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REVIEW ARTICLE

Midlevel providers as part of the US Emergency health care teams: roles, responsibilities and future directions

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The concept of training nonphysician health care providers originated in the mid-1960s, when a shortage of primary care physicians was projected. The original intent was to compensate for shortages of primary care physicians. Since then the roles, responsibilities, and autonomy of practice of midlevel providers (MLPs) have evolved in a number of directions. The goal was initially to have the MLP provide care in less acute medical events and work under the supervision of a physician, but many have begun to work with relative autonomy in recent years, caring for increasing numbers of acutely ill patients and taking on responsibilities outside of direct patient care. The literature shows that MLPs offer quality of the care that is comparable to physicians' care. They have the potential to fill important roles in areas such as patient communication, monitoring of compliance with care guidelines and transitions in care, and in education and research. Current issues are the need to ensure standardization of training, define the scope of MLP care and practice, and address concerns about professional threat to specialist in emergency medicine. [Emergencias 2014;26:61-68]

Keywords: Midlevel providers. Emergency health services. Physician assistants. Nursing.

Introduction

As an emergency medicine physician practicing for nearly 30 years, I have watched with interest as mid-level providers (MLP) become an integral part of the health care team in U.S. emergency departments. By midlevel providers, I refer to nurse practitioners (NP) and physician's assistants (PA) , who have received training that allow them to participate in patient care with significant responsibility and autonomy. The concept of training non-physician health care providers originated in mid-60's, when there was a projected shortage of primary care physicians. The original intent was to fill in physician shortage gaps in primary care settings. Since then the roles, responsibilities and autonomy of practice of these MLPs have evolved in a number of directions.

An example of this is a situation where multiple high acuity patients arrive for care in a community ED. There is a solo ED physician on duty, and 2 MLPs. In today's world, their roles and responsibilities may vary greatly in this scenario, depending on their post-graduation clinical experience and training specific to EM, state law, institutional policy and supervising physician discretion.

MLP possible roles:

1. Participate directly in care as primary care provider, with responsibilities that include airway management and trauma resuscitation. There would be physician oversight, which may be direct supervision, on-site availability if needed and/or chart review
2. Assist physician in monitoring patient during assessment and treatment, collecting data as it comes in and giving MD updates
3. Seeing lower acuity patients that may be kept waiting
4. Arranging admission or transfer to trauma unit or care center

5. Talking to family, chaplain

6. Ensuring compliance with patient care guidelines with respect to transfusion, Patient consent, pain management, trauma protocols

It is clear that ED physicians welcome the contributions made by MLPs when confronted by increasing numbers of patients, particularly those presenting with non-acute illnesses. Available literature specifically describing the quality of the care provided by MLPs to this patient population consistently shows that they provide comparable if not superior care as defined by compliance with treatment standards, efficiency of care, patient satisfaction and need for return visits[1-5]. In the past decade there has been a rapid rise in the use of MLPs in the ED. In 2005, a MLP covered 13 percent of all U.S. ED visits, up from only four percent in 1993[6]. From 2006 through 2009, 64% of EDs utilized MLPs, with higher utilization in urban compared to nonurban EDs. A recent survey revealed that 5.8% of ED patients were seen by MLPs only, however nonurban EDs had MLPs, without physician involvement, see a median 27% of all ED visits, compared to 7.5% for urban EDs[6-8]. It is clear that MLPs have the real and anticipated potential to increase the efficiency of emergency department by offloading some of the burden of patient care. Their cost to the hospital is lower than a physician's, and if they can assume proportionate care for patients without compromising safety, reimbursement and throughput, then the benefits are clear. MLP salaries vary with respect to demographic location, practice setting, specialty training and experience and are generally about 50% of physician salaries. While physician salaries range from 211-269K based on a national 2012 survey, MLP working in an ED setting make approximately 100K[9,10]. While PA salaries across all practice settings usually are higher then NP salaries, NPs working in the ED setting make salaries comparable to PAs[9,10].

