of Postgraduate Physician Assistant Programs (APPAP) lists over 40 postgraduate programs in 16 specialties, with the large majority in surgery, emergency medicine, and other hospital-based specialties.¹² Two postgraduate programs in dermatology and three in orthopedics are available to PAs. The APPAP does not recognize any postgraduate training programs in gastroenterology, although, as discussed below, some industry-sponsored GI fellowships have been offered.

III. Methodology

THE LITERATURE REVIEW WAS CONDUCTED using electronic searches for relevant publications in health care and health policy databases such as PubMed and the Cochrane Collaboration. The Google Scholar database was searched for professional association information, popular literature, and examples of interdisciplinary teams. Collectively, the searches generated hundreds of potentially relevant documents, which were then reviewed for direct applicability. The priority in this study was to examine literature on practices offering high-demand outpatient specialty services. Interview subjects provided background information and direction regarding the literature search.

Regulatory review sources included the California Business and Professions Code and the California Code of Regulations. Work previously published by the authors regarding scope-of-practice regulation of NPs and PAs was also reviewed for relevance.¹³

In 2008, staff compiled a list of potential interview subjects based on the literature and queries to the Center for the Health Professions' professional network, including senior fellows, advisory committee members, leadership fellowship program representatives, and partner institutions. Potential interview subjects were primarily physicians, NPs, and PAs in medical specialty practices that included NPs or PAs as providers, as well as knowledgeable stakeholders. Over 50 letters of invitation to participate were sent in late 2008 and early 2009, and more than 30 telephone interviews were completed. Structured interviews and data management were conducted in accordance with UCSF Committee on Human Research guidelines.

IV. Findings

At the specialty practice sites in this study, NPs and PAs generally shared responsibilities with specialist physicians and saw both new and follow-up patients.

TO COMPLEMENT EXISTING DATA AND TO GAIN NEW information, in late 2008 and early 2009, UCSF staff interviewed over 30 individuals in more than a dozen medical specialty practices across the United States that used PAs and/or NPs to provide advanced clinical care to patients. Most participants reported that NPs or PAs were an integral part of their specialty practice because they significantly eased the bottleneck of patients awaiting care. Although interviewees noted some challenges, which are explored below, the overwhelming majority reported positive outcomes from utilizing NPs and PAs. Most agreed that their care delivery model should be widely adopted, given the increased patient satisfaction and improved quality of care credited to the assistance of these clinicians.

Acting as both communication links between patients and specialists and as care providers themselves, NPs and PAs improved coordination, reduced wait times, and increased access to care. Further, NPs and PAs helped free physicians to attend to more complicated cases, which translated to a positive bottom line for practice revenue. Many study participants reported that their practices successfully expanded to meet increasing patient populations.

Practice Models

At the specialty practice sites in this study, NPs and PAs generally shared responsibilities with specialist physicians and saw both new and follow-up patients. NPs and PAs commonly ordered tests, devised treatment plans, and assisted with surgeries and procedures. Specific practice duties differed among the specialties, as outlined below.

Orthopedics

Study participants reported that PAs and NPs were already widely used in many orthopedic practices. PAs were more deployed than NPs, although supervising physicians noted no other reason besides tradition. Ten percent of PAs (6,900 in the United States) who practice in a surgical specialty are in orthopedics.¹⁴ Orthopedic PAs typically see patients, order and interpret diagnostic studies, rotate in hospitals, set fractures, apply casts, and inject steroids.

Some community clinics host a weekly or monthly orthopedic clinic staffed by a nurse practitioner employed by a local orthopedic group. These NPs generally perform nonsurgical orthopedic services, such as injecting joints; setting broken bones; assessing the severity of strains or sprains on hips, shoulders, and knees; and evaluating the need for surgery.¹⁵ PAs practicing in orthopedic outpatient settings may also have local hospital privileges. These hospitalist PAs' responsibilities typically include performing minor surgical procedures, such as debridement and pin removal; first assisting in the operating room; conducting post-surgery rounds; and ordering X-rays.

Gastroenterology

PAs and NPs in gastroenterology and hepatology perform a wide range of diagnostic and therapeutic procedures, including flexible sigmoidoscopies, paracentesis, liver biopsies, esophageal studies, assisting with percutaneous endoscopic gastrostomy tube placement, and ongoing counseling for patients with diseases such as hepatitis. Many evaluate patients for colon cancer. They treat patients for gastroesophageal reflux disease, pancreatic diseases, hepatitis, cirrhosis, and inflammatory bowel diseases.¹⁶

Both NPs and PAs were employed equally in gastroenterology; physicians sought competent clinicians, preferably with some prior experience in the specialty. Study participants reported that NPs and PAs typically require six months of training in core gastroenterology conditions, such as stomach bleeding, colon cancer, and nausea and vomiting, to handle their own patients. Years of additional training, however, are required for proficiency in advanced GI areas such as pancreatic issues, cirrhosis, and inflammatory bowel disease. Most of the

clinicians interviewed for this study did not receive formal GI training but were trained on the job.

