



ReThink  
Health®

# Understanding the Impacts of Incarceration on Health

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## A Framework

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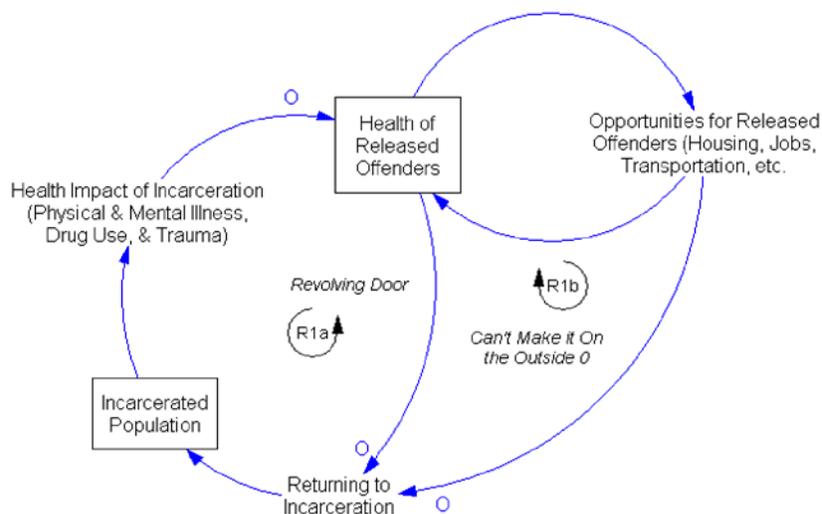
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## Executive Summary

In February 2016, ReThink Health (RTH), in partnership with the Minnesota Department of Health (MDH), facilitated two work sessions with a group of individuals with varying perspectives on the criminal justice system. The group's charge was to work together to develop a shared, high-level understanding of the systemic impacts of incarceration on health. Several key findings emerged from these workshops, including:

1. Incarceration impacts health in numerous, complex ways as shown in Exhibit 6 on Page 10. Incarceration sets off domino effects that increasingly ensnare individuals, families, and communities, leading to poor health outcomes as well as health inequities.
2. The current system has three primary "reinforcing loops," whereby actions influence results, which creates more of the actions and so forth in a vicious cycle. For example, as shown in Exhibit 1 below, an event (incarceration) negatively influences a result (health of released offenders), which results in more of that event (recidivism and re-incarceration). For further description of reinforcing loops see Page 5.

### Exhibit 1: Reinforcing Loop



3. The three reinforcing loops identified by the participants, and substantiated by research, are:
  - Reinforcing loop 1 – The health impacts of incarceration can be lifelong because incarceration limits opportunities, and exposes people to trauma, disease, chronic stress, social stigma and exclusion; once incarcerated, people are trapped.
  - Reinforcing loop 2 – Health impacts are intergenerational; having an incarcerated parent is recognized as a traumatic experience for the child and is linked to negative health outcomes throughout the child's life.
  - Reinforcing Loop 3 – High rates of incarceration impair community health.
4. The map of the three loops represents a first step in exploring the question of how incarceration impacts health. The map does not depict the impact of incarceration on public safety nor the factors leading to incarceration, some of which are health-related. Participants did however have a lengthy discussion about the factors leading to incarceration, specifically, how racism and underlying social, political and economic values shape today's system of incarceration. They stated emphatically that additional community conversations are needed to expose the values and assumptions that drive the current system design in order to complete the picture of the impact of incarceration on health.

## Background

ReThink Health (RTH) is national nonprofit dedicated to reimagining and transforming health by helping leaders identify and overcome the barriers to reform at a regional level, with the goal of inspiring change across the country that will lead to healthy people and thriving communities. RTH offers the discipline of Systems Thinking and modeling to facilitate big-picture thinking: allowing leaders to step outside their own frames of reference, enabling a view of how the various parts of systems interact in unexpected ways, and helping them determine how and where they can exert influence. RTH does this by seeking to deeply understanding regional challenges, listening to diverse voices, and providing models and tools so that leaders can work together to harness the information, insights, and actions needed to overcome entrenched beliefs and disrupt the status quo to improve health.

