



*The most important characteristics for
an entrepreneur are the same that
guide all of life:
Passion, Integrity
Courage and Resilience.*

*Ginny
Pribanic*

INTENSE

Pittsburgh Made

And Proud...



Entrepreneur

Serial Entrepreneur

Applying new technologies

To old problems.



It's a dialogue, not a lecture

MedRespond

CMU – Based Conversational AI
Simulates
Conversations with Patients

<https://www.youtube.com/watch?v=nflfOLbwN7A>

Fit for Surgery Outcomes

Case Study: 50% Cost Reduction

Open heart surgery program delivers unmatched outcomes with leading healthcare systems

50%

reduction in 30-day
post-discharge costs

30%

reduction in 180-day
post-discharge costs

90

average minutes of
engagement
per patient

**93-
99%**

Improved patient
satisfaction scores

Patients report that the Conversational Coach eases their anxiety and provides their families critical guidance to know how to support them



"This is a game changer"

- Cardiac Chair

100% of patients reported improved care experience

Cleveland Clinic valve repair/replacement surgery patients agree that the MedRespond program improved their overall experience of care:

- Strongly agree: 93%
- Agree: 7%
- Disagree: 0%
- Strongly Disagree: 0%

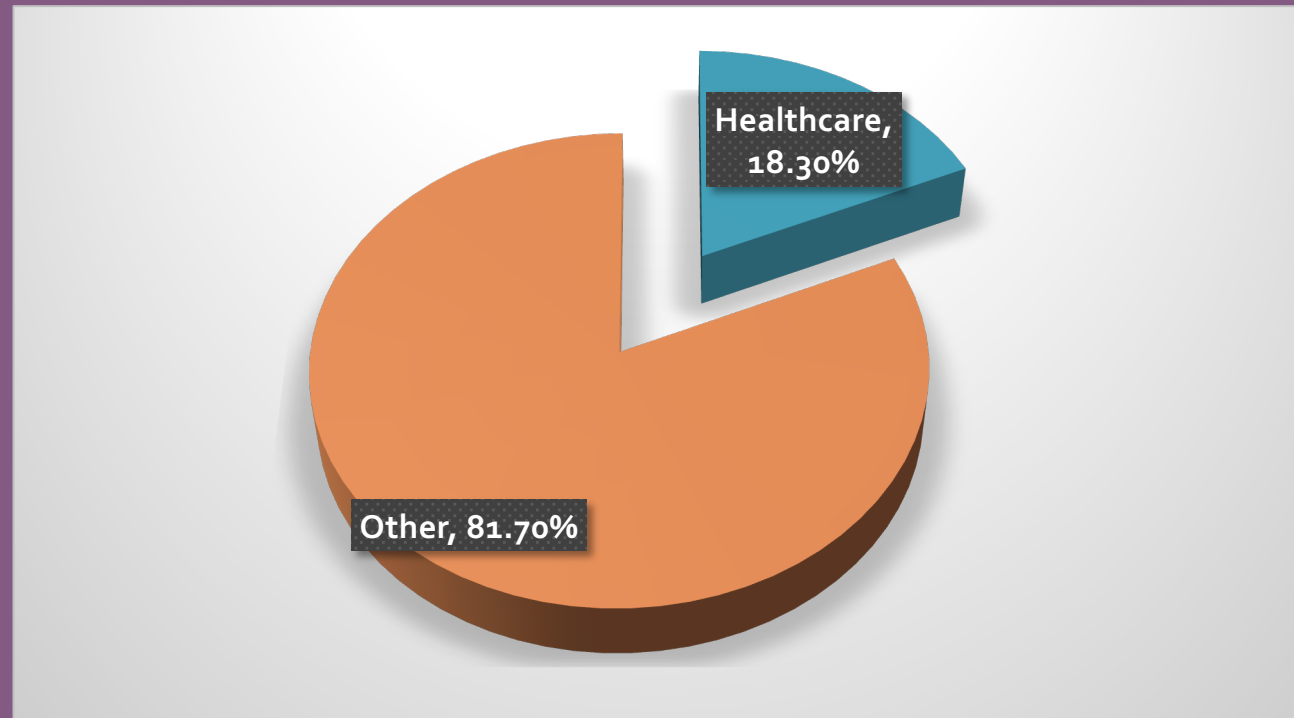
The screenshot displays the 'Interactive Heart Surgery Program' interface. On the left is a navigation menu with the following items: Introduction (highlighted), Dr. Gillinov Program Welcome, Welcome, Are you feeling ready for surgery?, + Preparing for Surgery, + Pre-Surgery Visit Review, + Day of Surgery, + Recovery in the Hospital, + Discharge Readiness Questions, + First Week Home, and + Glossary. The main content area features a video of Dr. A. Marc Gillinov, MD, Chairman of Thoracic and Cardiovascular Surgery. Below the video is a text box with a question input field and an 'Ask' button. The text reads: 'I'm Marc Gillinov, chairman of cardiac surgery at The Cleveland Clinic. I want to welcome you to our interactive heart surgery program. We recognize that heart surgery is an important event in your life. We want to give you and your family and friends all of the information you could possibly need or want before, during, and after your hospitalization. Everyone has questions; sometimes you don't think of every single question during your meeting with the surgeon or your discussions with nurses before surgery. The purpose of this program is to anticipate your questions and provide the answers in a way that is specifically tailored to you. We will tell YOU about YOUR condition with your own heart, what sorts of valve operations or other procedures you might need, which medicines are we using, which medicines are best for you, how long should you continue the medicines, what will recovery look like, what should you do, what shouldn't you do, what's the best diet. We want to answer all these questions in a way that is'. At the bottom, there is contact information: 'For additional help: 866-289-6911, or go to: <http://www.clevelandclinic.org/heartnurse>' and the 'medrespond' logo.

