

HOD Action: Council on Medical Education Report 1 adopted and the remainder of the report filed.

REPORT OF THE COUNCIL ON MEDICAL EDUCATION

CME Report 1-I-24

Subject: Medication Reconciliation Education
(Resolution 805-I-23, Resolved 2)

Presented by: Krystal Tomei, MD, MPH, Chair

Referred to: Reference Committee C

1
2 Resolution 805-I-23, “Medication Reconciliation Education,” was introduced by the Michigan
3 delegation at the 2023 Interim Meeting of the American Medical Association (AMA). While
4 Resolve 1 was adopted into AMA Policy D-300.973, [Medication Reconciliation Education](#), thus
5 encouraging external parties to more broadly study medication reconciliation separate from this
6 report, the language of Resolve 2 was referred for study. The referred clause asked that our AMA:
7
8 work with other appropriate organizations to determine whether education for physicians-in-
9 training is sufficient to attain the medication reconciliation core competencies necessary to
10 reduce medical errors and ensure patient safety and quality of care and provide
11 recommendations for action as applicable. (Directive to Take Action)
12

13 Testimony within Reference Committee J emphasized the importance of the spirit of the resolution
14 and how vital appropriate medication reconciliation is to patient safety. Additionally, testimony
15 indicated that this is not an issue around the education of physicians, but rather the other challenges
16 that can occur even for well-trained physicians working toward medication reconciliation, such as
17 the burdens of dissimilar electronic health records (EHR). The testimony discussed the
18 involvement of many non-physicians in medication reconciliation as well. Council on Medical
19 Education testimony also noted that the AMA as an organization does not make determinations of
20 the adequacy of training as this lies solely with the accrediting body and as such the original
21 language would be inappropriate. Reference Committee J proposed amending language to offer
22 generalized educational support for all relevant health care providers.
23

24 The House of Delegates (HOD) rejected this proposed wording. Testimony at full HOD
25 deliberations centered around differing opinions on the adequacy of existing training for medical
26 learners: some academic physicians felt training was sufficient, while some residency program
27 educators felt training was not effective. Other concerns included differing opinions about the
28 potential impacts of additional EHR and medication reconciliation regulations on physicians and
29 patients and uncertainty regarding who bears the responsibility for medication reconciliation. Due
30 to varying and sometimes contradictory concerns, the HOD felt that the language of the directive
31 warranted further study before a decision was made. This report is in response to this referral.
32

33 BACKGROUND

34 *Medication Reconciliation: Definitions, Importance, and Existing Policy*

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36
37 The Centers for Medicare & Medicaid Services (CMS) define medication reconciliation as follows:
38 “The process of identifying the most accurate list of all medications that the patient is taking,

1 including name, dosage, frequency, and route, by comparing the medical record to an external list
2 of medications obtained from a patient, hospital, or other provider.”¹ Adverse drug events are a
3 leading cause of injury and death for patients,² and medication reconciliation is one intervention
4 intended to alleviate some of the risks of this potential harm. Medication reconciliation, when
5 compared to usual care, has the potential to reduce dangerous discrepancies, although it is likely
6 insufficient on its own³ and creates inconsistent results due to being subject to a variety of barriers
7 in resource-limited settings.⁴ A reconciled list may also not necessarily be the correct medication
8 list, and understandings of what constitute medication reconciliation and when it has been achieved
9 vary.⁵ Though important, evidence indicates medication reconciliation must be paired with a larger
10 set of interventions to improve safety.⁶ However, the correct medication list, when achieved,
11 significantly improves patient outcomes.⁵

12
13 Existing AMA policy supports medication reconciliation as a means to improve patient safety
14 ([Pharmacy Review of First Dose Medication D-120.965](#)), supports implementation of medication
15 reconciliation as part of the hospital discharge process ([Hospital Discharge Communications H-
16 160.902](#)), and offers suggestions within these policies to optimize medication reconciliation. AMA
17 also “supports medication reconciliation processes that include confirmation that prescribed
18 discharge medications will be covered by a patient’s health plan and resolution of potential
19 coverage and/or prior authorization (PA) issues prior to hospital discharge” ([Continuity of Care for
20 Patients Discharged from Hospital Settings H-125.974](#)) and encourages further study of a broad
21 number of issues related to medication reconciliation ([Medication Reconciliation Education D-
22 300.973](#)).

