

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%)	Forgot to take stock of the medicine -	Other (2 responses)	
	Saved medication in case another family member might need it-	Not aware of the proper method of disposal -	- I ask physician to prescribe extra since it’s difficult for me to visit hospital frequently - Physician prescribes extra medication	
		Other -	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 prescribes 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 <i>expired</i> or <i>unused</i> 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%)