5-2015

A Retrospective Chart Review to Profile Appalachian Fall Risk

Hannah M. Warren
East Tennessee State University

A Retrospective Chart Review to Profile Appalachian Fall Risk

By

Hannah Marie Warren

An Undergraduate Thesis Submitted in Partial Fulfillment of the
Requirements for the
Nursing Honors-in-Discipline Program
College of Nursing
East Tennessee State University

Hannah M. Warren	Date
Sandy Halford, Thesis Mentor	Date
Peggy McConnell, Reader	Date
Dr. Joy Wachs, Reader	Date

An Abstract of

A Retrospective Chart Review to Profile Appalachian Fall Risk

By

Hannah M. Warren

This study was designed to create a high-risk fall profile for a specific Appalachian community. Data were obtained from 1,598 individuals with fall-related injuries who had been had been evaluated at a Level 1 Trauma center in Northeast Tennessee throughout 2011 and 2012, ages of individuals were 18 to 85 years. Data collected included: age, gender, county of fall, site of fall, type of fall, number of co-morbidities, season of fall, and time of day of fall. Results showed differences in criteria for categorizing individuals at high risk of falls, as well as data that had not appeared in the literature such as high-risk counties, a new high-risk age range, and the specific type of fall occurring. Tailored interventions should be created to fit the needs of this at risk community.

Acknowledgement

I acknowledge the resources, advice, and support from the East Tennessee State University Honors College, College of Nursing, and Center for Nursing Research. Specifically Sandy Halford, MSN, RN (Faculty Mentor); Dr. Florence Weierbach, PhD, MSN, MPH (Honors in Discipline Coordinator); Yan Cao MPH, PhD (Statistician); Gina Conaway, RN (JCMC Trauma Research Coordinator); and Bill Hartley, MBA.

Table of Contents

List of Tables

List of Figures

Chapter One

Introduction

Background

Falls in the geriatric community are numerous, with one in three adults over the age of 65 years old falling each year (Stevens et al., 2012). However, the annual total number of falls is misleading, as many falls are unreported (Sterling, O'Conner, and Bondadies, 2001). Falls in the geriatric, community-dwelling population lead to broken hips, hemorrhages, brain injuries, less mobility, loss of independence, and often the transferring of individuals out of their homes (Kannus, Sievanen, Palvanen, Jarvinen, & Parkkari, 2005). Falls are not mysterious; studies have resulted in calculations describing where falls occur (Kelsey, Proctor-Gray, Hannan, and Li, 2012), why falls occur (Stevens, Thomas, Teh, and Greenspan, 2009) and risks related to fall occurrence (Moyer, 2012). Falls are preventable; studies have shown that exercise, knowledge of risk, home modifications, medications substitution and supplements can decrease fall risk (Moyer, 2012). Falls are constant. Falls result in thousands of elderly individuals being hospitalized every year. Why, if we know so much about the problem and have evidence of effective interventions, do falls continue to occur nationwide?

Literature Review

To understand falls, the significance falls play in the community has been assessed. According to the University of Missouri-Columbia, more than one-third of the geriatric population (age sixty-five and above) fall each year (Abbott, 2012). In fact, this population is hospitalized five times more often from falls than for injuries from any other cause (Alexander, Rivara, and Wolf, 1992). According to Sterling et al., falls are largely under-reported; only 20% to 30% of falls are moderate to severe in nature (2001).

The cost of fall-related injuries to the victim can be substantial; falls are the leading cause of fatal and non-fatal injuries in older adults (Abbott, 2012). In this same study, Abbott showed that hip fractures caused by falls in adults aged 85 and older lead to death within one year in 18% to 33% of these patients (2012). The same study showed that after a fall, only 40% of individuals regain their baseline functioning at the one-year anniversary of the fall (Abbott, 2012).

Although the physical impact of falls is important, the monetary cost of falls is also of concern. According to the Centers for Disease Control and Prevention (CDC), the total direct health care costs (adjusted for inflation) of fall-related injuries for individuals aged 65 and older was $34 billion in 2013 (Stevens et al., 2006). The price noted is likely an under-estimation due to the age restriction of the data provided. The CDC also estimated that the Medicare cost per fall averages between $14,306 and $21,270 (Shumway-Cook et al., 2009).

Health promotion strategies are dependent on taking the actions of individuals and grouping them into general actions, which then lead to generalized interventions. These generalized interventions are applied to all individuals, with the best outcome desired for the majority. This has been the approach in fall interventions. Researchers have noted that some falls are due to loose rugs, cluttered hallways, lack of proper lighting, unknown side effects of medication, and the age of the individual (Preidt, 2015). Although these observations have led to interventions, communities are unique in regards to demographics, culture, values, and practices and must be assessed accordingly.

Many northeast Tennesseeans exhibit Appalachian culture. McGarvey, Leon-Verndin, and Killos (2010) conducted a study to examine the difference between Appalachian counties and non-Appalachian counties in regard to health disparities. Findings suggested that Appalachian counties had poorer health status, as well as significantly worse health perception. These findings

"can be a mediator between critical thinking and health behaviors, which is important in preventive medicine as well as health care utilization" (McGarvey, Leon-Verndin, and Killos, 2010, p. 349). This study supports the view that Appalachian communities must be independent from generalized interventions.

