



Spring Meeting 2023

Friday June 23rd
Session 1

Spring Meeting 2023

**Role of Life Underwriter in the
Collaboration Between
Underwriters and Actuaries**

- 41yof applying for 1,000,000 life insurance
- Admits to Aviation history
- 200 pages medical records
- Slightly elevatedLFTs (liver function test)
- Admits to carcinoma history
- Is the risk standard or substandard/decline?

What's next?





This is what I plan to share in our time this morning.

1. How to better understand life underwriting language and how this will help with collaboration
2. What does a Life Underwriter do and why?
3. What effect does accelerated underwriting have on this collaborative relationship?





Who am I?

Life Underwriter

Life Underwriter Trainer

Business Analyst

Project Leader on Epigenetic project

Life Settlements Underwriter

Quality Assurance

Underwriting Innovation





POLL Question the old fashion way

- ▶ How many health actuaries in the room?
- ▶ How many life actuaries?
- ▶ Other





POLL Question the old fashion way

Have you had more than 3 meetings
which involved Underwriters and Actuaries in 2023?



GETTING ON THE **SAME** PAGE

- ▶ The goal of Underwriting and Actuarial is to provide protection at a fair and profitable price for all policyholders.





GETTING OTHERS ON THE **SAME** PAGE

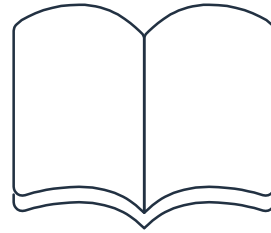
- ▶ Other stakeholders include Marketing, Sales, Business Operations and a newer role at the table is the Data Scientist



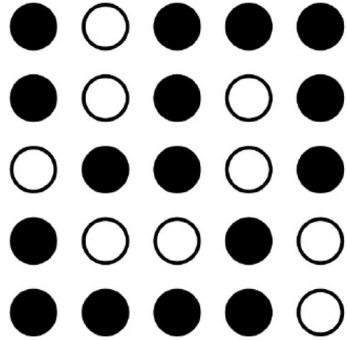
Actuary **Primer**

This is what you bring to the table.

You are the experts in this area.



Underwriting Primer



Actuaries look at populations to evaluate **average** risk



Underwriters look at **individual cases** to ensure population match expectations



Underwriting Primer

Underwriters leverage third-party medical and behavioral data sources to assess individual risks.



Medical data

- Prescription history
 - Brand and generic drug name
 - Dosages and fill dates
 - Prescribing physician details
- Attending physician statements (APS) and electronic medical records (EHR)
- Clinical lab results
- ICD diagnostic and CPT procedure codes
- Medical Information Bureau



Behavioral history

- Motor vehicle records
- Criminal history
- Public record and credit mortality models
- Financial records
- Insurance Activity Indicators





Let's look at our applicant
What is involved in this assessment?

Actuary role



**Let's look at our applicant
What is involved in this assessment?**

Underwriter role



RX Document

Rx lab slip rx

RX LIST

RX RULES

RX DISPUTES

BLOOD / URINE

PARAMED

Oxycodone/acetaminophen

•	Escitalopram Oxalate Escitalopram Oxalate; Lexapro	24	6/12/2022	Ronald Surowitz Avishai Mendelson Joshua Hersh David Liporace
•	Cyclobenzaprine Hcl Cyclobenzaprine Hydrochloride	1	11/3/2021	Gregory Delange
•	Prednisone Prednisone	2	11/18/2020	Barton Hershfield David Liporace
•	Fluconazole Fluconazole	1	11/13/2020	Cynthia Brown
•	Methylprednisolone Methylprednisolone Dose Pack	2	12/26/2019	Joshua Bolton Phyllis Wille

Albuterol Sulfate



RX insight

Metformin - What is
this used for?

Diabetes

Weight loss

PCOS = Polycystic
Ovarian syndrome



APS Document

Why was attending physician records (aps) ordered?



