

Presentation Outline

ICHP Annual Meeting

September 13-15- 2012

“Evolving Trends That Will Impact Pharmacy’s Future”
David A Zilz

- 1) Introduction: Future leaders need a vision to meet future needs, expectations and mandates.
 - a) Articulation critical issues
 - b) Analyzing pertinent data and statistics
 - c) Developing forecasting mentality
 - d) Creating a vision on how to implement of patient and health-system services
- 2) Critical Issues identified by ASHP Research and Education Foundation:
 - a) Support the profession - advance pharmacy practice – foster leadership – accountability for patient outcomes
 - b) Create demand – new models of practice – leverage expertise and unique abilities of pharmacists
 - c) Drive advancement – technical, human and leadership competencies – in complex and rapidly changing organizations.
 - d) Ensure financial stability of the Foundation
- 3) Major dimensions in vision and forecasting:
 - a) Patients and changing demographics
 - b) Health care providers, especially pharmacists
 - c) The restructuring of healthcare systems.
 - d) Technology-Technicians-Trainees
- 4) Patients and care statistics and trends:
 - a) Numbers – patients
 - b) Hospitals – beds – admissions –
 - c) Emergency departments
 - d) Disease trends
- 5) Providers
 - a) Physicians, hospitalists, nurses, physician assistants
 - b) Pharmacists and the changing landscape
 - c) Health systems and chain drug (health center) stores
- 6) Future health systems and pharmacy enterprises
 - a) Roles and responsibilities
 - b) Leadership needed
 - c) Future role of residency trained pharmacists
- 7) Integrating career into a complete life plan
- 8) Concluding remarks.

Illinois Council of Health-Systems
Pharmacists
Annual Meeting

Oak Brook, Illinois
September 13-15, 2012

Evolving Trends That Impact Will
Pharmacy Practice in the Future

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The speaker has no conflict to disclose.

“Prayer to Owen Meany”

- **“Faith takes practice (not only in religious- but every aspect of life)”**

and

- **“We are always being trained for the next opportunity but we will not know why, until the moment we die.”**

Since Then-Unique Path-perhaps?

- Practice
- Associations
- Consulting
- Blue Collar
- Volunteer

Tomorrow and you!! - 1

ASHP's Role in Strategic Leadership Development

- Annual ASHP Conference for Leaders in Health-System Pharmacy
- Sections for Pharmacy Practice Manager and Clinical Specialists
- Targeted monthly Newslinks
- ASHP Connect
- Specialized programming at ASHP national meetings
- Educational and networking webinars
- Web-based practice resources
- Residency accreditation

Tomorrow and you!! - 2

ASHP Research and Education Foundation
Visionary Leadership

- Strategic Plan
 - **approved (June 1, 2011)**
 - **identifies four critical issues**
 - **12 strategic initiatives to address them.**
- That is truly “Visionary Leadership”

The Critical Issue - 1

“Facilitate and strongly support the pharmacy profession in advancing pharmacy practice models that foster pharmacists’ leadership and accountability for patient outcomes.”

The Critical Issue - 2

“Create demand for new models of pharmacy practice that leverage the expertise and unique abilities of pharmacists.”

The Critical Issue - 3

“Drive the advancement of the technical, human, and leadership competencies of pharmacists and pharmacy staff in complex and rapidly changing organizations.”

The Critical Issue - 4

“Ensure the long-term financial sustainability of the Foundation.”

The R & E Vision
& Role of Forecasting

Four major dynamics that will change your practices in the future:

- 1) Patients and changing demographics
- 2) Pharmacy & other health care providers
- 3) Restructuring of the health care systems
- 4) Technologies and Technicians + Students

**Statistics
Patients**

Patient Activity - 1

Patients in U.S.

