

2006-2015 International Pressure Ulcer Prevalence™ Survey (US Only) Overall Results: 10 year trends

Catherine VanGilder, MBA, BS, MT, CCRA | Charlie Lachenbruch, PhD | Corrine Algrim-Boyle, RN, MS | Stephanie Meyer, BS

Abstract

Purpose: Pressure Ulcer (PU) prevalence allows benchmarking within and across facilities. The International Pressure Ulcer Prevalence™ (IPUP) Survey is unique as it includes a variety of care settings and participants include community and larger teaching facilities. The purpose of this study is to present 10 years of US prevalence data and demographic data (2006-2015) by care setting.

Methods: Facilities volunteer to participate in the IPUP survey. Internal clinical teams collect data during a pre-determined 24 hour period which includes demographics, pressure ulcer prevalence, and other pertinent data. Aggregate data was analyzed for this study.

Results: 918,621 US patients were surveyed 2006-2015. Overall Prevalence (OP) (all facilities) declined from 13.5% (2006) to 9.3% (2015). Facility-Acquired Prevalence (FAP) declined from 6.2% (2006) to a range of 3.1-3.4% (2013-2015). Acute Care (AC) OP was 13.3% in 2006 and declined to a range of 8.8 - 9.3% (2012-2015). AC FAP declined from 6.4% (2006) to 2.9% in 2015, with 2008-2009 showing the most aggressive decline. Long-Term Acute Care (LTAC) had the highest OP at 32.9% (2006), and declined to 28.8% (2015), FAP was 9.0% declining to 5.6% respectively. Recently Long-Term Care (LTC) FAP has risen from 3.8% (2013) to 5.4% (2015). Rehab FAP was between 2.6-2.8% over the last 3 years.

Discussion: In 2007 CMS announced that they would no longer pay for the cost of care of FAPU's in AC. AC FAP declined a full 1% during 2008-2009, likely indicating the focus on PU prevention. Continued AC prevention efforts have achieved an overall 45.6% reduction in FAP (2007-2015). This decline is similar in Rehab, however, LTAC and LTC are more variable, perhaps due to lower sample size.

Conclusions: AC and Rehab OP and FAP has declined significantly over this 10 year period, while we see variation in LTC and LTAC's.

Introduction

Pressure ulcers are a significant clinical complication for patients and a financial and quality issue for healthcare facilities. After the 2008 CMS payment discontinuation for the care of hospital acquired pressure ulcers, many facilities put in pressure ulcer prevention programs.

However, little information is available to demonstrate the overall efficacy of these prevention efforts. The International Pressure Ulcer Prevalence™ (IPUP) Survey has collected data since 1989 to aid facilities in process improvement efforts. It is routinely performed to assist healthcare facilities benchmark their pressure ulcer prevalence against like institutions, as well as internally in order to identify areas within facilities that need improvement.

The purpose of this study is to analyze existing IPUP database to ascertain whether or not pressure ulcer prevalence by care setting has changed over a ten year period.

Study Objectives

To Determine:

- The overall prevalence of pressure ulcers over a ten year period in all US facilities.
- The prevalence of pressure ulcers by US care setting.
- The demographics of hospitalized patients that may be risk factors for pressure ulcers, such as average age, weight, BMI, and Braden pressure ulcer risk score.

Methods

- Retrospective analysis of the IPUP database using 2006-2015 data limited to the United States.
- Overall Prevalence (OP) includes both pre-existing ulcers and those acquired during the admission.
- Facility-Acquired Prevalence (FAP) includes only those patients who had ulcers form while admitted, or if the ulcer was not documented as present on admission.
- Age was reported in years with the exception of patients/residents who were 90 years and older, where it is reported in the 90+ category to avoid the collection of protected health information
- All other demographic data and aggregate analyses will be reported by care setting.
- All available patient records are included.
- Descriptive statistics were applied to summary data.
- Changes in year to year prevalence were compared using Chi-square analysis with Yates Correction with alpha set at 0.05.
- Study was found to be exempt by Schulmann IRB (Reference # 201602908).