So ...

What's the Big Deal About Healthcare?

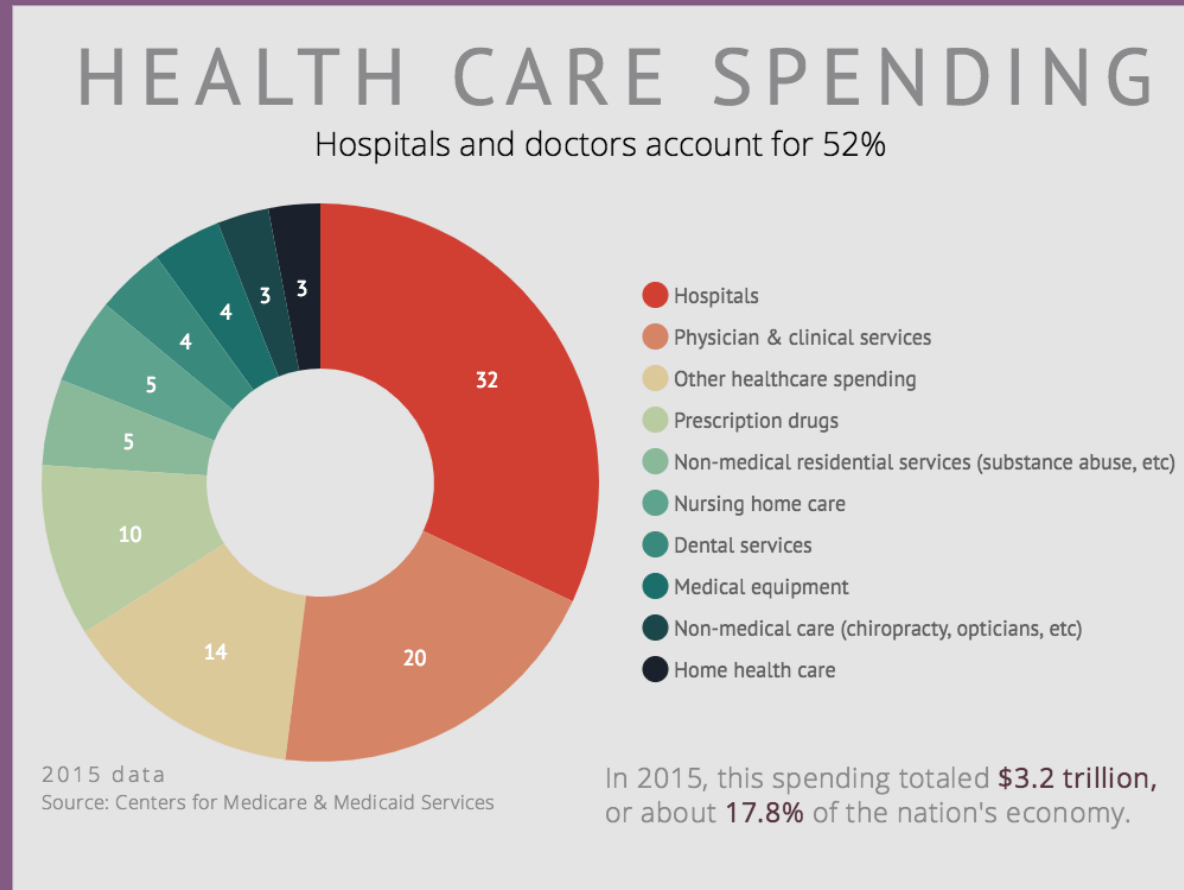
It's a REALLY Big Deal!