To keep up with colon cancer screening demand that is exceeding GI physician supply, some hospitals run small, very efficient endoscopy centers using PAs to help handle the patient volume. One care provider suggested developing a colonoscopy center model with one gastroenterologist on-site while NPs or PAs performed concurrent colonoscopies. The specialist would be in a control room with monitors to supervise each patient, enabling the physician to communicate verbally with clinicians or attend to patients with problems.¹⁷

Dermatology

Study participants reported that PAs were more likely than NPs to be working in dermatology. Dermatology PAs typically manage chronic conditions such as psoriasis, rosacea, vascular abnormalities, eczema, and acne. Since all PAs receive suture training, they are well suited to perform biopsies and simple excisions in dermatology offices. They may also perform skin cancer screenings and minor surgeries, and assist in major medical procedures such as Mohs surgery.¹⁸ Additionally, some PAs perform cosmetic procedures including laser resurfacing, dermabrasion, and chemical peels.

One care provider said dermatology is a great field for PAs, since roughly 25 percent of her practice covers primary care skin conditions.¹⁹ She believes the repetitive nature of dermatology—especially in cases of acne, warts, and psoriasis—means PAs may quickly become proficient. It can be an excellent specialty for PAs to handle the bulk of simple cases, allowing physicians to attend to more complex surgical or cosmetic procedures.

Patient Caseload

Some PAs and NPs carried their own patient loads from start to finish, allowing for continuity of care. Other NPs and PAs shared patients to evenly distribute the burden of caseloads. Practices reportedly functioned optimally when specialists were confident in both the clinicians' skills and their discretion in knowing when to bring complex cases to supervising physicians. Also key was respecting patients' and referring physicians' requests to see a physician specialist, particularly for initial workup. Study participants also reported that some highly specialized NPs and PAs (in liver disease, for example) served as resources to their physician colleagues.

Level of Supervision and Independent Practice

Some PAs and NPs worked with several physicians, while others partnered with only one specialist. Supervising physicians were usually on-site or available by phone, but most NPs and PAs reported that they confidently handled most outpatient needs without direct supervision. Physicians confirmed these assessments. Some clinicians practiced at one site (clinic or hospital) full time while their supervising physicians traveled among sites or split their time between hospital and clinic work. Other NPs and PAs worked at multiple sites.

Training

Presently, postgraduate training in the specialties is limited. In PA programs, students are trained in general surgery and may participate in elective rotations in their specialty of choice. Many PAs reported that they were hired by the practices where they had done their rotations. NPs may elect to earn postgraduate certifications in areas such as women's health or pediatrics, but certificates in the outpatient

medical specialties of this study are not offered. To supplement their skills and fulfill re-licensure requirements, nurse practitioners and physician assistants often take continuing medical education courses alongside specialist physicians. Study participants in California noted the Orthopaedic Surgery Physician Assistant Residency Program at Arrowhead Regional Medical Center. It is a 12-month intensive didactic and clinical training program designed to prepare PAs for careers in orthopedic surgery. Several care providers said they prefer to hire graduates of this program.

Given the limited availability of postgraduate training, NPs and PAs in specialty care typically receive the bulk of their specialty training from their supervising physicians on the job. One interview subject suggested that NPs and PAs practicing in academic centers may be more fortunate because hospitals have formal specialty training programs for their fellows. Other practices may have less structured procedures for on-the-job training. According to study participants, it can take several months to a year of on-the-job training for NPs and PAs to perform to the level of competency required by employers. Observing and shadowing physicians is critical, regardless of prior experience and formal institutional training.

However, some training could be standard and theoretically completed prior to beginning work. Several NPs and PAs indicated they would be interested in formal procedure- or condition-specific training courses, if they were available. Several specialist physicians reported interest in standard postgraduate programs to facilitate the hiring process and streamline on-the-job orientation and training.