Freiberger, Haberle, Sirduso, and Zijlstra(2012) conducted an experimental study on a sample of 280 community-dwelling adults aged 70 to 90 years. Over two years, these individuals participated in strength, balance, and endurance training as an intervention against falls. However, this training did not improve fall-related psychological outcomes, such as fear of falling, or reduce the incidence of falls. Pighills, Torgerson, Sheldon, Drummond, and Bland (2011) researched the effectiveness of trained assessors sent to the homes of older adults to increase their awareness of and eliminate fall hazards. After one year, it was determined that the trained assessors had no significant effect on the fall rate (Pighills, 2011).

Purpose

Although some of the interventions described above have been effective in certain communities, proving ineffective in others revealed that a descriptive analysis of the specific community is necessary to properly evaluate its needs and cultural habits. With descriptive data, healthcare providers could offer community-specific interventions to the most vulnerable parts of the community in ways the community could accept.

The information available regarding fall interventions for the geriatric, community-dwelling individuals in the rural, northeast Tennessee area of Appalachia is scarce. Databases including CINAHL Complete, Cochrane Database of Systematic Reviews, and Pubmed provided no

research describing falls in the northeast Tennessee region. The lack of data about fall interventions is second only to the need to discover the characteristics of falls within this rural Appalachian population. To shape interventions to fit this population, a retrospective cohort study was proposed to determine the age and gender of older adults who fall, circumstances of the falls, and the time of year the falls occurred. Healthcare providers must demonstrate that an effort to understand specific demographic and culture characteristics has been made before interventions are developed and applied. This research offers such an opportunity for the northeast Appalachian region of Tennessee, with fall-related injuries the leading cause of Trauma Department visits each year. This research will lay the groundwork necessary for developing effective interventions to older Tennesseans in the future.

Chapter Two

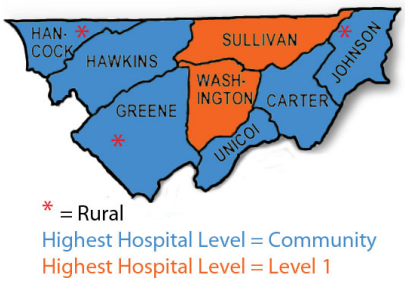
Methodology

An initial Form 129 was submitted to the East Tennessee State University (ETSU) Institutional Review Board (IRB) for verification that the project qualified as research (see Appendix). The partnering hospital and the IRB at ETSU granted approval of the research in October 2014.

The sample consisted of 1,598 patients aged 18 to 85 years with fall-related injuries. This data was obtained from a hospital registry at a Level 1 Trauma Center in the Appalachian region covering a total of eight counties. With the purpose of creating a high-risk fall profile of the immediate community, this sample population provided the most conclusive and inclusive data to the research team. The collected data cover a two-year time period (2011 and 2012).

The research team obtained a fully de-identified data set that covered various aspects of patients' injuries from the hospital registrar. Descriptors collected included: gender, age range, season of fall, type of fall, injury site, county of fall, number of comorbidities present, and whether or not the fall was work-related. Data analysis was done using statistical software SPSS and provided a specific fall-risk profile for the region. Figure 1 depicts the immediate community and the healthcare resources provided to each. The hospital used in this study is the Level 1 hospital located in Northeast Tennessee and serves the eight counties shown. The data were examined to show relationships among the descriptors.

Figure 1 Community Resources



East Tennessee State University's Center for Nursing Research aided in descriptive analysis of the data, creating appropriate displays of the dependent variables.

Chapter Three

Results

The following findings are representative of the 1,598 individuals for whom data were collected, combining years 2011 and 2012 to create a more comprehensive profile. Age, displayed in Table 1, shows a steady increase in falls with increasing age up to fifty years old. At this point, an uncharacteristically high percentage of falls in the 50 to 64 age group and significant elevation in percentage for the 75 to 84 age group was calculated. Gender analysis showed 57 % (n = 911) of the sample were female and 43 % (n = 687) were male. The number of fall-related injuries recorded gradually decreased as the number of co-morbidities gradually increased. One co-morbidity was recorded for 65.8 % (n = 1052) of the sample, two co-morbidities for 14.1 % (n = 226) of the sample, three co-morbidities for 9.8 % (n = 156) of the sample and four for 4.6 % (n = 74) of the sample. The largest number of co-morbidities documented for one individual was 15. Co-morbidities provided in the data from the Registrar were nonspecific; only the number of co-morbidities each fall victim possessed was present. See Appendix B for a list qualifying co-morbidities.