2021: U.S. Health Care Spending Reached \$4.3 Trillion 18.3% of GDP



Two Key Sectors Represent Over Half Of All Spending

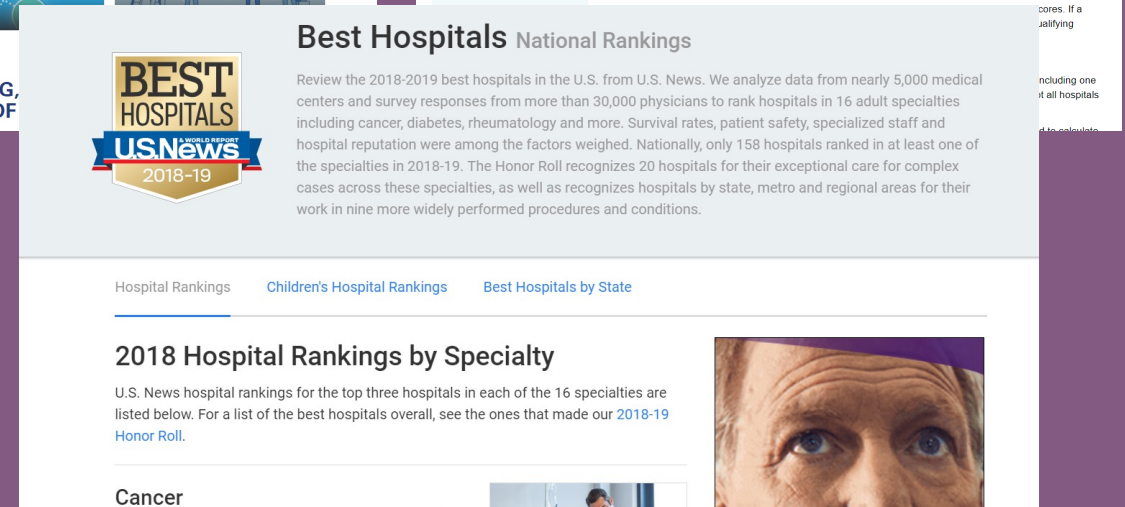
Hospitals and Doctors Account for 52%



Service Delivery Is Well Understood And Accessible

| | |
|--|---------------------|
| Total Number of All U.S. Hospitals | 6,210 |
| Total Staffed Beds in All U.S. Hospitals | 931,203 |
| Total Admissions in All U.S. Hospitals | 36,510,207 |
| Total Expenses for All U.S. Hospitals | \$1,060,933,249,000 |

Industry Analytics are Plentiful



So ...

What's the Problem?