- 310.9 million – 80+% will receive prescription
- Beds available - all facilities – 944,277
- Community hospital/university – 805,593
- Admissions annually all facilities – 37,479,709 –
Discharges or 140,000 today-most with new medications
- Admissions in community/university – 35,527,377

Patient Care Activities

Emergency Room Patients

- ER visits:
 - 123.8 million (13-17% admitted)
- Medications:
 - 96,419,000 mentioned medications
 - 27,343,000 did not mention medications
 - ~30% had 3 or more medications
 - And 425,000 visits – inappropriate pain relievers
- Patients over 65 years of age:
 - 19,261,000
 - 1,675,000 with chest pain or shortness of breath

Patient Care Activities

Emergency Room Patients

- Injury-related visits:
 - 42.4 million
 - 41.4 per 100 citizens (OH: 46.8; IL: 41.8; MA: 41.5; WI: 33.3; MI: 39.6; MD: 37.7; NC: 40.8)
 - All others discharged on medication
- Patients seen by:
 - Physicians: 111,000,000
 - Physician Assistants and ER Techs: 21,450,000
 - Nurse Practitioner: 4,400,000
- Patient patterns:
 - 4% of the patients account for 20% of all visits
 - 5% of patients account for 50+% of costs

Diabetes – IAF Forecast - 1

We need to better forecast the profession's future *2010 to 2015*

Population: 310,233,000 to 325,540,000 =
15,307,000 +4.9 %

Pre-diabetes: 79,016,000 to 82,915,000 =
3,899,000 +5.0 %

Diagnosed: 20,300,000 to 26,600,000 = 6,300,000
+ 31%

Diabetes – IAF Forecast - 2

We need to better forecast the profession's future *2010 to 2015*

- Major complications: visual, renal, amputations
 - 3,676,300 to 4,850,900 = 1,052,500 **+ 28%**
- Over 65 – the percentages even greater.
- “Point is” many entities are forecasting better each year

Statistics Providers

Numbers Health Professionals Where do pharmacists fit? - 1

- Nurses – 3.3+ million
- Physicians – 980,000
- Physician Assistants – 84,000 + 4,160/yr
- Pharmacists – 270,000
- Pharmacists – Health-Systems - 57,000
 - 5% retire each year – need 2,900 residency trained people every year just to replace retirees

2011 AHA Futurescan

- Clinical extenders will provide the bulk of primary care
- Two Factors
 - Development of clinical guidelines
 - Pressing patient demands
- Two-thirds of responders believe by 2016
 - Advanced practice nurses, physician assistants **and pharmacists**—will provide most primary care
- Rationale for prediction:
 - 82% - M.D.'s who oppose will reverse thoughts
 - Regulations in states will allow prescribing without M.D. signature
 - Potential for cost savings
 - 71% believe productivity and efficient use of resources will be same

Physician Statistics

- Total no. of physicians: 954,000
 - Resident positions: 110,000 (13% are non-US citizens)
- Primary Care: 352,908
 - Predicted to need 45,000 more by 2020
 - No. entering Family Medicine in 5 years declined by 25%; reason for non-physician providers
- Medical school entering class: 18,000
 - In 2009, 4 new schools admitted 190
 - Pharmacy admits about 12,000

Physician Statistics

- 60% of Health Systems own physician practices
- 50% of all US physicians are employed by hospitals
 - 32% of first year residents have decided they would like to work for hospitals.
- 75% of cardiology practices owned by Hospitals/Health Systems
- Of the 10,400 certified Oncologists, McKesson Health Solutions employees 2,990

Medical Residents & Students National Trends (April 2010)

- Expansion of Medical Schools (as of Oct. 2009):
 - Number of students admitted: 18,000
 - Expanding by 340
 - Four new schools: 190 more students
 - Existing schools added 150 more students
 - **Contrast 20++ new pharmacy schools**
- Residents-in-training in 2010:
 - 110,000
 - 14,300 non-US citizens trained outside of US medical schools

Hospitalists National Trends

- History of growth – Term was coined in 1997 and Society of Hospital Medicine was created
- 1997 --- 1,000
- 1999 --- 3,500
- 2001 --- 7,000
- 2003 --- 11,200
- 2005 --- 16,400
- 2007 --- 20,200
- 2010 --- 30,000 +
- 2015 --- ??,???