23
24 Nationally, other major groups incorporate medication reconciliation guidance into their own
25 policies. CMS, a federal agency, provides, regulates, and/or facilitates health coverage through
26 Medicare, Medicaid, the Children’s Health Insurance Program, and the Health Insurance
27 Marketplace. They describe medication reconciliation within their Electronic Health Record
28 Incentive Program documentation on Eligible Professional (EP) Meaningful Use Menu Set
29 Measures,¹ with an objective of “The EP who receives a patient from another setting of care or
30 provider of care or believes an encounter is relevant should perform medication reconciliation” and
31 the qualifying measure of “The EP performs medication reconciliation for more than 50 percent of
32 transitions of care in which the patient is transitioned into the care of the EP.” Medication
33 reconciliation is also part of CMS’ Merit-Based Incentive Payment System (MIPS) measures for
34 clinicians, listed as high priority under Quality ID #130, “Documentation of Current Medications in
35 the Medical Record.”⁷ The Joint Commission, a non-profit organization that accredits more than
36 20,000 health care programs and organizations in the United States,⁸ also provides newsletters and
37 National Patient Safety Goals (NPSG) related to medication reconciliation. NPSG.03.06.01 states:
38 “There is evidence that medication discrepancies can affect patient outcomes. Medication
39 reconciliation is intended to identify and resolve discrepancies—it is a process of comparing the
40 medications a patient is taking (or should be taking) with newly ordered medications. The
41 comparison addresses duplications, omissions, and interactions, and the need to continue current
42 medications. The types of information that clinicians use to reconcile medications include (among
43 others) medication name, dose, frequency, route, and purpose. Organizations should identify the
44 information that needs to be collected in order to reconcile current and newly ordered medications
45 and to safely prescribe medications in the future”⁹ and lists several elements of performance in this
46 safety goal, including obtaining, documenting, and defining patient medications, comparing other
47 lists and resolving discrepancies, providing appropriate parties with written medication
48 information, and explaining the importance of medication management to patients/caregivers. The
49 Agency for Healthcare Research and Quality also released a toolkit for medical reconciliation with
50 tools for designing or redesigning the process.¹⁰ Finally, globally, the World Health Organization

1 provides a Standard Operating Protocol for “Assuring Medication Accuracy at Transitions in Care:
2 Medication Reconciliation.”²

3 *Responsibility*

4
5 Significant disagreement exists about who is responsible for each role within medication
6 reconciliation, and workflow processes vary depending on the setting.¹¹ Although physicians are
7 ultimately held legally accountable in the United States for medication and medication
8 management¹² and AMA policy advocates that prescriptive authority include the responsibility to
9 monitor the effects of the medication and to attend to problems associated with the use of the
10 medication, including liability ([Non-Physician Prescribing H-120.955](#)), medication reconciliation,
11 while physician-led, is a team-based interprofessional process, with an absence of shared
12 understanding about the roles physicians, pharmacists, pharmacy technicians, nurses, and other
13 professionals play to reconcile medication lists in any given setting.¹³ In fact, pharmacist-based
14 interventions may have a significant positive impact in preventing hospital readmissions.¹⁴
15 Physician trainees rotate through many different clinical settings during their medical education
16 making the trainees’ roles in multiple medical reconciliation processes as transient care team
17 members challenging in many circumstances. The perspectives of the patient and the patient’s
18 family also impact the practice of medication reconciliation.⁵

19
20 Responsibility for ensuring medication reconciliation takes place within health care is typically
21 enforced via hospital accreditation bodies, although challenges such as difficulty demonstrating
22 tangible positive outcomes and complexities and costs of the process have led to lack of
23 standardization and scaling back of some requirements.¹⁵

24 25 *The Role of Technology*

26
27 Although EHR use can reduce medication errors,⁷ EHR systems have interoperability gaps across
28 different clinical settings that create additional conditions for errors.⁵ AMA policy currently
29 involves working with EHR vendors and other vendors to improve medication reconciliation
30 within the systems ([Reducing Polypharmacy as a Significant Contributor to Senior Morbidity D-120.928](#)). Other existing and emerging technologies also impact medication reconciliation—for
31 instance, The Joint Commission warned of the potential dangers of voice recognition technology to
32 patient safety within medication reconciliation.¹⁶

33 34 35 *Medical Education Core Competencies and Specialty-Specific Competencies*

36
37 The Accreditation Council for Graduate Medical Education (ACGME) endorses six core
38 competencies expected of all residents. These are patient care, medical knowledge,
39 professionalism, interpersonal and communication skills, practice-based learning and improvement,
40 and systems-based practice.¹⁷ Though medication reconciliation is not specifically delineated for all
41 specialties in these broad categories, it applies to the requirements within several categories,
42 including patient care, systems-based practice, and the interpersonal and communication skills
43 requirement of communicating effectively with patients and other professionals as well as the need
44 to “maintain comprehensive, timely, and legible medical records.”¹⁸ In addition, several specific
45 specialties discuss medication reconciliation within their ACGME Milestones, including within
46 “Patient Care 3: Assessing and Optimizing of Pharmacotherapy” in the Geriatric Medicine
47 Milestones¹⁹ and within “Patient Care 1: History” in the Internal Medicine Milestones.²⁰