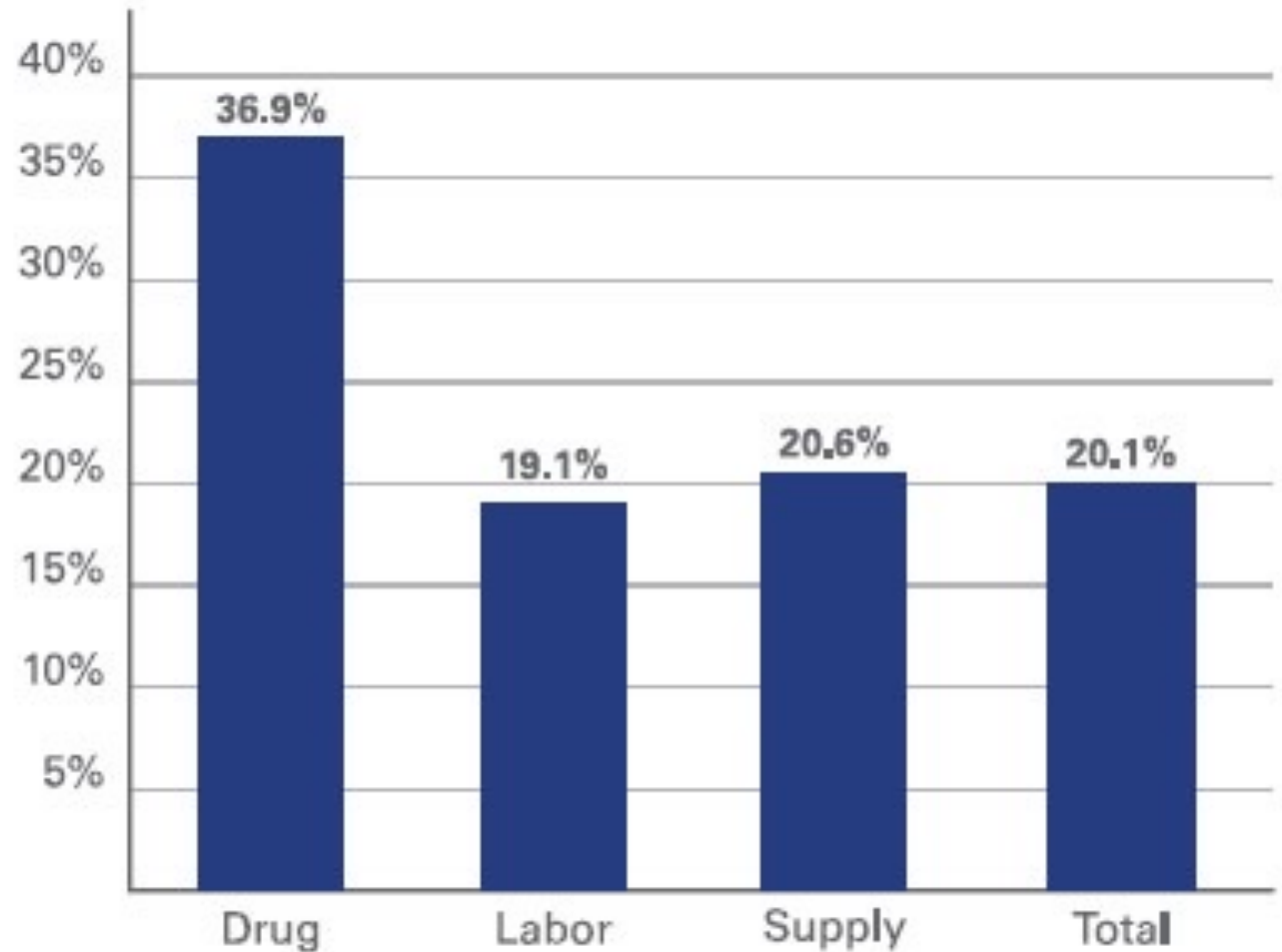
**A Big Problem that Started with COVID-19
And Keeps Getting Worse!**

Hospital Expenses Skyrocketing

| | |
|--------|---------|
| Drugs | + 36.9% |
| Labor | + 19.1% |
| Supply | +20.0 % |
| Total | +20.1 % |

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**Figure #1: Increase in Hospital Expenses
Per Patient from 2019 to 2021**



Source: January 2022 Kaufman Hall National Hospital Flash Report

Hospital Staffing Crisis

- Hospital employment is down approx 100,000 from pre-pandemic levels
- Increased reliance on contract staff:
 - In 2019, hospitals spent 4.7% of total nurse labor for contract travel nurses
 - January 2023 that skyrocketed to 38.6%
- Contracting rate have increased significantly, 213%
- Recovering increased costs limited by long term contracts.