Available literature shows that MLPs also provide effective care without adversely compromising patient safety, patient throughput or relative value unit (RVU) generated per hour irrespective of shift length and departmental acuity[3,11]. Descriptions of practice scope have noted that care is optimized when MLPs see lower acuity patients, allowing the physicians to focus on those higher acuity patients. When described, this includes conditions that range from laceration repair, minor traumatic injuries such as ankle sprains and fracture to URI and asthma[1-3,12.]. On the other hand, there is data showing that MLP clinical care responsibilities may not be limited to lower acuity patients. A 2005 practice survey found that of ED patients seen by MLPs without direct physician supervision, six percent arrived by ambulance, 37 percent had urgent/emergent acuity, and three percent were admitted to the hospital[6].

It is clear that the "horse has already left the barn" in the case of MLPs as part of the emergency health care team, and with it come growing concerns with respect to the lack of standardization of training, scope of care and practice. In this article we will review training, scope of practice, present dilemmas and future challenges for both for PA's and NPs practicing in emergency departments.

Nurse practitioners (NPs)

NPs have been part of the American medical care team since 1965. The original goal was to train nurses who can provide primary and pediatric care and Help Bridge the gap created by a physician shortage and prohibitive cost of health care[11]. The vision was a collaboration between the physician and the NP, and not as a physician substitute. In the early 1990's the focus moved towards training NPs to participate more fully in the care of acutely ill and critical patients in the inpatient setting. National certification for acute care nurse practitioner (ACNP) practice began in 1995 and currently; over 5000 NPs have received certification as ACNPs.

Training

Licensing as a NP requires a Bachelors of Science Degree in Nursing, and completion of a graduate-level nurse practitioner program (either a Master's or Doctorate of Nursing Practice degree) with didactic and clinical training in a specialty area. (Family, Psychiatry, Neonatal, Pediatrics, Gerontology, or Acute Care).

Passage of National Board certification in an area of specialty is required to practice. Certification is renewed every 5 years and requires 150 hours of professional development (continuing education, academic credits, presentations/research, preceptor hours, or professional service) and a minimum of 1,000 practice hours in your certification specialty. Further specialty training is obtained on the job and through continuing education.

There are a few schools that offer a Post-Masters Emergency NP (ENP) degree. However, at this time, there is no national certification offered. A

degree with an emergency medicine concentration can be obtained within an Acute Care or select Family NP degree program. Others practicing in the ED currently have a Family NP or Adult NP degree and get on the job training. The Acute Care specialty training provides skills for NPs to manage acute, critical, and chronically ill patients in ICU settings. These programs include coursework in pharmacology, physiology, pathophysiology, and patient care management, in addition to skills that include chest tube insertion, arterial puncture, central line placement, endotracheal intubation, managing ventilator therapy, and hemodynamic monitoring. The ENP program includes skills such as basic and advanced suturing, joint injection, slit lamp examinations, and splinting and casting. There are several yearlong fellowship training programs being offered in emergency medicine at individual hospitals.

Scope of practice and practice Settings

The scope of practice of the NP is determined by state law and place of employment and can vary considerably. NPs can practice autonomously based on individual state regulations, which allow them to diagnose and treat patients in collaboration with interdisciplinary health professionals. In some states, they are recognized as primary care providers and have prescribing authority with or without physician involvement. In 2007, there were 23 states that required no physician involvement to diagnose and treat[14]. State law also determines whether NPs are eligible for hospital admitting privileges, either by regulating access at the state level or by allowing local hospital boards to decide. All NPs are required to practice within their individual states scope of practice. They are also required to maintain both their registered nurse (RN) and NP license regulated by the state along with their national NP certification[14]. In the ED, NPs focus on primary health care services and wellness and prevention, including assessment, diagnosis, and treatment of lower acuity emergent, as well as chronic, health care problems[14,15].

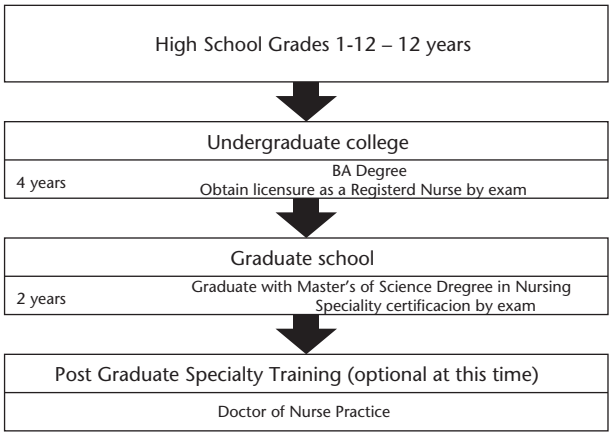

Figure 1. Nurse practitioner education and training.

