Health Impact Assessment of the Proposed Opioid Pre-Authorization Policy in the State of Utah

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EXECUTIVE SUMMARY

Key Policy Consideration

In order to curb the amount of opioids prescribed in Utah, Representative Ray Ward of the Utah State Legislature has proposed a requirement for insurance prior authorization when prescribing certain opioid prescriptions.[1-3] Prior authorization would be required for any opioid prescription greater than 90 morphine equivalents; anytime benzodiazepines are prescribed to patients already taking opioids; and for any new patient starting chronic opioids (i.e. prescriptions longer than 10 days in duration).[1-3] This will not apply to all insurance companies; only private Insurance plans over which the state has jurisdiction, insurance plans covering state employees, Medicaid, and Workman's compensation will be affected. Should the bill pass, it is anticipated that opioid prescribing rates, and thus addiction rates and overdose-related deaths, in Utah will decrease.

The Need for the HIA

This Health Impact Assessment (HIA) provides an analysis of the likely impacts and outcomes of this proposed policy on patients already using prescription opioids, patients who may need prescription opioids in the future, and their prescribers. The information provided in this HIA will help determine the effectiveness of this policy in stemming the tide of Utah's opioid addiction epidemic, and this HIA is particularly useful because of its focus on unconsidered and undervalued health impacts of the proposed policy. It will examine whether prior authorization of opioid prescriptions by health insurers is the best policy to address the opioid problem in Utah, and will propose policy mitigations and alternatives that should be explored by Utah's state policy makers.

Key Findings

The following are key outcomes that were analyzed as part of this HIA:

Highly likely impacts

- Increased time and cost for prescribers
- Patient stress/anxiety because of difficulty getting needed prescriptions

Likely impacts

- Modest decrease in prescription of opioids
- Modest decrease in consumption of prescription opioids
- Modest decrease in number of persons addicted
- Increase in other substance abuse (heroin particularly)
- Increase in heroin-related illness, overdose, and homelessness
- Increase in crime and incarceration

Plausible, but not well-supported impacts

- Higher patient pain tolerance
- Increased patient suicide
- Decreased addiction to prescription opioids
- Change in healthcare costs
- Change in productivity costs

A Summary of Findings table has also been developed to summarize the findings of the HIA. The table displays the predicted direction, magnitude, likelihood, distribution, and certainty of evidence of the health effects discussed.

Table 1: Summary of Findings

			Based on Stakeholder input and Literature Review				Literature
Health Factor or Outcome	Literature review	Stakeholder Perspectives	Direction	Magnitude	Likelihood	Distribution	Certainty of evidence
Prescribing of opioids	Modest decrease	No change	Modest Decrease	Medium	Probable	High	Medium
Time and cost for prescribers	Increase	Increase	Increase	Medium	Probable	Low	High
Opioid consumption	Modest Decrease	Mixed	Modest Decrease	Medium	Probable	Medium	High
Higher patient pain tolerance	Increase	Increase	Increase	Low	Possible	Medium	Low
Patient anxiety and stress due to prescription denial	N/A	Increase	Increase	Medium	Probable	High	N/A
Patient suicide	N/A	Increase	Modest Increase	High	Unlikely	High	N/A
Addiction	Decrease	Mixed	Modest Decrease	High	Possible	High	Low
Other substance abuse	Increase	Increase	Increase	High	Possible	Medium	High
Heroin-related illness, overdose, and homelessness	Increase	N/A	Increase	High	Possible	Medium	High
Crime and incarceration	Increase	Increase	Increase	Medium	Possible	Medium	High
Healthcare Costs	Unknown	N/A	Unknown	Low	Unknown	Unknown	Unknown
Productivity Costs	Unknown	N/A	Unknown	Low	Unknown	Unknown	Unknown
Productivity Costs	Unknown	N/A	Unknown	Low	Unknown	Unknown	Unknown

Summary of Findings Table Key[4]

1) *Literature Review/Stakeholder Perspectives:*
   a) Increase: health outcome will increase
   b) Mixed: there were mixed perspectives about the health outcome
   c) Decrease: health outcome will decrease
   d) No Change: health outcome will not change
   e) Unknown: insufficient evidence available
   f) N/A: data was not gathered from the source

2) *Direction*: Effect is beneficial or adverse.
   a) Increase: there will be an increase in the health state
   b) Decrease: there will be an decrease in the health state
   c) Stable: there will be no change in the health state
   d) Unknown: health state is unmeasured or unknown

3) *Magnitude:* Expected size of the effect (number of affected people, expected frequency or prevalence of symptoms, illness or injury).
   a) Low: the impact on health is minor and/or temporary and does not pose a hazard or benefit
   b) Medium: the impact on health is detectable, reversible and/or poses a minor to moderate hazard/benefit
   c) High: the impact on health is substantial, lasting and/or poses a major hazard/benefit

d) Unknown: the impact on health is unknown or poses an unknown hazard/benefit

4) *Likelihood:* Chance that the effect will occur.
   a) Unlikely: the impact is not likely to occur
   b) Possible: the impact is likely to occur on a regular basis
   c) Probable: the impact will almost certainly occur and persist over time
   d) Unknown

5) *Distribution:* Distribution of effects among vulnerable populations to delineate equity factors.
   a) High: high impact on vulnerable population
   b) Medium: medium impact on vulnerable population
   c) Low: low impact on vulnerable population
   d) Unknown: unknown impact on vulnerable population

6) *Certainty of Evidence:* level of confidence that the effects will occur based on literature review.
   a) High: Evidence strongly supports the characterization conclusions
   b) Medium: Evidence moderately supports the characterization conclusions
   c) Low: Evidence nominally supports the characterization conclusions
   d) Unknown: There is little or insufficient evidence to support the characterization conclusions
   e) N/A: Literature was not examined for the health

Summary of Recommendations

A thorough investigation of the proposed policy has revealed that it will produce minor benefits, but may also complicate the process of filling opioid prescriptions for patients and their physicians, leading to several negative outcomes. In order to mitigate these negative health outcomes, we recommend that this policy be modified by exempting pain specialists from the pre-authorization policy, given that many of the prescriptions they write fall above the 90 morphine equivalent cut-off for the proposed pre-authorization, and that pain specialists have already undergone further training to deal with chronic pain and prescribe opioids appropriately. This would also help to mitigate the significant increase in time and cost for pain specialists that are likely to result from this policy. In addition, maintaining the pre-authorization requirement for general practitioners is likely to result in increased patient referrals to pain specialists for patients with pain management issues, thus ensuring that those patients who are truly experiencing enough chronic pain to require high doses of prescription opioids receive appropriate care for their pain issues. With the incorporation of this modification, it is recommended that the policy be adopted by the Utah State Legislature.

HIA PROCESS

A Health Impact Assessment (HIA) is an evaluation of the potential health effects of a proposed plan, project or policy prior to its implementation. In general, HIAs highlight potential positive and negative health impacts of proposed plans, projects or policies, which can be considered as part of the decision-making process. HIAs also make recommendations to maximize positive health impacts and to minimize negative health impacts.[5]

This HIA utilizes both quantitative and qualitative techniques to assess the health impacts of the proposed policy to require pre-authorization for prescription opioids and provides recommendations based on findings that will aid in the decision-making process. This HIA involved six key steps:

1. **Screening:** the determination of whether or not to conduct the HIA based on its potential, feasibility, and value in the decision-making process. This is decided based on a review of current and proposed legislation to mitigate Utah's opioid epidemic, public health indicator data, and stakeholder input.
2. **Scoping:** the planning of the HIA, and identification and prioritization of the potential significant health effects, key players, vulnerable populations, and legislation alternatives for the opioid pre-authorization legislation.
3. **Assessment:** the analysis of likely health effects of the proposed opioids pre-authorization policy on affected populations, namely patients already using prescription opioids, patients who may need prescription opioids in the future, and their prescribers.

4. **Recommendations:** the identification and proposal of specific actions and methods that can be taken to avoid or minimize adverse health effects and to maximize potential health benefits from the proposed policy, as well as consideration of policy alternatives.
5. **Reporting:** the presentation of findings to the public, decision-makers, and other stakeholders.
6. **Monitoring & Evaluation:** the proposal of ways to track health changes and compliance with HIA recommendations over time, which will determine to what extent the HIA ultimately impacts the decision-making process.[5]

POLICY AND BACKGROUND

Recently, Representative Ray Ward of the Utah State Legislature proposed an opioid prior authorization bill to the Health and Human Services Interim Committee to prevent opioid addiction in Utah.[1-3] Prior authorization would be required for any opioid prescription greater than 90 morphine equivalents; anytime benzodiazepines are prescribed to patients already taking opioids; and for any new patient starting chronic opioids (i.e. prescriptions longer than 10 days in duration).[1-3] This will not apply to all insurance companies; only private Insurance plans over which the state has jurisdiction, insurance plans covering state employees, Medicaid, and Workman's compensation will be affected. Should the bill pass, it is anticipated that opioid prescribing rates, and thus addiction rates and overdose-related deaths, in Utah will decrease.