As part of their work in sustainable financing, RTH is interested in understanding if the discipline of Systems Thinking can be used to help decision-makers understand how complex systems interact and whether such an understanding can provide insights about how alternative policy and/or resource allocation choices could improve health. In late 2015, RTH approached the MDH about a partnership to test this question. MDH had recently received a request from the Minnesota Legislature to study the impact of incarceration on health and agreed that Systems Thinking could be helpful in framing the complexities.

## A Framework for Understanding Health

Health is more than the absence of disease: it is a resource for living, shaped by conditions in the community. It's found at the intersection of one's physical, mental, spiritual and social well-being. Communities create health together; it is not something an individual can purchase (as in health care) or

produce alone (as in healthy behaviors). It is determined by a number of social influences such as education, housing, family structure, and economic opportunity. Incarceration is a powerful force in many communities; it interacts with all of the social determinants, impacting the health of people and communities across the country.

## Exhibit 2: Social Determinants of Health



Image Source: (Vera Institute of Justice, 2014)

Incarceration is not an isolated event confined to the individual and time served, but a cog in a complex system. Complex systems are extremely hard to understand because it is difficult to see all the interactions or to know all intended as well as unintended “side effects” (which are often delayed or occur in other sectors). In order for us to make sense of and operate in a world of complexity, each of us carries “mental models” of the way the world works. Sometimes, in situations of great complexity, these models are incapable of providing more than a sliver of the whole picture; so we operate on imperfect information. How health is produced is one of those situations. So, too, is incarceration.

Incarceration is major social determinant of health for entire populations as well as on an individual level. Incarceration can have long lasting, detrimental effects on economic opportunity, educational achievement, family unity, and housing stability – the very conditions that shape the health of individuals, families, communities, and that reinforce the pathways leading to or away from incarceration. Incarceration, far from being a matter simply of the interactions of incarcerated persons

with law enforcement and prison, is a complex set of interactions with profound consequences for the families and communities, police, courts, prison employees, health care contractors, and the educational, economic, and social systems of the larger society. Moreover, as stated in an in-depth and extensively researched report by the National Research Council of the National Academy of Sciences,<sup>1</sup> "Understanding extraordinary racial disparities in imprisonment is a critical challenge facing the nation. The political and social context in which current policies unfolded has a pronounced racial dimension." In Minnesota, the over representation of populations of color in the prison system contributes to the health inequities and health disparities we experience in these same communities, especially the American Indian and African American communities.

## Thinking Systemically

RTH proposed applying Systems Thinking in two workshops: one in early February 2016 and another, two weeks later. More than 30 individuals were invited at the request of the MDH, and they represented diverse perspectives on the criminal justice system: public safety, economic development, education, health, human services, and the community. Participants were led through a discussion of the question: *What are the issues, opportunities and obstacles that impact incarcerated individuals and their families as they attempt to lead truly healthy lives?* The goal was for participants to work together to develop a shared, high-level understanding of the systemic impacts of incarceration on health.

In its fullest expression, Systems Thinking is a highly technical discipline that uses maps composed of causal loop diagrams to depict the interactions in complex systems. These diagrams are validated and calibrated with data; mathematical algorithms are applied to estimate the intensity and probability of effects on different segments of the population or other dependent variables; and computer models are created to simulate the system. The simulation model allows users to explore various "what if" scenarios.