48
49 At the time of this writing, the ACGME, the Association of American Medical Colleges, and the
50 American Association of Colleges of Osteopathic Medicine are engaged in a multi-year initiative to

1 develop a common set of foundational competencies for use in undergraduate medical education
2 programs.²¹

3 DISCUSSION

4

5 The Agency for Healthcare Research and Quality offers a toolkit for medication reconciliation
6 training,²² emphasizing a multidisciplinary approach to education, as a multiplicity of disciplines
7 are involved in the medication use process, including physicians, nurses, pharmacists, medical
8 assistants, and others, and therefore, robust communication and cooperation across the continuum
9 of care is required.²³ This multidisciplinary approach is especially highlighted by research that
10 indicates involvement of pharmacists in medication reconciliation tends to lead to better patient
11 outcomes and should therefore not be exclusively related to physician training.²⁴

12

13 Current research²⁵ emphasizes the efficacy of using simulation, roleplay, and interactive, skills-
14 based training in teaching interdisciplinary medication reconciliation skills.²⁶ One interprofessional
15 education session including both pharmacy students and medical students from neighboring
16 institutions elicited themes of: “(1) increased awareness of barriers to medication adherence, (2)
17 increased empathy towards adults with polypharmacy, (3) appreciation for the interprofessional
18 team, and (4) realization of the importance of medication reconciliation and patient understanding
19 of their medications.”²⁷ One study found that even PowerPoint-based instruction within grand
20 rounds improved perceived, self-reported knowledge of medication reconciliation among medical
21 learners, though actual practices and patient outcomes were not assessed.²⁸

22

23 One 2021 study of pediatric resident physicians in Canada revealed incomplete documentation for
24 40% of patient charts, with no reason for the incompleteness documented in 68% of these cases.
25 Improved resident education at the institution level was one of the recommended quality
26 improvement strategies, in addition to improved patient education and increased collaboration with
27 pharmacy services.²⁹ A twice-monthly interactive educational intervention took place among
28 internal medicine residents at the Washington DC VA Medical Center and significantly reduced
29 medication discrepancies when compared to a control group not receiving the educational
30 intervention, although there was no statistical difference between the amount of medication
31 omissions across the two groups.³⁰ Most studied and effective interventions regarding medication
32 reconciliation education for health care professionals take place at site-specific levels with the
33 entire care team, such as nursing homes in a specific region.³¹ Some sites also recommended urgent
34 suggestions for improvement that were not focused around physician training on medication
35 reconciliation specifically, but on improving communication mechanisms between staff and the
36 need for pharmacy involvement, again emphasizing the interdisciplinary nature of the work.¹⁵

37

38 More broadly, away from local contexts, in addition to AMA policy related to medication
39 reconciliation, the AMA also offers continuing medical education in medication reconciliation on
40 the AMA Ed Hub, offering 36 modules at the time of this writing that incorporate mentions of
41 medication reconciliation improvements.

42

43 There is an underlying infrastructure for medical learner training within medication reconciliation
44 in several ACGME-accredited specialties, hospital system quality metrics, and wider medical
45 education competencies. The AMA as an organization does not make determinations of the
46 adequacy of training as this lies solely with the accrediting body, but AMA policy does provide
47 robust support for medication reconciliation, including the possibility of additional training. In
48 addition, as discussed above, physician training is only one component of medication reconciliation
49 education, and medication reconciliation itself, though important, is insufficient for patient safety
50 on its own. Each care setting has a unique context, and interventions are often conducted most

1 effectively in the care setting with the entire interdisciplinary team and with the overall promotion
2 of interprofessional communication, as well as improvement of EHR systems. Interventions must
3 also focus on improvements to actual patient outcomes and receiving the correct medications,
4 rather than simply to the completion of medication reconciliation, which may or may not be correct
5 or helpful to the patient, even if accurately reconciled across multiple sources: “Primary care
6 clinicians and hospitalists currently must attest that medication reconciliation has been completed,
7 but this does not measure accuracy. Currently, no validated measures are available to assess the
8 quality of medication reconciliation. More meaningful measures are needed, and studies can be
9 built upon these measures to assess the value of medication reconciliation across a gradient of how
10 comprehensively it was performed.”⁵ AMA policy [D-300.973](#) already advocates toward this goal.