To date, more than a dozen bills have been passed by the Utah State Legislature addressing opioid addiction treatment, but little has been done at the state level to prevent opioid addiction in the first place.[3] Revised clinical guidelines for prescribing opioids in Utah were developed in 2009,[6] but since that time, little progress has been made in decreasing the amount of opioids prescribed.[1,3] In order to curb the amount of opioids being prescribed in Utah,

Representative Ward has proposed that before a prescription of opioids is written, prior authorization would be required from patients' health insurers.[1-3]

PURPOSE OF THE HIA

The seriousness and extent of the opioid addiction epidemic and the frequency of overdose-related deaths in Utah has resulted in a need for prevention policy to be pursued by the state government. Given this, the conducting of this HIA is timely. The purpose of this HIA is to analyze the potential health effects of mandatory pre-authorization of high-dose or chronic opioid prescriptions, and to determine whether or not this policy will be an effective solution to Utah's opioid problem.

METHODS AND DATA SOURCES

Screening

As part of the Screening phase, key stakeholders were identified and their willingness to participate in the HIA process was determined. A timeline for HIA completion was established. Potential health effects and the availability of data to identify those health effects were determined. Given the availability of data, the likelihood of stakeholder participation, and most importantly, the relevance of the HIA to the fight against prescription opioid addiction in Utah, it was decided that the HIA should be completed. Further details on the Screening phase of this HIA can be found in Appendix A.

Scoping

The Scoping phase of this HIA included hypothesis generation and the development of a causal pathway (see Figure 1 in Appendix B) which displays the processes leading from the proposed policy to the likely health outcomes resulting from this policy. Each branch of the

causal pathway represents a separate hypothesis that was explored in the Assessment phase of this HIA. Key research questions that plan to be addressed as part of this HIA consisted of:

1. What are the health impacts and outcomes that will result from this policy for chronic users of opioids?
2. What are the health impacts and outcomes that will result from this policy for individuals at risk of becoming addicted to prescription opioids?
3. Does the risk of the negative health outcomes outweigh the risk of the positive health outcomes?
4. What policy improvements or alternatives should be considered?
5. Is the proposed policy likely to be an effective solution to Utah's opioid problem?

Further details on the Scoping phase of this HIA can be found in Appendix C.

Assessment

Two types of data were collected as part of this HIA: 1) quantitative and qualitative data from the literature, and 2) qualitative data through stakeholder interviews. Data from the literature was used to examine several branches of the causal pathway, including: the effects of pre-authorization policies on prescribers, medication use, and patients; negative effects of addiction; and the likelihood of the policy decreasing the incidence of addiction. As the literature lacked sufficient data to be able to test all each hypothesis included in the causal pathway, stakeholder interviews were conducted with relevant individuals who were most likely to have be affected by the proposed policy.

Together, gathered quantitative and qualitative data were assessed for each hypothesis. Following data assessment, the health impacts were characterized by the research team, with the

team reaching a consensus on the characterization of all potential health impacts shown in the causal pathway.

Baseline data was collected from the Utah State Health Department, national health agencies, and the literature. See "Baseline Conditions" for this information. This data was included in the HIA analysis because it will likely change in some way as a result of the pre-authorization requirement. The changes would be monitored and evaluated to determine the effectiveness of this policy, should it be passed by the Utah State Legislature.

Stakeholder Input

Several stakeholders provided valuable input as part of this HIA. Physicians, dentists, pharmacists, health department officials, an economist, a detective who frequently encounters illegal drug users, and a drug treatment center counselor were locally selected and contacted for perspectives based on their respective specialties. These stakeholders provided information on how the policy is likely to affect prescribers and their patients, both positively and negatively. For more information on the specific stakeholders, see Appendix D.

BASELINE CONDITIONS

From 2012-2014, Utah was ranked 4th in the nation for drug poisoning deaths; 24 people die from drug poisoning in Utah each month. The areas in Utah with the most overdoses include southeast counties (Carbon, Emery and Grand counties), as well as Downtown Ogden, East Taylorsville, and West Murray counties.[7]

Risk factors for prescription opioid addiction and the demographics of Utahans who have overdosed have been described in various studies.[8,9] People in Utah who have died from prescription opioid overdoses were more likely to have abused prescription pain medication, obtained medication from non-prescription sources, smoked daily, not graduated high school,

been divorced or separated, and had chronic pain.[8] Another study[9] identified Utah decedents of opioid prescription to be middle-aged, Caucasian, less educated, not married, and habitants of more rural areas in Utah, and 87% of them had been prescribed prescription pain medication. 52.9% had misused their prescription pain medication a year before their death, 31.6% had obtained prescriptions from more than one doctor a year before their death, and many used their medications to get high. Decedents were more likely to have financial problems, physical disabilities, mental illness, and to be unemployed, smoke, drink alcohol and use illegal drugs. 91.8% obtained drugs from a health care provider, but drugs were also obtained from a friend or relative (24.0%), from someone without their knowledge (18.2%), and as a purchase from a friend, relative, acquaintance (16.4%) or dealer (11.6%). Additionally, primary care physicians were found to prescribe opioids the most frequently and be involved in the most opioid fatalities.[10]

Increases in opioid prescription mirror increases in overdoses (see Figure 2, located in Appendix B).[11] Opioid prescriptions nationally have jumped from 76 million in 1991 to 207 million in 2013, and 32% of people aged 18 and older were prescribed an opioid pain medication in Utah during the year of 2014.[11] In 2012, there were 86 painkiller prescriptions written per 100 people in Utah.[12] Prescription opioids currently contribute more to drug poisoning deaths than heroin, though heroin overdose is still a problem (see Figure 3, located in Appendix B).[13]

In 2014, Utah spent $237,756,799 on opioid-related healthcare, which amounts to 1.0% of total healthcare costs in Utah or $81 per capita.[14,15] Another study of a Medicaid population in Utah found that the healthcare costs of prescription drug abusers in Utah amount to approximately $14,537 per year compared with $8,436 per year for matched controls.[16]

ASSESSMENT OF HEALTH IMPACTS

Summary of Findings

Using the literature and stakeholder perspectives that were collected and reviewed as part of this HIA, a Summary of Findings (see Table 1) was developed to summarize the potential effects of a mandatory pre-authorization requirement for high doses of prescription opioids. The effects were characterized by direction, magnitude, likelihood, distribution, and certainty of evidence. Definitions for these terms and a key for how the effects were characterized can be found in the Summary of Findings Table Key located in Appendix E.

Table 1: Summary of Findings

			Based on Stakeholder input and Literature Review				Literature
Health Factor or Outcome	Literature review	Stakeholder Perspectives	Direction	Magnitude	Likelihood	Distribution	Certainty of evidence
Prescribing of opioids	Modest decrease	No change	Modest Decrease	Medium	Probable	High	Medium
Time and cost for prescribers	Increase	Increase	Increase	Medium	Probable	Low	High
Opioid consumption	Modest Decrease	Mixed	Modest Decrease	Medium	Probable	Medium	High
Higher patient pain tolerance	Increase	Increase	Increase	Low	Possible	Medium	Low
Patient anxiety and stress due to prescription denial	N/A	Increase	Increase	Medium	Probable	High	N/A
Patient suicide	N/A	Increase	Modest Increase	High	Unlikely	High	N/A
Addiction	Decrease	Mixed	Modest Decrease	High	Possible	High	Low
Other substance abuse	Increase	Increase	Increase	High	Possible	Medium	High
Heroin-related illness, overdose, and homelessness	Increase	N/A	Increase	High	Possible	Medium	High
Crime and incarceration	Increase	Increase	Increase	Medium	Possible	Medium	High
Healthcare Costs	Unknown	N/A	Unknown	Low	Unknown	Unknown	Unknown
Productivity Costs	Unknown	N/A	Unknown	Low	Unknown	Unknown	Unknown

