My Journey Towards Understanding the Value of Medical Analytics

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Orchard Analytics Webinar

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1. Explain medical reimbursement trends.

2. Describe a medical analytics database.

3. List the key resources needed for a medical analytics program.

4. Understand what medical analytics can contribute to your institution.

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Disclosures

- ❖ I have received no financial or other remuneration from Orchard Software.

- ❖ I have no other relevant disclosures.

- ❖ These views are those of the presenter, and do not necessarily represent those of Marshfield Clinic or its subsidiaries.

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The Changing Landscape

→ OUT

Fee-for-service payment models

→ IN

Bundled payments incentivized by positive outcomes

I'm not dead yet…

FFS

DAWN OF TIME
APRIL 16, 2015

RIP

http://hitconsultant.net/2015/05/11/ death-fee-service-healthcare/. 04/27/16

http://image.slidesharecdn.com/springone2gx2014holyintegrationtest-141104181654-conversion-gate02/95/the-quest-for-the-holy-integration-test-36-638.jpg?cb=1415203147. 04/27/2016

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- HHS sets bold new goals
  - By 2018, total Medicare $$:
    - 50% value-based alternative payment models
    - 43% value-based FFS
    - 7% traditional FFS

- Medicare Access and CHIP Reauthorization Act (MACRA) targets FFS & promotes "pay for value".

http://www.hhs.gov/about/news/2015/01/26/better-smarter-healthier-in-historic-announcement-hhs-sets-clear-goals-and-timeline-for-shifting-medicare-reimbursements-from-volume-to-value.html. 4/27/16

https://www.washingtonpost.com/news/wonk/wp/2015/01/26/the-obama-administration-wants-to-dramatically-change-how-doctors-are-paid/. 4/27/16

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The Changing Landscape: Today

- ➢ <u>HHS Health Care Payment Learning and Action Network</u> → pushing private payers to value.
  - ➢Now:
    - ➢BC/ BS: 20% of $$
    - ➢Aetna: 28% of $$ (going to 78% by 2020)
    - ➢Medicare Comprehensive Care for Joint Replacement model.

- ➢ CMS has 27 ongoing model initiatives.

  (https://innovation.cms.gov/initiatives/index.html#views=models. 08/10/2016)

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❖ Analytics is the discovery, interpretation, and communication of meaningful patterns in data. <u>Especially valuable in areas rich with recorded information</u>, analytics relies on the simultaneous application of statistics, computer programming and operations research to quantify performance.
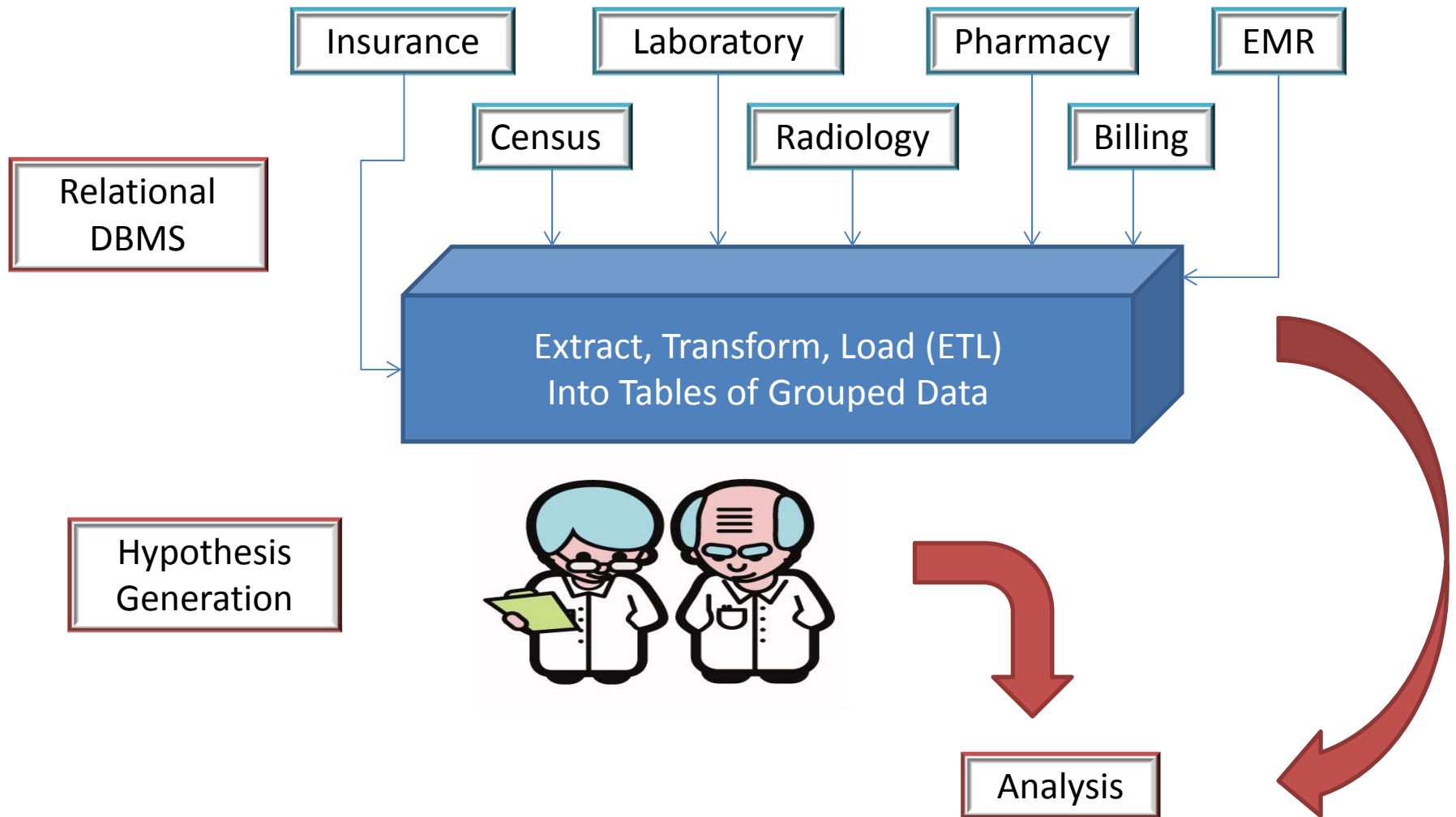
(Underscore added.)