Healthcare Industry Imbalance

Insurers Turn Billion-Dollar Profits

- Humana \$1.2 billion in third quarter profits
- Cigna's third quarter profits hit \$2.8 billion.
- CVS Health third quarter revenue jumped 10% \$81.2 billion,

Providers Reporting Big Losses

- CommonSpirit Health - \$1.3 billion operating loss for the 12-months end on June 30.
- Ascension, - \$1.8 billion loss for the fiscal year's end in June.
- Community Health System - \$42 million net loss for the third quarter in October

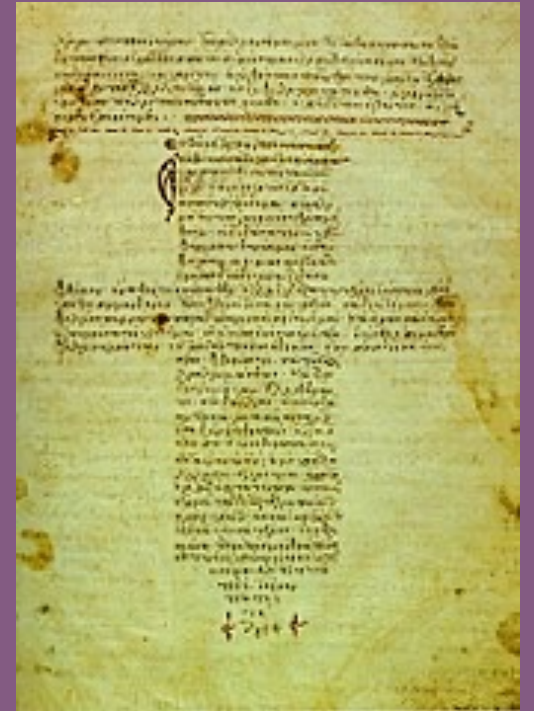
Healthcare Is:

- I. A Political Football – a privilege or a right?
- II. Responsible for lives
- III. Highly complex
- IV. Highly regulated
- V. Complex and evolving payment models
- VI. Under incredible pressure

I. Innovation Cannot Jeopardize Lives

1. Improve upon current standard of care
2. Above all – cause no harm
3. Improve efficiency

Key Challenge Is Proving It!



Challenge Proving It - Lack Of Data

1. Interoperability is still a challenge
2. Electronic health records are rigid
3. Critical data not coded
4. Clinical data separated from claims data
5. Lack of transparency of healthcare costs
6. Lack of defined standards – consistency

Proving Efficacy Is A Challenge!

II. Hospital Systems are Complex

1. Mergers and acquisitions create complex organizations
2. Several hospitals
3. Hundreds of practices, outpatient centers, labs and clinics
4. System level leadership
5. Hospital level leadership
6. Service line leadership
7. Layer in governing committees, clinical committees,