There is an ongoing national debate regarding the establishment of specialty certification for PAs. Given their generalist education, PAs may choose any medical specialty after graduation. In

addition, certification by the National Commission on Certification of Physician Assistants (NCCPA), which is required by all states as a prerequisite for licensure, is a general, non-specialty focused certification. Many PAs move among specialties throughout their careers and enjoy a range of practice settings. Stakeholders reluctant to formalize specialty training are concerned that such certification requirements could impede the professional mobility of PAs and NPs by pigeonholing them into certain specialties, creating additional barriers to access. One study participant cautioned that “any certification scheme that requires experience in the specialty prior to certification will discourage new PAs from entering the specialty.”²⁰ Some postgraduate programs could find accreditation and recognition requirements challenging, such as granting degrees or being affiliated with academic institutions. On the other hand, the lack of standardization and individual focus currently required to train each clinician could impede practitioner mobility among practices within specialties. This, in turn, could hamper access to care by perpetuating the insufficient workforce supply and difficulties in recruitment.

Several independent professional organizations have moved to establish their own postgraduate programs. For example, the American Association for the Study of Liver Diseases has offered highly selective fellowship programs for NPs and PAs specializing in hepatology, supported by funding from pharmaceutical companies. The national Gastroenterology Physician Assistants association is developing a standardized core curriculum with continuing medical education organizations. The NCCPA has recently decided to take the first steps toward offering a voluntary PA specialty credential.²¹

Reimbursement and Sustainability

Generally, third-party payers reimburse practices for services provided by NPs and PAs but policies vary depending on the service and the level of clinician independence. When these clinicians independently provide services to patients, Medicare typically reimburses at 85 percent of the physician reimbursement rates.

Outpatient services may alternatively be billed under Medicare’s “incident to” physician care provisions, which reimburse at 100 percent of the physician’s reimbursement rate if the following guidelines are met: 1) the physician is physically on-site when the NP or PA provides care; 2) the physician personally treats and diagnoses patients on their first visit for a particular condition, though NPs and PAs may provide subsequent care; and 3) patients with new conditions are treated and diagnosed by the physician, though NPs and PAs may provide subsequent care. Further, the physician must remain involved in the patient’s care.²²

Under Medi-Cal, California’s Medicaid program, services provided by PAs and NPs may be reimbursed at 100 percent of the amount payable to a physician for the same service. Medi-Cal rates are notoriously low, however, and while any service provided by a PA working under a physician may be billed to Medi-Cal, only primary care services provided by NPs may be billed.²³ Despite these limitations, Medi-Cal may be critical to specialty services for some patient populations. A recent analysis found that recent policy changes permit Federally Qualified Health Centers to provide preventive and screening specialty services; these services are associated with enhanced Medi-Cal reimbursement, which is key to financing specialty care services at safety-net clinics.^{24, 25}

Services provided to patients enrolled in Medi-Cal managed care plans are reimbursable under varying plan policies. Similarly, while many private

third-party payers follow Medicare guidelines, individual plan policies may vary.

Practices that participated in the study reported being in good financial positions in large part because of their integration of physician assistants and nurse practitioners. Many offices arranged their practice models to comply with Medicare policy, allowing them to bill NP and PA services at 100 percent of the physician rate. Even if they billed some services at 85 percent, the increased patient volume and the lower salaries of NPs and PAs contributed to solid financing. In many practices, the increased patient volume was divided: Routine, follow-up patients were directed to NPs and PAs and new, more acute, or complex cases were seen by physicians. These acute and complex cases are often associated with high-level procedures, which are reimbursed at high rates.

Published studies examining how integration of PAs and NPs into specialty practices has affected costs are sparse but noteworthy. A 2006 article regarding NPs and PAs in a GI practice found that billing charges were two and a half to four times the salaries of the NPs and PAs, making them extremely cost-effective.²⁶ Additional research has shown that PAs generate revenue far greater than the cost of their compensation.²⁷

Effect on Access, Quality of Care

Study participants reported that in addition to the financial benefits, integrating NPs and PAs contributed to positive results in terms of access and quality. Especially notable were reduced wait times for patients to secure appointments and increases in the overall number of patients or appointments. This increase in volume was directly associated with PAs and NPs assuming significant patient caseloads. Study participants also reported improved care coordination, which leads to patient satisfaction

and better quality care. When PAs and NPs handled many routine and follow-up patient visits, specialty physicians were freed to focus on complex cases. The better match of expertise between provider and patient reportedly improved the quality of care.