Results

- 918,621 US patients were surveyed 2006-2015.
- Overall Prevalence (OP) (all facilities) declined from 13.5% (2006) to 9.3% (2015).
- Facility-Acquired Prevalence (FAP) declined from 6.2% (2006) to a range of 3.1-3.4% (2013-2015).
- Acute Care (AC) OP was 13.3% in 2006 and declined to a range of 8.8 - 9.3% (2012-2015).
- AC FAP declined from 6.4% (2006) to 2.9% in 2015, with 2008-2009 showing the most aggressive decline.
- Long-Term Acute Care (LTAC) had the highest OP at 32.9% (2006), and declined to 28.8% (2015), FAP was 9.0% declining to 5.6%.
- Long-Term Care (LTC) FAP was 5.6 in 2006 and has been variable since: it has risen from 3.8% (2013) to 5.4% (2015).
- Rehab FAP was between 2.6-2.8% over the last 3 years.

TABLE 1. RESULTS: PREVALENCE BY CARE SETTING

Blue shaded P values indicate significant decreases in prevalence vs. previous year.
Gray shaded P values indicate increases in prevalence vs. previous year.

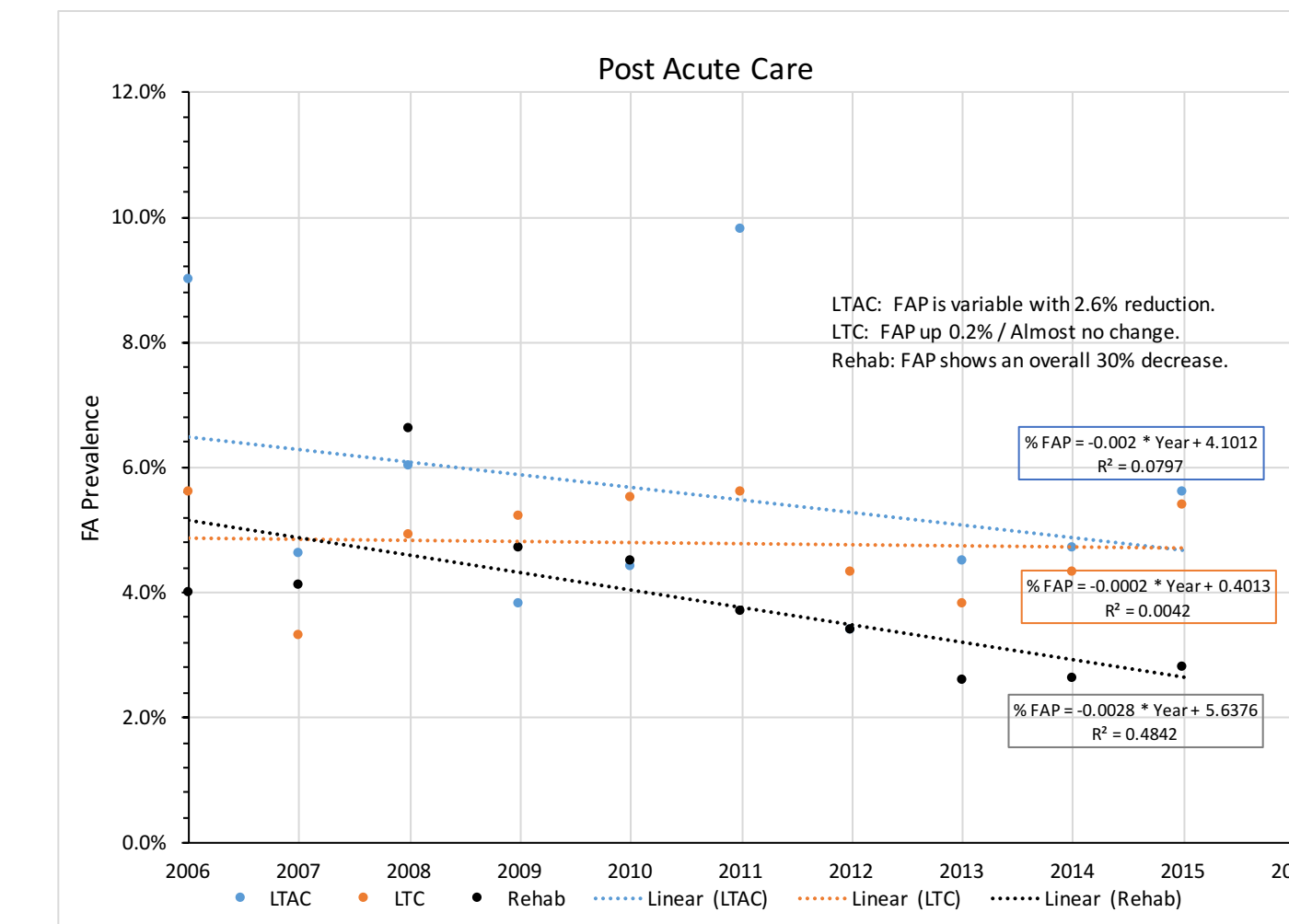
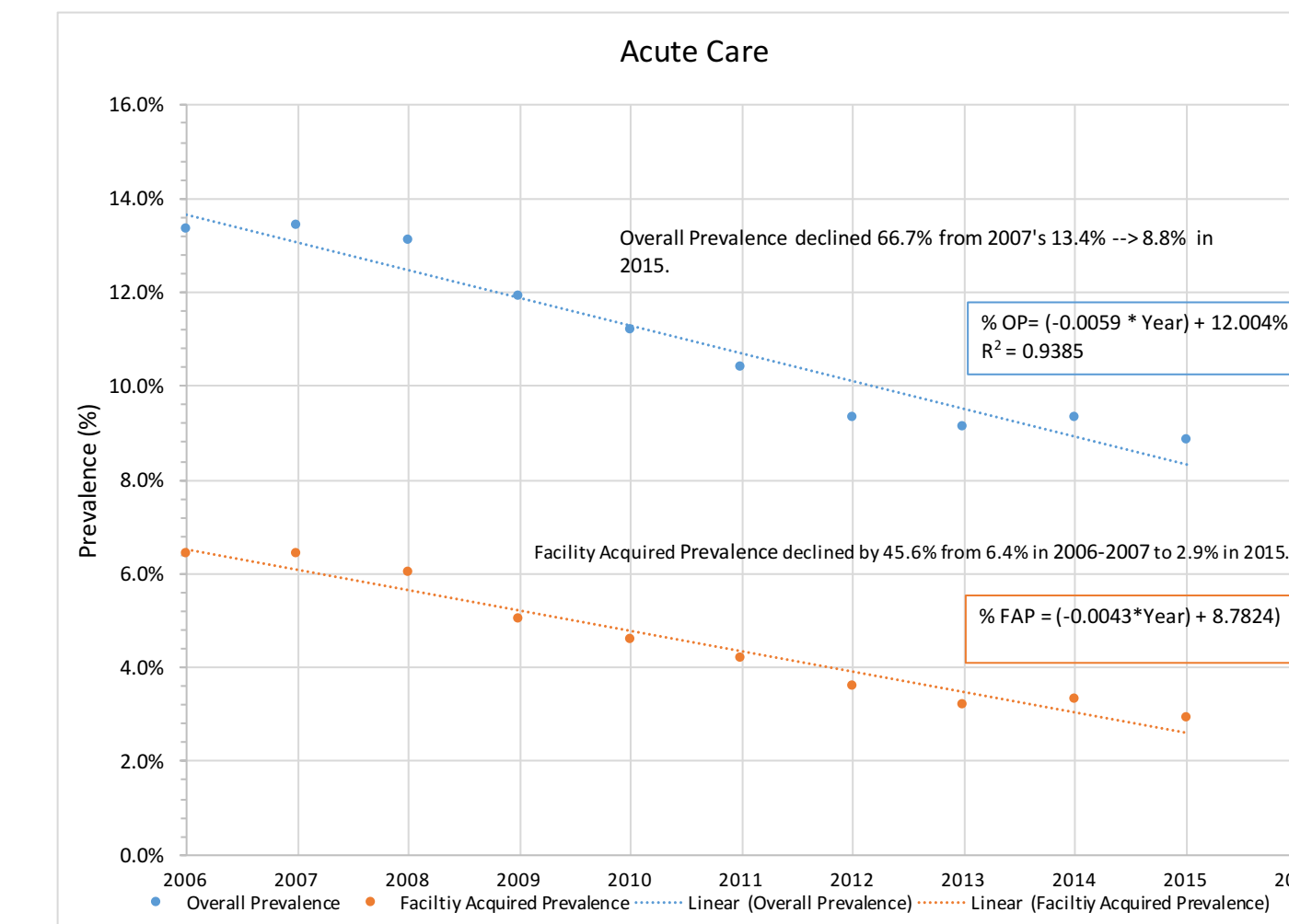
All US Care Settings	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
# Facilities	702	638	765	855	886	882	931	892	917	906
# Patients Surveyed	88743	79193	90398	92197	98078	97294	97768	91087	91745	92118
Overall Prevalence	13.5%	13.7%	13.5%	12.3%	11.5%	10.8%	9.7%	9.6%	9.7%	9.3%
P value when compared year over year	NA	0.2709	0.3074	<0.0001	<0.0001	<0.0001	<0.0001	0.4271	0.4735	0.0039
Facility-Acquired Prevalence	6.2%	6.1%	6.0%	5.0%	4.6%	4.3%	3.6%	3.2%	3.4%	3.1%
P value when compared to prev Yr.	NA	0.7390	0.2388	<0.0001	<0.0001	0.0014	<0.0001	<0.0001	0.0176	<0.0001
Prevalence FAPU > Stage I	3.4%	3.5%	3.6%	3.2%	3.0%	2.9%	2.4%	2.3%	2.5%	2.3%
P value compared to previous year	NA	0.3097	0.3061	<0.0001	0.0006	0.0015	<0.0001	0.2394	0.0170	0.0024