APS Document

Progress Note

Printed On Sep 09, 2008

ETOH: None Occupation: Reverend (not working past year)

Drugs: None

PM: Mother died of lung CA at 80 yo, father died at 52 with CVA, otherwise non-contributory

ROS: Constitutional-No change in wt, appetite, fever, night sweat, weight loss. HEENT-No change in vision/hearing, cataract, glaucoma, tinnitus, epistaxis, sinusitis, dysphagia, dysphasia, aspiration, regurgitation, neck pain/swelling, thyroid disease

Pulmonary- No symptoms of obstructive or restrictive lung disease. No chronic cough, sputum, or hemoptysis.

Cardiac- No history of hypertension, DM. No symptoms of ischemic or valvular heart disease, congestive heart failure, palpitation, arrhythmia, gout, elevated cholesterol.

GI/GU-See HPI

MSK- No arthralgia, myalgia, bone pain.

Neurologic- No paresis, paresthesia, tremor, seizure. No change in mentation, memory, or personality. No change in balance or coordination

PE: General-WD WM male in NAD A&O

Skin-No rashes, contusions, ecchymoses

Eyes-Sclera and conjunctiva clear, BOMI, PERRLA, fundi-benign

Nares-Clear, no blood, mucous discharge

Oro-Tongue and uvula midline. Mucosal clear and moist. Dentition

Neck/Chest-No cervical or supraclav LN. Thyroid non-palpable.

Lungs-Clear to P&A. No rales, wheezes, ronchi, rales.

Cor-RRR no murmur, gallop, rub.

Abdomen-Non-distended, non-tender BS+. No guarding, rebound, fluid wave, shifting dullness. No mass, organomegaly.

Back-No bone or CVA tenderness. No sacral or pedal edema.

Extremities-FROM no clubbing, cyanosis. Pedal pulses brisk & symmetric.

Neuro-CN II-XII intact.

Motor symmetric strength, normal bulk & tone

Gait & station normal

Mentation Clear

Affect appropriate

Rectal-Perianal skin is clear. Prostate is mildly enlarged with a 2cm nodule at the right apex. There is no edema or induration of the rectal mucosal.

IMP: 63 yo AA male with T2ANOMO carcinoma of the prostate with a Gleason Score of 6 and a PSA of 7.04 who desires seed implants.

REC: The patient is an excellent candidate for either seed implants, external beam radiation, or surgery. The patient is strongly motivated to undergo prostate seed implantation. We discussed the side effects and risks with the patient of radiation therapy including, but not limited to, rectal bleeding and

DATE 09/09/08 COMPLAINT parasitas, vitaminas

MALE FEMALE HT. 5'10" WT. 19 lbs B/P 100/60 TEMP 97.1 PULSE 130

Sibilancias <i>Wheezing</i>	Dolor de cabeza <i>Headache</i>	Dolor abdominal <i>Abdominal Pain</i>	Problemas para respirar <i>Breathing Problems</i>	Tos - well checked <i>Cough - vitamins</i>
El lloro <i>Crying</i>	Fiebre <i>Fever</i>	Dolor de pecho <i>Chest Pain</i>	Problemas menstrual <i>Menstrual Problems</i>	Cargue la perdida <i>Weight loss</i>
Fatiga <i>Fatigue</i>	Diarrea <i>Diarrhea</i>	Nariz Liquida <i>Runny Nose</i>	Apoye el dolor <i>Back Pain</i>	Palidezca/anemia <i>Pale/Anemia</i>
Irritacion en los ojos <i>Itchy Eyes</i>	Sudores <i>Sweats</i>	Calambres <i>Cramps</i>	Dolor de hueso <i>Bone Pain</i>	Garganta adolorida <i>Sore Throat</i>

PERTINENT MEDICAL HISTORY:

Heart Disease NO YES *The patient is thin and not eating well*
 Diabetes *If yes, explain 19 lbs not eating well*
 Asthma *No diarrhea no NV*
 Allergies
 Hypertension
 Current History