11 RELEVANT AMA POLICY

12 The AMA has extensive policy related to medication reconciliation and physicians-in-training.
13 Some examples are as follows:

- 14 • [D-300.973](#), “Medication Reconciliation Education,” encourages the study of
15 current medication reconciliation practices across transitions of care to evaluate the
16 impact on patient safety and quality of care, including when there are dissimilar
17 electronic health records, and to develop strategies, including the potential need for
18 additional training, to reduce medical errors and ensure patient safety and quality
19 of care.
- 20 • [D-120.965](#), “Pharmacy Review of First Dose Medication,” supports medication
21 reconciliation as a means to improve patient safety and indicates that (a) systems
22 be established to support physicians in medication reconciliation, and (b)
23 medication reconciliation requirements should be at a level appropriate for a
24 particular episode of care and setting.
- 25 • [H-160.902](#), “Hospital Discharge Communications,” supports implementation of
26 medication reconciliation as part of the hospital discharge process.
- 27 • [D-120.928](#), “Reducing Polypharmacy as a Significant Contributor to Senior
28 Morbidity,” works with other stakeholders and EHR vendors to address the
29 continuing problem of inaccuracies in medication reconciliation and propagation
30 of such inaccuracies in electronic health records.
- 31 • [H-125.974](#), “Continuity of Care for Patients Discharged from Hospital Settings,”
32 supports medication reconciliation processes that include confirmation that
33 prescribed discharge medications will be covered by a patient’s health plan and
34 resolution of potential coverage and/or prior authorization issues prior to hospital
35 discharge.
- 36 • [H-120.968](#), “Medication (Drug) Errors in Hospitals,” encourages individual
37 physicians to minimize medication errors by adhering to the following guidelines
38 when prescribing medications: (a) Physicians should stay abreast of the current
39 state of knowledge regarding optimal prescribing through literature review, use of
40 consultations with other physicians and pharmacists, participation in continuing
41 medical education programs, and other means.
- 42 • [H-120.955](#), “Non-Physician Prescribing,” advocates that prescriptive authority
43 include the responsibility to monitor the effects of the medication and to attend to
44 problems associated with the use of the medication. This responsibility includes
45 the liability for such actions.
- 46 • [H-310.929](#), “Principles for Graduate Medical Education,” states there must be
47 objectives for residency education in each specialty that promote the development
48
49
50

1 of the knowledge, skills, attitudes, and behavior necessary to become a competent
2 practitioner in a recognized medical specialty. Institutions sponsoring residency
3 programs and the director of each program must assure the highest quality of care
4 for patients and the attainment of the program’s educational objectives for the
5 residents.

- 6 • [D-295.934](#), “Encouragement of Interprofessional Education Among Health Care
7 Professions Students,” recognizes that interprofessional education and partnerships
8 are a priority of the American medical education system and encourages the
9 development of skills for interprofessional education that are applicable to and
10 appropriate for each group of learners.

11
12 These policies are listed in full detail in Appendix A.

13 14 SUMMARY AND RECOMMENDATIONS

15
16 While support and ongoing improvement can and should be ongoing in the education of
17 physicians-in-training, aligned with the overall goal to reduce errors and improve patient safety,
18 issues associated with medication reconciliation far exceed the domain of education for physicians-
19 in-training, and even appropriate medication reconciliation practices alone³ do not necessarily
20 improve certain patient outcomes,⁶ requiring attention to the full spectrum of medication-related
21 practices. Accrediting bodies for both physician trainees and for hospitals and health systems
22 currently provide guidance and frameworks around medication reconciliation as appropriate for
23 each clinical setting and specialty. The AMA already works to remedy EHR-related medication
24 reconciliation issues via [D-120.928](#) and encourages additional study of medication reconciliation
25 issues via [D-300.973](#), which includes encouraging research on additional training opportunities.
26 Current evidence suggests this training is best done in an interdisciplinary context, which [D-](#)
27 [295.934](#) also provides support and guidance for.

28
29 The Council on Medical Education therefore recommends that the following recommendations be
30 adopted in lieu of Resolution 805-I-23, Resolve 2, and the remainder of this report be filed:

31
32 That our AMA:

- 33
34 1. Amend AMA Policy [D-120.965 “Pharmacy Review of First Dose Medication”](#) by
35 addition of a new third clause to read as follows:
36 3. Our AMA a) recognizes that medication reconciliation is a multidisciplinary
37 process and b) supports education of physicians-in-training about the
38 physician’s role and responsibilities in medication reconciliation and
39 management within a physician-led team in relevant clinical settings, to
40 minimize medical errors and promote patient safety and quality of care.
- 41 2. Amend AMA Policy D-120.965 with a change in title to read as follows:
42 Medication Reconciliation to Improve Patient Safety
- 43 3. Reaffirm AMA Policy [H-160.902 “Hospital Discharge Communications”](#)
44

45 Fiscal note: \$1,000

1 APPENDIX A: RELEVANT AMA POLICY

2
3 Medication Reconciliation Education D-300.973

4 Our American Medical Association encourages the study of current medication reconciliation
5 practices across transitions of care to evaluate the impact on patient safety and quality of care,
6 including when there are dissimilar electronic health records, and to develop strategies, including
7 the potential need for additional training, to reduce medical errors and ensure patient safety and
8 quality of care.