For the purpose of exploring the linkages between incarceration and health in a very compressed time frame, a conceptual application of Systems Thinking was used in the workshop. With more time, the process would have benefitted from vetting the loops with participants a final time, and including additional perspectives. Most limiting was the workshop focus: the social determinants of health are so complex and so extensive that it was impractical to attempt to build a "full" map during the short timeframe of the workshop. There are a number of important variables – like the impact incarceration has on public safety – that we could not address. The workshop did not fully explore the pathways into the justice system or the pathways when people exit the system and interact with other social

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<sup>1</sup> National Research Council. (2014). *The Growth of Incarceration in the United States: Exploring Causes and Consequences*. Committee on Causes and Consequences of High Rates of Incarceration, J. Travis, B. Western, and S. Redburn, Editors. Committee on Law and Justice, Division of Behavioral and Social Sciences and Education. Washington, DC: The National Academies Press.

determinants of health. As workshop participants pointed out, expanding the map to address both ends of the spectrum is critical if we are truly to address the impact of incarceration on health.

Nonetheless, even this preliminary application of Systems Thinking yielded powerful insights into how systems work to impact health. The results provide a construct for understanding population health outcomes including health inequities. The results can serve as a platform for further discussions to deepen our collective understanding and to explore effective ways of intervening in the system and/or modifying resource investments to achieve different outcomes.

## Workshop Results

In response to the question above about the impacts of incarceration on health, workshop participants generated more than 150 responses. Many of the participants work directly with people who are or have been incarcerated, and have witnessed the desperate need for treatment services, the struggle to secure jobs or housing upon release, or the trauma suffered by the children of incarcerated parents – experiences validated, for example, by the National Resource Council report, as quoted throughout.

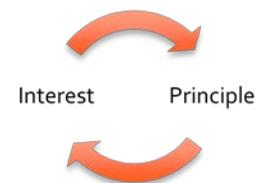
Participants sorted the impacts into several categories, from which three profound “reinforcing loops” emerged – e.g., cycles that repeat to increasingly grow in breadth or intensity over time. These loops show that an event such as incarceration can set off domino effects that increasingly ensnare individuals, families, and communities and lead to poor individual and community health. The three reinforcing loops are described below.

Reinforcing loop 1 (Exhibit 3)– *The health impacts of incarceration can be lifelong because incarceration limits opportunities, and exposes people to trauma, disease, chronic stress, social stigma and exclusion; once incarcerated, people are trapped.* According to the National Research Council, “The incarcerated population bears a disproportionate burden of many diseases.”<sup>2</sup> This is just one aspect of health impacts. The National Research Council also stated, “Imprisonment can adversely affect the interpersonal interactions in which prisoners engage once they are released, closing off opportunities to obtain badly needed social, economic, and other kinds of support.”<sup>3</sup> For example, participants described how criminal records brand someone for life—making it nearly impossible to obtain housing or jobs, especially upon release. The lack of housing and/or a job

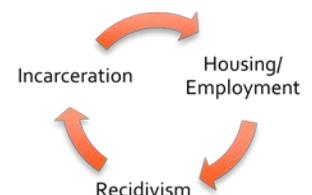
### WHAT IS A REINFORCING LOOP?

It’s a structure in Systems Thinking. It refers to an action that influences a result, which creates more of that action and exponential growth.

Principle and interest are an example of a positive – or virtuous – reinforcing loop.



The incarceration loops identified by participants create negative – or vicious – reinforcing loops. For example:



<sup>2</sup> NRC, p. 251

<sup>3</sup> NRC, p. 194

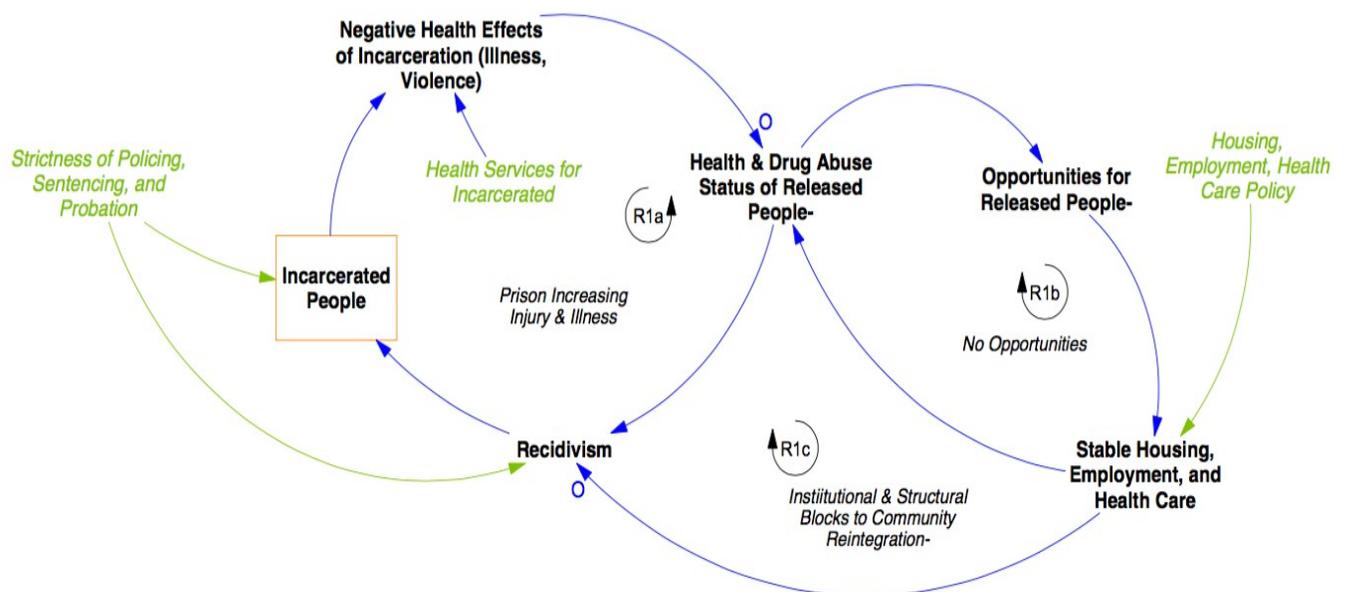
makes successful re-entry into society an overwhelming task. Further, the difficulty in obtaining housing and employment upon re-entry makes it hard to reunite with one's family, social support that is vital to successful re-entry. Isolation further stresses and erodes health. Likewise, access to appropriate health services and/or treatment options is often lacking. Incarceration itself has been shown to be a traumatic event in a person's life that can have lifelong health repercussions.

### Exhibit 3: Reinforcing Loop 1

## Lifelong effects of incarceration

"The incarcerated population bears a disproportionate burden of many diseases."

– National Research Council



#### Key

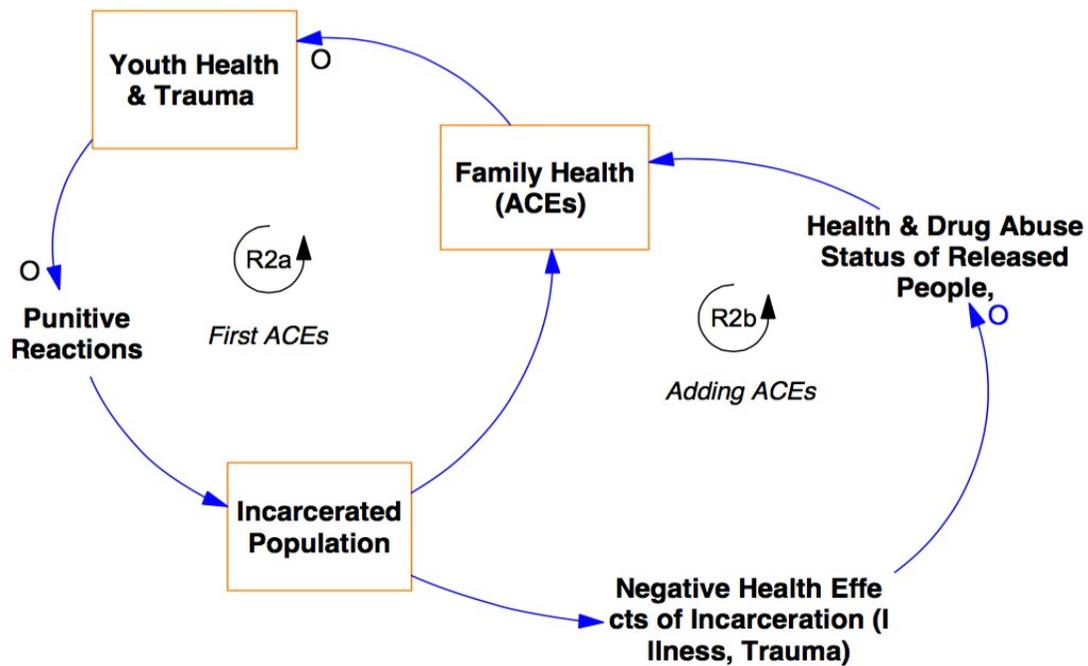
- R Loops – Reinforcing feedback loops creating compounding growth
- *Large Italic Variables* – Policy areas; areas of choice
- Boxed Variables – Key variables (e.g., individual, family, community)
- O Links – Cause and effect in the opposite direction. (All others change in the same direction.)