Current Medications _____

PHYSICAL EXAM: Normal Abnormal *thin appearing but*

HEENT *OK*
 Heart *OK*
 Lungs *OK*
 Abdomen *OK*
 Extremities *OK*

LAB: Hb. _____ Glucose _____ Malaria _____ Urine _____

IMPRESSION *Low ~~body~~ weight*

TREATMENT *Mephendazole use as directed*
Infant formula with iron
RT 1 month
London

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HOME HEALTH CERTIFICATION AND PLAN OF CARE

Patient HI Claim No.	Start of Care Date	Certification Period	Medical Record No.	Provider No.
	05/05/2018	From: 05/05/2018 Thru: 07/03/2018		
* Name and Address [Redacted]	Sex	M <input checked="" type="checkbox"/> F <input type="checkbox"/>	Provider Name, Address, Telephone Number [Redacted]	[Redacted]
Date of Birth				

Primary Diagnosis (ICD-10-CM)

Z48.01 Encounter for change or removal of surgical wound dressing (E) 05/05/2018

Other Diagnosis

L70.22 Eczematoid infection of extremities w ulceration (E) 04/04/2018

L70.23 Eczematoid infection of trunk/neck/face (E) 05/05/2018

L67.521 Non-pits chronic ulcer on prt l foot (incl w fat layer) exposed (E) 05/05/2018

Z69.421 Acquired absence of other right foot(s) (E) 05/05/2018

G90.03 Idiopathic progressive neurocognitive disorder (E) 05/05/2018

M100.9 Depressive mood, multiple episodes (E) 04/03/2018

M100.8 Depressive mood, single episode (E) 05/05/2018

M1.150 Primary generalized (tonic)clonus (E) 05/05/2018

Z96.9 Presence of functional prosthesis, unspecified (E) 05/05/2018

Other Diagnosis Not Necessarily Related to Hospice

T82.312D Breakdown of remore arterial graft (bypass), stids

Prognosis: Guarded

Functional Limitations:

Bowel/Blisters/Incontinence), Hearing, Endurance, Ambulation, Dyspnea with minimal exertion

Utd. Perception:

U/A: Tolerant, Waker, NEEDS ASSIST C/AOL5 ATT

Atty Measures: Change, Proper Position Change, Use of Assistive Devices, Support During Transfer and Ambulation, Emergency Plan Development, Keep Pathways Clear, Safety in ADLs, Universal Precautions / Infection Control, Standard Precautions, Fall Precautions, Safe Utilities Management, Instructed, verbalized understanding, Mobility Safety, instructed, requires further teaching, Proper Handling of Hazard Waste, instructed, requires further teaching, Emergency/Disease Plan, Instructed, verbalized understanding, Fire Safety Measures, Instructed, verbalized understanding

Home Health Agency Clinical Summary / Recertification of Need and Duration

THIS 86 YEAR OLD MALE JUST CAME HOME FROM THE HOSPITAL/SNF UNIT AFTER A LENGTHY STAY, WHERE HE HAS UNDERGONE SURGERY AND HAS A WOUND VAC TO HIS RIGHT GROIN. HE ALSO HAS AN AMPUTATED 2ND TOE ON RIGHT FOOT AND PRESSURE ULCERS TO HIS LEFT ANGLE AND LEFT GREAT TOE. HIS BP HAS BEEN VERY UNSTABLE DURING HIS ACUTE CARE STAY, VERY TALKING FOR THIS PT TO GET AROUND D/T SEVERE PAIN WHEN HE WALKS ACROSS THE ROOM. HE USES A WALKER TO AMBULATE WITH ASSIST FOR SAFETY. HE NEEDS SN TO ASSESS TO DO WOUND VAC CANE AND ASSESS AND MONITOR THE PRESSURE ULCERS. HE HAS SEVERAL NEW WOUNDS SINCE BEING IN THE HOME. HE WILL NEED TEACHING ON THEM. WILL ADMIT TO HH SERVICES AT THIS TIME TO ASSESS AND MONITOR DX PROCESSES, V/S, W/P, ADL AND TEACHING.

Received

Continued on next page...