Published outcomes data on NPs and PAs in specialty medical practice is limited but consistent with the interviews and with long-established research that has found NP- and PA-provided primary care comparable to care provided by physicians.²⁸ In specialty practices, outcomes were almost always positive and were measured in terms of clinical and cost effectiveness, increased physician time for more complex duties, increased capacity to accept new patients, and decreased lengths of stay and readmission rates for inpatients.²⁹ Numerous studies compared the work of NPs and PAs to a variety of other clinicians, including primary and specialty physicians, residents, and certified nurse specialists, and found comparable competence.³⁰ For example, a study measuring patient quality of life and treatment outcomes found that hepatology NPs can be as effective as physicians.³¹ Several articles have specifically examined the dynamics of interdisciplinary practices using providers of various professions, including NPs and PAs. Most studies concluded that these teams achieved positive clinical outcomes.³²

Few Regulatory Hurdles

All of the study participants reported being able to implement successful practice models integrating PAs and NPs as clinicians well within their state legal and regulatory frameworks. Responses varied, however, with regard to whether state scope-of-practice laws were appropriately broad. One GI physician assistant described struggling with her state's vague laws regarding authority to discharge patients. A few clinicians were dissatisfied with state rules prohibiting

them from prescribing controlled substances, though most practitioners could work with the prohibition because they had access to prescribing specialists. Other care providers reported that physician chart sign-off requirements were time-consuming and unnecessary.

Most study participants were satisfied with the range of services they provided and the level of physician oversight. Exceptions included rare occasions when specialists were not readily available when needed, and when NPs or PAs felt rotating physicians didn't trust them. Most physicians reported satisfaction with state scope-of-practice laws and regulations regarding NPs and PAs, although one asserted that his practice model worked as well as it did because its monitoring system was stricter than required by the state. Study participants who had overlapping inpatient and outpatient responsibilities noted increasing requirements to comply with hospital policies and credentialing rules, which can encompass matters already covered by state practice acts, such as scope of practice, safety, privacy, and billing. Additionally, these requirements may vary among different sites, creating confusion for clinicians who practice at multiple sites or wish to move from one site to another.

Physician Acceptance and Perspectives

Several study participants noted that some physicians were initially reluctant to fully accept NPs and PAs as clinicians. Some suggested that physicians who had not worked with NPs or PAs as colleagues before often were unaware of what they could do in a clinical setting. Others stressed that some physicians were very concerned about the competence of PAs and NPs. Some thought that community practice physicians, particularly those just starting their careers, might be uncomfortable bringing an NP or PA into the practice before the practice is financially well established, out of concern for competition. Other physicians were troubled by the amount of time they would need to dedicate to training and mentoring NPs and PAs, time that would need to be taken from already busy schedules.

All of the study participants reported that any hesitancy among physicians was overcome with time, comprehensive practice procedures, and daily interactions with NPs and PAs. Some physicians probably will always want tighter control and supervision over PAs and NPs. But it appears that once physicians work with competent and appropriately trained NPs and PAs, they understand and appreciate how such an arrangement can work for the benefit of everyone involved.

At the same time, a few study participants cautioned that some physicians in other settings may have gone too far with their use of NPs and PAs. They thought these practitioners may be excessively or inappropriately used. They warned of consequent decreases in quality of care, especially where NPs and PAs are insufficiently trained and/or do not understand their limitations. Physicians and other clinicians said the greatest potential issue is not always PAs or NPs overstepping boundaries, but can be doctors acting irresponsibly when working with NPs and PAs.

Six Examples of Specialty Practices

In-depth follow-up interviews were conducted with representatives from two sites in each of the three specialties to get a detailed picture of how these models work. These case studies are examples of specific practices that have integrated PAs and NPs into their clinical settings.

Orthopedics

KAISER PERMANENTE FONTANA MEDICAL CENTER,
ORTHOPEDIC DEPARTMENT, FONTANA, CA
members.kaiserpermanente.org/kpweb/facilitydir/facility.do?id=100127&rop=SCA#anchor1

The Kaiser Fontana Medical Center Orthopedic Department relies on 13 physician assistants and one nurse practitioner to provide a broad range of out- and inpatient services, including “first call” for all orthopedic consult requests from urgent care, primary care, emergency, or inpatient services. Although Kaiser’s closed financing model is unique, the orthopedic practice model is worth noting because of the range and quality of services PAs provide.

PAs conduct all initial evaluations and fully handle an estimated 80 percent to 90 percent of patient cases, with the remainder—such as fractures that are not reducible and may require surgery—referred to physicians. PAs order and read imaging studies and other tests, apply casts, set bones such as wrists, prescribe medications (except schedule II drugs at discharge), and provide most other orthopedic treatment. Fourteen physicians supervise the PAs. A team of four rotating PAs works essentially as PA hospitalists to support inpatient care and work closely with three internist physicians. The nurse practitioner works in podiatric surgery.