(Wikipedia, 08/10/2016)

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- ❖ A willing leadership

- ❖ An accepting medical staff

- ❖ A well-maintained relational DBMS

- ❖ Database analyst

- ❖ A team captain

MA – The Process

❖ The RDMS analysis is often iterative.

❖ Data are exportable to Excel.

❖ Use data internal to the lab (e.g. instrument justification) or externally (e.g. intervention to drive change).

❖ Post-hoc re-analysis to test intervention.

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Clinical and Financial Benefits of Rapid Bacterial Identification and Antimicrobial Susceptibility Testing

JOAN BARENFANGER,[1]* CHERYL DRAKE,[1] AND GAIL KACICH[2]

Laboratory Medicine[1] and Clinical Data Management,[2] Memorial Medical Center, Springfield, Illinois 62781

❖ Compared rapid AST reporting to routine AST reporting

❖ Analyzed rAST impact on mortality and morbidity

❖ Mortality rate was unchanged, but mean LoS was reduced by 2 days

❖ **Savings: $4mil / year**
($5.8mil today)

Winter 2015	Began conversations with Orchard Analytics. Two pilot projects were selected.
Spring 2016	Ran those projects in a two day site visit to Marshfield Clinic.
Summer 2016	➤ Presented projects at the OMA annual Symposium ➤ Met with Marshfield Clinic CMO
Fall 2016	MC begins it's first MA project: Test utilization in DM pts.
	Disclosure: We already had a robust relational Data Warehouse (!)

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❖ Thyroid function testing

❖Issue:

❖SoC: Screen with TSH; use confirmatory tests *only if TSH is abnormal*

❖Sub-optimal test utilization leads to wrong diagnoses, missed diagnoses, & excess costs.

❖Questions:

❖Are confirmatory TFT tests needlessly used?

❖How often and at what cost?

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Project 1

Test Scenario	Annual Volume			Variable Materials Cost		
	Clinic	MSJH	Total	Clinic	MSJH	Total
FT4 given normal TSH; same req	8,835	715	9,550	$26,770.05	$2,166.45	$28,936.50
FT4 given no TSH	2,041	599	2,640	$6,184.23	$1,814.97	$7,999.20
FT3 given normal TSH	2,235	143	2,378	$8,805.90	$563.42	$9,369.32
FT3 given no TSH	650	323	973	$2,561.00	$1,272.62	$3,833.62
FT3 given high/low TSH and high/low FT4	584	40	624	$2,300.96	$157.60	$2,458.56
TT4 given normal TSH; same req	169	67	236	$469.82	$186.26	$656.08
TT4 given no TSH	49	105	154	$136.22	$291.90	$428.12
TT3 given normal TSH	8	2	10	$17.84	$4.46	$22.30
TT3 given no TSH	1	1	2	$2.23	$2.23	$4.46
TT3 given high/low TSH and high/low FT4	1	1	2	$2.23	$2.23	$4.46
Reverse T3 (all)	79	4	83	$395.00	$20.00	$415.00
			16,65 2			
Total			**2**			**$54,127**

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Why should I use MA to *reduce* my test volume (and my revenue) when FFS is still here?

❖ Test utilization committees are demanding it.

❖ Payers are denying "unnecessary" claims.

❖ Bundled payments have begun.

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❖ Good for the lab too. Outcomes data

  ❖ objectively demonstrates lab value,

  ❖ justifies lab expenditures,

  ❖ Solidifies our position on the healthcare team.

❖ 'In skating over thin ice, our safety is in our speed.'

    Ralph Waldo Emerson

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❖ FFS *is* going to be replaced by value-based schemes.

❖ Healthcare systems **must** prepare for this radical new environment in order to stay relevant.

❖ MA offers a powerful way to make this transition by leveraging *all* institutional data to improve outcomes and inform spending decisions.

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1. A subsidiary of Orchard Software. Carmel, IN
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