Impacts to Prescribers

Changes in Costs to Prescribers

After interviewing several prescribers, it was concluded that requiring pre-authorization for prescription opioids would greatly impact the practice of prescribers. There was a general consensus among all prescribers interviewed as part of the HIA that pre-authorization requirements, no matter what they are for, are a significant burden and hassle for medical practitioners and pharmacists.[17-22] A number of studies confirm these prescriber sentiments that pre-authorization requirements increase doctor time, hassle and paperwork.[23,24] In addition, pre-authorization policies increase costs for physicians, largely due to having to hire extra staff to complete pre-authorizations.[17-19,22] These costs are also confirmed in the literature.[24] Furthermore, one general practitioner raised the concern that increased paperwork for doctors ultimately results in sacrificing face-to-face time with patients, leading to poorer quality of care and poorer health outcomes for patients.[17]

It was also noted that such a policy could be particularly problematic for pain clinics.[17] Pain specialists almost solely write prescriptions for high dose opioids that would require pre-authorization under this policy; as such, the implementation of this policy could prove overwhelming for pain specialists due to the burden of increased cost and paperwork.[17]

Changes in Prescribing Habits

On the other hand, pre-authorization policies are likely to affect current practitioner prescribing habits,[23] thus resulting in fewer prescriptions. Several of those interviewed stated that they would be more likely to stop and think before writing a high dose opioid prescription if a pre-authorization policy existed.[17,25] One study that examined the effects of a pre-authorization

policy on the prescribing of Cox-2 inhibitors found that pre-authorization caused prescribers to only write prescriptions of Cox-2 inhibitors to patients who truly needed them, while other patients were switched to less expensive alternatives that did not require pre-authorization.[26] Another study of Massachusetts' Medicaid program showed that after implementing pre-authorization to reduce high doses and daily doses of prescription opioids and to increase preferred therapeutic alternatives, the number of long-acting opioid analgesic users decreased by 17.8%, and the number of claims decreased by 4.1%.[27] Another study found that pre-authorization was associated with an 8% decrease in long-acting oxycodone use.[28] Thus, requiring pre-authorization for prescription opioids could result in a modest decline in the number of opioid prescriptions written.

One concern raised was the worry that this policy would cause general practitioners to stop prescribing high-dose narcotics, perhaps due to a desire to avoid pre-authorization.[17,23] Even though Representative Ward[25] stated that general practitioners should never be prescribing opioids in the high doses that would require pre-authorization under this policy, concern was expressed that if patients can no longer get these medications from their family doctor, they would to go to the emergency room for these medications.[19] Alternatively, general practitioners may refer all such patients to pain specialists.[17,18] Although this is not inherently a bad thing, as pain specialists are far better equipped to appropriately treat pain than general practitioners, specialist referrals and emergency room visits ultimately result in an increased financial burden to patients and the healthcare system.[17] Also, this policy is unlikely to reduce the number of prescriptions written by pain specialists, given that pain treatment is the main reason why patients visit such specialists.[17,22] In addition, patients that live in rural communities without pain

specialists may be forced to forgo their medications if their family physician refuses to write high-dose opioid prescriptions due to this pre-authorization requirement.[17]

Summary of Impacts to Prescribers

Despite the negative impact of a pre-authorization policy on prescribers, [14-16,19,25] it is likely that implementation of pre-authorization for high dose opioids will result in a modest reduction of opioid prescription rates. For further information on how less opioid prescribing could lead to less opioid addiction, see the next section.

Impacts to Pill Availability

Changes to Opioid Diversion

Opioid diversion is a process that involves the transfer of opioids from a person to whom the drug was legally prescribed, to another person for illicit use. Increased accessibility of prescription opioids, partially due to opioid diversion, has contributed to increased opioid addiction. According to a study of opioid overdoses in Utah, 24% of opioids users were given drugs by friends or relatives, 18.2% were stolen, 16.4% were purchased from a friend, relative, or acquaintance, and 11% were purchased from a dealer.[9] Notably, a significant number of people who die from an opioid overdose do not have a prescription for the opioid that caused their death.[29] Should the proposed policy lead to a decrease in the number of opioid prescribed (see Impacts to Prescribers above), it can be assumed that the amount of prescription opioids dispensed would decrease. This would reduce patient opioid consumption and decrease the problem of opioid diversion, thus reducing the availability of drugs for people to get addicted to.[29]

In contrast to findings in the literature, several interviewed stakeholders gave a different opinion. As seen in the previous section (Impacts to Prescribers) many stakeholders believe that

prior authorization would be ineffective at decreasing the number of opioid prescriptions,[17-19,22] thus resulting in negligible decreases to other opioid associated problems, such as opioid diversion, storage of unused drugs, and selling to the black market. Many of the prescribers interviewed as part of this HIA felt that the mandatory education that is required by the State of Utah on opioid prescribing is already doing much to reduce the number of opioid prescriptions, and that a pre-authorization policy is unlikely to further reduce prescribing rates and drug availability.[17-19]

Changes in Pain Tolerance

There is also a consensus among doctors that continued use of opioids would increase chronic pain due to opioid-induced hyperalgesia.[30] When opioids are prescribed continually for pain relief, a higher dose is required over time to obtain the same pain relief.[17] Hence, if fewer opioids and lower doses are prescribed now, fewer opioids and lower doses will be required in the future.[18,30]

Summary of Impacts to Addiction

In summary, there seems to be a mixed opinion about how effective the prior-authorization would be in curbing the number of prescription opioids available for consumption. The literature supports that this policy would be effective in decreasing opioid prescriptions, and would help contribute to a decrease in opioid diversion; however, stakeholders generally felt the opposite. Furthermore, gathered data suggests that prior-authorization would help patients have a higher pain tolerance and would result in a reduced need for opioids in the future. Should the accessibility and amount of opioids prescribed decrease, it is likely that a decrease in addiction rates would result, which is the overall goal of this policy.[29]

Impacts to Patients

Changes to Patient's Physical and Emotional Health

Prior authorization has many effects on patients and their well-being. Firstly, pre-authorization causes patients to deal with more bureaucracy and put forth more effort to get prescriptions, which could delay or prevent them from getting necessary medication.[17-19,22,31] One doctor stated that sometimes it takes his patients 3-4 attempts before they can get prior authorization approval and obtain prescriptions that they need.[18] Patients may have to visit their doctor or pharmacy multiple times in an effort to obtain prior authorization, which can be a strain on older patients and patients with disabilities who often have difficulty arranging transportation.[32,33] This policy could lead to a portion of patients that may not receive treatment due to the cost and hassle of doctors undergoing the prior authorization process.[17] Though it is possible for patients to bypass the prior authorization denial by simply paying for their medications out-of-pocket, the costs of opioid medications can range from $80 to hundreds of dollars per prescription.[33] The costs of opioid medications would likely be too high for many patients to afford on their own, unfairly disadvantaging poor patients.

In addition, pre-authorizations are overseen by insurance companies, not medical personnel, which could make it more likely for patient prescriptions to be delayed or denied if the policy is enacted. The general opinion among the doctors interviewed was that prior authorizations are not overseen by someone who can make an appropriate, informed decision. Due to the fact that insurance companies do not know much about the patients or their diagnosis and treatment plans, they are unable to make a proper judgement.[18,19,21,34]

Denied or delayed prescriptions can cause patients to feel anxious, stressed, angry, abandoned and emotionally hurt. The proposed policy could also adversely affect pharmacies because delays in patients getting medications sometimes results in patients becoming angry and

frustrated with pharmacists.[20] The interviewed doctors had also heard of patients committing suicide in a few extreme cases, due to lack of necessary treatment and stress experienced due to prescription denial.[17,22] Untreated patients in significant pain for longer periods of time have more psychologically difficult recoveries and longer healing times.[18] In addition, multiple doctors stated that people who are addicted to opioids – people that really want them – will still find ways to get them even when pre-authorization is required.[18,19] However the proposed policy could punish people who genuinely need opioid pain medications, causing all of the previously mentioned effects.

Changes in Source of Drugs

Another serious health effect of the policy mentioned by doctors is the possibility that people who are already addicted to opioids will be less able to get opioids, and that they will turn to the black market or illegal drugs to satisfy their addiction.[18,25] Both of these outcomes are more likely for younger patients.[34] Prescription drug users frequently move onto heroin, an illegal and powerful opioid, because it is much less expensive and often easier to get; studies have shown almost half of young heroin users start with abusing prescription opioids.[35,36] Research has shown a strong correlation between the number of opioid prescriptions and the number of heroin overdoses (see Figure 4 in Appendix B) A study reporting the effects of introducing an abuse-deterrent opioid showed that opioid dispensing dropped 19% and prescription opioid overdoses dropped 20%; however, heroin overdose rose 23% as a result.[37] Reducing the supply of opioids without addressing the problem that there is a demand for them results in people turning to heroin and other harmful drugs.[31,37]

Summary of Impacts to Patients Physical and Emotional Health

Overall, the effects of the proposed policy on patients who need opioid prescriptions are likely to be primarily negative. Patients will have to go through more bureaucracy and effort to get opioid prescriptions. Their prescriptions could possibly be delayed or denied due to less qualified individuals at insurance companies making decisions about their medications. Delayed and denied prescriptions would likely cause patient stress and anxiety and could lead to patients being in pain for longer amounts of time. Patients that are unable to get pain medications could turn to the black market, illegal drugs or, in extreme cases, suicide.