NPs practice in a wide range of urban and rural healthcare settings, that include private practice, hospital in-patient and acute care settings, nursing homes, home health agencies, schools/universities and public health departments. A recent survey showed that of the NPs in emergency departments, 50% worked in both a main ED and fast track, with 23% only in fast tract, 21% only in the main ED, and 3% in urgent care[2].

Physicians Assistants (PA)

The concept of a specialized PA role was intended to offset physician shortages, improve access to health care and promote more cost effective health care delivery systems within the United States. The first PA training program was started at Duke University Medical Center with a group of Navy Corpsmen who had previously received prior extensive medical training and graduated the first class on October 6, 1967. Since its inception this new addition to the healthcare delivery team has gained wide acceptance from the medical community, federal government and private insurance sector. The Bureau of Labor and Statistics predict that PAs will be the second –fastest-growing profession in next decade. The American Academy of Physician Assistants project that in 2020 there will be between 137,000 and 173,000 certified PAs practicing with the United States

The PA educational program is modeled after the medical school curriculum lasting an average of 27 months. The training program for PA includes instruction in anatomy, physiology, biochemistry, pharmacology, physical diagnosis, pathophysiology, microbiology, clinical laboratory science, behavioral science and medical ethics. This is followed by more than 2,000 hours of clinical specialty rotations that include family medicine, internal medicine, obstetrics and gynecology, pediatrics, general surgery, emergency medicine and psychiatry. There are currently 159 accredited PA programs in the United States. The vast majority award master's degrees (Figure 2).

PA education programs are represented by the Physician Assistant Education Council and accredited through the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA)

and now the Society of Emergency Physicians Assistants (SEMPA) SEMPA's role has been support and advocate for physician assistants practicing in the ED of emergency medicine. Very recently they have proposed concluded that there is a need for standards of quality training and experience for physician assistants seeking to enter emergency medicine, and have proposed that the society take a leadership role in the following area:

1. Develop criteria for training and experience
2. Develop clinical emergency medicine continuing education
3. Nurture the future leadership of both the Society and physician assistants in developing and strengthening the MD-PA Team model of care
4. Extend the MD-PA Team model to all facets of emergency medicine including advocacy, safety, and quality
5. More fully engage with physician colleagues in facing the challenges and issues facing emergency medicine

As part of the strategic advancement of the profession, they have proposed an extensive postgraduate curriculum in emergency care for new graduates, and equivalent clinical experience, proctoring and continuing education for those who have been out in practice[15].

Scope of practice and practice settings

PAs practice medicine with the supervision of licensed physician and, although by law are dependent practitioners, they typically exercise considerable autonomy in clinical decision-making. Supervision may be provided by varied methods such as physical presence or reasonable access by telephone or electronic media. Each state will have its own supervisory requirements and it is mandatory that the physician/EMPA team follows state law where they are practicing.

There are four parameters that determine the scope of practice for an emergency medicine physician assistant: State law and regulation, facility policy, education, experience, and expertise of the PA and importantly the determination of the supervising physician(s).

Because medical practice and physician/PA practice are dynamic, specific lists of approved tasks that can be applied to all facilities and to all physician PA teams are not practical. There are not any "typical" restrictions on what a PA does in the ED. The physician/PA team and the hospital should be aware of any restrictions on the PA's scope found within state law or hospital policy.

PAs are educated in a broad-based medical curriculum that prepares them to be adaptable. They do not specialize during their education, but upon graduation can practice in any specialty. This allows flexibility within the profession and gives PAs the ability to respond to changing healthcare needs. According to 2010 AAPA Census numbers, about one-third of PAs work in primary care and the remaining two-thirds in specialties. Of those in specialty practice, nearly 20% are practicing in the emergency department setting. At the present time, emergency medicine PAs may provide emergency care for patients in settings that include the emergency department and critical care units, urgent care and fast track settings, observation units and chest pain centers. In addition they may participate in pre-hospital care situations involving air and ground transport of patients. An emerging and valuable role is their involvements in administrative functions that include compliance with care algorithms, quality improvement and patient safety initiatives. Finally, they are involved in teaching health care trainees, patients and families, and have assumed increasingly prominent roles in ED and hospital-based research programs assisting in patient recruitment, study compliance and follow-up[15,21-23].