Table 1 Age

Age	*Percent (%)*
18-29	3.8
30-39	4.3
40-49	7.8
50-64	21.8
65-74	19.3
75-84	28.2
85 +	14.8

The year was divided into quarters: Quarter 1 (Q1) January 1st though March 31st, Quarter 2 (Q2) April 1st through June 30th, Quarter 3 (Q3) July 1st through September 30th, and Quarter 4 (Q4) October 1st through December 31st. During Q1, 21.7 % (n = 347) of fall related injuries occurred, during Q2 28 % (n = 448) occurred, during Q3 25.2 % (n = 403) occurred, and during Q4 25 % (n = 400) occurred. The time of injury was categorized into day (0700 – 1859) and night (1900 – 0659). Of the 1,598 fall-related injuries, only 478 were associated with an

exact time of day. Of the recorded data, the majority of falls occurred during the day, accounting for 62.6 % (n = 299) of the falls. Nighttime falls represented only 37.4% (n = 179) of the recorded data.

Injury location is presented in Table 2. The data were collapsed into home, outdoor (farm, places of recreation and sport, and street and highway), public places (industrial places and public buildings), residential institute, and other (other specified and other unspecified) categories. Outdoor was the location of 5.9 % (n = 94) of these fall injuries, public places 6.5 % (n = 104), and other 15.6 % (n = 250). In the specified region, the percentage of falls that occurred on farms was shockingly low.

Table 2 Location of Injury

Location	***N***	***Percent (%)***
Home (specific area not identified)	1009	63.1
Farm	18	1.1
Industrial Place	43	2.7
Places of Recreation and Sport (Outdoor)	43	2.7
Street and Highway (Road)	33	2.1
Public Building	61	3.8
Residential Institute (including prison)	141	8.8
Other Specified Places	22	1.4
Unspecified Places	228	14.3

Table 3 County of Injury

County	***Population***	***% of Sample (%)***	***Incidence Rate (%)***	***Ranking (population based)***
Carter	37,381	13.9	0.59	1
Cocke	35,571	0.5	0.02	7
Greene	68,549	8	0.18	5
Hawkins	56,817	0.1	0.003	8
Johnson	18,111	2.7	0.24	4
Sullivan	156,709	4.6	0.05	6
Unicoi	18,198	5.3	0.46	3
Washington	124,264	39.2	0.5	2

Table 3 displays the fall incidence rate for each of the eight counties served by the Trauma Department; a total of 36 counties were represented in the collected data: Tennessee (13 counties), Virginia (12 counties), North Carolina (8 counties), Kentucky (2 counties), and West Virginia (1 county).

The types of falls as broad categories are described below; the detailed breakdown of the type of falls individuals sustained are provided in Table 4. Falls on steps accounted for 9 % (n = 140) of the falls, ladder / scaffolding accounted for 4 % (n = 68), building / structure accounted for 3 % (n = 50), multi-level accounted for 16% (n = 260), tripping, slipping or stumbling accounted for 60 % (n = 955) and "other" accounted for 7 % (n = 112). Only 3.3% of the reported falls were work-related; 0.3 % of data did not report if the injury was occupational.

The data in each category were compiled to profile individuals with the greatest risk for falls in the Appalachian community: female older than 50 years old with one co-morbidity in the home of a Carter County resident, on a summer day, due to tripping, slipping or stumbling. The fall is unlikely to be work-related.

Table 4 Fall Descriptors

Type of Fall	***N***	***Percent (%)***
Steps / Stairs General	133	8.3
Escalator	2	0.1
Sidewalks / Curbs	5	0.3
Ladder / Scaffolding	68	4.3
Building / Structure	50	3.1
Into Hole or Opening	4	0.3
Multi-level Fall (Miscellaneous)	131	8.2
Playground Equipment	1	0.1
Cliff	6	0.4
Chair	20	1.3
Wheelchair	28	1.8
Bed	54	3.4
Furniture (General)	4	0.3
Commode / Toilet	16	1.0
Same Level Fall (Tripping, Slipping, Stumbling)	955	59.8
Same Level Fall (Collision, Pushing, Shoving)	7	0.4
Fracture (Unknown Cause)	2	0.1
Other	112	7.0

Chapter Four

Research and Practice

Discussion

Regardless of numerous fall interventions focused on individuals at home, this location is the site of the most falls across all ages. More step, chair and same level falls occur in the home where residents are most comfortable as opposed to unfamiliar places (e.g., public buildings or outdoors; Table 5). Potentially these data reveal the Appalachian culture in which parties, gatherings, and activities are commonly held at home. In areas with more suitable climate, terrain, and a venturesome culture, the data might differ. Only 0.3% of falls occurred on sidewalks or curbs. This percentage would likely be higher in more urban areas; the findings are indicative of Appalachian culture and environment. In regards to location as identified in Table 5, "other" includes all locations that the assessor deemed unable to fit in the pre-defined location. No additional information was provided concerning the actual fall location of these individuals.