Hospitalists National Trends

- January 2010 – Society of Hospital Medicine Members reached 10,000
- Credentialing growth:
 - May 2009 – 500 inducted as “Fellows in Hospital Medicine”
 - 2011 – 119 New Fellows Approved
 - April 2010 – Senior Fellows Category Created
 - 2011 - 59
 - April 2010 – Masters of Hospital Medicine
 - 2011 – 4
- Bottom line – outcomes and cost are now aligned by hospitals and physicians

Ratio of Primary Care Physicians to Population

- United States Average: 1.25 physicians per 1,000 population
- Wisconsin, Minnesota, and Illinois are slightly better off, with ratios between 1.21 to 1.5
- Iowa and Indiana: Ratios between 1.0 to 1.2

Nursing Profession Statistics

- Nurses: 3.3+ million plus 2.2 million trained aids
 - Currently 2,618,700 listed positions (60% in hospitals)
- Predict in 10 years, will need 581,500 additional RNs: The needs in practice settings beyond current staffing levels for nurses is projected to be:

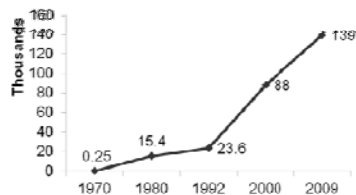
▪ Offices of physicians:	48%
▪ Home health services:	33%
▪ Nursing care facilities:	25%
▪ Employment services:	24%
▪ Hospitals (public and private):	17%

Nursing Profession Statistics

- Advance Practice Nurses in 2008: 375,794 (28,369 doctorates)
- Doctors of Nursing Practice
 - 2004: Four (4) schools -7 DNP degrees
 - 2006: Eight (8) schools-74 DNP degree
 - 2008: (92)Schools-361 DNP = 3,415 enrolled
 - 2010: (153)Schools-1,281 DNP = 7,037 enrolled
 - 2011: (182) schools –1,581 DNP = 8,973 enrolled
 - 2012: (101) more schools in planning stages
- Additional PH.D. Enrollees 2011 – 4,907

Nursing Profession Statistics

- Advance Practice Nurses in 2008: 375,794 (28,369 doctorates)
- In 2010, 153 schools granted 7,037 Doctor of Nursing Practice (DNP) degrees. In 2004, 4 schools granted 170 DNP degrees.
- Nurse Practitioners’ growth in Master’s degrees:



Nursing Profession Statistics

- Many Advanced Practice Nurses acting as physicians to fill primary care needs
- ****In 2004, the American Association of Colleges of Nursing mandated that by 2015, all entry-level Advanced Practice Nurses (APNs), including NPs, attain a doctorate degree, Doctor of Nursing Practice (DNP)

Numbers - Health Professionals Where do pharmacists fit? - 2

How can 57,000 be organized within health-system pharmacy enterprises to collaborate with 4.2 million M.D.s and R.N.s to optimize drug use for 310 million patients?

Pharmacy Landscape

- Applicants to pharmacy schools
 - 115,000+/year
 - From a pool of 3.2 million grads or 3.5% of graduates from 37,000 High Schools
- 12,000 admitted
 - 0.375% of all high school graduates – REMEMBER - there are 37,000 valedictorians and 37,000 salutatorians = 74,000
 - 1 of 3 valedictorians or 1 out of 6 combined valedictorians and salutatorians.
 - Academic excellence – very competitive era!

Changing Pharmacy Landscape - 1

- Applicants to pharmacy schools
 - 115,000/year or more
- Graduate from pharmacy schools
 - 12,000 annually and growing
 - Last two years plus all residents – 27,000 additional pharmacy presence – educated – capable – with training and using good systems - much better than what happens to patients histories and discharge now.
 - Plot - Patient Benefit versus student 60%-resident 30% - preceptor

Changing Pharmacy Landscape - 2

- Residents 2010
 - Completed PGY1 - 1,765
 - Completed PGY2 - 366
 - Completed Total 2,131
- PGY-2 – So how unique are you? (12,000)
 - Critical Care - 85
 - Oncology – 52
 - Ambulatory Care – 49
 - Infectious Disease – 35
 - Administration + M.S. – 30
 - Psych and Internal Med – 15 each
- How will you uniquely provide “leadership”

Changing Pharmacy Landscape - 3

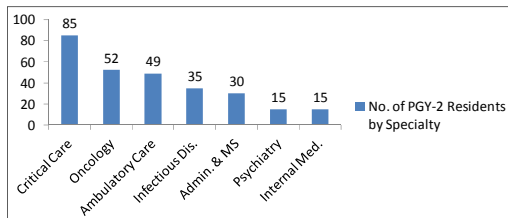
- Residents 2010 – 2,131
- Residents 2011 – incomplete data
 - Predicting 2,300
- Complete PGY2/Administration – 30 to 45
 - How about 50 to 500 in 5 years?
 - Increasingly with an “M” degree – M.S., M.P.H., M.B.A., Med, M.H.A., etc.
- Needed to replace retirees:
 - 2,900 or 600 more / year than being prepared.

