

REPORT OF THE COUNCIL ON MEDICAL SERVICE

CMS Report 10 - I-98
(December 1998)

Subject: Ratio of Physician to Physician Extenders
(Resolution 303, I-97)

Presented by: Kay K. Hanley, MD, Chair

Referred to: Reference Committee C
(Michael Tenner, MD, Chair)

1 At the 1997 Interim Meeting, the House of Delegates referred Resolution 303 to the Board of
2 Trustees. Introduced by the Medical Student Section, the resolution calls for the AMA to “study
3 the appropriate ratio of physician to physician extenders in which the physician can effectively
4 direct and supervise the treatment and care of patients.” The resolution has been referred by the
5 Board of Trustees to the Council on Medical Service for a report back to the House at the 1998
6 Interim Meeting.

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8 The following report summarizes current AMA policy on the use of physician extenders, reviews
9 existing state laws and regulation on physician to physician extender supervisory ratios, and
10 reviews available literature on the use of physician extenders.

11 12 BACKGROUND

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14 The term “physician extender” (PE) is often used interchangeably with “mid-level provider,”
15 “mid-level practitioner,” and “non-physician practitioner” (NPP). These non-physician
16 practitioners include physician assistants (PAs), nurse practitioners (NPs), advanced practice
17 nurses (APNs), nurse-midwives, and other allied health professionals. The extent to which these
18 NPPs are physician extenders, versus providing nursing care or serving other practice roles, varies
19 among the NPPs. States generally do not agree on what name or titles to use for nurses in
20 advanced practice. Along with APN, the most common choices include advanced registered nurse
21 practitioner (ARNP), advanced practice registered nurse (APRN), and nurse practitioner (NP).
22 Categories of advanced practice nurses include nurse anesthetists or certified registered nurse
23 anesthetists, certified nurse midwives or nurse midwives, certified nurse specialists, pediatric
24 nurse practitioner, and clinical nurse specialists with post-register nurse graduate clinical training.
25 New categories of PEs continue to develop (e.g., registered nurse first assistants who serve as first
26 assistants at surgery). The categories of registered nurses falling within each of those titles also
27 vary among states, as do the agencies responsible for regulating and licensing the professions.
28 States also vary in their use of professional titles for APRNs, and whether they allow or require
29 APRNs to function under broad nurse practice acts.

30 31 REGULATION OF PHYSICIAN EXTENDERS

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33 Currently, state laws and regulations which define the legal relationships between physicians and
34 PEs differ significantly across states. Differences are partially determined by the specific PE, their
35 scope of practice, and the practice setting. State regulations generally include the responsibilities

1 of the supervising physician and the criteria or definition for supervision. However, approximately
2 one-half of the states now allow NPs to practice independently.

3
4 State laws place limits on the number of PEs that physicians may supervise. For example, state
5 laws covering physician-to-PA supervisory ratios generally limit physicians to supervising no more
6 than two PAs. A summary of state laws covering physician to PAs supervisory ratios is included
7 as an appendix to this report. Limits on the supervisory ratio between physicians and other PEs
8 are generally higher, and vary between two and four. In addition, some states allow the formation
9 of collaborative practice arrangements between physicians and certain PEs. At the time this report
10 was written, the AMA Advocacy Resource Center was preparing a "Scope of Practice
11 Compendium" which examines state laws and regulations regarding collaborative agreements and
12 supervisory ratios of physicians to PEs.

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14 The specific definition of supervision varies across states, but typically refers to overseeing,
15 controlling, and directing the services provided by the PE. Supervision also includes accepting the
16 responsibility and liability for the activities delegated to the PE. Supervision may be direct, in that
17 the supervising physician is physically present when the PE is providing care. Constant physician
18 presence may not be required. Some state PE laws allow for on-site and off-site supervision. On-
19 site supervision requires the supervising physician be in the same location as the PE. Off-site
20 supervision specifies that the supervising physician be continuously and easily available for direct
21 communication with the PE. The means of communication and distance limits are often included
22 as conditions for off-site supervision.

23 24 UTILIZATION OF PHYSICIAN EXTENDERS

25
26 Although vast literature exists regarding the utilization of NPs, PAs, and other PEs, no studies
27 examining the supervisory role of physicians were found. The areas of research include the
28 following:

- 29
- 30 • PE scope of practice;
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 - 32 • the supply of PEs;
 - 33
 - 34 • the roles and degree of responsibility of PEs;
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 - 36 • the roles of PEs in providing care in rural and underserved areas;
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 - 38 • the impact of the employment of PEs on service use, cost and outcomes of care, or patient
39 satisfaction;
 - 40
 - 41 • task delegation and patient assignment to PEs; and
 - 42
 - 43 • comparisons of models of care or organizational structure in the practice setting, e.g.,
44 variations on a collaborative practice model, network models, and team models.