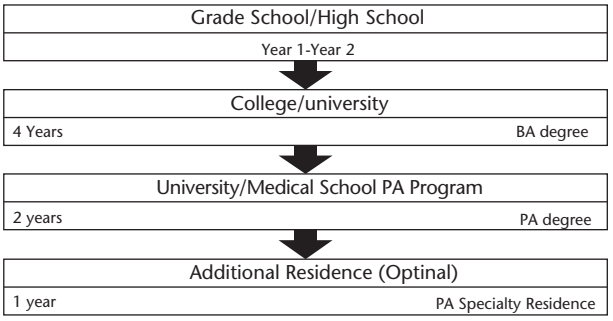

Figure 2. Physician's assistant education and training.

Reimbursement for services provided by MLPs

When an ED is staffed by both physician and MLPs from the same group practice, and the physician provides and documents that they had a "face to face" encounter with the patient in the ED, the service may be billed under either the physician's or the MLPs Medicare identification number. If there is no documentation of a direct interaction between the physician and the patient on the day of the ED encounter, then the service may only be billed by the MLP and the payment will be billed at 85% o the Medicare physician fee schedule[20].

Billing practice and regulations for non-medicare patients vary depending on the individual state regulations with respect to scope of practice. All states reimburse MLPs for services provided within the proscribed scope of practice, with some variance with respect to requirements for physician supervision, reimbursement for procedures and practice setting[18-20].

Clinical Impact of MLPs in the ED

There is a growing body of literature describing the impact of MLP care in the ED. Many of these studies are limited in their generalizability because of small sample sizes, limited patient populations with respect to volume and acuity and short duration of outcome assessment[2,12]. However, what has been shown is that their integration into the ED healthcare team positively impacts patient care. MLPs enhance patient care flow in low acuity areas with reduced treatment times, superior clinical documentation and fewer unplanned follow-up visits. Patient satisfaction scores also seem to be comparable and in some studies superior to those of physicians for low acuity patients[2,25,26]. When quality of MLP care is compared to that of physicians, it has been shown that there are no significant differences in care with respect to accuracy of exams, interpretation of radiographs, adequacy of treatment, laceration repair quality, drugs prescribed, diagnostic screening tests ordered, diagnoses made, laceration care and planned follow-up[27-29].

Importantly, the presence of MLPs may provide a critical stabilizing influence, particularly in academic settings that utilize trainees where staffing levels and personnel rotate often. There is a substantial body of literature that shows that the presence of MLPs providers enhances collaboration and communication, shorten ED lenth of stay for trauma patients, and increase compliance with clinical practice guidelines in the critical care setting[12,15]. Communication among care providers and compliance with care guidelines are vitally important to ED care as well, and is an area where a MLP can assume a leadership role.

NP perspective: The University of North Carolina/Chapel Hill (UNC) Experience

NPs at UNC are being recognized as an integral and invaluable asset to the medical care team in emergency medicine. We see lower acuity ED patients, managing emergent, acute and chronic conditions, and function in an array of administrative duties. NPs work independently alongside the physicians, who are immediately available for consultation if requested. We excel in delivering primary care to lower acuity patients who have limited access to health care. In addition to providing care, we collaborate with social work and primary care practitioners to ensure follow-up access to primary care clinics. While NP focus in the ED is primary care, it is clear that there is a need for structured training in emergency care to ensure consistency in practice and ultimately increase the range and acuity of patients seen. A program specific to emergency care, similar to the acute care program for NPs program would help in the transition from the classroom to the role of the provider in emergency care.

PA perspective: The Duke University Hospital Experience

Duke University Medical Center Emergency Department is Level 1 Trauma Center. The PAs on staff work collaboratively with the physician staff in the ED in a number of clinical care areas that include the main ED, the observation unit and the fast track for lower acuity patients. They also provide clinical oversight and teaching for PA students. This unique environment allows for the "health team" concept to be utilized to its full potential. The attending faculty are able to spend more time with critically ill patients while less acute patients are evaluated and treated in a safe and efficient manner. Throughput times are decreased which improves patient satisfaction and the overall efficiency of the department. The PAs participate in clinical research and educational programs such as bedside ultrasound. As Emergency Departments become increasingly overburdened and access to healthcare delivery systems continue to be of national concern, the PAs concept in emergency medicine illustrates a well proven solution to the problem of diminishing heath care access and rising health care cost.