Physician's Signature and Date of Verbal SOC Where Applicable

MAY 24 2018 Date HHA Received Signed POT

I certify that this patient is confined to bed/r chair and needs additional skilled nursing care, physical therapy and occupational therapy. The patient is under my care, and I have authorized the services on this plan of care and will periodically review the plan. I also certify that my review includes the additional pages attached to this form.

Agency who manages, labels, or controls essential information required for payment of Federal funds may be subject to fine, imprisonment or civil penalty under applicable Federal laws. (See page signature covers all pages)

Physician's Signature

Date:



10/10/86

ENT

SpT is *Streptococcus* by path
to causing *Streptococcus* a cell
except for *Strep* is para for *Strep*
C, i.e.
SpT is water bacteria in *Strep*
hemmit to *Strep*
Re: ENT: *Strep* *Strep*
HENT: *Strep* *Strep*
Now: *Strep* *Strep*
HP: *Strep* *Strep*
X - case *Strep*
cell *Strep* *Strep*
background:
II *Strep*
Now: *Strep*
Plan: *Strep* *Strep*
- plan *Strep*

APS Document



Lab results

RESULT NAME	NORMAL	ABNORMAL	REFERENCE/CUTOFF	UNITS

SERUM HIV				
SERUM HIV	NON-REACTIVE		NON-REACTIVE	
BLOOD CHEMISTRY PROFILE				
GLUCOSE		57 L	70 - 110*	(MG/DL)
HB A1C	4.5		3.0 - 6.0	(%)
BUN	19		6 - 25*	(MG/DL)
CREATININE	0.6		0.6 - 1.5*	(MG/DL)
ALK. PHOS.	94		30 - 120*	(U/L)
BILI. TOT.	0.4		0.1 - 1.2*	(MG/DL)
AST	17		0 - 41*	(U/L)
ALT	14		0 - 45	(U/L)
GGT	12		2 - 65*	(U/L)
BLOOD ALCOHOL	NEGATIVE		< 10	(MG/DL)
TOT. PROTEIN	6.3		6.0 - 8.5*	(G/DL)
ALBUMIN	4.0		3.8 - 5.5*	(G/DL)
GLOBULIN	2.3		1.0 - 4.0*	(G/DL)
CHOLESTEROL	143		120 - 240*	(MG/DL)
HDL CHOLESTEROL	69		35 - 75*	(MG/DL)
LDL (CALCULATED)		67 L	80 - 200*	(MG/DL)
CHOL/HDL CHOL RATIO	2.1		1.5 - 5.0*	
TRIGLYCERIDES	34		10 - 200*	(MG/DL)



Example of Aviation Guidelines

Well-Qualified Pilot (eligible for Select ¹ without a flat extra premium)	Highly-Qualified Pilot (eligible for Select ¹ or Ultra ¹ without a flat extra premium)
Instrument Flight Rating (IFR)	Instrument Flight Rating (IFR)
Ages 26-70	Ages 30-65
At least 300 solo hours	At least 500 solo hours and at least 5 years of flying experience as a certified pilot
26-250 hours annual flight time	50-250 hours annual flight time
No unusual flying activity ³	No unusual flying activity ³
No history of pilot certification suspension or FAA investigation in the past 5 years.	No history ever of pilot certification suspension or FAA investigation.

Aviation Exclusion Rider (AER)²

Clients requesting an AER may be eligible for Preferred classes.¹ This has not changed.



Aviation Questionnaire



AVIATION QUESTIONNAIRE

APPLICANT INFORMATION

NAME OF APPLICANT

DATE OF BIRTH

<input type="text"/>	<input type="text"/>	<input type="text"/>
DAY	MONTH	YEAR

AVIATION DETAILS

1. Are you a pilot student pilot crew member?

2. As a pilot, student pilot or a crew member, please indicate:

(a) the total number of hours flown: hours (b) date of last flight:

(c) type of license currently held: Student Private Commercial Senior Commercial ATR N/A

(d) do you hold a valid instrument rating? YES NO

3. Schedule of flying time as a Pilot or Copilot or a Crew Member:

Purpose/capacity	Hours flown last 12 months	Hours flown last 13-24 months	Estimated next 12 months
Student			
Pleasure			
Business			
Airline Planes			
Military			
Other:			

4. Indicate category, class and type of aircraft flown:

(a) Is the aircraft prototype experimental personally build or assembled?