Impacts to Health due to Drug Switching

Changes in Health

Increases in the use of heroin and other illegal/black market drugs leads to increases in overdose deaths, illness, injury, as well as overall worse health for those drug users. There is a higher risk of overdosing on heroin than prescription opioids because heroin is not always pure.[11] People who survive heroin overdoses often have injuries that include respiratory problems and brain damage.[38] Regular heroin users experience deterioration of white matter in the brain, which could affect decision-making ability, behavior regulation and response to stressful situations, in addition to addiction and withdrawal when quitting.[39] Heroin is injected, and injection drug users are the highest-risk group for spreading and acquiring Hepatitis C infections (HCV). Each injection drug addict with HCV is estimated to infect an additional 20 people. Other serious diseases are spread through needle sharing as well, such as HIV.[40]

Changes in Crime

Heroin use often leads to theft, in order to fund the to fund the addiction, and incarceration.[41] Detective King[41] reported that drug addicts often break into and steal from cars and that addicts have been caught stealing prescription pads from doctors' offices, among other crimes. From a study of people who inject illegal drugs, 18% of users had committed a property

offence in the past month, and opioid dependence and age were the strongest correlations with committing property offences.[42] 71% of property offenders and 73% of violent offenders reported being under the influence of drugs while committing their most recent offence.[42] 75% of offenders said they committed their offense for financial reasons. Many heroin addicts are incarcerated as well.[42] Each year, about one-third of heroin users are sent to correctional facilities.[42] 15% of all Americans entering jails and prisons are addicted to heroin.[43]

Changes in Homelessness

Heroin use can also lead to homelessness. One study analyzed similar characteristics among injection drug users: they were most likely to be homeless, be a temporary employee or unemployed, have higher education, and prefer heroin among other drugs.[44] The National Institute of Health's website states "Once a person becomes addicted to heroin, seeking and using the drug becomes their primary purpose in life."[45] When people's lives are centered on an addictive substance, they are often willing to be homeless to fund their addiction. Homelessness creates another slew of negative health outcomes. Analysis of these outcomes was beyond the scope of this HIA.

Summary of Impacts on Health Due to Drug Switching

In summary, there are many effects of prescription opioid abusers turning to heroin. Heroin users are more likely to overdose and spread diseases through needles. Heroin addicts often commit property offences and are frequently incarcerated. Their addiction can lead them to homelessness.

Impacts to Economic Costs

The costs of opioid abuse are significant. One study found that annual excess healthcare costs are between $14,054-$20,546 for those with private health insurance who abuse opioids.[29]

This same study found that the annual excess healthcare costs for opioid abusers with Medicaid is between $5,587-$15,183.[46] Another study amounted annual healthcare resource utilization costs to $10,627 per patient.[47] In Utah, these costs are approximately $14,537 per patient annually.[16] Should pre-authorization decrease opioid-addiction rates in Utah, it is likely that healthcare costs associated with prescription opioid abuse will decrease.

Opioid abuse also results in significant productivity costs. One study estimates that abusers have $1,244 in excess annual work-loss costs.[47] Such costs are primarily due to premature death, reduced compensation and lost employment.[48] Again, should this policy reduce opioid-related addiction in Utah, it is hopeful that productivity costs will be recuperated.

LIMITATIONS

Despite best efforts by the research team to conduct a comprehensive assessment, this assessment has some limitations. Details of these limitations can be found in Appendix F.

RECOMMENDATIONS

The recommendations in this section are based on data gathered through literature review and stakeholder opinion. Their intention is to minimize patient stress and anxiety and propose policy alternatives to address other angles of preventing opioid addiction. The following are impacts analyzed in this HIA:

Highly likely impacts

- Increased time and cost for prescribers
- Patient stress/anxiety because of difficulty getting needed prescriptions

Likely impacts

- Modest decrease in prescription of opioids
- Modest decrease in consumption of prescription opioids
- Modest decrease in number of persons addicted
- Increase in other substance abuse (heroin particularly)
- Increase in heroin-related illness, overdose, and homelessness
- Increase in crime and incarceration

Plausible, but not well-supported impacts

- Higher patient pain tolerance
- Increased patient suicide
- Decreased addiction to prescription opioids
- Change in healthcare costs
- Change in productivity costs

Based on these health impacts, the following section contains proposed recommendations for modifications to the current policy, as well as policy alternatives.

A thorough investigation of this proposed policy has revealed that it will produce minor benefits, but may also complicate the process of filling opioid prescriptions for patients and their physicians, leading to several negative outcomes. In order to mitigate these negative health outcomes, we recommend that this policy be modified before moving forward. With the incorporation of this modification, it is recommended that the policy be adopted by the Utah State Legislature.

Modification to the Proposed Policy

1. *Exempt pain specialists from the restrictions in the proposed policy*

It is recommended that pain specialists be exempt from the pre-authorization policy, given that many of the prescriptions they write fall above the 90 morphine equivalent cut-off for the proposed pre-authorization, and that pain specialists have already undergone further training to deal with chronic pain and prescribe opioids appropriately. This would also help to mitigate the significant increase in time and cost for pain specialists that are likely to result from this policy. In addition, maintaining the pre-authorization requirement for general practitioners is likely to result in increased patient referrals to pain specialists for patients with pain management issues, thus ensuring that those patients who are truly experiencing enough chronic pain to require high doses of prescription opioids receive appropriate care for their pain issues.

Alternative Policy Suggestions

An interview with a Brigham Young University health economist revealed that those who are most likely to be influenced by policy decisions are those groups of individuals considered to be "elastic" (i.e., those that will change their behaviors due to policy enactment, changes in societal norms, price changes, etc.).[49] Considering the key players of Utah's opioid epidemic, it was concluded that the most elastic groups are prescribers and patients that are not yet using prescription opioids. Those who are already addicted to prescriptions opioids would be considered inelastic. Given this, requiring pre-authorization for prescription opioids targets the right people, namely prescribers. Patients would also be an effective group to target.

The following sections include policy alternatives that would impact elastic groups involved in the opioid epidemic. These policy alternatives are likely to impact addiction rates without resulting in several of the negative effects associated with pre-authorization. Assessing the costs of these policies was beyond the scope of this HIA.

Doctors as the Target Population

1. *Increased monitoring of the Controlled Substance Database (CSD)*

The best way to change over prescribing is to go after those doctors that are over-prescribing, because it is the few that are harming the majority. The information necessary to do this is currently in the CSD, however it is not used for the purpose of monitoring.[17,25] It would be helpful for a qualified person from the Utah Medical Association or other credible institution to be able to monitor the database in order to find harmful prescribing patterns and perform audits on implicated doctors. In extreme cases, doctors could be reported to lawmakers, have a license suspended or be required to undergo intensive education.

2. *Additional doctor education*

Increasing responsible prescribing would help protect patients from opioid addiction. Though doctors are already required to participate in education on opioid abuse, additional yearly mandatory education by the Utah Medical Association would be helpful. When physicians are armed with accurate and up-to-date knowledge, they can make informed decisions, communicate better with patients, and set realistic treatment goals.

3. *Restrict prescriptions of opioids to no more than 7 days*

The CDC's opioid prescription guidelines stated that opioid prescriptions are very rarely necessary for longer than seven days, and some sources state that they are unneeded past even three days.[50] This could be a more beneficial bill than the policy analyzed in this HIA. The HIA team also recommends that this policy would exempt pain specialists so that patients who would genuinely need chronic opioids to manage chronic pain could access the medication they need from a specialist.

Patients as the Target Population

4. *Patient screening and contracts*

It is recommended that patients undergo a thorough screening for need and substance abuse disorders prior to receiving an opioid prescription. The Opioid Risk Tool[51] is one possible screening tool that could be adopted by prescribers. In addition, upon receiving an opioid prescription, patients should be required to sign a contract with their physician stating that they will not go to another prescriber for an opioid prescription, that refills cannot be done over the phone, and that refills cannot be given before a certain date, among other clauses. In addition, doctors could require a pill count from patients at any point, drug testing, etc. Such a contract has already been implemented at the Spanish Fork Clinic of the Canyon View Medical Group in Spanish Fork, Utah.