9
10 Pharmacy Review of First Dose Medication D-120.965

11 1. Our AMA supports medication reconciliation as a means to improve patient safety.
12 2. It is AMA policy that (a) systems be established to support physicians in medication
13 reconciliation, and (b) medication reconciliation requirements should be at a level appropriate for a
14 particular episode of care and setting.

15
16 Hospital Discharge Communications H-160.902

17 1. Our AMA encourages the initiation of the discharge planning process, whenever possible, at the
18 time patients are admitted for inpatient or observation services and, for surgical patients, prior to
19 hospitalization.
20 2. Our AMA encourages the development of discharge summaries that are presented to physicians
21 in a meaningful format that prominently highlight salient patient information, such as the
22 discharging physician's narrative and recommendations for ongoing care.
23 3. Our AMA encourages hospital engagement of patients and their families/caregivers in the
24 discharge process, using the following guidelines:
25 a. Information from patients and families/caregivers is solicited during discharge planning, so that
26 discharge plans are tailored to each patient's needs, goals of care and treatment preferences.
27 b. Patient language proficiency, literacy levels, cognitive abilities and communication impairments
28 (e.g., hearing loss) are assessed during discharge planning. Particular attention is paid to the
29 abilities and limitations of patients and their families/caregivers.
30 c. Specific discharge instructions are provided to patients and families or others responsible for
31 providing continuing care both verbally and in writing. Instructions are provided to patients in
32 layman's terms, and whenever possible, using the patient's preferred language.
33 d. Key discharge instructions are highlighted for patients to maximize compliance with the most
34 critical orders.
35 e. Understanding of discharge instructions and post-discharge care, including warning signs and
36 symptoms to look for and when to seek follow-up care, is confirmed with patients and their
37 families/caregiver(s) prior to discharge from the hospital.
38 4. Our AMA supports making hospital discharge instructions available to patients in both printed
39 and electronic form, and specifically via online portals accessible to patients and their designated
40 caregivers.
41 5. Our AMA supports implementation of medication reconciliation as part of the hospital discharge
42 process. The following strategies are suggested to optimize medication reconciliation and help
43 ensure that patients take medications correctly after they are discharged:
44 a. All discharge medications, including prescribed and over-the-counter medications, should be
45 reconciled with medications taken pre-hospitalization.
46 b. An accurate list of medications, including those to be discontinued as well as medications to be
47 taken after hospital discharge, and the dosage and duration of each drug, should be communicated
48 to patients.
49 c. Medication instructions should be communicated to patients and their families/caregivers
50 verbally and in writing.

1 d. For patients with complex medication schedules, the involvement of physician-led
2 multidisciplinary teams in medication reconciliation including, where feasible, pharmacists should
3 be encouraged.

4 6. Our AMA encourages patient follow-up in the early time period after discharge as part of the
5 hospital discharge process, particularly for medically complex patients who are at high-risk of re-
6 hospitalization.

7 7. Our AMA encourages hospitals to review early readmissions and modify their discharge
8 processes accordingly.

9
10 Reducing Polypharmacy as a Significant Contributor to Senior Morbidity D-120.928

11 1. Our AMA will work with other organizations e.g., AARP, other medical specialty societies,
12 PhRMA, and pharmacists to educate patients about the significant effects of all medications and
13 most supplements, and to encourage physicians to teach patients to bring all medications and
14 supplements or accurate, updated lists including current dosage to each encounter.

15 2. Our AMA along with other appropriate organizations encourages physicians and ancillary staff
16 if available to initiate discussions with patients on improving their medical care through the use of
17 only the minimal number of medications (including prescribed or over-the-counter, including
18 vitamins and supplements) needed to optimize their health.

19 3. Our AMA will work with other stakeholders and EHR vendors to address the continuing
20 problem of inaccuracies in medication reconciliation and propagation of such inaccuracies in
21 electronic health records.

22 4. Our AMA will work with other stakeholders and EHR vendors to include non-prescription
23 medicines and supplements in medication lists and compatibility screens.

24
25 Continuity of Care for Patients Discharged from Hospital Settings H-125.974

26 Our AMA:

27 (1) will advocate for protections of continuity of care for medical services and medications that are
28 prescribed during patient hospitalizations, including when there are formulary or treatment
29 coverage changes that have the potential to disrupt therapy following discharge;

30 (2) supports medication reconciliation processes that include confirmation that prescribed
31 discharge medications will be covered by a patient's health plan and resolution of potential
32 coverage and/or prior authorization (PA) issues prior to hospital discharge;

33 (3) supports strategies that address coverage barriers and facilitate patient access to prescribed
34 discharge medications, such as hospital bedside medication delivery services and the provision of
35 transitional supplies of discharge medications to patients;