Changing Pharmacy Landscape - 4

- Residents Forecast – 2012
 - Starting PGY1 2,027
 - Starting PGY2 438
 - Starting Total 2,465
 - ASHP Support Post-match 20
 - Post Match Scramble ??
 - Estimated Total Complete 2,500
- Three year summary
 - 2010 2,131
 - 2011 2,300 -- 7.9% increase
 - 2012 2,500 -- 8.7% increase
 - Total 6,831 --17.3% since 2010

Pharmacy Landscape

- PGY-2: So how unique are you?



- How will Pharmacy uniquely provide medication management "leadership"?

Changing Pharmacy Landscape - 5

- Total residents completed program 1964-2010 -- **27,214!!!!**
- If all practiced in health systems that would be approximately ½ of current practitioners
- In 9 years another 27,000!!!
 - They will be part of greatest generation of pharmacists in history

Changing Pharmacy Landscape - 6

- 2020 - Why you could easily become the "Greatest Generation of Pharmacists"
- Merge "The Greatest Generation + That used to be us" + Generations: The History of America's Future, 1584 to 2069 - "every 20-25 years"
 - Large numbers 1964>2010 27,000 By 2020 at least another 27,000
 - Maturity & skills & multiple degrees
 - Tools-data-analytics-multi-media
 - Challenges & Opportunities very significant
 - Entitlements receding → ^ competition >
 - ^ competence > ^ performance

Walgreens – Numbers - 1

- Oh by the way – 5,300 students a year still receive Walgreens scholarships.
- The "chains" will continue to be a major force in shaping our future practice models. Corporate Pharmacy-competitors or colleagues?
- \$67 billion in revenue
- 70,000 health care providers (nurse practitioners, physicians assistants, home care nurses, physicians) AND 26,000 pharmacists

Walgreens – Numbers - 2

- 7,500 stores – 1/3 open 24/7/365 - 75% of US citizens within 5 miles – 6 million customers a day – 72 million different ones/yr . -- more than hospitals
- 5.4 million flu vaccinations and 2 million H1N1 vaccines plus infusion and respiratory home visits, Midwest \$ Impact
- Last two years - opened 1 additional store per day – over 700
- Blue Cross Blue Shield findings – 40%
- Where do we fit and what is our connect, if any???

Where do we fit with future practitioners???

- Annually – New patient care doctorates entering practice every year (based on 2010 data)
- Medical Doctors - 18,000
- Pharm. D's - 12,000
- Doctors of Nursing Practice - 10,000+
 - Note - nursing trend is exponential
- Total 40,000**
- So what???
- Nearly 1/3 will be pharmacists! Where will they fit?
- Who will collaborative practices be with???
- What should your contributions be???

What will you do as future practitioners by 2015???

At a minimum

It had better include all the components of the PPMI!!

If not accomplished by then-
your generation
could be left behind

Kaiser Foundation
www.statehealthfacts.org

Illinois Statistics-1

- Population: 12,814,300
- Poverty Level: 2,455,700
- Food stamps: 1,831,898
- Uninsured: 1,863,800
- Medicaid: 2,691,000
- Medicare: 1,794,002
- Obesity in Children: 35%
- AIDS: 1,358

Illinois Statistics-2

- Hospitals: 189 (20 For Profit)
- Beds: 33,317
- Admissions: 1,537,716
 - 120/1,000 Population (US-114 & Wis-103)
 - Medication History/discharged today: 4,271
- Inpatient days: 7,534,808
 - Today 20,930 Ave LOS ?.? days
- Emergency Room Visits: 3,656,201
 - 418/1,000 residents (high) WI is 380/1,000
 - Today will admit 10,156 (30 to 40%) - all need a good med histories?