5. *Patient education*

Patient expectations about pain and pain management need to be changed. Further society-wide education is needed to inform patients that opioids are not the first line of treatment for pain. In addition, education is needed to help people understand that opioids are only effective for treating severe, acute pain, but are unlikely to be effective at managing chronic pain long-term. Altering patient expectations about opioid prescription would likely result in decreased demand for prescription opioids, thereby resulting in less actual prescribing and less addition.

Other Alternative Policy Suggestions

6. *Insurance coverage of alternative methods of pain management*

Though it is much easier and less expensive for doctors to simply prescribe patients a pain medication, other methods of pain management are often much better for the patient. Adequate coverage/reimbursement by insurance companies for alternative treatment options, such as specialist care, physical and cognitive therapy, and other self-regulatory pain management methods, would help provide a comprehensive and interdisciplinary approach to pain management that would help patients to be better equipped to manage pain.

7. *Expand drug addiction rehabilitation centers*

Several stakeholders reported that there are not enough rehabilitation resources, particularly staff, for people battling opioid addiction. Expanding the resources of drug rehabilitation and detox centers for opioid abuse patients could help decrease the number of opioid addicts, as well as aid them in preventing relapse. Centers that include medication-assisted and behavioral health treatment services are particularly helpful.[52] See Figure 5 in Appendix for further information on the need to drug addiction rehabilitations services in Utah.

MONITORING AND EVALUATION

It is necessary to continue monitoring and evaluating the discussed health effects, as compared to the baseline measures. Some of the important measures to evaluate include the demographics of Utahns who are overdosing, what percentages of addicts are getting their drugs from doctors, family members and friends and other sources, the number of opioid prescriptions in Utah as well as the percent of Utahns that are prescribed opioids, and Utah's total opioid-related healthcare costs.

CONCLUSION

This HIA provides a valuable contribution to the fight against the opioid addiction epidemic in Utah by providing a thorough analysis of one of the policies that has been proposed by the Utah State Legislature to combat the problem, namely requiring pre-authorization prior to prescribing high doses of prescription opioids. The HIA team found that with modification, this policy could provide a modest decrease to the rates of opioid addiction in Utah. Given this, it was recommended that the Utah State Legislature move forward with this policy following implementation of the recommended modification.

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APPENDICES

APPENDIX A: HIA SCREENING

Background

On average, one person dies per day of a prescription drug overdose in Utah.[7,52] There are more deaths from drug poisoning than from firearms, falls, or motor vehicle accidents in Utah, and Utah's overdose deaths went up 400% from 2000 to 2014.[7] Opioid-related healthcare costs in the US amount to $25 billion per year, or 1% of all health care costs.[14] In 2014, Utah spent $237,756,799 in opioid-related healthcare alone.[14] Additional societal costs of opioids and related addictions include: workplace costs, such as reduced earnings from premature deaths and lower employment/compensation of opioid addicts; and criminal justice costs, including higher correctional facility and police costs.[48] There is evidence that we can decrease opioid-related costs, addictions and fatalities with better doctor and patient education, as well as better regulation policies.[53]

In order to curb the amount of opioids being prescribed in Utah, Representative Ward has proposed that before a prescription of opioids is written, prior authorization would be required from patients' health insurers.[1-3] Should the bill pass, it is anticipated that opioid prescribing rates, and thus addiction rates and overdose-related deaths, in Utah will decrease. To date, the Utah state legislature has passed several laws to prevent opioid-related death and treat those who are addicted. However, laws pertaining to preventing opioid addiction in the first place are still lacking in Utah.

Key Stakeholders

Key stakeholders for this policy, their association with this policy, and their readiness to participate in the HIA process are outlined in the table below:

Stakeholder	Association with Policy	Readiness to Participate
Representative Ray Ward	Legislator that is proposing the policy	Ready
Other Utah State Legislators	Will make the decision as to whether or not the bill is passed	Ready
Health Insurers	Will pre-authorize prescriptions	Probably ready
Dispensers	Dispensing of prescribed dose	May not be ready
Prescribers	Pre-authorization of prescriptions needed prior to prescribing, prescribing within guidelines	May not be ready
Patients	Can only receive low doses without prescription pre-authorization	May not be ready
County Drug and Alcohol Prevention and Treatment Programs	Want to decrease addiction and related deaths	Ready
Violence and Injury Prevention Program of the Utah Department of Health	Want to decrease addiction and related deaths	Ready
Utah Coalition for Opioid Overdose and Prevention	Want to decrease addiction and related deaths	Ready

Potential Health Effects of the Proposed Policy

Potential positive health effects of the proposed policy include reduced prescribing of opioids by prescribers, improved patient outcomes due to decreased addiction (such as improved workplace productivity and improved physical and mental health), and a reduction in the number of people who experience an opioid-related addiction, death, or other adverse event related to these drugs.

This policy aims to reduce overprescribing by physicians, which in turn could lead to fewer storage-related issues, lessened availability of pills to others via illegal sharing and selling

of prescription opioids, a decrease in risky behaviors associated with chronic addictions, decreased crime related to opioid purchase from illegal sources, and a decrease in healthcare costs to the system due to fewer overdose-related hospitalizations and other associated costs.

Potential negative effects of mandatory pre-authorization for prescription opioids include an increase in paperwork needing to be completed by the prescriber and the potential of delay in patient's access to opioids until the prior authorization is complete, which may result in excess frustration, stress and anxiety for patients who are already suffering from pain. Additionally, when availability of prescription opioids is reduced, it could force those who are already addicted to opioids to turn to the black market or switch to illegal opioids such as heroin and synthetic fentanyl, which are far more dangerous than prescription opioids.[54] This could lead to an increase in the number of deaths related to illegal drug use.

Finally, as this policy aims to prevent opioid addiction through pre-authorization by health insurers, this policy fails to protect people who do not have insurance coverage against the misuse of opioids. Furthermore, it may provide insurers, who are inclined to deny insurance claims whenever possible, with an excuse to deny insurance claims that may otherwise be for people who legitimately need long-acting opioids to manage their pain.

Available Data

There is a great deal of research on Medicaid and other insurance companies requiring prior authorization on medications in certain states.[27,28,55-58] Many similar policies have been previously considered and passed in numerous states, but most policies have been motivated by insurance companies (most often Medicaid) trying to cut down on costs. Even so, prior authorization policies cut down on the number of doses and prescriptions prescribed in most of

the reviewed studies. There are also other reports analyzing prior authorization legislation, its effects, and appropriate recommendations that could be useful to our HIA.[32]

The Case for the HIA

The following points are reasons why this HIA should be conducted:

1) The proposal is associated with potentially significant health impacts, and there are several policy alternatives, that would otherwise be unconsidered or undervalued by decision makers such as:
    a) Looking more deeply at the negative effects of the policy, such as unintended patient stress and decreased patient well-being
    b) Examining the policies of other states and making appropriate recommendations to improve the current proposed policy so that it will have a more wide-spread impact
    c) Determining effective policy alternatives
2) It is feasible to conduct a relevant and timely analysis of the health impacts of the proposal.
    a) It is relevant because of the major opioid problem in Utah, discussed above, and because the policy that will be examined is seeking to alleviate part of that problem.
    b) It is timely because the policy the HIA is examining will be voted upon in January, and there is great support for addressing this issue by the Utah State Legislature and other relevant stakeholders
3) The proposal and its decision-making process are potentially open and receptive to the findings and recommendations of an HIA.
    a) The majority of stakeholders involved in the decision-making process are ready to act, and are likely to consider the findings of this HIA.

In conclusion, the information provided as part of this HIA would add value to the current debate on how to stem the tide of Utah's opioid addiction epidemic, particularly given that unconsidered and undervalued health impacts of the currently proposed policy will be addressed. Whether or not prior authorization of opioid prescriptions by health insurers is the best policy to address the opioid problem in Utah will be determined, and possible policy alternatives that should also be explored by Utah's state policy makers will be proposed.