36 (4) will advocate to the Office of the National Coordinator for Health Information Technology
37 (ONC) and the Centers for Medicare & Medicaid Services (CMS) to work with physician and
38 hospital organizations, and health information technology developers, in identifying real-time
39 pharmacy benefit implementations and published standards that provide real-time or near-time
40 formulary information across all prescription drug plans, patient portals and other viewing
41 applications, and electronic health record (EHR) vendors;

42 (5) will advocate to the ONC to include proven and established real-time pharmacy benefit criteria
43 within its certification program;

44 (6) will advocate to the ONC and the CMS that any policies requiring health information
45 technology developers to integrate real-time pharmacy benefit systems (RTPB) within their
46 products do so without disruption to EHR usability and minimal to no cost to physicians and
47 hospitals, providing financial support if necessary; and

48 (7) supports alignment and real-time accuracy between the prescription drug data offered in
49 physician-facing and consumer-facing RTPB tools.

1 Medication (Drug) Errors in Hospitals H-120.968

2 (1) Our AMA encourages individual physicians to minimize medication errors by adhering to the
3 following guidelines when prescribing medications:

4 (a) Physicians should stay abreast of the current state of knowledge regarding optimal prescribing
5 through literature review, use of consultations with other physicians and pharmacists, participation
6 in continuing medical education programs, and other means.

7 (b) Physicians should evaluate the patient's total status and review all existing drug therapy before
8 prescribing new or additional medications (e.g., to ascertain possible antagonistic drug
9 interactions).

10 (c) Physicians should evaluate and optimize patient response to drug therapy by appropriately
11 monitoring clinical signs and symptoms and relevant laboratory data; follow-up and periodically
12 reevaluate the need for continued drug therapy.

13 (d) Physicians should be familiar with the hospital's medication-ordering system, including the
14 formulary system; the drug use review (DUR) program; allowable delegation of authority;
15 procedures to alert nurses and others to new drug orders that need to be processed; standard
16 medication administration times; and approved abbreviations.

17 (e) Written drug or prescription orders (including signatures) should be legible. Physicians with
18 poor handwriting should print or type medication orders if direct order entry capabilities for
19 computerized systems are unavailable.

20 (f) Medication orders should be complete and should include patient name; drug name (generic
21 drug name or trademarked name if a specific product is required); route and site of administration;
22 dosage form (if applicable); dose; strength; quantity; frequency of administration; and prescriber's
23 name. In some cases, a dilution, rate, and time of administration should be specified. Physicians
24 should review all drug orders for accuracy and legibility immediately after they have prescribed
25 them.

26 (g) Medication orders should be clear and unambiguous. Physicians should: (i) write out
27 instructions rather than use nonstandard or ambiguous abbreviations (e.g., write "daily" rather than
28 "qd" which could be misinterpreted as "qid" or "od"); (ii) not use vague instructions, such as "take
29 as directed"; (iii) specify exact dosage strengths (such as milligrams) rather than dosage form units
30 (such as one vial) (an exception would be combination products, for which the number of dosage
31 form units should be specified); (iv) prescribe by standard nomenclature, using the United States
32 Adopted Names (USAN)-approved generic drug name, official name, or trademarked name (if a
33 specific product is required) and avoid locally coined names, chemical names, unestablished
34 abbreviated drug names (e.g., AZT), acronyms, and apothecary or chemical symbols; (v) always
35 use a leading "0" to precede a decimal expression of less than one (e.g., 0.5 ml), but never use a
36 terminal "0" (e.g., 5.0 ml); (vi) avoid the use of decimals when possible (e.g., prescribe 500 mg
37 instead of 0.5 g); (vii) spell out the word "units" rather than writing "u"; (viii) and use the metric
38 system. Instructions with respect to "hold" orders for medications should be clear.

39 (h) Verbal medication orders should be reserved only for those situations in which it is impossible
40 or impractical for the prescriber to write the order or enter it in a computer. Verbal orders should be
41 dictated slowly, clearly, and articulately to avoid confusion. The order should be read back to the
42 prescriber by the recipient (e.g., nurse, pharmacist); when read back, the recipient should spell the
43 drug name and avoid abbreviations when repeating the directions. A written copy of the verbal
44 order should be placed in the patient's medical record and later confirmed by the prescriber in
45 accordance with applicable state regulations and hospital policies.

46 (2) Our AMA encourages the hospital medical staff to take a leadership role in their hospital, and
47 in collaboration with pharmacy, nursing, administration, and others, to develop and improve
48 organizational systems for monitoring, reviewing, and reporting medication errors and, after
49 identification, to eliminate their cause and prevent their recurrence.

1 Non-Physician Prescribing H-120.955

2 1. Our AMA advocates that prescriptive authority include the responsibility to monitor the effects
3 of the medication and to attend to problems associated with the use of the medication. This
4 responsibility includes the liability for such actions.