If YES, please provide details:

(b) Have you flown or intend to fly rotocraft balloon glider?

If YES, please provide details:

5. Do you engage or expect to engage in:

- | | | |
|--|---|---|
| <input type="checkbox"/> student instruction | <input type="checkbox"/> charter flying | <input type="checkbox"/> freight carrying |
| <input type="checkbox"/> sightseeing | <input type="checkbox"/> commercial photography | <input type="checkbox"/> crop dusting |
| <input type="checkbox"/> emergency services | <input type="checkbox"/> prospecting | <input type="checkbox"/> testing or inspection flying |
| <input type="checkbox"/> racing or stunting | <input type="checkbox"/> seeding | <input type="checkbox"/> bush flying or exploration |
| <input type="checkbox"/> water bombing | <input type="checkbox"/> spraying | <input type="checkbox"/> other: |

If YES, please provide details:

6. Have you ever been involved in a flying accident or had your license restricted or suspended for any reason? YES NO

If YES, please provide details:



A couple of resources the Underwriter uses.

Use of Medical Underwriting Guide and Procedures guide

Let's take a look at agent influence on this and every case.

Agent pressure is real!

- 41y of applying for **1,000,000** life insurance
- Admits to Aviation history
- **200 pages** medical records
- Slightly elevated LFTs (liver function test)
- Admits to carcinoma history
- Is the risk standard or substandard/decline?

What's next?



Let's take a look at
behind the scenes of our
applicant.

1. Skin
Carcinoma
2. Aviation

Let's take a look at
behind the scenes of our
applicant.

**Admitted history
of Carcinoma is
actually Basal Cell
Carcinoma**

Let's take a look at
behind the scenes of our
applicant.

Aviation:
Applicant has
750 solo flying
hours
Flies 200 hours
per year



What about this
accelerated thing in the life
industry?

.



What is Accelerated?

How is this defined?



What has changed for the life underwriter?



1. There are new sources of data and structure that are used in the accelerated process



- a. MCR
- b. Structured data/summary for medical records

1. Learn as we go
 - a. RHO - provides more immediate feedback. Do not need to wait until claim time
 - b. Post issue review



Accelerated tools

What about **new data** sources?





New Data sources

- Dental records
- Epigenetics
- Wearables related - think fitbit, health watches, Garmin,
- MCR
- EHR summaries
- GRAIL is upcoming

How can actuaries help underwriters?

Help us to understand what you need

L





How an underwriter can help the actuary?

- ▶ UW can provide regular feedback as to what they are seeing day to day
- ▶ How requirements are ordered
- ▶ Understand Protective value of requirements



Rules engines in the accelerated process

Predictive
Models

Predictive Models

**Assessment of
preferred classes**

Predictive Models

**Assessment of
medical impairments**



When to
involve
underwriters?

NOW!!

3 questions ACT can ask UWers



1. What are the most common medical impairments?

2. What emerging risks are coming up?

3. How easy is it to use Labpigtire/MCR and how do I incorporate it into my thought process?



How to do this?

- ▶ Make friends with an underwriter
- ▶ Job Shadow
- ▶ Attend an Underwriting Conference
 - ▶ This can be in person or virtual



“

“Involve underwriters **early**: In evaluating new sources of data, involving underwriters early in the process can help with assessing how trustworthy the data is and whether there may be gaps. If the data is determined to be of sufficient quality, a scoring tool can help increase its usefulness, with an underwriter ensuring the tool’s accuracy by **reviewing the business and examining cases coming through.**”

Catie Muccigrosso and Taylor Pickett of RGA in an article published in the On The Risk publication vol. 37 n.2 (2021).





Key to Success for Underwriting/Actuary working together

- **Regular communication**
- **I do not have all the answers.**
- **As a group will have better answers.**



THANKS!

Any questions?

You can reach me at kent@lifescorelabs.com