Table 5 Cross Analysis with General Location of Injury

Qualifiers			General Location				
			Home	Outdoor	Public Places	Residential Institutes	Other
Gender	F	Count (% within Gender)	631 (69)	33 (4)	45 (5)	96 (11)	106 (12)
	M	Count (% within Gender)	378 (55)	61 (9)	59 (9)	45 (7)	144 (21)
Age Groups	18-49	Count (% within Age Groups)	94 (37)	49 (19)	29 (12)	7 (3)	74 (29)
	50-64	Count (% within Age Groups)	200 (58)	17 (5)	32 (9)	13 (4)	86 (25)
	65-74	Count (% within Age Groups)	210 (68)	16 (5)	18 (6)	25 (8)	39 (13)
	75-84	Count (% within Age Groups)	333 (74)	7 (2)	19 (4)	57 (13)	34 (8)
	85 +	Count (% within Age Groups)	170 (72)	5 (2)	6 (3)	39 (17)	17 (7)
Injury date	Quarter 1	Count (% within Quarters)	221 (64)	21 (6)	26 (8)	29 (8)	50 (14)
	Quarter 2	Count (% within Quarters)	271 (61)	33 (7)	32 (7)	36 (8)	76 (17)
	Quarter 3	Count (% within Quarters)	252 (63)	22 (6)	23 (6)	31 (8)	75 (19)
	Quarter 4	Count (% within Quarters)	265 (66)	18 (5)	23 (6)	45 (11)	49 (12)
Injury Time	Day	Count (% within Injury Time)	173 (58)	28 (9)	28 (9)	18 (6)	52 (17)
	Night	Count (% within Injury Time)	130 (73)	10 (6)	4 (2)	18 (10)	17 (10)

A common assumption regarding falls is that the use and interaction of many medications may contribute to syncope, orthostatic hypotension, dizziness, and blurred vision – all of which contribute to falls. Several medications are indicative of disease pathologies or co-morbidities. However, the data collected for this study showed that the number of co-morbidities per individual is indirectly correlated to the risk of falls.

Table 5 shows the correlation between several descriptors and the location of fall injuries. In relation to season, one might suspect that falls would increase during the winter quarter. Individuals are more likely to spend more time in their homes during cold weather and venture outside more in warm weather. This assumption is also false, as the highest incidence of falls occur during the spring quarter (Q2) and the lowest during the winter quarter (Q1). In regard to annual quarters, data also revealed that slipping, tripping and stumbling falls were constant throughout the year. All fracture-related falls occurred in quarter two, which follows the winter months. This finding may be explained by the lack of Vitamin D individuals may receive during the winter months along with a more sedentary lifestyle, contributing to bone and muscle weakness and susceptibility to fracture.

When analyzing the type of fall and the relationship between fall type and age, many interesting findings surface. Although falls from bed are among the leading causes of falls for

Table 6 Top Fall Factors for each Age Group

	18 – 49	50 – 64	65 – 74	75 – 84	85 +
#1 Reason	Slipping / Tripping or Stumbling	Slipping / Tripping or Stumbling	Slipping / Tripping or Stumbling	Slipping / Tripping or Stumbling	Slipping / Tripping or Stumbling
#2 Reason	Building / Structure	Stairs / Steps	Stairs / Steps	“Other”	Stairs / Steps
#3 Reason	Stairs / Steps and Ladder/Scaffolding	Multi-Level (Misc.)	Bed	Bed	Multi-Level (Misc.)

individuals over age 65, the majority of falls from bed occur among individuals age 50 to 64; chair falls also increase in this age range. Table 6 shows the top three types of falls sustained by each age group.

Nursing Implications

Several interventions based on study findings could be implemented by the health care community of northeast Tennessee. Educating all adults about fall-risks and related health promotion activities at the age of fifty is an important intervention stemming from this research. If individuals are aware of the risks and are proactive in prevention efforts, falls later in life could possibly be prevented. Initial education should include the data-specific content to demonstrate that the interventions are valid for their Appalachian population.

The findings also show that while interventions focusing on falls in public areas are crucial in other communities, Appalachia adults need to focus on fall prevention in their homes, specifically falls related to slipping, tripping and stumbling. Clients should be asked about the infrastructure of their homes and offered low cost ways to modify unsafe situations. A special focus should be placed on individuals living in counties with increased fall incidence rates: Carter, Washington, and Unicoi (Table 3).

In response to the high number of chair/wheelchair/toilet falls and their prevalence in homes, implementation of lower extremity strengthening, transfer safety education, and awareness of orthostatic hypotension are crucial.

The implications surrounding this study will depend largely on the dissemination of data. The raised awareness of the findings are necessary in the effort to bring key stakeholders to the discussion, to begin dialogue on specific interventions for fall risks, and to discover ways in

which this data may build on current interventions in the immediate community. This dissemination of data will be realized through communication between team members and key professionals in the community.

Limitations

Only falls significant enough to warrant hospitalization were included in the chart review; falls of lesser degree were not reported in the hospital database. A time restriction prevented the accumulation of more qualifiers to create a more extensive and accurate profile of those at risk of falls in this community. The severity of falls as well as the severity of co-morbidities were not specified, which would have provided additional beneficial information. Missing data was a significant limitation: The time of fall for the injury was missing in 70.1% of fall episodes, potentially affecting the validity of the fall data. A sizeable number (16.6%) of falls did not have a county of where the fall occurred but instead were documented as “Not Recorded”. Likewise, data categorized as “Other” consisted of 15.2% of Types of Falls and 15.7% of Injury Sites and hindered the data analysis.