Reinforcing loop 2 (Exhibit 4) – *Health impacts are intergenerational; having an incarcerated parent is recognized as a traumatic experience for the child and is linked to negative health outcomes throughout the child’s life.* One in six Minnesota children have had an incarcerated parent. Incarceration and separation damages family and social bonds and decreases economic and social stability of the family. Scientific evidence shows that incarceration of a parent is a traumatic life event that can impact that child’s mental and physical health throughout the child’s entire life. Evidence also shows that this trauma often disrupts a child’s education. So the cycle continues. For example, two-thirds of the men in state and federal prison do not have high school diplomas. The National Research Council concluded, “The close correlation between having a partner or parent who has been incarcerated and poor outcomes among families and children is unmistakable.”<sup>4</sup>

### Exhibit 4: Reinforcing Loop 2

## Health impacts are intergenerational; traumatic impact on health of children and families

“The close correlation between having a partner or parent who has been incarcerated and poor outcomes among families and children is unmistakable.” – National Research Council



<sup>4</sup> NRC, p. 280

## Key

- R Loops – Reinforcing feedback loops creating compounding growth
- *Large Italic Variables* – Policy areas; areas of choice
- Boxed Variables – Key variables (e.g., individual, family, community)
- O Links – Cause and effect in the Opposite direction. (All others change in the same direction.)

Reinforcing Loop 3 (Exhibit 5) – *High rates of incarceration impair community health*. According to the National Research Council, “Although gaps in knowledge in this area remain, the evidence base compiled over the past 10 years makes clear that current challenges in incarceration and community health are strongly connected for some of the most vulnerable communities.”<sup>5</sup> As the level of incarceration rates grows, the impact is felt on the community with the diminishment of economic opportunity, household incomes, social and family cohesion, and educational success while depression and anxiety levels increase. In some communities, particularly African American and American Indian communities, a significant percentage of the adult population has been removed, damaging social bonds and cohesion. Disinvestment in these populations and communities occurs, exacerbating the lack of employment and quality affordable housing, in yet another downward cycle.