Physician perspective

With experience, ED physicians have come to appreciate the fact that MLP's will reduce their overall workload without compromising care. In the context of a high volume and acuity setting, they can insure that patients with less acute con-

ditions are seen in a timely manner. Additionally, when used appropriately in the critical care setting, they can be instrumental in implementing jointly developed patient care plans and monitoring response to therapeutic interventions. They also prioritize non-clinical aspects of care that are often overlooked by physicians that include social services, communication, pain management and quality improvement initiatives.

As the presence of these providers grows in both the academic and community setting, there are concerns about scope of practice and the potential for professional threat to physician practice. Supervision and scope of practice for MLPs are defined at the state and institutional level. Most states allow provision of emergency care and define supervision as the availability of a physician, but participation in care or even physical presence in the facility is often not required. Physician supervision may be limited to co-signing charts or prescriptions days to weeks after the ED visit, and there are concerns that patient care may suffer when patient complexity or acuity are outside the training and clinical experience of the MLP. Limited data address the quality of midlevel provider care of higher acuity ED patients. A recent study of 4,029 visits for acute asthma in 63 U.S. EDs found that unsupervised MLPs provided a significantly lower quality of ED asthma care compared with MLPs who were supervised by a physician and with physicians alone[31]. The care of the asthma patient is supported by widely disseminated treatment guidelines, and this finding raises concerns about the care of patients who are less straightforward in their presentation. What is apparent is that experience as well as training, as in any specialty, is paramount. We need to focus on providing quality clinical experience for newly graduated MLPs that will prepare them for their clinical role. We also need to recognize the value of those with experience by providing increased scope of practice and autonomy. The proposed actions of SEMPA with respect to training and scope of practice are vitally important, and we will hopefully see parallel developments for NPs.

A secondary concern is that as MLPs become increasingly independent, they may pose a professional threat to physicians by competing for jobs. In one survey of physician trainees, approximately one-third viewed mid-level providers as a professional threat[32]. While there still are reported shortages in the workforce for EM physicians, it is likely that a major driving force behind inclusion of MLPs is largely financial; EDs may hire midlevel providers instead of emergency physicians because they are less expensive. This is of particular concern in urban centers where jobs for new graduates are becoming increasingly scarce.

It is clear that there are substantial real and potential benefits to having mid-level providers as part of the ED health care team, and these need to be clearly defined. Rather than simply being a low cost solution to existing problems in ED care, the introduction of the MLPs should be seen as adding value to the current level of practice. There is the widely held notion that, if given the choice, a "real doctor" would rather see a patient than an MLP. This may have been true in the past but I doubt it matters as much in this day and age. Patients are more concerned about being seen in a timely fashion by a caring and competent health care provider, and the letters after the name are far less important. Their training and expertise can be important additions to the health care process, particularly with respect to patient communications, compliance with disease management programs, quality improvement initiatives and patient flow.

In conclusion, it was not long ago that the vast majority of EDs in the U.S. were manned by general practitioners without specialty training, and now the majority are staffed by physicians who are residency-trained and board certified in Emergency Medicine. Emergency medicine emerged as a specialty for physicians because there was a clear need for expert care for the acutely ill and injured patients. We are now seeing a similar pattern develop with MLPs, who are filling a growing void for the emergent care of patients presenting with less urgent conditions. These MLPs are generally trained, without specialty training in EM, and as with specialty development for MDs, we envision that the next step will be the development of specialty training and certification in EM.

Our collective focus needs to be on developing collaborative roles with the ultimate goal being provision of expert, efficient and timely care for our patients. We envision the emergence of best practice models where the ED physician leads a team that includes MLPs who have had specialty training in emergency care. This would include EM fellowships for PA/NP after basic training, and board certification in EM.

For those currently in practice who have not had specialty training, there will need to be incremental progression in responsibilities and autonomy after performance benchmarks are met. Importantly, we need to recognize that MLPs can be utilized in a manner that is distinct from that of physicians by creating unique responsibilities for

patient communication and patient satisfaction initiatives, monitoring longitudinal care within the hospital and post discharge and enforcing quality improvement and clinical care algorithms.