Conclusion

This retrospective cohort study provided the data that the majority of falls in the Northeast Tennessee area can be described as female gender, not work related, in the homes, slip/trip or stumble by nature, during the summer season, daytime hours, and begin occurring frequently by the age of fifty. The ability to create effective interventions begins with the ability of nurses and other healthcare professionals to chart accurately and precisely. Further research must be done to incorporate specific habits and cultures of the specified community with health data. This research will contribute to the body of knowledge regarding those at risk for falls in the Appalachian region so specific interventions can be identified.

References

Alexander, B., Rivara, F., Wolf, M. (1992). The cost and frequency of hospitalization for fall-related injuries in older adults. *American Journal of Public Health*. Retrieved from http://www.cdc.gov/HomeandRecreationalSafety/Falls/fallcost.html

Abbott, C. (2012). Falls and Hip Fractures. Retrieved April 1, 2015, from http://shp.missouri.edu/vhct/case4007/index.htm

Freiberger, E., Haberle, L., Sirduso, W., Rixt Zijlstra, G.A. (2012). Long-Term Effects of Three Multicomponent Exercise Interventions on Physical Performance and Fall-Related Psychological Outcomes in Community-Dwelling Older Adults: A Randomized Controlled Trial. *Journal of American Geriatrics Society.* Retrieved from ehis.ebscohost.com.

Kelsey, J. L., Procter-Gray, E., Hannan, M.T., & Li, W. (2012). Heterogeneity of Falls Among Older Adults: Implications for Public Health Prevention. *American Journal of Public Health*. Retrieved from ehis.ebscohost.com.

Kannus P., Sievanen H., Palvanen M., Jarvinen, T., & Parkkari, J. (2005). Prevention of falls and consequent injuries in elderly people. *Lancet*. Retrieved from PubMed.

McGarvey, E., Leon-Verndin, M., & Killos, L. (2010). Health Disparities Between Appalachian and Non-Appalachian Counties in Virginia USA. *NCBI*. Retrieved April 1, 2015.

Moyer, V.A. (2012). Prevention of Falls in Community-Dwelling Older Adults: U.S. Preventive Services Task Force Recommendation Statement. *Annals of Internal Medicine.* Retrieved from ehis.ebscohost.com.

Pighills, A.C., Torgerson, D.J., Sheldon, T.A., Drummond, A.E., Bland, J.M. (2011, January). Environmental Assessment and Modification to Prevent Falls in Older People. *Journal of American Geriatrics Society.* Retrieved from ehis.ebscohost.com.

Preidt, R. (2015, January). Falls on the Rise Among U.S. Seniors. *HealthDay*. Retrieved from http://consumer.healthday.com.

Shumway-Cook, A., Ciol, M., Hoffman, J., Dudgeon, B., Yorston, K., Chan, L. (2009). Falls in the Medicare population: incidence, associated factors, and impact on health care. *Physical Therapy*. Retrieved from http://www.cdc.gov/HomeandRecreationalSafety/Falls/fallcost.html

Sterling, D., O'Connor, J., Bonadies, J. (2001). Geriatric falls: injury severity is high and disproportionate to mechanism. *Journal of Trauma–Injury, Infection and Critical Care*. Retrieved from http://www.cdc.gov/HomeandRecreationalSafety/Falls/fallcost.html

Stevens, J., Ballesteros, M., Mack, K., Rudd, R., DeCaro, E., & Adler, G. (2012) Gender differences in seeking care for falls in the aged Medicare Population. *American Journal of Preventive Medicine, (43)*. 59-62. Retrieved from http://www.cdc.gov

Stevens, J., Corso, P., Finkelstein, E., Miller, T. (2006). The costs of fatal and nonfatal falls among older adults. *Injury Prevention*. Retrieved from http://www.cdc.gov/HomeandRecreationalSafety/Falls/fallcost.html

Stevens, J., Thomas, K., Teh, L., Greenspan, A.I. (2009, August). Unintentional Fall Injuries Associated with Walkers and Canes in Older Adults Treated in U.S. Emergency Departments. *Journal of American Geriatric Society*. Retrieved from ehis.ebscohost.com.

Appendix A

Form 129 Approval Letter

February 20, 2014

Dear Ms. Warren,

I have reviewed your submission for "Striving for Fall Prevention: A Descriptive, Retrospective Study". After reviewing the submitted Form 129, I have determined that the proposed activity IS research involving human subjects according to the definitions established by the Department of Health and Human Services.

As such, the proposed "Striving for Fall Prevention: A Descriptive, Retrospective Study" is subject to the purview of the ETSU/VA IRB.

Approval must be obtained from the ETSU/VA IRB prior to beginning this project.

Please call Janine Olive at 439-6054 or Hazel Fulton Robinson 439-6055 if you require assistance with completion of any of the IRB required submission documents.