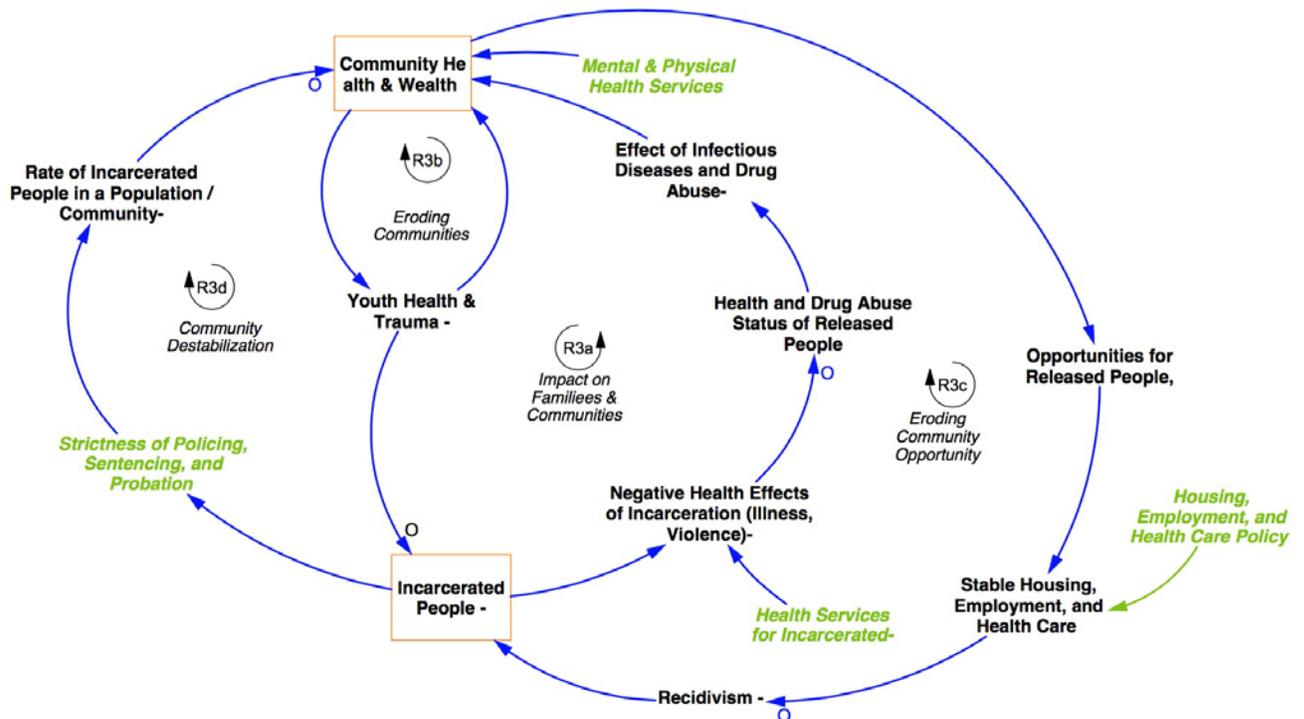
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<sup>5</sup> NRC, p. 203

## Exhibit 5: Reinforcing Loop 3

# High rates of incarceration impair community health

“The evidence base compiled over the past 10 years makes clear that current challenges in incarceration and community health are strongly connected for some of the most vulnerable communities.” – National Research Council