MLPs are a now a recognized part of emergency care, and we anticipate that they will continue to play a greater role in clinical care, administration and education. At the same time, we also need to support efforts to develop emergency medicine training, accreditation, and continuing medical education for PAs and NPs. There also needs to be active discussion about the scope of practice and supervisory requirements for MLP because the inconsistencies among actual practices may ultimately constrain the uniform expansion of their roles and practice. Finally, the initial intent for MLPs was to support and not replace physicians practice. Experience to date suggests that MLPs can provide safe and effective care for patients within their scope of practice. In clinical settings where the complexity and acuity of patients is highly variable, such as the ED, MLP should collaborate with, and not replace, emergency physicians.

References

1 Sturmann KM, Ehrenberg K, Salzberg MR. Physician assistants in emergency medicine. Ann Emerg Med. 1990;19:304-8.
2 Carter AJ, Chochinov AH. A systematic review of the impact of nurse practitioners on cost, quality of care, satisfaction and wait times in the emergency department. CJEM. 2007;9:286-95.
3 Arnopolin SL, Smithline HA. Patient care by physician assistants and by physicians in an emergency department. JAAPA 2003;13:39-40.
4 Mundinger MO, Kane RL, Lenz ER, Totten AM, Tsai W, Cleary PD, et al. Primary Care Outcomes in Patients Treated by Nurse Practitioners or Physicians. JAMA. 2000;283:59-68.
5 Jeanmonod R, Delcollo J, Jeanmonod D, Dombchewsky O, Reiter M. Comparison of resident and mid-level provider productivity and patient satisfaction in an emergency department fast track. Emerg Med J. 2012;30:E12.
6 Ginde AA, Espinola JA, Sullivan AF, Blum FC, Camargo Jr CA. Use of midlevel providers in US EDs, 1993 to 2005: implications for the workforce. Am J Emerg. 2010;28:90-4.
7 Wiler JL, Rooks SP, Ginde AA. Update on midlevel provider utilization in U.S. emergency departments, 2006 to 2009. Acad Emerg Med. 2012;19:986-9.
8 Brown DF, Sullivan AF, Espinola JE, Carmargo CE. Continued rise in the use of mid-level providers in US emergency departments, 1993-2009. Int J Emerg Med. 2012;5:21.
9 Medscape. (Consulado 4 Enero 2013). Disponible en: http://www.medscape.com/features/slideshow/compensation/2012/emergencymedicine
10 National Salary Report 2010. (Consultado 4 Enero 2013). Disponible en: http://nurse-practitioners-and-physician-assistants.advanceweb.com/features/articles/national-salary-report-2010.aspx. Accessed 4.13.15
11 Brook C, Chomut A, Jeanmonad J. Physician Assistants Contribution to Emergency Department Productivity. West J Emerg Med. 2012;13:181-5.
12 Hooker RS, Klocko DJ, Larkin GL. Physician Assistants in emergency medicine: the impact of their role. Acad Emerg Med. 2011;18:72-7.
13 Snyder A, Keeling A, Razionalke C. From "First Aid Rooms" to advanced practice nursing: a glimpse into the history of emergency nursing. Adv Emerg Nurs J. 2006;28:198-209.
14 Klein TA. Scope of Practice and the Nurse Practitioner: Regulation, Competency, Expansion and Evolution. (Consultado 12 Abril 2012). Disponible en http://www.medscape.org/viewarticle/506277.
15 20EMPA Postgraduate Training & Practice Guidelines: Society of Emergency Medicine Physician Assistants Emergency Medicine Physician Assistant Postgraduate Training and Emergency Medicine Physician Assistant Practice Guidelines. (Consultado 12 Abril 2012). Disponible en: http://www.sempa.org
16 Cole FL, Ramírez E. A Profile of Nurse Practitioners in Emergency Care Settings. J Am Acad Nurse Pract. 2002;14:180-4.
17 Ault A. EDs search for the right midlevel provider mix. ACEP News 2008. (Consultado 12 Abril 2012). Disponible en: http://www.acep.org/content.aspx?id=37214
18 Lowery B, Varnam D. Physician Supervision and Insurance Reimbursement: Policy Implications for Nurse Practitioner Practice in North Carolina. N C Med J. 2011;72:310-3.
19 2011 AANP National NP Compensation Survey, 2011. (Consultado 12 Abril 2012). Disponible en: http://www.aanp.org/images/documents/research/2011AANPNationalNPCompensationSurveyPreliminary.pdf
20 Report to the congress: Medicare payment to advanced practice nurses and physicians assistants. (Consultado 12 Abril 2012). Disponible en: http://www.medpac.gov/documents/jun02_NonPhysPay.pdf
21 Kleinpell RM, Ely EW, Grabenkort R. Nurse practitioners and physician assistants in the intensive care unit: An evidence-based review. Crit Care Med. 2008;36:2888-97.
22 Goldfrank L, Corso T, Squillacote D. The emergency services physician assistant: Results of a 2-year experience. Ann Emerg Med. 1980;9:96-9.
23 Hooker RS, McCaig L. Emergency department uses of physician assistants and nurse practitioners: A national survey. Am J Emerg Med. 1996;14:245-9.
24 Doan Q, Sabhaney V, Kissoon N, Sheps S, Singer J. A systemic review: the role and impact of physician assistant in the emergency department. Emerg Med Australas. 2011;23:7-15.
25 Cooper MA, Lindsay GM, Kinn S, Swan IJ. Evaluating emergency nurse practitioner service: A randomized controlled trial. J Adv Nurs. 2002;40:721-30.
26 Rhee K, Dermyer A. Patient satisfaction with a nurse practitioner in a university emergency service. Ann Emerg Med. 1995;26:130-2.
27 Sakr M, Angus J, Perrin J, Nixon C, Nicholl J, Wardrope J. Care of minor injuries by emergency nurse practitioners of junior doctors: A randomized con- trolled trial. Lancet. 1999;354:1321-6.
28 Freij R, Duffy T, Hackett D, Cunninghan D, Fothergill J. Radio- graphic interpretation by nurse practitioners in a minor injuries unit. J Accid Emerg Med. 1996;13:41-3.
29 Buchanan L, Powers R. Establishing an NP- staffed minor emergency area. Nurs Pract. 1997;22:175-87.
30 Plater M. Making Sense of Mid-Levels. Emergency medicine monthly. August 15, 2011. (Consultado 12 Abril 2012). Disponible en: http://www.epmonthly.com
31 Tsai CL, Sullivan AF, Ginde AA, Camargo CA Jr. Quality of emergency care provided by physician assistants and nurse practitioners in acute asthma. Am J Emerg Med. 2010;28:485-91.
32 Larkin GL, Kantor W, Zielinski JJ. Doing unto Others? Emergency Medicine Residents' Willingness to Be Treated by Moonlighting Residents and Nonphysician Clinicians in the Emergency Department. Acad Emerg Med. 2001;8:886-92.
33 Roblin DW, Becker ER, Adams EK, Howard DH, Roberts MH. Patient Satisfaction With Primary Care: Does Type of Practitioner Matter? Medical Care. 2004;42:579-90.