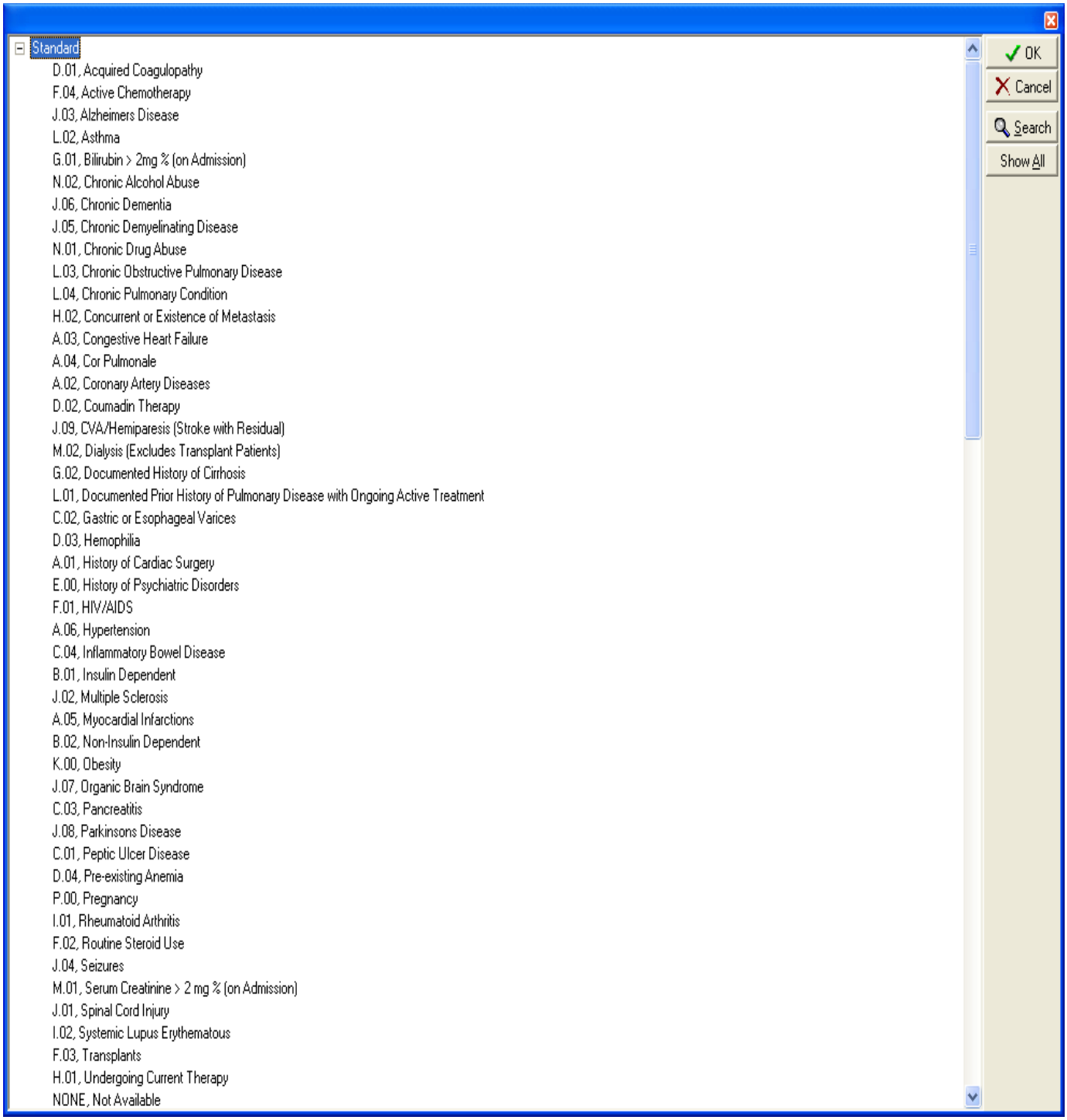
Sincerely,

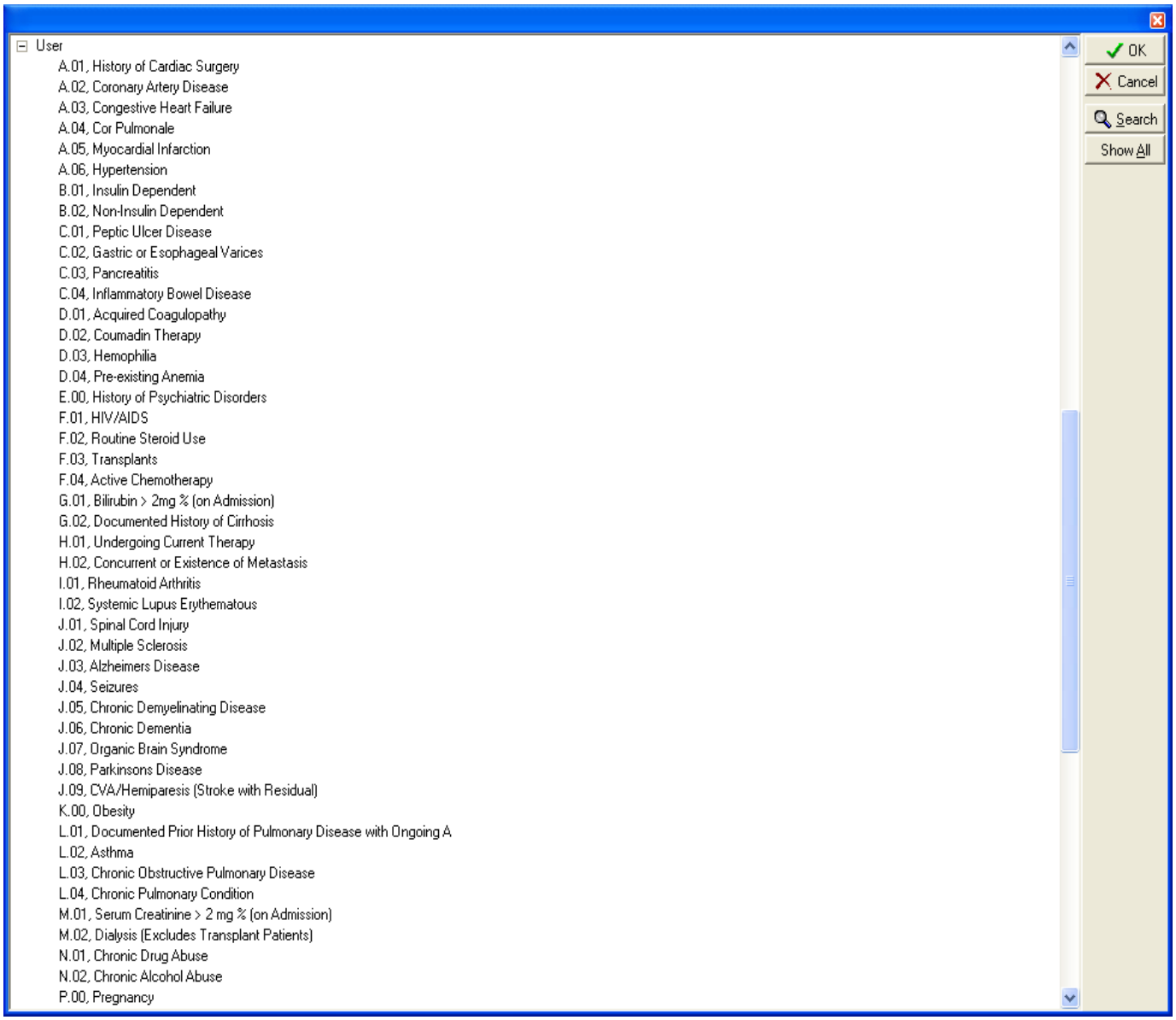
George Youngberg, M.D.