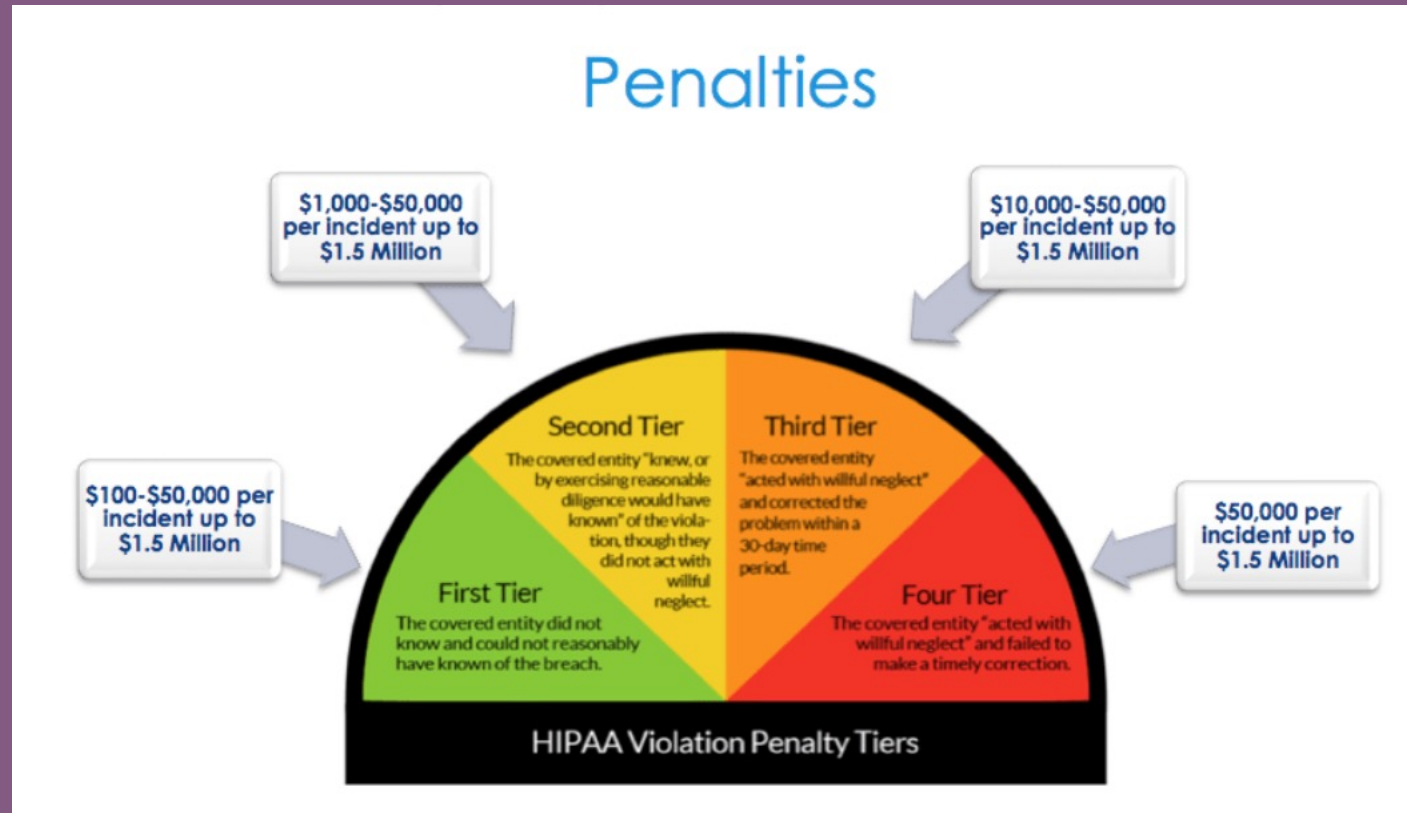
Who Is The Decision Maker And Process?

III. Healthcare Is Heavily Regulated

1. FDA
2. JAHCO
3. Legal requirements
4. Compliance
5. Internal Review Boards (IRB)
6. Confidentiality and HIPAA
7. Data security

The Scrutiny And Requirements Will Take Time!

Penalties can be significant – e.g.: HIPAA violations ...



Source: HHS, Federal Register.gov

Malpractice is Real

NY hospital mandated to pay \$62 million to women who underwent an ectopic pregnancy surgery and ended up in intensive care and suffered three heart attacks. She ended up with skin grafts, a colostomy, and two below-the-knee amputations. The jury found the responsible physician guilty of straying from the required care standards.

In 2010, a NY physician performed a thigh operation on a woman which ended up as a botched surgery. The jury found him guilty of failing to advise his patient on the risks associated with the surgery and using an inappropriate surgical technique, he was ordered to pay \$60 million.

In 2011, a 6-year-old boy was left with cerebral palsy and permanent brain damage after undergoing 25 surgeries in Chicago, Illinois. The boy was born with some health problems that were not life-threatening. It is alleged that the doctor used some unproven techniques to carry out several surgeries. They settled their medical malpractice case for \$30 million in 2016.