### Key

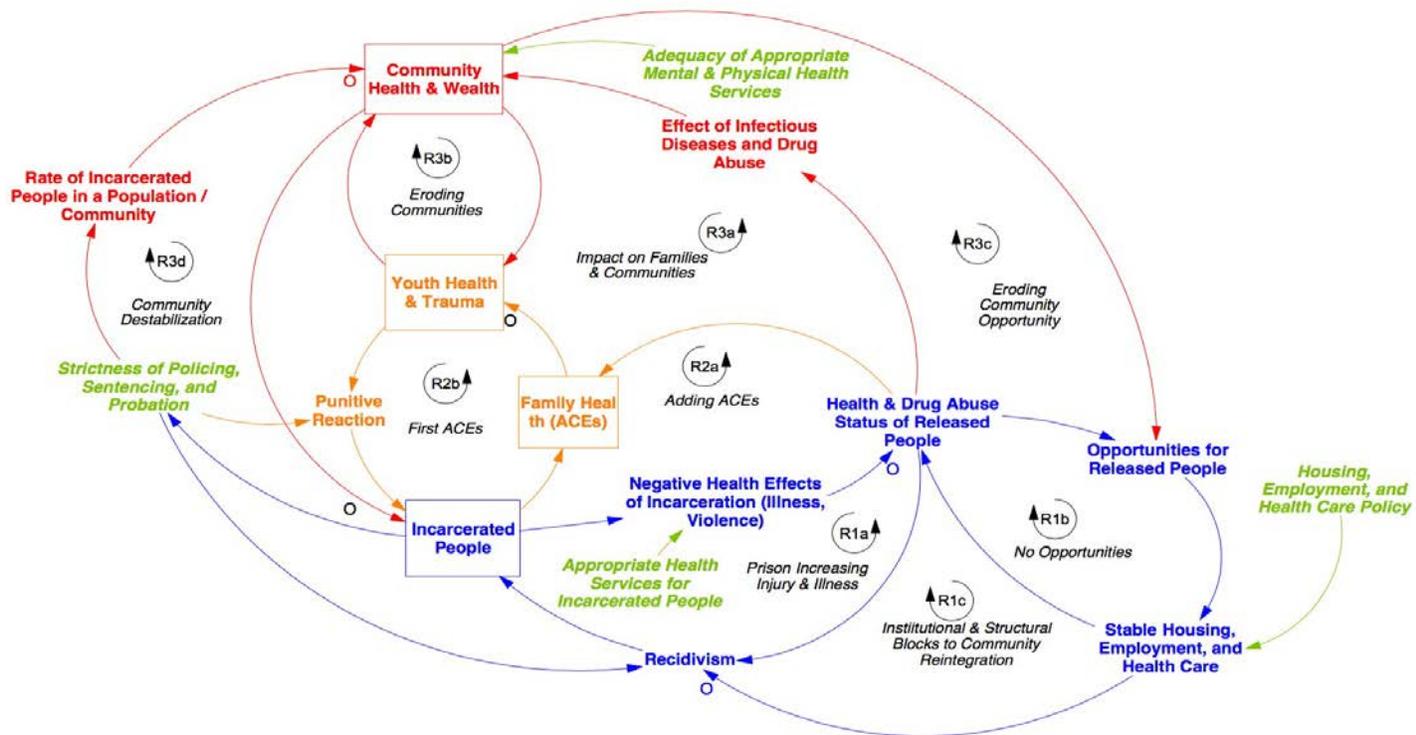
- R Loops – Reinforcing feedback loops creating compounding growth
- *Large Italic Variables* – Policy areas; areas of choice
- Boxed Variables – Key variables (e.g., individual, family, community)
- O Links – Cause and effect in the Opposite direction. (All others change in the same direction.)

Taken together, as shown in Exhibit 6, these three loops show that incarceration is not an isolated event — incarceration sets off a chain reaction. The loops reinforce one another in a vicious cycle, driving down the health of people, families and communities. The National Research Council concluded, “Because of the extreme social concentration of incarceration, the most important effects may be systemic, for groups and communities.”<sup>6</sup>

### Exhibit 6: Current System

## Map of current system: vicious cycle

“Because of the extreme social concentration of incarceration, the most important effects may be systemic, for groups and communities.” – National Research Council



<sup>6</sup> NRC, p.355

## Key

- R Loops – Reinforcing feedback loops creating compounding growth
- *Large Italic Variables* – Policy areas; areas of choice
- Boxed Variables – Key variables (e.g., individual, family, community)
- O Links – Cause and effect in the Opposite direction. (All others change in the same direction.)

## Beginning to Make the Invisible Visible: A Platform for Public Discussion, Policy Deliberations and Resource Allocation

The goal of the workshop was straightforward: describe the systemic impacts of incarceration on health. The resulting map is a helpful tool to explore the complexity of how health is created and as a discussion platform to help policy-makers identify the broader and long-term health impacts of policy and system design. But the map, created over a period of two weeks, is a partial view of a much larger set of systemic effects, including public safety and economic opportunity. It represents just a first step in exploring the question of how incarceration impacts health.

