

Disposal practices for unused/expired medications, Table 1–4

Table 1: Demographic Characteristics of Respondents

	Pittsburgh, United States	Turin, Italy	Kobe, Japan
Sample Size	99	168	75
Mean Age in years	49.77±18.93	55.79±18.00	23.15±8.42
Gender	F (70, 70.7%); M (17, 17.2%)	F (97, 57.7 %); M (69, 41.1 %)	F (31, 41.3 %); M (36, 48.0 %)
Race	White (80, 80.8%), Black (4, 4.0%) Asian (2, 2.0%), Other (1, 1.0%)		
Marital Status	Single (31, 31.3%), Married (40, 40.4%), Divorced (9, 9.1%), Sepa (1, 1.0%)	Single (38, 22.6%); Married (110, 65.5 %), Divorced (8, 4.8%); Sepa (7, 4.2%)	Single (72, 96.0 %); Married (2, 2.7 %)
Education	Less than HS (4, 4.0%), HS/GED (12, 12.1%), Some college (22, 22.2%), College (22, 22.2%), Graduate (27, 27.3%)	Less than HS (39, 23.4 %), HS/GED (83, 49.7 %), Some college (10, 6.0 %), College (15, 9.0 %), Graduate (20, 12.0 %)	High School graduation (70, 93.3 %); Graduation from University (4, 5.3 %)
Income	<\$25000 (12, 12.1%), 25-50 (17, 17.1%), 50-75 (19, 19.2%), 75 (30, 30.3%)	<Euros25000 (48, 28.6 %), 25-50 (61, 36.3 %) 50-75 (31, 18.5 %), 75 (11, 6.5 %)	0 (34, 45.3 %); Less than 2 million Yen (3, 4.0 %); 2-4 Million Yen (4, 5.3 %); 4-6 Million Yen (4, 5.3%); 6 Million Yen or more (16, 21.3 %) [1\$=Yen 120]
Last 6 months, services from Physician	3.12±2.86	3.19±3.48	2.78±3.04
Last 6 months, services from Pharmacists	3.81±4.25	4.94±8.52	1.81±2.54
Last 6 months, services from Nurse/ Physician Assistant	0.79±1.16	1.21±1.99	0.69±1.44

Table 2: Respondents' Practices Related to Unused Medications

	Pittsburgh, United States		Turin, Italy	Kobe, Japan
Sample Size	99		168	75
Mean <i>Unused Medications</i>	1.60±2.30		1.69±1.86	6.69±8.78
Medications Prescribed to respondent	53 (53.5%)		81 (48.2%)	57 (76.0%)
Reasons for having <i>unused</i> prescription medications at home	Medication was 'take as needed' 31 (31.3%)	No longer suffer from the condition for which the medication was prescribed 47 (28.0%)	No longer suffer from the condition for which the medication was prescribed 41 (54.7 %)	
	No longer suffer from the condition for which the medication was prescribed 29 (29.3%)	Medication was taken as needed 46 (27.4%)	Kept for later use 31 (41.3%)	
	Switched to another medication 27 (27.3%)	Kept for later use 31 (18.5%)	Medication was taken as needed 20 (26.7%)	
	Doctor discontinued medication 25 (25.3%)	Switched to another medication 25 (14.9%)	Forgot to take medications 15 (20.0%)	
	Kept for later use 18 (18.2%)	Doctor discontinued medication 17 (10.1%)	Forgot to take stock of the medicine 5 (6.7%)	
	Not aware of the proper method of disposal 15 (15.2%)	Experienced too many side effects 16 (9.5%)	Switched to another medication 4 (5.3%)	
	Experienced too many side effects 15 (15.2%)	Medication was ineffective 9 (5.4%)	Medication was ineffective 4 (5.3%)	
	Medication was ineffective 12 (12.1%)	Forgot to take stock of the medicine 12 (7.1%)	Not aware of the proper method of disposal 3 (4.0%)	
	Other 9 (9.1%)	Forgot to take medications 3 (1.8%)	Experienced too many side effects 2 (2.7%)	
	Forgot to take stock of the medicine 6 (6.0%)	Saved medication in case another family member might need it 3 (1.8%)	Saved medication in case another family member might need it 2 (2.7 %)	
	Forgot to take medications 2 (2.0%)	Medication is expensive -	Doctor discontinued medication 1 (1.3%)	
	Medication is expensive 1 (1.0%)	Not aware of the proper method of disposal -	Other (2 responses)	
	Saved medication in case another family member might need it-	Other -	- I ask physician to prescribe extra since it's difficult for me to visit hospital frequently - Physician prescribes extra medication	
			Medication is expensive -	