US Acute Care	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
# Facilities	562	541	654	743	766	753	772	727	749	748
# Patients Surveyed	76199	72490	83914	87004	92375	91678	90660	83030	84127	85822
Overall Prevalence	13.3%	13.4%	13.1%	11.9%	11.2%	10.4%	9.3%	9.1%	9.3%	8.8%
P value for OP compared prev yr	NA	0.5899	0.0689	<0.0001	<0.0001	<0.0001	<0.0001	0.0931	0.1599	0.5146
Facility-Acquired Prevalence	6.4%	6.4%	6.0%	5.0%	4.6%	4.2%	3.6%	3.2%	3.3%	2.9%
P value for FAP compared to prev yr	NA	0.8860	0.0014	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.2560	0.0025
Prevalence FAPU > Stage I	3.5%	3.6%	3.6%	3.1%	3.0%	2.7%	2.4%	2.2%	2.4%	2.2%
P value for FAP > Stage I Prev year	NA	0.1282	0.8571	<0.0001	0.0899	<0.0001	<0.0001	0.0129	0.0068	0.0011

US Long-Term Acute Care	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
N Facilities	44	33	42	38	32	33	35	38	35	36
# Patients Surveyed	1840	1604	2031	1473	1487	1417	1408	1606	1462	1385
Overall Prevalence	32.9%	29.0%	31.9%	29.3%	28.9%	37.3%	30.5%	32.0%	31.9%	28.8%
P value OP compared to prev yr.	NA	0.080	0.178	0.249	0.886	0.001	0.008	0.536	0.985	0.208
Overall Prevalence > Stage I	27.2%	26.0%	27.3%	25.7%	26.7%	33.7%	28.1%	30.6%	31.0%	27.9%
Facility-Acquired Prevalence	9.0%	4.6%	6.0%	3.8%	4.4%	9.8%	3.4%	4.5%	4.7%	5.6%
P value FAP compared to prev year	NA	<0.0001	0.078	0.006	0.510	<0.0001	<0.0001	0.176	0.832	0.378
Prevalence FAPU > Stage I	5.9%	3.6%	4.4%	3.0%	3.7%	8.3%	3.0%	4.0%	4.1%	5.0%
P value FAP > Stage I prev year	NA	0.003	0.258	0.049	0.347	<0.0001	<0.0001	0.180	0.945	0.324