Profesionales de grado medio como parte del equipo médico de atención a las emergencias en EE.UU: funciones, responsabilidades y directrices futuras

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El concepto de formar a profesionales no médicos en cuidados sanitarios se originó a mediados de los años 60, cuando hubo una escasez prevista de médicos de atención primaria (AP) y pretendía cubrir dicha escasez. Desde entonces, sus funciones, responsabilidades y autonomía se han desarrollado en diversas direcciones. El objetivo original era que estos profesionales de grado medio (PGM) proporcionasen atención a los pacientes menos graves y trabajaran bajo la supervisión de un médico, pero en los últimos años muchos están trabajando con una relativa autonomía, al atender a un número creciente de pacientes con enfermedad aguda y asumir responsabilidades más allá del cuidado directo del paciente. La literatura disponible muestra que la calidad de la atención proporcionada por los PGM es comparable a la de los médicos. Tienen potencial para cubrir importantes áreas de la atención como la comunicación con el paciente, el control del cumplimiento de las directrices en los cuidados y otros aspectos como la educación y la investigación. Son necesarios estudios actualizados para garantizar la homogenización y normalización en su formación, para definir el alcance y la práctica clínica de la atención que deben prestar y sobre la preocupación de los *urgenciólogos* por la amenaza profesional que puedan representar. [Emergencias 2014;26:61-68]

Palabras clave: Profesionales del grado medio. Servicio de urgencias. Asistente médico. Enfermería.