Illinois Statistics-3

- Physicians: 34,388
 - Male (65%) female (35%)
 - Lower percent of woman than other states
 - Perhaps a large number of old men physicians
- Medical Students Graduating: 1,085
 - Male (50%) Female (50%)
 - 4th largest number in nation behind – New York, Texas, Pennsylvania –More than Cal

Primary Care Physicians by Field, February 2012

	Illinois Number	Colorado %	US #	US %
Internal Medicine	2,185	35%	158,116	41%
Family Medicine/General Practice	2,323	38%	113,516	30%
Obstetrics/Gynec ology	708	11%	43,662	11%
Pediatrics	968	16%	67,769	18%
Total Primary Care	6,184	100%	383,063	100%

Primary Care Physicians by Field, February 2012

	IL #	IL %	US #	US %
Internal Medicine	7,560	44%	158,116	41%
Family Medicine/General Practice	4,647	27%	113,516	30%
Obstetrics/Gynecology	1,985	12%	43,662	11%
Pediatrics	2,909	17%	67,769	18%
Total Primary Care	17,101	100%	383,063	100%

Physicians by Specialty Area, February 2012

	IL #	IL %	US #	US %
Anesthesiologists	1,830	10.6%	42,466	9.9%
Emergency Medicine	1,858	10.7%	40,141	9.4%
Oncology (Cancer)	568	3.3%	14,443	3.4%
Psychiatry	1,759	10.2%	45,981	10.7%
Surgery	1,760	10.2%	43,579	10.2%
Endocrinology, Diabetes, & Metabolism	250	1.4%	5,956	1.4%
Cardiology	1,109	6.4%	26,701	6.2%
All Other Specialties	8,153	47.2%	209,223	48.8%
Total Specialty	17,287	100.0%	428,490	100.0

Illinois Statistics-4

- Nurses: 123,770
 - Nurse Practitioners: 4,539
- Physician Assistants: 589
- Dentists: 8,571
 - Male (72%) female (28%)
- Pharmacists: ??????

Statistics Health Systems

Statistics - Health Systems - 1

- Registered Hospitals – 5,795
- Community Hospitals – 5,008
 - Not for profit – 2,918
 - For Profit – 998
 - State and local – 1,092 - Universities are part
 - Urban – 3,011
 - Rural – 1,997
 - In a system – 2,921
 - In a network – 1,485

Statistics - Health Systems - 2

Rate of Integration:

(2009-1/week)

(2010-1/3 days)

(2011-1/2 days) -

Therefore by 2013 there will likely be only
2200 to 1,000 networks

- Physician practices a key part
 - 60% of networks now own practices
 - 90 +% of cardiology practices owned by networks

Statistics - Health Systems - 3

What are the seismic shifts that will impact you?

- 1) Integration of physicians and office practices into the health systems.
- 2) Seismic shift to "Ambulatory Care Awareness" in delivery of care!
- 3) Optimum "expense management" plus "revenue enhancement" plus "revenue preservation" for the enterprise

Health Systems and YOU!- 4

A question for you future leaders of the profession – how as pharmacists do you best influence the "optimum use of medications in our society in collaboration with other health professions in the evolving "system" in which you practice?

John David Mann's "The Go-Giver"

"Our individual and collective potential has always been grossly underestimated... just as it is today. If you are alive and reasonably healthy today, it is virtually 100% guaranteed that your potential has been, and is grossly underestimated."

Pharmacy and Health Systems

Future Pharmacy Enterprises - 1

- Must include at least the following considerations:
 - Developing sophisticated corporate structure
 - Financial impact pervasive – sophistication
 - Comprehensive drug policy development – key to future
 - Complex, intertwining systems – automation and computerization – better trained - industrial engineered
 - Patients – increasing demand for continuum of care
 - Capable education and training, especially leadership
- "Constructive **INFLUENCE** is everything"
- Different leadership - different training – The "M" factor MS, MPH, MHA, MBA, Medu, ???

Future Pharmacy Enterprises - 2

- Must include at least the following considerations:
 - **Patients – increasing demand for continuum of care**
 - **Capable education and training, especially leadership**
- "Constructive **INFLUENCE** is everything"
- But perhaps different leadership - different training

Health Systems Pharmacy and TATAI

“As we reengineer we will significantly improve efficiency overall and more important less pharmacist time related to product management”

- TATAI
 - Technology
 - Automation
 - Technicians
 - Artificial Intelligence – Watson on Steroids
- National Academy of Engineering Vision

Patients – The Only Focus

- Allen Flynn – U of Michigan: Informatist Perspective
- With in 5 years – with TATAI - Asked the question – “What will be left for pharmacists to do?”
- Answer – Translation – at two levels
 - **For a few – evidence based leadership in “managing order set development and maintenance.**
 - **For many – translation of all facts so individual patients through direct encounters take them correct.**

What is left for us to do?

