

e-Table 1: Summary of studies of medication history errors included in review (unabridged*)

Study (country)	Sample size	Quality grade†	Type of medication history error‡	Source of medication history	Source of comprehensive medication history	Prescription medications		Other main results
						% of patients with ≥ 1 error	Mean no. of errors per patient	
Akwagyriam et al ⁷	33	B	<ul style="list-style-type: none"> Omission Incorrect dose 	<ul style="list-style-type: none"> Resident physician chart note 	<ul style="list-style-type: none"> Structured interview by pharmacist 	–	1.5	73% of patients had ≥ 1 error (mean 2.3 errors per patient) when both prescription and nonprescription medications were included in medication history
Badowski et al ⁸	80	C	<ul style="list-style-type: none"> Incorrect drug name Incorrect strength Incorrect dose 	<ul style="list-style-type: none"> Physician chart note 	<ul style="list-style-type: none"> Structured interview by pharmacist 	57	–	95% of patients had ≥ 1 error when prescription medications, nonprescription medications, drug allergies and compliance were included in medication history
Barger et al ⁹	50	C	<ul style="list-style-type: none"> Omission 	<ul style="list-style-type: none"> Physician and nurse chart notes 	<ul style="list-style-type: none"> Structured interview by pharmacist 	–	–	Pharmacist-acquired medication histories yielded twice as many prescription medications as physician-acquired medication histories
Beers et al ¹⁰	122	A	<ul style="list-style-type: none"> Omission Commission 	<ul style="list-style-type: none"> Resident physician or physician chart note 	<ul style="list-style-type: none"> Interview by trained research assistant 	60	–	52% of patients had prescription errors if only omission errors were included; 83% of patients had ≥ 1 error when both prescription and nonprescription medications were included in medication history
Brookes ¹¹	109	C	<ul style="list-style-type: none"> Omission Commission Incorrect strength Incorrect dose 	<ul style="list-style-type: none"> Physician chart note 	<ul style="list-style-type: none"> Interview by pharmacist GP record Community pharmacy record 	–	–	61% of patients had ≥ 1 error when both prescription and nonprescription medications were included in medication history
Cohen et al ¹²	60	C	<ul style="list-style-type: none"> Omission 	<ul style="list-style-type: none"> Physician MAR 	<ul style="list-style-type: none"> Structured interview by pharmacist Medication vials GP record 	–	–	48% of patients had ≥ 1 error when both prescription and nonprescription medications were included in medication history
Cornish et al ⁵	151	A	<ul style="list-style-type: none"> Omission Commission Incorrect dose Incorrect frequency 	<ul style="list-style-type: none"> Physician admitting medication orders 	<ul style="list-style-type: none"> Interview by trained pharmacist or pharmacy student or medical student Patient's chart note Visual inspection of pill bottles Community pharmacy record 	54	0.9	–
Covington et al ¹³	58	C	<ul style="list-style-type: none"> Omission 	<ul style="list-style-type: none"> Physician chart note 	<ul style="list-style-type: none"> Interview by pharmacist 	–	2.7	–
Dobbs ¹⁴	50	C	<ul style="list-style-type: none"> Omission 	<ul style="list-style-type: none"> Physician and nurse chart notes 	<ul style="list-style-type: none"> Interview by pharmacist or pharmacy student 	24	0.4	48% of patients had ≥ 1 error when prescription medications, nonprescription medications, adverse drug events and alcohol use were included in