45 The results from the few studies which examine the use of PEs, or the mix of physicians and PEs,
46 suggest that the rate of use of PEs will depend upon the practice arrangement, size, and location.

1 For example, a 1986 study of large group practices reported the ratio of physicians to NPPs in
2 three health maintenance organizations varied from 1:1 to 17:1.

3
4 More recently, a study by the AMA Center for Health Policy Research examined data from the
5 AMA's 1994 Socioeconomic Monitoring System (SMS) survey on physician utilization of NPPs.
6 The physicians participating in the 1994 SMS survey were asked how many non-physician
7 personnel (i.e., clinical and administrative office staff) were employed in their practice during
8 1993. Information was also collected on the utilization of NPPs (i.e., PAs, and three types of
9 APNs, nurse midwives, NPs, and clinical nurse specialists).

10
11 The survey results indicated that 56% of group practice physicians report that their groups
12 employed NPPs. In contrast, about four solo physicians out of ten utilized NPPs. Physicians in
13 both types of practices were more likely to employ PAs than the other NPPs. Across specialties,
14 surgical specialists were the most likely to work with NPPs, regardless of their type of practice
15 (Figures 1 and 2). The findings also suggest that employing NPPs increases the size (total visits)
16 of solo physicians' medical practice and physician productivity (i.e., office visits per hour, and
17 patient visits per week and per year). The change in practice size is accompanied by an increase in
18 hours spent providing patient care and a small decrease in the number of weeks worked per year.

19
20 On average, group practice physicians were found to employ 6.2 NPPs--3.4 APNs and 2.8 PAs.
21 Physicians in practices with fewer than five physicians employed fewer NPPs (1.41) than
22 physicians in practices with five or more physicians (11.36). By specialty, physicians in the
23 medical specialties were in practices employing 8.7 NPPs, while the practices of general/family
24 practitioners employed 3.5 NPPs. Pathologists in group practice were found to employ the greatest
25 number of NPPs (16.74). The mix of APNs and PAs also varied across the specialties. The
26 variation among census regions (Figure 3) in the number of NPPs employed with group practice
27 physicians is similar to the variation in the data for solo physicians. Group practice physicians in
28 the North Central region were likely to employ more NPPs than physicians in other regions. The
29 average employment of NPPs in group practices also differed between rural and urban locations.
30 Practices in rural areas employ fewer NPPs (4) than groups in either small (6.8) or large (6.5)
31 urban areas. The mix of APNs and PAs employed also differed between rural and urban areas.
32 The ratio of APNs to PAs was higher for practices in urban areas than for practices in rural areas.

33
34 In 1993, the average solo practice physician employed 0.77 NPPs (i.e., an average of 77 NPPs are
35 employed for every 100 physicians). The data also show variation in the utilization of NPPs by
36 specialty (Figure 4). Surgical specialists worked with more NPPs (1.04) than any of the other
37 specialties. Among surgical specialists in solo practice, physicians in general surgery employed
38 the greatest number of NPPs (2.24). "Other specialists" (i.e., physicians in radiology,
39 anesthesiology, pathology, psychiatry, aerospace medicine, neurology, occupational medicine and
40 rehabilitation, general preventive medicine, public health, dermatology, emergency medicine, and
41 other or undefined specialties) worked with the least NPPs (0.36). The relative number of APNs
42 and PAs employed also varies by specialty. The APN/PA ratios in the medical specialties and
43 surgical specialties were higher than in the other specialties. The number of NPPs employed by
44 physicians in solo practice also varied by census region and urban-rural locality. The data
45 indicated that physicians in the North Central region had at least twice as many NPPs (1.37) in
46 their practice as physicians in the Northeast, South or West (0.51, 0.66, and 0.66, respectively).