IV. Complex Buying Process

1. Decisions often siloed
2. Many decision makers and levels
3. Many decision influencers
4. Many gate keepers – supply chain, legal, IT-cybersecurity
5. Formularies limit treatment choices

Points To Very Long Sales Cycle: 18 -24 months

Evolving Payment Models

1. Formerly Fee-for-service
2. Evolving to value-based and bundled payments
3. Hybrid is negotiated payments, e.g. liver transplant
4. Who benefits from an innovation can shift

Strategy Must Support The Evolving Landscape!

V. Providers are incredibly stressed

1. Victims of doing more with less – overloaded
2. Operating under razor-thin margins
3. Innovation is an additional burden
4. Cynical that innovation will help workflow
5. Gaining support of those who will use it

Innovations must be easy to buy, easy to use!

Individual Interests Can Impede Adoption

1. Great investment in status quo
2. Physician culture – want control
3. Conflicting motivations within
4. teams
5. Not invented here
6. Nobody does it better

All Can Lengthen And/Or Stop Sales Process!

Complex System of Payments

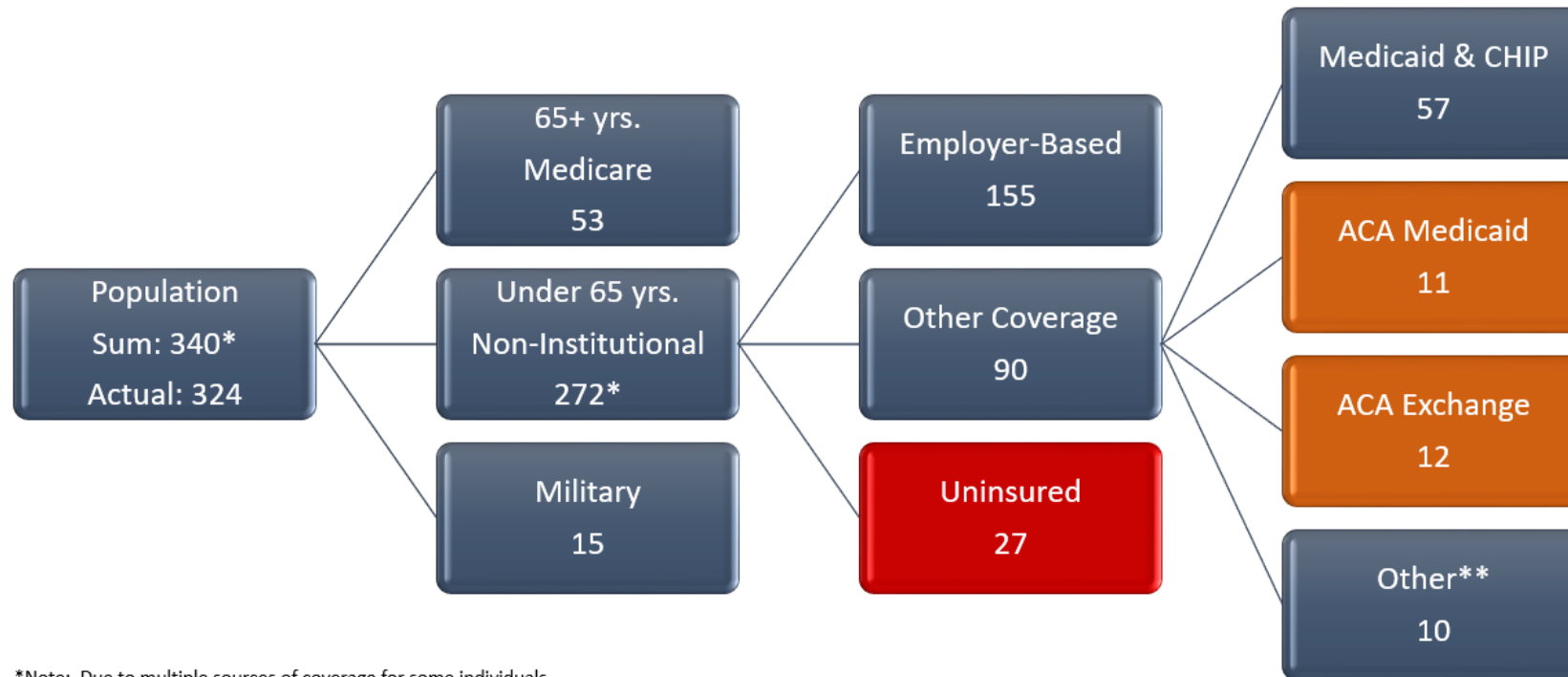
1. Third party – government or private or combination
2. Insurers must approve innovation and price
3. Insurers may disagree