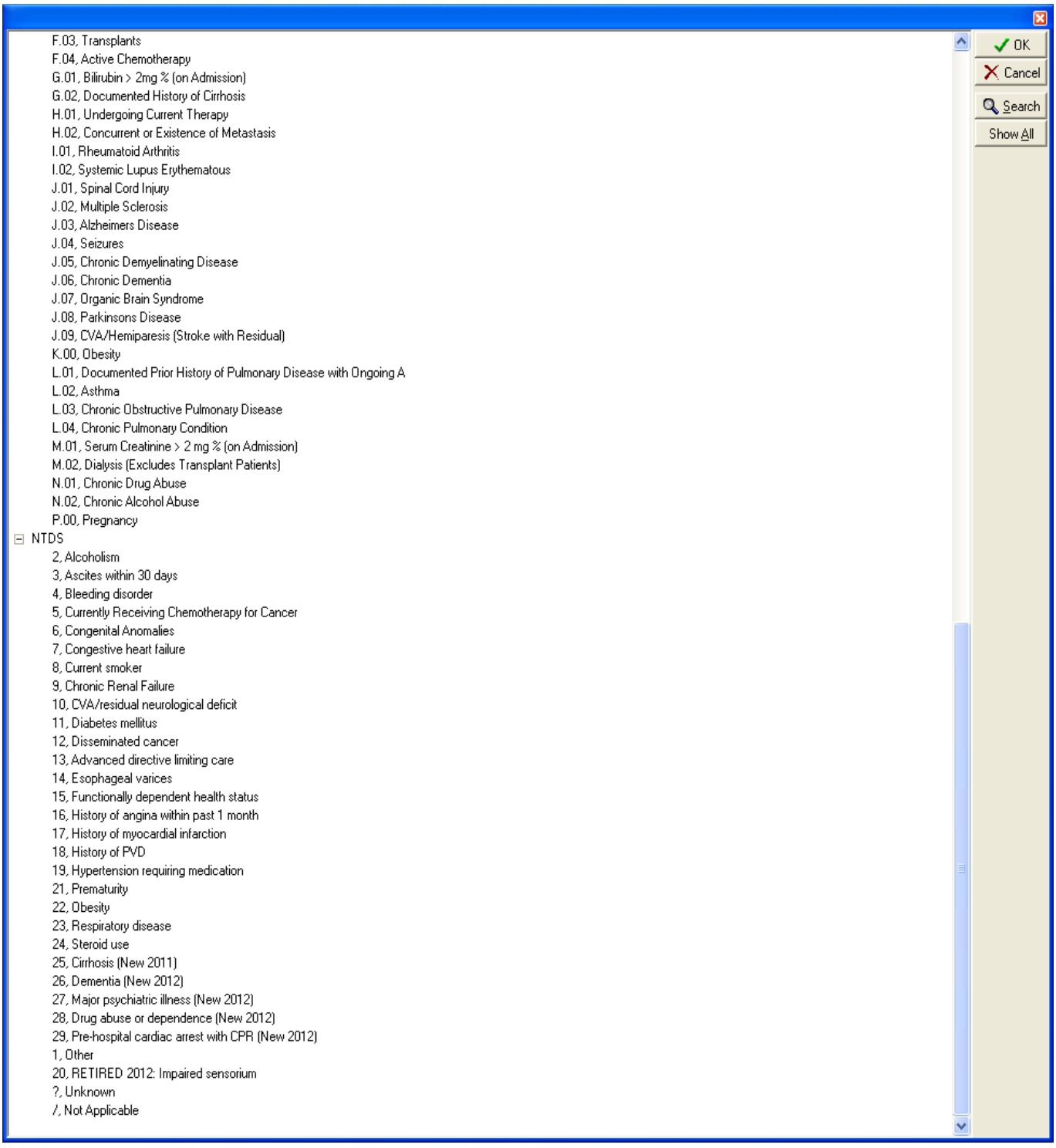
Chair, ETSU/VA IRB

Appendix B

List of Comorbidities




User
A.01, History of Cardiac Surgery
A.02, Coronary Artery Disease
A.03, Congestive Heart Failure
A.04, Cor Pulmonale
A.05, Myocardial Infarction
A.06, Hypertension
B.01, Insulin Dependent
B.02, Non-Insulin Dependent
C.01, Peptic Ulcer Disease
C.02, Gastric or Esophageal Varices
C.03, Pancreatitis
C.04, Inflammatory Bowel Disease
D.01, Acquired Coagulopathy
D.02, Coumadin Therapy
D.03, Hemophilia
D.04, Pre-existing Anemia
E.00, History of Psychiatric Disorders
F.01, HIV/AIDS
F.02, Routine Steroid Use
F.03, Transplants
F.04, Active Chemotherapy
G.01, Bilirubin > 2mg % (on Admission)
G.02, Documented History of Cirrhosis
H.01, Undergoing Current Therapy
H.02, Concurrent or Existence of Metastasis
I.01, Rheumatoid Arthritis
I.02, Systemic Lupus Erythematous
J.01, Spinal Cord Injury
J.02, Multiple Sclerosis
J.03, Alzheimers Disease
J.04, Seizures
J.05, Chronic Demyelinating Disease
J.06, Chronic Dementia
J.07, Organic Brain Syndrome
J.08, Parkinsons Disease
J.09, CVA/Hemiparesis (Stroke with Residual)
K.00, Obesity
L.01, Documented Prior History of Pulmonary Disease with Ongoing A
L.02, Asthma
L.03, Chronic Obstructive Pulmonary Disease
L.04, Chronic Pulmonary Condition
M.01, Serum Creatinine > 2 mg % (on Admission)
M.02, Dialysis (Excludes Transplant Patients)
N.01, Chronic Drug Abuse
N.02, Chronic Alcohol Abuse
P.00, Pregnancy
OK
Cancel
Search
Show All


F.03, Transplants
F.04, Active Chemotherapy
G.01, Bilirubin > 2mg % (on Admission)
G.02, Documented History of Cirrhosis