1 Physicians in both rural areas and large urban areas employed 35% more NPPs (0.84) than
2 physicians in small urban areas (0.62).
3

4 The employment of NPPs can be expected to affect physician productivity. Utilizing PAs and
5 APNs, rather than physicians, to take patients' health history and to perform certain screening and
6 initial evaluation functions increases physician productivity. Enhanced physician productivity
7 might be reflected in the quantity of physician services per unit of physician time, measured by
8 office visits per hour. Total physician output or productivity can be measured by the number of
9 patient visits per week and per year. Employing NPPs may also affect the allocation of physician
10 time through changes in hours worked per week and weeks worked per year. To focus more
11 directly on the physician making the NPP employment decisions (and hence, the supervisory
12 relationship), the analysis was confined to physicians in solo practices. The practice
13 characteristics of solo physicians who utilized NPPs and of solo physicians who did not utilize
14 NPPs were examined. The data showed that employing NPPs enhances physician productivity.
15 Physicians who employ NPPs supply more office visits per hour and more visits in all settings,
16 both on a weekly and yearly basis than other physicians.
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18 AMA POLICY

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20 Current AMA policy includes comprehensive guidelines for the use of physician extenders (PEs).
21 Policy H-160.947, (AMA Policy Compendium), contains suggested guidelines for
22 physician/physician assistant (PA) practice. Guideline 6 of this policy states that the physician
23 must be available for consultation with the PA at all times, either in person or through
24 telecommunication systems or other means. Similarly, Policy H-160.950 endorses guidelines
25 which include the roles and responsibilities of nurse practitioners (NPs) and other advanced
26 practice nurses (APNs), and the responsibilities of the physician in supervising and coordinating
27 care in a collaborative practice. Guideline 8 in this policy states that at least one physician in the
28 integrated practice must be immediately available at all times for supervision and consultation
29 when needed by the NP. The other guidelines in both policies provide the physician and the PEs
30 principles for the management and coordination of patient care. In addition, Policy H-360.987
31 endorses principles regarding the supervision of medical care delivered by APNs in integrated
32 practices. The principles outline the physicians' responsibilities and authorities for patient care
33 and implementing quality control programs for PEs delivering care in integrated practices. Policy
34 H-360.987 also recognizes PAs and APNs, when under physician leadership, as effective PEs.
35 Policy 35.989 describes the responsibilities of physicians in the supervision of a PA. Policy
36 35.989 also states that the state medical licensing board should determine on an individual basis
37 the number of PAs that a particular physician may supervise or a group of physicians may employ.
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39 DISCUSSION

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41 As noted above, AMA guidelines on the supervision of PEs account for variation in the training,
42 experience, preparation, and the scope of practice (as defined by state law) of PEs; in the patient's
43 condition and treatment; and in physician supervising methods and styles of delegating patient
44 care. Although the guidelines do not specify recommended ratios of physician to PEs, they do
45 provide physicians with the needed flexibility to determine the appropriate utilization of PAs and
46 NPs per supervising physician.
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1 As a result, the Council believes that the appropriate mix of physicians and NPPs should be
2 determined by physicians at the practice level. Supervising physicians are the most knowledgeable
3 of their own supervisory abilities and practice style, as well as the training and experience of PEs
4 in their practice. Rather than maximizing a physician's ability to direct patient care, the Council
5 believes that specified ratios of supervisory physicians to PEs might restrict appropriate provision
6 of care and could reduce access to care.

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8 A review of the literature provides little basis for determining the appropriate ratios of supervisory
9 physician to PEs. Although patient satisfaction and outcomes data regarding the use of PEs is
10 currently unavailable, the Council believes this information will aid in assessing the supervisory
11 relationship between physicians and PEs. Based on the results from a study by the AMA Center
12 for Health Policy Research, utilization of NPPs per physician varied by physician specialty, census
13 region, and community size. The average physician in solo practice, who takes on the role of
14 supervisory physician, utilizes no more than one PE. Consequently, the actual physician-to-PE
15 ratio, at least for these physicians, is relatively low.

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17 It should be noted that the American Academy of Family Physicians (AAFP) also recognizes the
18 diversity of practice settings in which NPPs are employed and supports the use of NPPs only if
19 practicing under the "direction and responsible supervision of a practicing, licensed physician."
20 The AAFP policy includes guidelines on the supervision of PEs, which are intended to serve as a
21 set of general principles with which physicians and policy makers can assess the role of NPPs in
22 improving the availability of health care services. The guidelines do not specify the number of
23 PEs physicians may supervise. Likewise, the American Academy of Physician Assistants
24 recommends that the "supervising physician should be allowed flexibility in staffing and team
25 deployment." Finally, at the time that this report was written, the Advocacy Resource Center was
26 planning a late 1998 meeting on scope of practice issues. At that meeting, it is anticipated that
27 state and specialty medical society policies on the supervisory and collaborative relationships
28 between physicians and physician extenders will be discussed.

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30 RECOMMENDATIONS

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32 The Council on Medical Service recommends that the following be adopted in lieu Resolution 303
33 (I-97), and that the remainder of the report be filed:

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35 That the AMA endorse the principle that the appropriate ratio of physician to physician
36 extenders should be determined by physicians at the practice level, consistent with good
37 medical practice, and state law where relevant.