Kaiser Fontana orthopedic PAs work fairly independently. Although supervising physicians are usually available on-site, the model is structured for PAs to see and treat patients on their own

without direct physician oversight at all times. PAs and NPs are considered active clinical partners and professional colleagues; they not only attend but also deliver departmental lectures on specific conditions or procedures. Jim Delaney, PA-C, sees the Kaiser practice as notable in its recognition of competence of PAs and the role they can play.

Kaiser relies heavily on the nearby postgraduate orthopedic training offered at Arrowhead Regional Medical Center, which in turn depends on Kaiser for student rotation opportunities. Mary Hurley, M.D., chair of the orthopedic department at Kaiser Fontana, noted that the department only hires PAs who have completed an orthopedic postgraduate program at one of the few such programs in the country. After they are hired, the physician assistants are expected to become PA IIs, a job classification that indicates a high level of competency. The department continues to work on its commitment to adequately proctor and mentor PAs during this process.

Representatives from Kaiser Fontana see themselves as having been on the cutting edge of the movement to bring PAs fully into orthopedic practice, a movement that could still go further throughout California and the United States. Both Dr. Hurley and Mr. Delaney indicated that the integration of PAs had enabled the department to meet an extremely high and growing demand for orthopedic services. Indeed, Dr. Hurley said she did not know how the department would function without PAs. She also believes quality of care has improved with the PAs rounding and seeing hospital patients, in large part because of the PAs’ attention to detail.

ST. JOHN'S CLINIC—ORTHOPEDIC SPECIALISTS,
SPRINGFIELD, MO

www.stjohns.com/healthinfo/adult/orthopaedics

St. John's Clinic—Orthopedic Specialists provides a full range of orthopedic services within an integrated health care system owned and operated by the Sisters of Mercy. Approximately 13 physician assistants work with 16 orthopedic physicians providing both in- and outpatient clinical care. The clinic is probably a good example of many practices across the country that have incorporated significant numbers of PAs into clinical care due to increased demand. Jeff Del Vecchio, MPAS, PA-C, who has worked at the clinic for 11 years, noted that the clinic has grown significantly—in numbers of physicians and PAs and volume of patients—during that time. In addition to hospital responsibilities such as daily patient rounds, assisting in the operating room, and call duty, Mr. Del Vecchio provides outpatient care in the clinic. Outpatient services provided by the PAs include seeing and evaluating patients, applying and removing casts, prescribing medications (except narcotics), ordering and interpreting tests, and delivering joint injections. Physicians and PAs usually work together in teams of two, though some physicians in the group do not work with any PAs. With the one-on-one team approach, PAs always have access to a physician and receive both direct and general supervision.

The practice experimented with allowing experienced PAs to see some new patients but modified its policy due to concerns from some community primary care physicians. Now, all new patients see a physician in addition to a PA. Patients are seen exclusively by PAs for many follow-up visits, although physicians emphasize to PAs during their orientation and training that they must continuously sharpen their skills regarding patient satisfaction and assess whether a patient may want to see a physician instead of, or in addition to, the PA.

Training for PAs at St. John's is mostly on the job and through continuing medical education courses, which are readily available. Fred McQueary, M.D., an orthopedic surgeon and St. John's Springfield division president, noted that although it is not required of the PAs with whom he works, he sees advantages to having a specialty-focused postgraduate training program for PAs because it would permit them to practice more independently more quickly. However, there would still need to be some orientation time—six to 12 months, perhaps—for each PA to learn how the physician with whom he or she will be working thinks, treats, and deals with patients. The clinic offers orthopedic rotation opportunities to students at a local physician assistant program where Mr. Del Vecchio teaches, and has had success hiring from the program's graduates.

With a large and varied patient population, reimbursement options and rates differ from patient to patient. As in other settings, reimbursement rates for PAs can be lower than those for physicians. However, even if PAs are reimbursed at a lower rate, patient access to care can be increased with this model because PAs can see follow-up patients, freeing physicians to see new consults, perform surgeries, and care for patients with complex conditions. As Dr. McQueary pointed out, though, the integration of PAs into an orthopedic practice is not so much a cost-saver as a lifestyle-saver. Once a new physician has built up enough of a patient caseload to justify the cost of a PA's salary, it is worth bringing one into the practice so the team can handle “on-call” and other patient care demands.

Gastroenterology

UNIVERSITY OF FLORIDA, DEPARTMENT OF MEDICINE,
DIVISION OF GASTROENTEROLOGY, HEPATOLOGY &
NUTRITION, GAINESVILLE, FL
www.medicine.ufl.edu/gastro

The Gastroenterology, Hepatology & Nutrition Division within the University of Florida's (UF) Department of Medicine is a top-ranked unit in the United States. A team of 14 medical doctors, four PAs, and three NPs work to meet extremely high-volume demands for GI services ranging from basic assessments to liver transplants. Chris Forsmark, M.D., professor of medicine and chief of the gastroenterology division, underscored that the unit could not function without PAs and NPs.