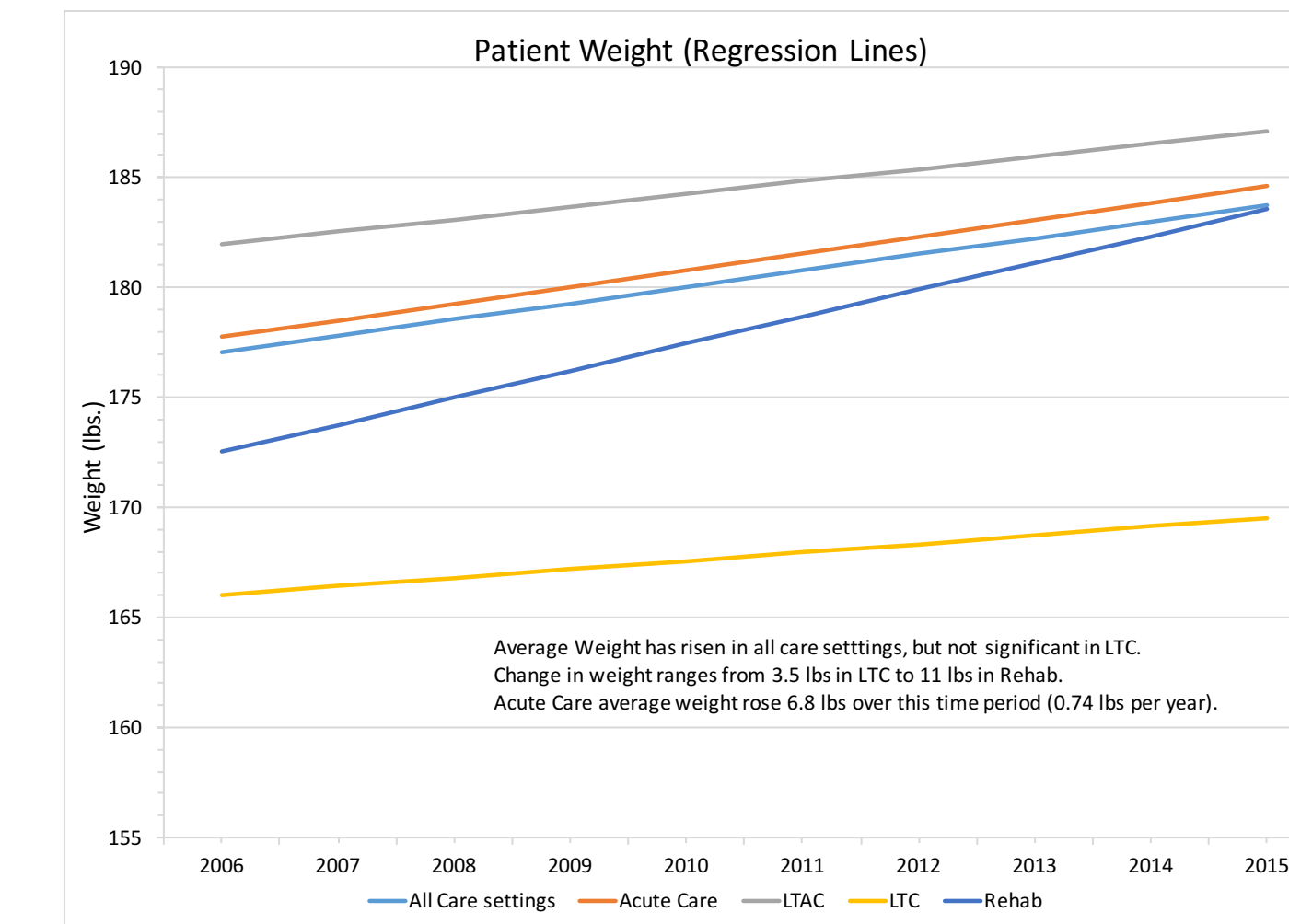
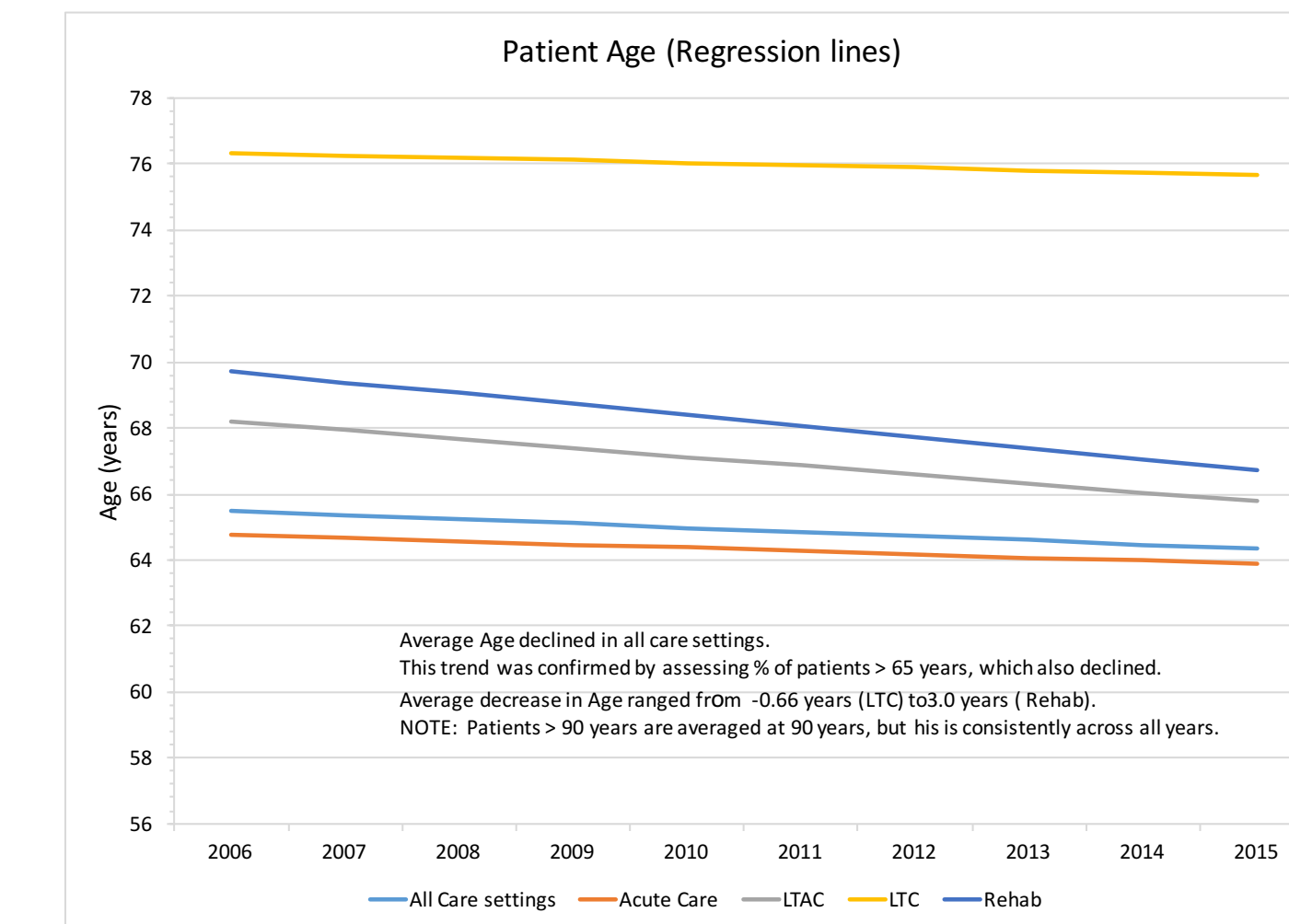
US Long-Term Care	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
N Facilities	47	33	46	33	48	49	54	57	55	49
# Patients Surveyed	5203	2795	3650	2061	2705	2927	4010	4865	4590	3309
Overall Prevalence	12.1%	11.4%	11.7%	11.9%	12.0%	10.8%	9.5%	9.9%	10.1%	11.3%
P value OP compared to prev yr.	NA	0.489	0.813	0.846	0.977	0.214	0.111	0.560	0.794	0.127
Overall Prevalence > Stage I	9.1%	8.1%	8.3%	9.7%	9.1%	9.3%	7.9%	8.7%	9.4%	9.8%
Facility-Acquired Prevalence	5.6%	3.3%	4.9%	5.2%	5.5%	5.6%	4.3%	3.8%	4.3%	5.4%
P value FAP compared to prev year	NA	<0.0001	0.002	0.695	0.696	0.929	0.019	0.288	0.268	0.028
Prevalence FAPU > Stage I	4.1%	2.1%	3.1%	3.8%	3.7%	4.7%	3.6%	3.2%	4.0%	4.4%
P value FAP > Stage I prev year	NA	<0.0001	0.027	0.205	0.939	0.079	0.037	0.304	0.049	0.466