5 2. Our AMA supports the development of methodologically valid research on the relative impact of
6 non-physician prescribing on the quality of health care.

7
8 Principles for Graduate Medical Education H-310.929

9 Our American Medical Association urges the Accreditation Council for Graduate Medical
10 Education (ACGME) to incorporate these principles in its Institutional Requirements, if they are
11 not already present.

12 PURPOSE OF GRADUATE MEDICAL EDUCATION AND ITS RELATIONSHIP TO
13 PATIENT CARE. There must be objectives for residency education in each specialty that promote
14 the development of the knowledge, skills, attitudes, and behavior necessary to become a competent
15 practitioner in a recognized medical specialty. Exemplary patient care is a vital component for any
16 residency/fellowship program. Graduate medical education enhances the quality of patient care in
17 the institution sponsoring an accredited program. Graduate medical education must never
18 compromise the quality of patient care. Institutions sponsoring residency programs and the director
19 of each program must assure the highest quality of care for patients and the attainment of the
20 program's educational objectives for the residents.

21 RELATION OF ACCREDITATION TO THE PURPOSE OF RESIDENCY TRAINING.

22 Accreditation requirements should relate to the stated purpose of a residency program and to the
23 knowledge, skills, attitudes, and behaviors that a resident physician should have on completing
24 residency education.

25 EDUCATION IN THE BROAD FIELD OF MEDICINE. GME should provide a resident
26 physician with broad clinical experiences that address the general competencies and
27 professionalism expected of all physicians, adding depth as well as breadth to the competencies
28 introduced in medical school.

29 SCHOLARLY ACTIVITIES FOR RESIDENTS. Graduate medical education should always occur
30 in a milieu that includes scholarship. Resident physicians should learn to appreciate the importance
31 of scholarly activities and should be knowledgeable about scientific method. However, the
32 accreditation requirements, the structure, and the content of graduate medical education should be
33 directed toward preparing physicians to practice in a medical specialty. Individual educational
34 opportunities beyond the residency program should be provided for resident physicians who have
35 an interest in, and show an aptitude for, academic and research pursuits. The continued
36 development of evidence-based medicine in the graduate medical education curriculum reinforces
37 the integrity of the scientific method in the everyday practice of clinical medicine.

38 FACULTY SCHOLARSHIP. All residency faculty members must engage in scholarly activities
39 and/or scientific inquiry. Suitable examples of this work must not be limited to basic biomedical
40 research. Faculty can comply with this principle through participation in scholarly meetings,
41 journal club, lectures, and similar academic pursuits.

42 INSTITUTIONAL RESPONSIBILITY FOR PROGRAMS. Specialty-specific GME must operate
43 under a system of institutional governance responsible for the development and implementation of
44 policies regarding the following; the initial authorization of programs, the appointment of program
45 directors, compliance with the accreditation requirements of the ACGME, the advancement of
46 resident physicians, the disciplining of resident physicians when this is appropriate, the
47 maintenance of permanent records, and the credentialing of resident physicians who successfully
48 complete the program. If an institution closes or has to reduce the size of a residency program, the
49 institution must inform the residents as soon as possible. Institutions must make every effort to
50 allow residents already in the program to complete their education in the affected program. When
51 this is not possible, institutions must assist residents to enroll in another program in which they can

1 continue their education. Programs must also make arrangements, when necessary, for the
2 disposition of program files so that future confirmation of the completion of residency education is
3 possible. Institutions should allow residents to form housestaff organizations, or similar
4 organizations, to address patient care and resident work environment concerns. Institutional
5 committees should include resident members.

6 **COMPENSATION OF RESIDENT PHYSICIANS.** All residents should be compensated.
7 Residents should receive fringe benefits, including, but not limited to, health, disability, and
8 professional liability insurance and parental leave and should have access to other benefits offered
9 by the institution. Residents must be informed of employment policies and fringe benefits, and
10 their access to them. Restrictive covenants must not be required of residents or applicants for
11 residency education.

12 **LENGTH OF TRAINING.** The usual duration of an accredited residency in a specialty should be
13 defined in the "Program Requirements." The required minimum duration should be the same for all
14 programs in a specialty and should be sufficient to meet the stated objectives of residency
15 education for the specialty and to cover the course content specified in the Program Requirements.
16 The time required for an individual resident physician's education might be modified depending on
17 the aptitude of the resident physician and the availability of required clinical experiences.

18 **PROVISION OF FORMAL EDUCATIONAL EXPERIENCES.** Graduate medical education must
19 include a formal educational component in addition to supervised clinical experience. This
20 component should assist resident physicians in acquiring the knowledge and skill base required for
21 practice in the specialty. The assignment of clinical responsibility to resident physicians must
22 permit time for study of the basic sciences and clinical pathophysiology related to the specialty.