APPENDIX B: FIGURES

Figure 1: Causal Pathway

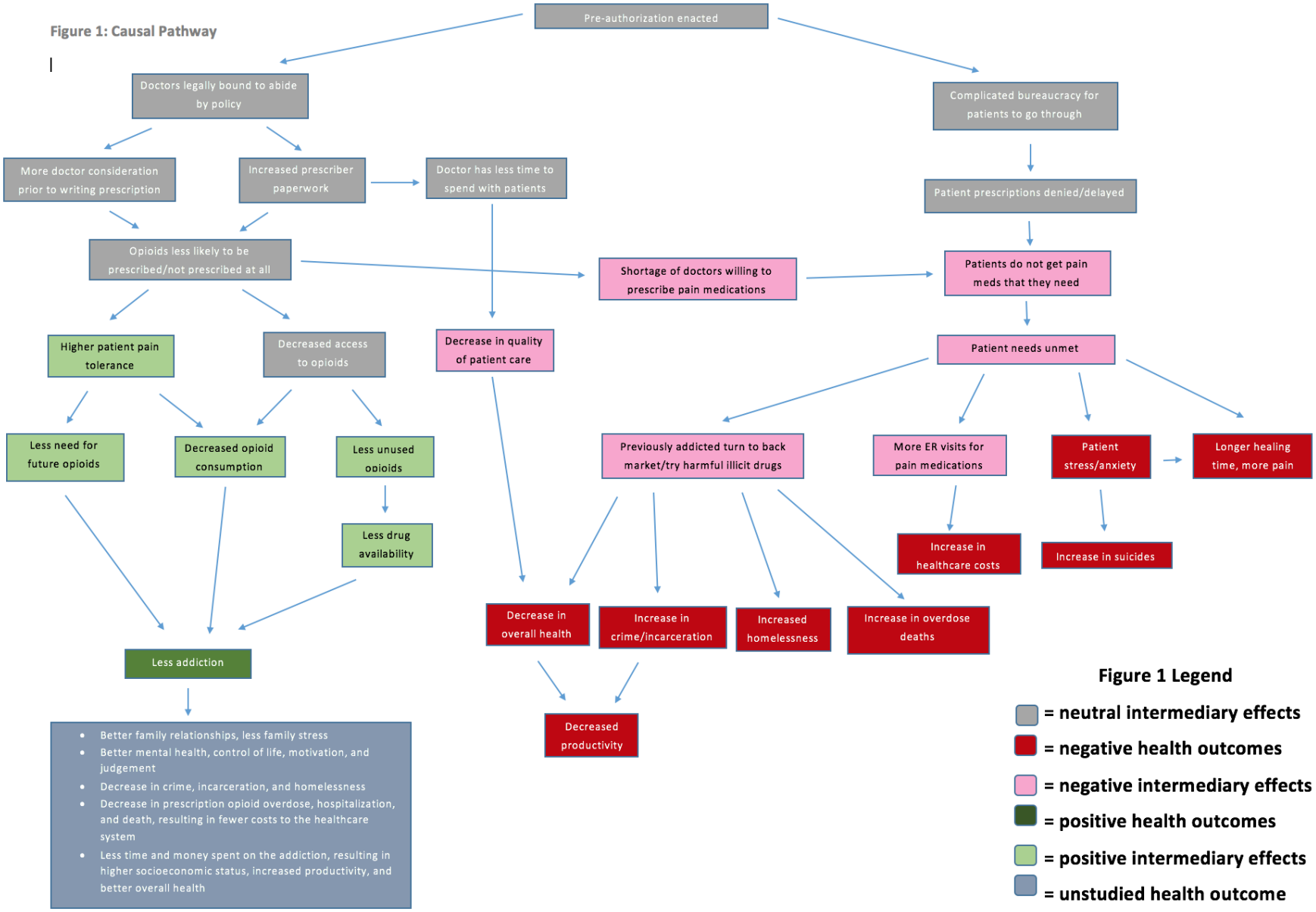


Figure 2: Opioid Prescriptions Dispensed by US Retail Pharmacies[11]

Figure 3: Number of deaths from occurrent[†] prescription opioids compared to cocaine and heroin, Utah 2000-2014[13]

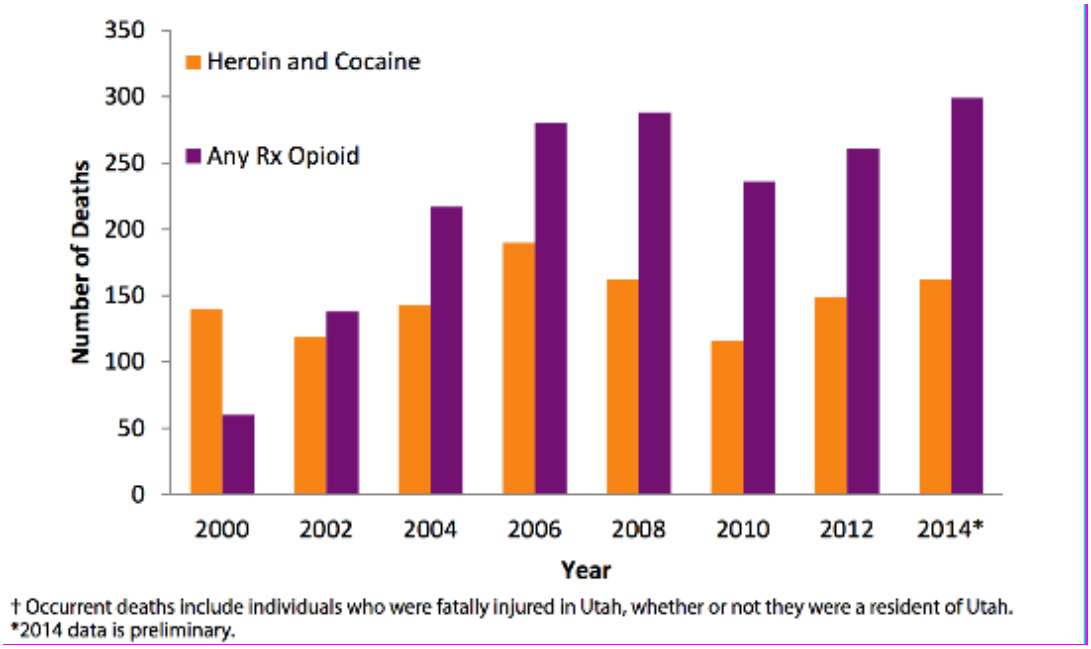


Figure 4: National Overdose Deaths – Number of Deaths from Heroin[59]

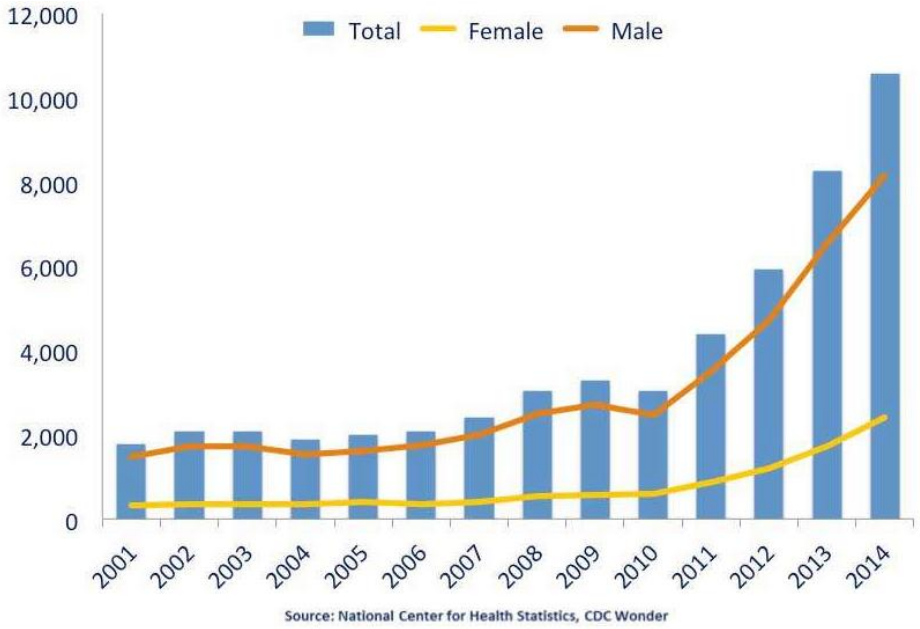
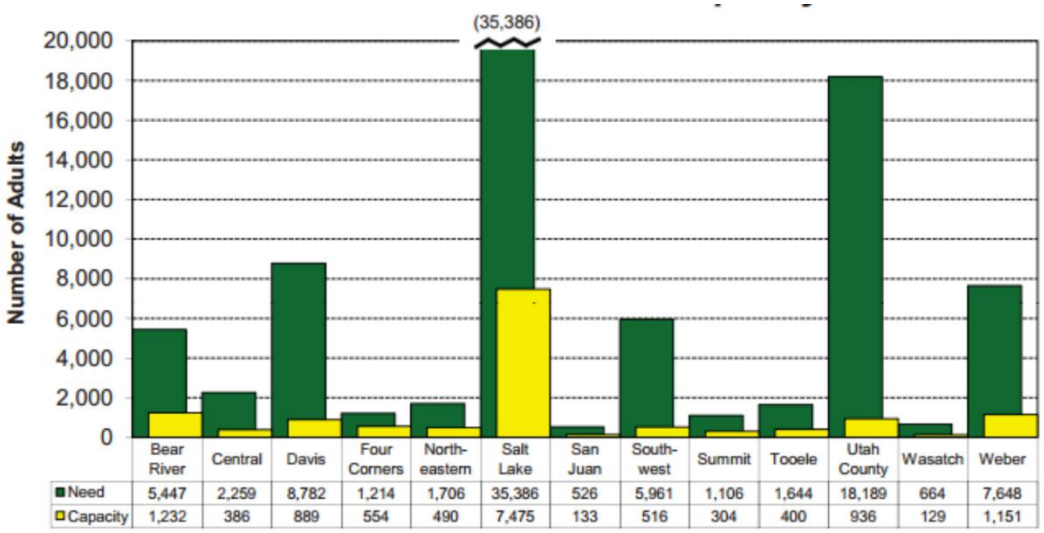