US Rehabilitation	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
N Facilities	13	22	22	40	39	47	70	70	78	73
# Patients Surveyed	575	709	707	1588	1413	1272	1690	1586	1566	1602
Overall Prevalence	16.3%	18.8%	19.4%	19.0%	15.8%	13.1%	13.0%	10.5%	11.9%	11.0%
P value OP compared to prev yr.	NA	0.384	0.858	0.912	0.056	0.103	0.981	0.056	0.309	0.517
Overall Prevalence > Stage I	10.4%	13.0%	14.7%	14.6%	11.5%	9.7%	9.5%	8.4%	10.2%	8.9%
Facility-Acquired Prevalence	4.0%	4.1%	6.6%	4.7%	4.5%	3.7%	3.4%	2.6%	2.6%	2.8%
P value FAP compared to prev year	NA	0.246	0.455	0.956	0.029	0.195	0.915	0.352	0.120	0.288
Prevalence FAPU > Stage I	2.3%	2.1%	4.7%	3.1%	2.5%	2.4%	1.9%	2.1%	2.0%	2.1%
P value FAP > Stage I prev year	NA	0.862	0.015	0.09	0.384	0.948	0.387	0.801	0.943	0.975



Discussion

- October 2008 CMS began a "no payment" policy for the cost of care of FAPU's in AC.
- Following that policy, AC FAP declined a full 1% during 2008-2009, likely indicating the focus on PU prevention.
- Acute Care:
 - OP declined 66.7% from 2007's 13.4% to 8.8% in 2015.
 - FAP declined by 55% reduction in FAP (6.4% to 2.9%) during 2006-2015.
 - FAP > Stage 1 declined by 39% (3.6% to 2.2%).
- Rehab had similar reductions in FAP.
- LTAC has the highest OP of all care settings while FAP is variable.
- LTC OP and FAP are variable, but FAP shows a recent increase 2013-2015 to levels last seen in 2011.



Conclusions

- AC and Rehab OP and FAP has declined significantly over this 10 year period.
- LTC and LTAC OP and FAP remain fairly constant during the 10 year period.
- Average patient weight significantly increased in all care settings except for LTC.
- Average patient/resident age showed significant decreases for all care settings and in Acute Care and Rehab.