Physician assistants and nurse practitioners focus on outpatient needs and function similarly to medical fellows or junior attending physicians. Working collaboratively with the physicians, the PAs and NPs have broad scopes of responsibility and competence. The unit stresses communication among all clinicians and works to ensure that PAs and NPs have access to physicians whenever needed. Specific responsibilities vary. Rick Davis, PA-C, who has been working as a licensed PA in GI settings for 26 years—including 15 years at UF—works closely with an attending physician and the medical director to evaluate and treat patients with advanced GI and liver diseases. Nurse practitioner Mitzi Tucker, who focuses on hepatology, runs the hepatitis C treatment program. After an initial evaluation by a physician, patients are seen and treated by Ms. Tucker throughout their six-to-18-month course.

Practitioners have different education and training backgrounds. Ms. Tucker worked in liver disease as a registered nurse prior to her NP studies. As an NP, she completed a fellowship with the American Association for the Study of Liver Diseases. Dr. Forsmark noted that the division seeks PAs and NPs with some experience, preferably in GI. Even

a GI rotation in school is not sufficient, however. It is expected to take at least six months of on-the-job training to grasp the basics of disease management and up to 12 months to be competent to see patients independently and draft well-reasoned treatment plan letters. From Dr. Forsmark's perspective, postgraduate GI programs for PAs and NPs would be a significant contribution. He also said he sees potential for identifying competent GI centers for training PAs and NPs so future employers would have confidence in training quality.

NP and PA services covered by public insurance programs can be billed at 85 percent of the physician rate, permitting physicians to focus on fully reimbursable procedures and complex clinical services. Private insurance contracts with UF do not allow billing for independent NP and PA services, which perpetuates backlogs of patients who must wait to see a physician. In response, several clinics now see Medicare and Medicaid patients exclusively. At some of these clinics, PAs such as Mr. Davis practice quite independently and treat patients on their own, checking in with physicians only as legally and medically indicated. These clinics have been successful in providing patients access to quality GI care they otherwise would not have received. The only other challenges UF clinicians noted related to state practice laws. The co-signature rule has just been deleted by Florida state laws; NPs and PAs both have prescriptive authority in the state, but not for controlled substances.

The integration of physician assistants and nurse practitioners into UF's GI unit has been invaluable. As Dr. Forsmark noted, they make the whole process much more efficient. He estimated that patient wait times have been reduced from six months to three over a two-year period in part due to the PAs and NPs. Without them, he said, the system would grind to a halt. With them, the division has increased the

volume and number of procedures performed, which in turn has boosted revenue streams.

DIGESTIVE HEALTH SPECIALISTS, FEDERAL WAY, WA
www.digestivehlth.com

Digestive Health Specialists (DHS) is a specialty group of medical doctors and non-physician clinical staff working at nine gastroenterology outpatient clinics and four endoscopy centers in and around Tacoma, Washington. Collectively, eight physician assistants and five nurse practitioners complement a team of about 20 gastroenterologist physicians to provide care in outpatient settings and at several affiliated local hospitals for inpatient services. DHS hired its first non-physician provider in 1987 to help meet demand that was outpacing provider supply.³³ The group has continued to expand its overall size and the number of NPs and PAs in the practice ever since.

Although specific duties and responsibilities may vary, the PAs and NPs work fairly independently and provide a full range of medical care except high-level diagnoses and procedures such as endoscopy and colonoscopy. For example, Timothy Morton, PA-C, who focuses on liver disease, follows patients continuously from initial consult through treatment. With physicians always available to answer questions, his practice includes making decisions regarding diagnosis, medication, treatment, and laboratory tests. Mr. Morton has also developed a strong professional relationship with gastroenterology specialists at the local academic center and teaching hospital, whom he can call for complex questions or cases.

Because there is no standard training pathway for PAs and NPs in gastroenterology, the backgrounds of these practitioners at Digestive Health Specialists vary. Mr. Morton took advantage of a one-year GI “fellowship” that was offered to PAs and NPs by Schering-Plough Corporation, a pharmaceutical

company that makes, among other products, interferon for treatment of hepatitis C. This fellowship provided him with a good working knowledge of gastroenterology. He still had close physician oversight for his first four to six months at DHS before taking broad responsibilities for patient care. Other PAs and NPs, especially new graduates, have come to DHS with more general family practice backgrounds that sometimes necessitate longer on-the-job training periods.