- As we reengineer the TATAI we will significantly improve efficiency and need less pharmacist time. Likely improvements every year for five years.
- What is left for pharmacists?
 - Translation of evidenced base knowledge to patient outcomes thru “order sets”
 - Translation of medication information from and to patients in hospitals portals of entry and at discharge – “Communicate”

“Leading the Way!!”

The Future Pharmacy Mantra

- For all Patients – “Instant Rapport”
 - Begin by recruiting into the profession those who are capable and interested in communicating with patients and then train them to a high level of sophistication
 - Buy into the concept “Every patient should know the name of their pharmacist!!!”
- For pharmacy leadership and the C-suite
“Instant Executive Presence” –
 What training is needed?

What might your Visionary Leadership Role become?

- 1) **Predict how many of different patients by diseases**
- 2) **Anticipate how to organize each of our rapidly consolidating systems pharmacy enterprises**
- 3) **Identify how many PGY2 residency trained individuals we need**
- 4) **Help ensure the long-term financial sustainability of the Foundation**

“Visionary Leadership”

- What society and patients really need
- Articulating what future scenarios could look like – from “longer view”
- Reality versus “wishful thinking”
- Multiple inputs and multiple iterations

AND

- Based on short and long term trends
- Bottom line – **Think Forecasting**

“Pearls 2012” (1)

- Recognize “seismic” shifts when they occur – current ambulatory transitions!
- Network – Network – Network – return 40 years – better people passed between better networks during oversupply era.
- Starting during residency and first 5 years – become “content expert go to” person in some area.
- Never forget the importance of professional and/or executive PRESENCE.

“Pearls 2012” (2)

- Volunteer for every possible project you can do well, it is the extra’s that will count.
- During your interviews be able to “tell the stories” how you helped the department or hospital. Be totally honest and accurate
- Learn how to “participate” in meetings!!! A “so what” list. What is your unique view?
- Computers will not solve your problems, only quantify them. CIO – Large system

“Pearls 2012” (3)

- Quotes from residents completing their program – what the youth are saying!:
 - “Take advantage of every learning opportunity you have – it will serve you well, it is why residencies are so unique”
 - “Continually work on knowing yourself, so you can align what you do well with potential career successes”.
 - “Residency is “a sprint mode” and career is a marathon”. The “to-do” lists get longer, the difference is, the buck now stops with you”. Learn to pace yourself.

“Pearls 2012” (4)

- Quotes from residents completing their program: – what the youth are saying!
 - “Better to first roll up sleeves Delegate later”.
 - “Never let failure get in the way of progress, success and growth”
 - “Always, always remain positive and more importantly – open minded”.
 - “WOW” – the competition for positions is overpowering. “Change in 3 years”-DZ

Always Remember John Maxwell

- “Leadership is influence, nothing more and nothing less.”
- “Leaders who last are marked by humility.”
- “GREAT” leaders expect to pay a price.”
- “GREAT” leaders set up their successor to be successful.”

Readings

The 21 Irrefutable Laws of Leadership

John C. Maxwell

The Tipping Point and Blink

Malcolm Gladwell

LeaderShock – How to Triumph over It

Greg Hicks

Managing and Leading: 44 Lessons Learned for Pharmacists

Paul Bush and Stuart G. Walesh

Most Important Reminder

“Begin now to **write a plan** for life that will be fully integrated, holistic and satisfying!”

See me later for more details!!

Common Question

- Will I have a job? Deja Vu 1980
- Recommendations:
 - Be able to tell a story on contributing to health-system
 - Always network – it may be get your job
 - In 5 years be health-system, state or national “content expert.
 - Always volunteer to take on tasks – more the better right now
 - Seismic change toward ambulatory again
 - Salaries??? – 11-17% to 20% VVV

Let us every day

“Aspire to
Inspire until
we expire!”

“Thank you for letting me spend this day with you.”

Post Test Questions

1. How many new diabetic patients are expected to be diagnosed between 2010 and 2015?
2. With the current rate of merger and acquisitions, How many health systems and/or networks are likely to be in existence by 2014.
3. How many hospitals and acute hospital beds are in the State of Illinois?
4. Since 1997, when the term “hospitalist” was established, how many individuals are now part of that patient care giver category?
5. Since the inception of the ASHP residency program (51 years), how many individuals have completed accredited residency programs and how many more will likely complete programs in the next 10 years?