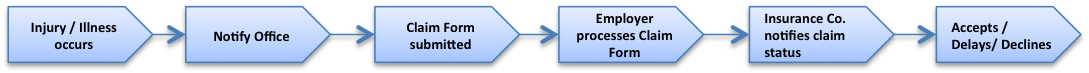
Q : Research on the Web and collect information about workers’ injury compensation claims processing.

* Write a report (4-5 pages, double-spaced, maximum font size 12, sub- sections properly titled and formatted) of the workers’ compensation claims management process, key challenges in this business, how big data analytics can help in addressing the challenges and what external data might be useful.

1. **Workers Compensation Claims Management process**

Workers' compensation insurance is an industrial insurance, which every employer, is required to purchase to cover work place injuries and illnesses for its employees. The main steps in the ‘workers compensation claims management process’ are as follows:



1. An injured worker reports the injury or illness to his/her employer immediately. The employer must report a ‘**First Report of Injury**’ within 7 days, this is done by reporting the injury to the workers' compensation insurance carrier, who in turn electronically reports the injury to the Labor Commission.
2. The injured worker tells the medical provider that the injury or illness is work related. The doctor is to report the initial visit by “Physician’s Initial Report of Injury” (Form 123) of the injured worker to the Labor Commission, the insurance carrier and give a copy of the report to the injured worker.
3. The insurance carrier will open a claim for benefits once they have received either one or both reports from the employer or doctor. The insurance carrier is to make a determination of compensability of the injury or illness within 21 days of having received the claim for benefits and can file for an extension of a total of 45 days.
4. Compensable Claim. If the claim is compensable, and if the doctor determines that the injured worker will lose work time, the insurance carrier is to contact the injured worker and the employer to determine the rate of weekly pay that the injured worker is to receive for the time off work. In most cases the claim for medical benefits is paid, the injured worker returns to work and the claim is ended.
5. Denial of the claim. If the insurance carrier denies that the claim is compensable, the insurance carrier is to send a denial letter to the injured worker and the Labor Commission.
6. Application for Hearing. If the claim is denied, the injured worker has the right to apply for a hearing at the Labor Commission to have an administrative law judge determine if the injured worker’s claim is compensable.
7. **Key Challenges in the ‘Workers Compensation’ business**

The challenges related to ‘workers compensation’ business can be classified into 3 major areas : Operational , Health, Technology and Social. They are described as below :

1. **Pressures due to stagnating premium growth ( Operational) :** The Salary stagnation or low growth of wages is impacting the growth of workers compensation business. Hence, the industry is forced to look at improving their efficiency to maintain or sustain the profits.
2. **Lack of technology and innovation ( Technology) :** The workers compensation industry is one of the low-tech industries where the processes are handled manually, Which has led to degrading cost model and customer experience.
3. **Opioid problem ( Health / Social) :** Vast percentage of claimants are on Opioid treatments which has led to addiction. Opiod poisoning and adverse affects are the cause for cost escalations and larger health issues facing the industry. As the opioid addiction patients cannot go back to work, it adds to the continued claims payments and employers costs and also tax payers money. Aside from the thousands of opioid overdoses, and the hundreds of deaths, evidence shows drug diversion from workers’ comp related injuries. That means that those opioids prescribed to workers’ comp claimants are getting in the hands of people who are going to use them for illicit purposes
4. **Influx of new and untrained workers due to sudden spurt in Manufacturing sector ( Social) :** The recent growth in manufacturing jobs is resulting in a new wave of work related injuries, which is costing the workers comp industry heavily.
5. **Growth in mobile workforce ( Social / Operational) :** The use of telecommuters – or the mobile workforce – has grown by nearly 80 percent since 2005, according to Global Workplace Analytics. This trend has exposed the workforce to challenges beyond the control of employers.
6. **Workplace safety ( Operational) :** The workplace safety standards are not uniformly implemented which raises the accident rate and difficult to determine the root causes of injuries.
7. **Workforce Demographics ( Social) :** The aging workers is increasingly hurting the workers’ compensation business. While the aging workers bring experience, they are also impacted by chronic health problems that may lead to work related injuries.
8. **Pandemics ( Health) :** The next pandemic such as Ebola can cause mass scale workers compensation costs , when they are detected to originate at workplace.
9. **How big data analytics can help in addressing the challenges and what external data might be useful.**

Big Data analytics can help in improving the workers compensation business through better operational efficiencies, fraud and litigation management, medical management and proactive workplace / member management, shortening time to settlement, reducing payout amounts, speeding up return to work, and improving health outcomes. Some of these challenges and the associated Big data value are described below:

1. Early triage and classification of claims severity can lead to better handling – both procedurally and medically, resulting in cost reduction and better customer experience. Also appropriate loss mitigation strategies can be deployed. Big Data analytics and models can be applied to the information available soon after First Report of Injury (FROI) to correctly flag claims that will benefit from early intervention and to flag claims for fast-tracking.
2. Predictive modeling of claims can result in better risk assessment, diagnostics and medical routing, allocation of right experts, or applying preventive procedures which can reduce possible elevated treatment costs and early return to work.
3. Applying Big data analytics to categorize 10% of claims as jumper claims, which are costliest for settlement, in the early stage of claims cycle can help bring down the payout costs and long running medical costs substantially. Also, auto adjudication of 50% of the claims which are simple in nature, can bring down down the manual costs of operations.
4. Predictive modeling of claim root causes and possible cost impacts can help in assigning right handlers and also ensure continuity.
5. Big Data analytics can help account for various data points which are not available as a part of the FROI ( First report of injury) report. Variables such as the claimants past history of claims and severity, litigation trends etc can help in better handling of process. Knowing the financial condition of claimant and historical analysis could help in predicting the ultimate settlement value.
6. Creating patterns for industries, enterprises or geographies can help in determining larger causes, which might transcend individual claims and might need to be addressed at policy level or actuarial level changes.
7. The population density, urban v/s rural areas, climatic variables etc can influence the claims volume and accounting for such variables can help bring down the costs through proactive management of underwriting rules and setting the policies correctly..
8. Big data analytics can help across the claims processing lifecycle : such as Initial claims triage and assignment, identification of coverage issues, compensability evaluation, assessing claims leakage, settlement handling, recovery process, regulatory compliance and avoidance of penalties, opioid risks and costs.

**3.a What external data might be useful ?**

External data which is not captured as customer master data or FROI report data could impact the claims processing by reducing cost, time and penalties involved with claims processing. Some of the data points that can contribute significantly are :

* Company owner / Commercial enterprise Data : Bankruptcies, Number of employees, Debt burden, Credit scores, credit balance, unemployment history, crimes, DUI’s, prior claims.
* Workplace safety : OSHA (Occupational Safety and Health Administration) inspections and violations reports data, claims data by industry type, regional health data.
* Socio-economic + Geographic : unemployment in geographic area of injury and average house hold income in the area, education level, crime rate.