The staffing model at DHS ensures physicians are always available and incorporates time for physician review so PA and NP services are billed as “incident to” physician services, at 100 percent of the physician reimbursement rate. An article by James Wagonfeld, M.D., former CEO of DHS, included billing data and productivity comparisons that demonstrated charges generally running at two and a half to four times the non-physician provider (NPP) salary. Although productivity must be mitigated by the need for physician supervision, which can require as much as 25 percent of a physician’s time with inexperienced practitioners, Dr. Wagonfeld noted that “the value of NPPs cannot be overemphasized.” To underscore the business case, he went on to state that “NPPs do an outstanding job of handling 80 percent of the cases at a fraction of a physician salary.”³⁴

The model at Digestive Health Specialists, which fully integrates PAs and NPs into the practice as collaborative providers, has been very successful. As noted in the conclusion of Dr. Wagonfeld’s article, “NPPs greatly enhance physician productivity, revenue, and patient and physician satisfaction.”

Dermatology

DERMATOLOGY CLINIC, P.C., SALEM, OR

www.salemdermatology.com

The Dermatology Clinic is a private group practice composed of four dermatology physicians and three physician assistants. Each PA has his or her own patient caseload, which is generally equal to the physician caseloads. Compared with physicians, PAs for the most part provide a similar scope of clinical services. Exceptions include some complicated surgeries and diagnostically complex patients, whom the physicians handle. PAs see patients, write treatment plans, prescribe medication, perform biopsies for skin cancer, make incisions, and provide some laser treatments. PAs work collaboratively with physicians on-site, requiring minimal supervision but under a rigorous monitoring policy. PAs do not see patients without a physician on-site. All new patients are seen by a physician and a PA at their first visit. PAs may see the patients on their own for follow-up visits when there is no change in treatment plans; if any questions arise, the PA consults with the physician to resolve the question, reevaluate the patient, and/or re-establish a treatment plan. If any new problems arise, the patient sees the physician. All PAs work with all physicians and interact regularly throughout the day.

The PAs in the group came from different backgrounds. Amy Ullan, PA-C, for example, worked for several years as a medical assistant in the Dermatology Clinic before going to PA school. Carolyn Greenwade, administrator at Dermatology Clinic, stressed that the practice relies heavily on graduates from the physician assistant program at Oregon Health & Science University because it is a good program and offers dermatology rotations at local settings such as the clinic. Although some dermatology postgraduate programs are available nationally, most postgraduate training for PAs at this practice is intensive on-the-job training, including

seeing every patient jointly with a physician for several months. Some continuing education and conferences are also available. An estimated three to six months is required to train new graduates from a PA program sufficiently to permit them to see their own patients. Jon Denton, M.D., who has been at Dermatology Clinic since 1987, sees value in developing more postgraduate dermatology programs for PAs. Dr. Denton said he thinks standard postgraduate programs would make it easier to hire PAs in this specialty and would encourage greater acceptance of PAs by physician dermatologists. Without such formal training, some physicians in this field are reluctant to accept PAs.

Most of the clinic's patients have health insurance through Medicare or other government programs. Under the monitoring and practice guidelines outlined above, most PA services are billed at 100 percent of the physician rate. The time physicians spend overseeing the PAs' work is offset by the volume of patients that can be seen, and the practice is in good financial shape.

Dermatology Clinic sees itself as one of the early leaders in the area to integrate PAs into a dermatology practice. Today, many local practices rely on PAs to some degree, although there may be differences in practice protocols and monitoring guidelines. Despite initial reluctance among some physicians in the group, Dr. Denton has a high opinion of the PAs and values their work. As other physicians have come to trust the PAs and the monitoring system that is in place, their concerns—particularly around the PAs' technical and diagnostic skills—were resolved and clinicians are very comfortable with the model. PAs do a great deal of work well within their training and competence. Although the group has not done any formal measurements, it appears that the practice

functions well and that they are seeing more patients in less time.

CENTRAL CAROLINA DERMATOLOGY CLINIC INC.
HIGH POINT, N.C.
www.centralcarolinaderm.com

This six-physician dermatology group employs one physician assistant, Gary Engstrom, PA-C, who sees 25 to 40 patients per day. He does evaluations, orders laboratory tests, orders ultraviolet light treatment, and performs biopsies and excisional surgeries (though not flaps, grafts, or Mohs surgeries). He has prescriptive authority but no Drug Enforcement Agency number, by choice, so he does not prescribe narcotics. He has worked with this practice for five years and previously was at another dermatology practice for seven years. With this experience, he works fairly independently and occasionally consults with the physicians for second opinions or complex cases.