Incarceration can be viewed in multiple ways: a series of events (someone being incarcerated), as social policy (the rules and practices around who is incarcerated, for what reasons, and for what purposes), and a reflection of public values. The map above treats incarceration only as causal events. The map does not depict the circumstances that lead to incarceration or how social policy responds to those circumstances (such as substance abuse). Nor does the map address the underlying values that give rise to the system as it is currently designed. Here the limitations of the workshop became evident as important discussions on the impact of race on incarceration and health were restricted by time, the lack of shared language and experiences between facilitators and participants around race, and the challenge of grappling with values in a workshop structure that attempts to use neutral frames.

Nonetheless, *the process* of developing the map gave rise to a deep and rich discussion about the elements that are missing from the map in its current form, a discussion that was passionate and at times agitated. Participants wondered: If the map represents the system as designed, isn't it a construct of prevailing social values, like the choice of incarceration over treatment for illness or substance abuse? The National Research Council addressed this question and concluded, "Powerful institutional, cultural, political, economic, and racial forces...helped propel the United States down a more punitive path. Yet the unprecedented rise in incarceration rates in the United States over this period was not an inevitable outcome of these forces. Rather, it was the result of the particular ways in which the political system chose to respond to the major postwar changes in U.S. society."<sup>7</sup>

Across the country, more and more attention is being given to the consequences of mass incarceration and why certain people and communities—namely American Indians, African Americans and other people of color – suffer disproportionately. Participants offered a host of factors, including institutionalized and systemic racism, differential policing, lack of services and treatments,

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<sup>7</sup> NRC, p.129

disinvestment and wealth extraction from some communities, and devaluing the lives of American Indians, African Americans and other people of color. Participants stated emphatically that while these are sensitive and sometimes taboo topics, community conversations are needed to expose the values and assumptions that drive the current system design. In addition, the map should be extended to capture these values, which are critical to a more complete picture of the impact of incarceration on health.

Systems are not fixed; they can be changed. What alternative policies, programs or resource investments can reverse the direction of the three reinforcing loops so that they create health and wealth rather than damage it? Participants identified “domains” (intervention areas such as policy, programmatic or resource investment options), outlined a range of options that would be available for each domain, and identified their preferred options. They identified these domains:

- families/adverse childhood experiences;
- policing, parole, sentencing and diversion;
- opportunities upon release (housing and employment);
- values (the “backdrop”); and
- investment in the health and wealth of communities of color.

Specific interventions suggested by participants included better support for the children and families of incarcerated individuals, diversion to quality treatment programs, and increasing the availability of and access to housing for formerly incarcerated individuals. The participants’ full list of the range of domains and intervention options has been provided to the MDH.

## Possible Next Steps

There’s a saying that “every system is perfectly designed to achieve the results it gets.” As the National Research Council noted, outcomes don’t just materialize by chance; they are determined by the design of the system. The system map developed by participants illustrates the main dynamics of the impact of one portion of the incarceration system on health. In that regard, the map can be used as a framework for interpreting the data and discussion in the report by the Minnesota Department of Health to the Minnesota Legislature. More importantly, expanding the conversation and the boundaries of the map can serve to further explore why we get the outcomes we do and what it would take to redirect that system to improve health. Next steps might include:

- Working with the community to complete the map, through a deep conversation about the values that undergird our current system of incarceration;
- “Validating” the map with data, the start of which is provided in the MDH report;
- Tracing through the map to identify and agree on key levers for change, and the types of policies, programs or resource investments that would effectively begin to reverse the downward spiral of health the current system creates; and
- Identifying how resource allocation decisions further serve to reinforce the loops as they currently exist.

Throughout the course of this work it became clear that incarceration has a profound impact on the health of Minnesotans and on health inequities. The mapping workshops provided what we hope is the start of a very important community conversation about health.

*ReThink Health would like to thank the Minnesota Department of Health, particularly Assistant Commissioner Jeanne Ayers and Dana Farley, for their partnership in this initiative. We would also like to thank the workshop participants for their passion and dedication to the work. It was an honor to collaborate with you all. We look forward to seeing this work advance.*