Figure 5: Number of Adults Who Need Substance Use Disorder Treatment Compared to the Current Public Treatment Capacity in Utah[60]



	Bear River	Central	Davis	Four Corners	North-eastern	Salt Lake	San Juan	South-west	Summit	Tooele	Utah County	Wasatch	Weber
Need	5,447	2,259	8,782	1,214	1,706	35,386	526	5,961	1,106	1,644	18,189	664	7,648
Capacity	1,232	386	889	554	490	7,475	133	516	304	400	936	129	1,151

APPENDIX C: HIA SCOPING

Introduction

As established in the Screening section, this HIA seeks to determine whether or not the policy proposed by Representative Ray Ward to require pre-authorization for prescription opioids will effectively contribute to solving Utah's opioid abuse problem. Specifically, the goals of this HIA are to thoroughly examine the positive and negative short-term health impacts and long-term health outcomes that are likely to result from implementation of this policy.

The purpose of the Scoping phase of the present HIA was to identify the potential health impacts and outcomes of the proposed policy that will be further examined as part of this HIA. In addition, a work plan for carrying out the HIA was established and key stakeholder involvement was determined.

Who will this policy affect?

This policy will be implemented statewide in Utah. It will affect all prescribers, distributors, and specific insurers (private insurance plans over which the state has jurisdiction, insurance plans covering state employees, Medicaid, and Workman's compensation). Each of these groups will be responsible for ensuring compliance with the new policy.

Patients enrolled in those specific insurance plans included in this policy who need prescription opioids will also be affected. Those who are likely to receive positive benefits from this policy are those at risk of becoming addicted to opioids, such as those who will experience any type of pain or injury for which opioids would be prescribed. As a result of this policy, it is hoped that the incidence of opioid-related addiction will decrease among this high-risk population. Other positive health impacts include a decrease in risky behaviors associated with addiction, and improved mental and emotional health of those at risk of becoming addicted. It is

expected that these short-term health impacts will emerge as a result of this policy within one year of its implementation.

Other vulnerable populations likely to be affected by this policy include individuals who are already addicted to opioids and those who are legitimately receiving opioids for chronic pain. It is likely that both of these populations will experience negative outcomes as a result of this policy. Negative health impacts that could be seen within one year of policy implementation include: increased anxiety, stress or pain experienced by patients who legitimately need prescription opioids but are now denied access by their insurance companies; and an increase in high risk behaviors by those who are already addicted, such as turning to the black market for opioids if they are denied access through legitimate channels. These health impacts and other long-term health outcomes are further explored in the next section.

The Scope of the HIA

Based on an understanding of health, health determinants and drug abuse, and after a review of the literature, a thorough causal pathway was developed. Figure 1 (in Appendix B) shows the causal pathway of health impacts and outcomes, both positive (in green) and negative (in red), that are likely to occur as a result of the proposed opioid pre-authorization policy. Non-health related outcomes are depicted in grey. An overview of the causal pathway is described below.

Following implementation of the pre-authorization policy, prescribers and pharmacists would be legally bound to abide by the policy. This would result in increased awareness of opioids and their potential harms among prescribers, as well as an increased amount of paperwork that needs to be completed by the prescriber prior to the patient being able to fill their prescriptions.[32] Doctors generally dislike pre-authorization regulations because they can become

complicated and can take extra time and resources. Representative Ward, an MD and the representative proposing this bill, said that he would change his prescribing habits just to avoid going through the preauthorization process, and he hopes that other doctors will also change their prescribing habits as a result of the passing of this bill.[61] Thus, the number of prescriptions written by prescribers for chronic opioids is likely to decrease as a result of this policy.[56]

Overall, it is expected that this policy will lead to decreased opioid consumption, which in turn will result in fewer opportunities for opioid addiction to develop and a decrease in the actual incidence of opioid addictions in Utah.[62] Decreased access to prescription opioids will also lead to fewer opioid storage problems, such as keeping unused medication, which leads to fewer pills available to be stolen or shared.[63,64] This prevents people from being exposed to unauthorized opioids (lessening the number of future addicts) and decreases access to opioids by individuals who are already addicted. In addition, most people who have recently started misusing pain relievers or who occasionally use them get them from people with unused medication.[65] Fewer storage problems would cut down on these peoples' access to opioids.

There are many expected positive health impacts of the proposed policy, all of which stem from a decrease in the incidence of opioid addictions. These impacts are more likely to affect those who are at risk of becoming addicted to prescription opioids, as opposed to those who are already addicted. It is expected that a lack of addiction would positively influence the family relationships of those at risk of addiction, and would result in an avoidance of the stress and poor mental health that come with the addiction of a loved one.[66,67] If addiction is avoided, those at risk are likely to experience better self-control, self-motivation and judgement.[68] They are likely to be more productive at work and in the home, leading to increased socioeconomic status.[69-71] These individuals are also less likely to engage in high risk behaviors associated with

addiction, such as theft, illegal drug use, homelessness, lying to prescribers and loved ones, driving while under the influence of opioids, and other crimes and injuries associated with risky behavior.[72-74] Decreased addiction would also lead to less time and money spent on the addiction by the individual.[71] Health outcomes directly associated with opioid abuse, such as overdose, hospitalizations and death, will also decrease as a results of this policy. This will directly result in reduced hospitalization and other addiction-related costs to the healthcare system, as well as lower economic costs to society.[48,75] The money saved on addiction-related costs can then be funneled into other programs and health-related expenditures.

Despite these positive impacts, those who are already using chronic opioids, either for legitimate pain or due to addiction, are likely to experience a number of negative health impacts and outcomes. Pre-authorization is another layer of bureaucracy for patients to go through prior to getting prescriptions filled. In order to successfully fill prescriptions, patients may be required to make multiple trips to the pharmacy, which is particularly problematic for the severely ill or the elderly.[32] Patients' prescriptions may be delayed or even denied by insurers, causing the patient to be frustrated and stressed. This is particularly problematic if the patient is using chronic opioids for legitimate pain, and could result in untreated pain.

For those suffering from opioid addiction, decreased access to opioids may cause those individuals to turn to the black market for their drugs, either for opioids or for other street drugs like heroin.[61,76] The effect of this policy on those who are already addicted is likely to be the opposite of the effect experienced by those at risk of addiction: risky behaviors (theft, illegal drug use, homelessness, etc.) and direct health outcomes (overdose, death, etc.) are likely to increase as a result of the pre-authorization policy.[72-74] Whether the risk of these negative health

outcomes outweighs the risk of the positive health outcomes described above remains to be determined as a part of this HIA.

Possible Data Gaps

One important data gap is that there is a limited amount of time to complete this HIA and it is not feasible to collect quality primary data in such a short timeframe. This may lessen the thoroughness of the HIA or could prevent the discovery of information that could be of importance to the HIA. However, a thorough literature review will hopefully make up for most of the information that could have been discovered through primary data collection.

Another data gap is that no states have passed opioid misuse pre-authorization legislation exactly as Utah has proposed. It is only possible to compare this proposed legislation to other states to a certain degree because of these differences. However, it is possible to look at the positive and negative aspects of different legislation in other states to estimate what could better Utah's currently proposed legislation and determine alternatives to it. This could partially be a strength because there are many different opioid policies in different states and hence there are many different aspects and ideas that could be considered in the HIA.

Also, though there are many studies on the effects of prior authorization on the amount of drug in circulation, there are few studies specifically about opioids and prior authorization. Additionally, these studies focus more on the aspect of pre-authorization saving money for insurance companies rather than pre-authorization lessening drug abuse. Though the pre-authorization studies are not exactly ideal, it is possible to still learn much from them and at least parts of them can be applied to the proposed legislation. The thorough literature review will help identify the most useful and pertinent articles for the HIA.