Table 3: Respondents' Practices Related to Expired Medications

	Pittsburgh, United States	Turin, Italy	Kobe, Japan
Sample Size	99	168	75
Mean <i>Expired</i> Medications	0.51±1.54	0.49±1.22	0.84± 2.26
Medications Prescribed to respondent (expired)	16 (16.2%)	28 (16.7%)	16 (21.3%)
Reasons for having <i>expired</i> prescription medications at home	No longer suffer from the condition for which the medication was prescribed 17 (17.2%)	No longer suffer from the condition for which the medication was prescribed 26 (15.5%)	No longer suffer from the condition for which the medication was prescribed 9 (12.0%)
	Medication was 'take as needed' 13 (13.1%)	Forgot to take stock of the medication 18 (10.7%)	Kept for later use 5 (6.7%)
	Doctor discontinued medication 12 (12.1%)	Medication was taken as needed 15 (8.9%)	Forgot to take medications 4 (5.3%)
	Not aware of the proper method of disposal 12 (12.1%)	Switched to another medication 10 (6.0%)	Not aware of proper method disposal 3 (4.0%)
	Kept for later use 11 (11.1%)	Doctor discontinued medication 3 (1.8%)	Medication was ineffective 2 (2.7%)
	Switched to another medication 11 (11.1%)	Forgot to take medications 3 (1.8%)	Switched to another medication 2 (2.7%)
	Forgot to take stock of the medicine 9 (9.0%)	Experienced too many side effects 2 (1.2%)	Doctor discontinued medication 1 (1.3%)
	Medication was ineffective 7 (7.0%)	Kept for later use 1 (0.6%)	Medication was taken as needed 1 (1.3%)
	Experienced too many side effects 7 (7.0%)	Medication was ineffective -	Experienced too many side effects 1 (1.3%)
	Other 3 (3.0%)	Medication is expensive -	Medication is expensive -
	Forgot to take medications 2 (2.0%)	Not aware of proper method of disposal -	Forgot to take stock of the medication -
	Medication is expensive 1 (1.0%)	Saved medication in case another family member might need it -	Saved medication in case another family member need it -
	Saved medication in case another family member might need it -	Other -	Other -

Table 4: Methods Utilized for Disposing Unused and Expired Medications

	Pittsburgh, United States	Turin, Italy	Kobe, Japan
Sample Size	99	168	75
Methods used for disposing expired or unused medications	Flush medication in toilet 35 (35.4%) Throw medication (in original container) in trash 34 (34.3%) Return medication back to a take-back program 31 (31.3%) Throw medication (not in original container) in trash 30 (30.0%) Keep for later use 26 (26.3%) Pour medication down the sink 9 (9.0%) Pour in kitty litter or coffee grounds 7 (7.0%) Return medication back to pharmacy 7 (7.0%) Share medication with another person 4 (4.0%) Other 4 (4.0%) Sell medication 1 (1.0%)	Return medication back to pharmacy 86 (51.2%) Return medication back to a take back program 58 (34.5%) Throw medication (not in original container in trash) 27 (16.1%) Keep for later use 12 (7.1%) Other 7 (4.2%) Flush medication in toilet 3 (1.8%) Throw medication (in original container in trash) 3 (1.8%) Pour medication down the sink 2 (1.2%) Share medication with another person 2 (1.2%) Pour in kitty litter or coffee grounds - Sell medication -	Throw medication (in original container in trash) 62 (82.7%) Return medication back to a take back program 43 (57.3%) Other 41 (54.7%) Keep for later use 9 (12.0%) Throw medication (not in original container in trash) 9 (12.0%) Pour medication down the sink 3 (4.0%) Flushed medication in toilet 1 (1.3%) Sell medication 1 (1.3%) Pour in kitty litter or coffee grounds - Return medication back to pharmacy - Share medication with another person -
Do you check the medication expiration date?	74 (74.7%)	156 (92.9%)	24 (32.0%)
Have you ever been counseled by your physician on medication disposal?	2 (2.0%)	27 (16.1%)	1 (1.3%)
Have you ever been counseled by your pharmacist on medication disposal?	9 (9.1%)	87 (51.8%)	2 (2.7%)
Do you ask your pharmacist about proper disposal of your unused or expired medications?	15 (15.2%)	61 (36.3%)	1 (1.3%)