Billing and insurance-related (BIR) costs for traditional Medicare and Medicaid hover around 2 percent to 5 percent, while those for private insurance is about 17 percent.

<https://www.americanprogress.org/article/excess-administrative-costs-burden-u-s-health-care-system>

Complicated Payor Network

Sources of Health Insurance Coverage in 2016 (Millions of Persons)



*Note: Due to multiple sources of coverage for some individuals, there is some double-counting in the components. The actual U.S. population in December 2016 was approximately 324m.

**Other: The 10m was reduced to tie to the total for "Other Coverage" of 90m. "Other" includes 23m persons (9m non-ACA marketplaces, 9m disabled in Medicare, 5m other).

Source data:

CBO "Federal Subsidies for Health Insurance Coverage for People Under Age 65: 2016 to 2026" (March 2016)
Census Bureau "Health Insurance Coverage in the United States: 2015 (September 2016)"

Healthcare Challenge:

*Address Healthcare Inequality
by Impacting the
Social Determinants of Health*

| Economic Stability | Neighborhood and Physical Environment | Education | Food | Community and Social Context | Health Care System |
|---|---------------------------------------|---------------------------|---------------------------|------------------------------|---|
| Employment | Housing | Literacy | Hunger | Social integration | Health coverage |
| Income | Transportation | Language | Access to healthy options | Support systems | Provider availability |
| Expenses | Safety | Early childhood education | | Community engagement | Provider linguistic and cultural competency |
| Debt | Parks | Vocational training | | Discrimination | Quality of care |
| Medical bills | Playgrounds | Higher education | | | |
| Support | Walkability | | | | |
| Health Outcomes Mortality, Morbidity, Life Expectancy, Health Care Expenditures, Health Status, Functional Limitations | | | | | |

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So What Is The Take Away ...

1. Target innovations that improve existing process rather than replace to ease adoption
2. Focus on ease of use
3. Map out workflows for all stake holders
4. Understand the buying process
5. Understand path to scalability early
6. Prepare for long sales cycle – need funds to survive
7. Prepare for low success rates – need deep pipe

Never give up!

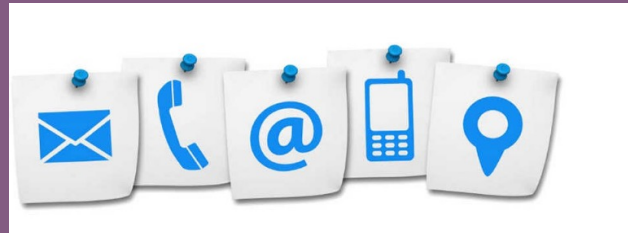
"It's hard to beat a person who
never gives up."

— Babe Ruth

Major League Baseball Hall of Famer.

Thank You!

Call if I can help you.



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Why Start Ups Fail

| | |
|-----------------------------|------------|
| 1. No market need | 42 percent |
| 2. Lack of cash | 29 percent |
| 3. Inappropriate team | 23 percent |
| 4. Strong competition | 19 percent |
| 5. Pricing and cost issues | 18 percent |
| 6. Bad core product | 17 percent |
| 7. Lack of a business model | 17 percent |
| 8. Bad marketing | 14 percent |
| 9. Customer neglect | 14 percent |
| 10. Bad timing | 13 percent |
| 11. Loss of focus | 13 percent |
| 12. Intra-team conflicts | 13 percent |
| 13. A pivot gone bad | 10 percent |
| 14. Lack of passion | 9 percent |
| 15. Bad location | 9 percent |

- A New Study Reveals the 20 Factors That Predict Startup Failure: Do Any Apply to You?
www.entrepreneur.com/article/308447