Conclusion

In conclusion, the scope of the HIA will include an examination of positive and negative health impacts and outcomes for individuals who are currently addicted or at risk of becoming addicted, with the help of a causal pathway. It will also identify alternatives or improvements to the presently proposed policy by examining other state's current opioid misuse policies, conducting secondary data analysis by performing a thorough literature review, and contacting key stakeholders. Lastly, it will determine if the current proposed policy will be an effective solution to Utah's opioid problem. As more data and stakeholder input are gathered, the scope and scoping pathways will be adjusted accordingly.

APPENDIX D: STAKEHOLDER INFORMATION

Representative Raymond Ward is a family practice physician in Bountiful, Utah and an elected member of the House of Representatives in the Utah State Legislature. He is the sponsor of the proposed policy to require pre-authorization for prescription opioids. As a family physician, Representative Ward felt, when interviewed, that this policy would be an effective method of changing the prescribing habits of physicians to decrease opioid addiction rates. He also believed that over time the rates of opioid addiction in Utah would decrease if fewer people are prescribed long-acting opioids. In addition, he felt that opioids are not an effective treatment for chronic pain and that general practitioners should never prescribe outside of the bounds the proposed policy would place on them.

Various medical professionals were individually interviewed as part of this HIA. Their input was sought to provide information on how requiring pre-authorization of prescription opioids will impact their medical practice and patients. The following are those that were interviewed:

- Dr. Stuart King, a physiatrist specializing in Physical Medicine and Rehabilitation in Orem, Utah
- Dr. Todd Groesbeck, a dentist in Provo, Utah
- Dr. Brian Swenson, a colorectal surgeon from Logan, Utah
- Dr. Case Gobb, a pharmacist in Provo, Utah
- Dr. Matthew Brown, a family practice physician in Orem, Utah

In general, these interviewees all had very similar views of the policy. None of them supported the policy, and most stated that it would not significantly lower the amount of prescribing, if it managed to at all. They also stated that the policy would increase work and cost for doctors and would make it more difficult for patients who need pain medicine to get it. Additionally, they strongly felt that insurance companies were unqualified to make good decisions about patients' pain medication needs, and that it could be dangerous to give insurance companies that power.

Dr. Keith Willmore is a family practice physician and the Medical Director of the Brigham Young University (BYU) Student Health Center in Provo, Utah. He had similar opinions as the medical professionals listed above. In addition, he predicted that pre-authorization would make general practitioners less likely to prescribe opioids themselves, resulting in an increase in the number of referrals to pain specialists. This would be particularly problematic for patients living in rural communities that lack specialists. However, no matter who writes the prescription, Dr. Willmore did not think that pre-authorization would decrease the number of long-acting opioid prescriptions. Instead he predicted that it would simply result in increased hassle for physicians and their patients.

Mr. Pat Bird is the Prevention Manager for Utah County Department of Drug and Alcohol Prevention and Treatment and has worked in the substance abuse field for 19 years. He felt that the policy addressed only the supply aspect of the opioid epidemic and not demand, which he thinks is the larger and more real problem. As long as demand goes unaddressed, there will still be addicts and overdoses. He also thought the policy could slightly decrease the number of prescriptions written, but that it would not likely significantly affect the problems of overdose and addiction.

Detective David King has been a police officer with the Salt Lake City Police Department for 9 years. He is a part of the Community Intelligence Unit over Salt Lake City's District 4, which includes a large homeless population, many of which suffer from substance abuse problems. Detective King's input was sought to provide knowledge on crime associated with prescription drug abuse, as well as knowledge about the number of prescription drug abusers that later turn to illegal drugs. Detective King did not provide an opinion as to whether he is for or against the proposed policy. However, he stated that many of the people he sees with

substance abuse problems begin with prescription drug addictions and that there is a severe lack of addiction recovery services for people who are currently addicted. Additionally, he highlighted some of the ways people obtain illegal drugs and legal drugs illegally.

Ms. Karen Carter is a Clinical Mental Health Counselor and Program Manager at the Department of Drug and Alcohol Prevention and Treatment for the Utah County Health Department. Given that Project Reality, Utah County's drug treatment program, sees a large number of patients who are abusing prescription drugs, her input was sought to gain an understanding of how this policy would affect those who regularly use prescription drugs. Overall, Ms. Carter did not believe that this policy would effectively reduce addiction to prescription opioids, and instead felt that other policy alternatives would be more effective. For example, she mentioned requiring doctor-patient contracts when prescription opioids are prescribed; this alternative is further discussed in the recommendations section.

Dr. Peter Kearney is a pharmacist in Provo, Utah. He supported the policy in general, because he agreed with its provisions, but did not think that it would have a very large impact on addiction or prescription. He also stated that it could be a burden for disabled or older persons because the policy could cause patients to visit the pharmacy multiple times when initially getting or renewing prior authorization approval.

Dr. Brigham Frandsen is an Assistant Professor with the Department of Economics at Brigham Young University. Dr. Frandsen provided feedback on important economic factors to consider as part of assessing this proposed policy. His input what particularly helpful in determining that doctors and patients who are not addicted to are most likely to change their behaviors as a result of opioid policy in general, because they are the most elastic groups. He did not provide an opinion on whether or not he was for or against the proposed policy.

APPENDIX E: SUMMARY OF FINDINGS TABLE KEY[4]

1) *Literature Review/Stakeholder Perspectives:*

   a) Increase: health outcome will increase
   b) Mixed: there were mixed perspectives about the health outcome
   c) Decrease: health outcome will decrease
   d) No Change: health outcome will not change
   e) Unknown: insufficient evidence available
   f) N/A: data was not gathered from the source

2) *Direction*: Effect is beneficial or adverse.

   a) Increase: there will be an increase in the health state
   b) Decrease: there will be an decrease in the health state
   c) Stable: there will be no change in the health state
   d) Unknown: health state is unmeasured or unknown

3) *Magnitude:* Expected size of the effect (number of affected people, expected frequency or prevalence of symptoms, illness or injury).

   a) Low: the impact on health is minor and/or temporary and does not pose a hazard or benefit
   b) Medium: the impact on health is detectable, reversible and/or poses a minor to moderate hazard/benefit
   c) High: the impact on health is substantial, lasting and/or poses a major hazard/benefit
   d) Unknown: the impact on health is unknown or poses an unknown hazard/benefit

4) *Likelihood:* Chance that the effect will occur.

   a) Unlikely: the impact is not likely to occur
   b) Possible: the impact is likely to occur on a regular basis
   c) Probable: the impact will almost certainly occur and persist over time
   d) Unknown

5) *Distribution:* Distribution of effects among vulnerable populations to delineate equity factors.

   a) High: high impact on vulnerable population
   b) Medium: medium impact on vulnerable population
   c) Low: low impact on vulnerable population
   d) Unknown: unknown impact on vulnerable population

6) *Certainty of Evidence:* level of confidence that the effects will occur based on literature review.

   a) High: evidence strongly supports the characterization conclusions

b) Medium: evidence moderately supports the characterization conclusions
c) Low: evidence nominally supports the characterization conclusions
d) Unknown: there is little or insufficient evidence to support the characterization conclusions
e) N/A: literature was not examined for the health effect

APPENDIX F: LIMITATIONS

Despite best efforts by the research team to conduct a comprehensive assessment, this assessment has some limitations. Firstly, there are insufficient Utah-specific data concerning the health care costs and work productivity costs of opioid abuse. This made it difficult to predict changes in costs due to changes in addiction. Also, much of the literature found as part of this assessment was conducted nationally or in other states, thus limiting the generalizability of our findings to the Utah-specific context. Additionally, there is little academic research on how prior-authorization affects patient care and outcomes; several studies recommend that this research be done,[26,77] but as of right now this research is still lacking. To make up for this lack, the HIA team sought this information from stakeholder interviews.

There were also limitations concerning the stakeholder data that was collected. Stakeholders were selected because of their connections to the HIA team, their accessibility in being contacted, and their willingness to participate in the HIA process, which means that valuable stakeholder input could have been excluded from the assessment. Additionally, some stakeholders did not respond, and their input was unable to be included in this assessment. Notably, opinions from insurers or a representative from the Utah State Health Department could not be collected as part of this HIA. There were also discrepancies between findings among stakeholders, and between stakeholders and gathered literature. The HIA team alleviated these problems by seeking numerous and varied stakeholder opinions, and by using the best possible judgement.

Lastly, the HIA team made decisions that limited the focus of research done in the Assessment phase. After gathering data from numerous sources that concluded that addiction

would either not change or would change minimally, the team did not fully research the benefits of people avoiding addiction as a result of this policy.