H.01, Undergoing Current Therapy
H.02, Concurrent or Existence of Metastasis
I.01, Rheumatoid Arthritis
I.02, Systemic Lupus Erythematous
J.01, Spinal Cord Injury
J.02, Multiple Sclerosis
J.03, Alzheimers Disease
J.04, Seizures
J.05, Chronic Demyelinating Disease
J.06, Chronic Dementia
J.07, Organic Brain Syndrome
J.08, Parkinsons Disease
J.09, CVA/Hemiparesis (Stroke with Residual)
K.00, Obesity
L.01, Documented Prior History of Pulmonary Disease with Ongoing A
L.02, Asthma
L.03, Chronic Obstructive Pulmonary Disease
L.04, Chronic Pulmonary Condition
M.01, Serum Creatinine > 2 mg % (on Admission)
M.02, Dialysis (Excludes Transplant Patients)
N.01, Chronic Drug Abuse
N.02, Chronic Alcohol Abuse
P.00, Pregnancy
NTDS
2, Alcoholism
3, Ascites within 30 days
4, Bleeding disorder
5, Currently Receiving Chemotherapy for Cancer
6, Congenital Anomalies
7, Congestive heart failure
8, Current smoker
9, Chronic Renal Failure
10, CVA/residual neurological deficit
11, Diabetes mellitus
12, Disseminated cancer
13, Advanced directive limiting care
14, Esophageal varices
15, Functionally dependent health status
16, History of angina within past 1 month
17, History of myocardial infarction
18, History of PVD
19, Hypertension requiring medication
21, Prematurity
22, Obesity
23, Respiratory disease
24, Steroid use
25, Cirrhosis (New 2011)
26, Dementia (New 2012)
27, Major psychiatric illness (New 2012)
28, Drug abuse or dependence (New 2012)
29, Pre-hospital cardiac arrest with CPR (New 2012)
1, Other
20, RETIRED 2012: Impaired sensorium
?, Unknown
/, Not Applicable
OK
Cancel
Search
Show All