Mr. Engstrom is aware of the two dermatology postgraduate programs currently available but, aside from his dermatology rotation during physician assistant school, most of his specialty training has been on the job. He has taken advantage of continuing education courses, distance learning programs, and national conferences devoted to dermatology. For his first six to 12 months, he only saw patients with a physician also present. By that point, he estimated, he could provide most of the dermatological services provided by a primary care physician (e.g., routine acne, warts). By his second year in dermatology practice, he had sufficient confidence and trust from his physician colleagues to see his own patients.

For Central Carolina Dermatology patients covered by private insurance, PA services are usually reimbursed at the physician rate. As in other settings, the Medicare rate for PA services is 85 percent that of the physician rate if the PA sees the patient

independently. If the PA sees the patient “incident to” the services of the physician, the reimbursable rate is 100 percent.

Mr. Engstrom emphasized the importance of PAs knowing their limitations when practicing dermatology. Physicians working with PAs also have a responsibility to train and trust their PA colleagues, and not to misuse them in any way. While the practice has not formally collected data, Mr. Engstrom said that well-trained PAs free up physicians to do higher-level procedures, and he noted that six-month wait times for appointments are now a thing of the past at the clinic.

V. Conclusion

With many Californians experiencing long wait times to see specialists in these fields, it is worth exploring the possibility of replicating these practice models throughout the state.

A NUMBER OF MEDICAL SPECIALTY PRACTICES ACROSS the United States rely in part on NPs and PAs to provide clinical care, including high-demand specialties such as orthopedics, gastroenterology, and dermatology. These practices have successfully improved access to care for patient populations that had been experiencing significant wait times to see specialists. This has been accomplished with sustainable financial systems. Safety and quality of care has been maintained, if not improved. The literature, while limited in this area, supports the notion that such practice models can have positive impacts on access, cost, and quality of care.

With many Californians experiencing long wait times to see specialists in these fields, it is worth exploring the possibility of replicating these practice models throughout the state. Particular attention could be placed on replicating these models for patients of community clinics and public hospitals, which have been reporting severe bottlenecks in referring patients to specialist practices.

While these models are persuasive evidence that alternative ways to provide care can be better than historical models, some areas of further research and improvement are recommended. There is room for education and information-sharing among all types of practitioners about these models, how they work best, and their limitations. In addition, further quantitative research about their impact on access, cost, and quality could better inform all involved. Finally, the limited availability of postgraduate programs in the medical specialties for PAs and NPs could be explored and addressed to better prepare these clinicians to provide specialty patient care.

The successful medical specialty practice models that have integrated PAs and NPs as clinicians have several important implications for practices in California, particularly for community clinics and public hospitals that are facing patient demand exceeding current capacity.

- **Replication of practice models.** Some community clinics and public hospitals may be able to replicate these models by hiring PAs and/or NPs to complement part- or full-time specialist

physicians in the specialties that are in highest demand for their populations. The model clinics discussed in the case studies are in a strong position to inform clinics across California about maximizing utilization of NPs and PAs. Investment money from the federal government³⁵ might stimulate adoption of these models but current reimbursement policies, if applied to a well-administered practice, should be sufficient to support the models. There does not appear to be any legal or regulatory prohibition to implementing these models in California.

- **Collaboration with specialty practices.** Some clinics and hospitals would be well served to understand and collaborate with practices that employ NPs or PAs. For example, physicians might feel more confident about referring patients to these practices if they understood when patients would be seen by a physician specialist, when they would be seen by a PA or NP, and what practice guidelines and protocols were in place to ensure safe, high-quality care. Sharing more information through in-person meetings, Web site posts, or other communications could go far in helping these arrangements work well.
- **Expansion of postgraduate opportunities.** One of the biggest challenges identified by study participants was the amount of on-the-job training required to bring an NP or PA, particularly a recent graduate, up to the level of competence necessary to see patients in a busy specialty practice. Although some on-the-job training will always be necessary, standard postgraduate opportunities could be explored in some specialties. A starting point would be to compare current NP and PA programmatic elements to the needs of specialty practices, with attention to both procedural and cognitive skills.

- **Additional research.** Finally, stakeholders need more outcomes studies on the deployment of NPs and PAs in specialty care. To both encourage adoption of these models and fine-tune their implementation, practitioners, administrators, and consumers need to see more research on how they work. Although there is compelling anecdotal information indicating NPs and PAs improve access to care by reducing wait times to see specialists, hard data are needed. In particular, stakeholders need facts and analyses regarding impacts on clinical patient outcomes, patient and practitioner satisfaction, access to care, and cost of care.

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