								medication history
Dodds ⁴	146	A	<ul style="list-style-type: none"> Omission 	<ul style="list-style-type: none"> Resident physician chart note 	<ul style="list-style-type: none"> Structured interview by pharmacist 	–	–	Mean 0.4 errors per patient when prescription and nonprescription medications were included in medication history
Drewett ¹⁵	80	C	<ul style="list-style-type: none"> Omission Incorrect dose Incorrect frequency 	<ul style="list-style-type: none"> Physician MAR 	<ul style="list-style-type: none"> Interview by pharmacist Patient's chart note GP record 	–	–	34% of patients had ≥ 1 error (mean 0.3 per patient) when prescription medications, nonprescription medications and drug allergies were included in medication history
Gleason et al ¹⁶	204	C	<ul style="list-style-type: none"> Omission Commission Incorrect dose Incorrect frequency 	<ul style="list-style-type: none"> Physician admitting medication orders 	<ul style="list-style-type: none"> Structured interview by pharmacist or pharmacy student Patient's chart note Visual inspection of pill bottles Community pharmacy record GP record Past medical record 	–	–	Up to 27% of patients had ≥ 1 unintended discrepancy between admission orders and comprehensive medication history (mean 0.34 discrepancies per patient) when both prescription and nonprescription medications were included in medication history
Gurwich ¹⁷	86	C	<ul style="list-style-type: none"> Omission 	<ul style="list-style-type: none"> Physician chart note 	<ul style="list-style-type: none"> Pharmacist chart note 	–	3.2	–
Hocking et al ⁶	1053	C	<ul style="list-style-type: none"> Omission 	<ul style="list-style-type: none"> Physician chart note or GP record 	<ul style="list-style-type: none"> Structured interview by physician 	10	–	–
La Verde ¹⁸	205	C	<ul style="list-style-type: none"> Omission Incorrect dose 	<ul style="list-style-type: none"> Physician and nurse chart notes 	<ul style="list-style-type: none"> Structured interview by pharmacist Visual inspection of pill bottles Past hospital record Old prescriptions Community pharmacy record 	–	–	Pharmacist-acquired medication histories yielded 87% more information than physician-acquired medication histories; pharmacists noted more prescription medications than physicians
Lau et al ¹⁹	304	A	<ul style="list-style-type: none"> Omission Commission 	<ul style="list-style-type: none"> Physician chart note 	<ul style="list-style-type: none"> Structured interview by pharmacist or pharmacy student Community pharmacy record 	67	1.5	61% of patients had prescription errors when only omission errors were included
Massey ²⁰	60	C	<ul style="list-style-type: none"> Omission Incorrect strength Incorrect dose 	<ul style="list-style-type: none"> Physician chart note 	<ul style="list-style-type: none"> Structured interview by pharmacist 	–	–	42% of patients had ≥ 1 error when prescription medications, nonprescription medications, drug allergies and adverse drug reactions were included in medication history
Montpetit et al ²¹	43	B	<ul style="list-style-type: none"> Omission Incorrect frequency 	<ul style="list-style-type: none"> Physician and nurse chart notes 	<ul style="list-style-type: none"> Standard form completed by pharmacist Structured interview 	–	–	Pharmacists performing structured interviews with a patient-completed form obtained 91%–99% of the total prescription medication information, as compared with 68%–84% of information acquired by physicians and nurses in chart notes

Nicholls et al ²²	328	C	<ul style="list-style-type: none"> • Omission • Commission • Incorrect dose • Incorrect frequency 	<ul style="list-style-type: none"> • Resident physician chart note 	<ul style="list-style-type: none"> • Interview by pharmacy technician 	–	0.3	–
Truitt et al ²³	186	A	<ul style="list-style-type: none"> • Omission • Commission 	<ul style="list-style-type: none"> • Resident physician, medical student and nurse chart notes 	<ul style="list-style-type: none"> • Structured interview by pharmacy student 	–	0.9	75% of patients had ≥ 1 error (mean 2.24 per patient) when both prescription and nonprescription medications were included in medication history
Walche et al ²⁴	247	C	<ul style="list-style-type: none"> • Omission 	<ul style="list-style-type: none"> • Physician chart note 	<ul style="list-style-type: none"> • Structured interview by pharmacist 	–	–	Mean 1.9 prescription medications per patient identified in pharmacist-acquired medication histories, as compared with mean 1.3 per patient in physician-acquired medication histories
Wilson et al ²⁵	100	C	<ul style="list-style-type: none"> • Omission • Commission 	<ul style="list-style-type: none"> • Physician chart note 	<ul style="list-style-type: none"> • Pharmacist interview 	–	0.5	Mean 1.2 errors per patient when prescription and nonprescription medications were included in medication history

Note: "error" = discrepancy between physician-acquired medication history and comprehensive medication history, MAR = medication administration record, GP = general practitioner.

*An abridged version of this table appeared in the print journal (*CMAJ* 2005;173[5]:510-5).

†Grade A studies had prospective enrolment of consecutive patients with a sample size of at least 100; grade B studies had prospective enrolment of consecutive patients with a sample size of less than 100; grade C studies included all other designs (e.g., retrospective and nonconsecutive patient studies).

‡Omission error = deletion of a drug used before admission, commission error = addition of a drug not used before admission. See Table 2 for examples of the types of medication errors.