23 **INNOVATION OF GRADUATE MEDICAL EDUCATION.** The requirements for accreditation
24 of residency training should encourage educational innovation and continual improvement. New
25 topic areas such as continuous quality improvement (CQI), outcome management, informatics and
26 information systems, and population-based medicine should be included as appropriate to the
27 specialty.

28 **THE ENVIRONMENT OF GRADUATE MEDICAL EDUCATION.** Sponsoring organizations
29 and other GME programs must create an environment that is conducive to learning. There must be
30 an appropriate balance between education and service. Resident physicians must be treated as
31 colleagues.

32 **SUPERVISION OF RESIDENT PHYSICIANS.** Program directors must supervise and evaluate the
33 clinical performance of resident physicians. The policies of the sponsoring institution, as enforced
34 by the program director, and specified in the ACGME Institutional Requirements and related
35 accreditation documents, must ensure that the clinical activities of each resident physician are
36 supervised to a degree that reflects the ability of the resident physician and the level of
37 responsibility for the care of patients that may be safely delegated to the resident. The sponsoring
38 institution's GME Committee must monitor programs' supervision of residents and ensure that
39 supervision is consistent with:

40 (A) Provision of safe and effective patient care;
41 (B) Educational needs of residents;
42 (C) Progressive responsibility appropriate to residents' level of education, competence, and
43 experience; and
44 (D) Other applicable Common and specialty/subspecialty specific Program Requirements. The
45 program director, in cooperation with the institution, is responsible for maintaining work schedules
46 for each resident based on the intensity and variability of assignments in conformity with ACGME
47 Review Committee recommendations, and in compliance with the ACGME clinical and
48 educational work hour standards. Integral to resident supervision is the necessity for frequent
49 evaluation of residents by faculty, with discussion between faculty and resident. It is a cardinal
50 principle that responsibility for the treatment of each patient and the education of resident and
51 fellow physicians lies with the physician/faculty to whom the patient is assigned and who

- 1 supervises all care rendered to the patient by residents and fellows. Each patient's attending
2 physician must decide, within guidelines established by the program director, the extent to which
3 responsibility may be delegated to the resident, and the appropriate degree of supervision of the
4 resident's participation in the care of the patient. The attending physician, or designate, must be
5 available to the resident for consultation at all times.
- 6 EVALUATION OF RESIDENTS AND SPECIALTY BOARD CERTIFICATION. Residency
7 program directors and faculty are responsible for evaluating and documenting the continuing
8 development and competency of residents, as well as the readiness of residents to enter
9 independent clinical practice upon completion of training. Program directors should also document
10 any deficiency or concern that could interfere with the practice of medicine and which requires
11 remediation, treatment, or removal from training. Inherent within the concept of specialty board
12 certification is the necessity for the residency program to attest and affirm to the competence of the
13 residents completing their training program and being recommended to the specialty board as
14 candidates for examination. This attestation of competency should be accepted by specialty boards
15 as fulfilling the educational and training requirements allowing candidates to sit for the certifying
16 examination of each member board of the ABMS.
- 17 GRADUATE MEDICAL EDUCATION IN THE AMBULATORY SETTING. Graduate medical
18 education programs must provide educational experiences to residents in the broadest possible
19 range of educational sites, so that residents are trained in the same types of sites in which they may
20 practice after completing GME. It should include experiences in a variety of ambulatory settings, in
21 addition to the traditional inpatient experience. The amount and types of ambulatory training is a
22 function of the given specialty.
- 23 VERIFICATION OF RESIDENT PHYSICIAN EXPERIENCE. The program director must
24 document a resident physician's specific experiences and demonstrated knowledge, skills, attitudes,
25 and behavior, and a record must be maintained within the institution.
- 26
- 27 Encouragement of Interprofessional Education Among Health Care Professions Students D-
28 295.934
- 29 1. Our American Medical Association recognizes that interprofessional education and partnerships
30 are a priority of the American medical education system.
 - 31 2. Our AMA supports the concept that medical education should prepare students for practice in,
32 and leadership of, physician-led interprofessional health care teams.
 - 33 3. Our AMA will encourage health care organizations that engage in a collaborative care model to
34 provide access to an appropriate mix of role models and learners.
 - 35 4. Our AMA will encourage the development of skills for interprofessional education that are
36 applicable to and appropriate for each group of learners.
 - 37 5. Our AMA supports the concept that interprofessional education include a mechanism by which
38 members of interdisciplinary teams learn about, with, and from each other; and that this education
39 include learning about differences in the depth and breadth of their educational backgrounds,
40 experiences, and knowledge and the impact these differences may have on patient care.
 - 41 6. Our AMA supports a clear mechanism for medical school and appropriate institutional leaders to
42 intervene when undergraduate and graduate medical education is being adversely impacted by
43 undergraduate, graduate, and postgraduate clinical training programs of non-physicians.

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