



**A case study focusing
on the impact of Pennsylvania's
whole-school approach**

The Kooth Theory of System Change was developed by researchers and clinical experts during a series of workshops to understand how Kooth improves youth mental health and impacts systemic change in Pennsylvania. The framework describes a sequence of events within the Kooth service (activities, inputs, outputs, and outcomes) that is expected to lead to positive change (impacts) in five key areas: education, healthcare, government, judicial, and economy. We also theorized the mechanisms of change: the underlying drivers of system change. This report presents a preliminary version of the Kooth Theory of System Change to describe the shared vision of the Kooth whole-school approach to improving youth mental health and well-being.

What does Kooth do?

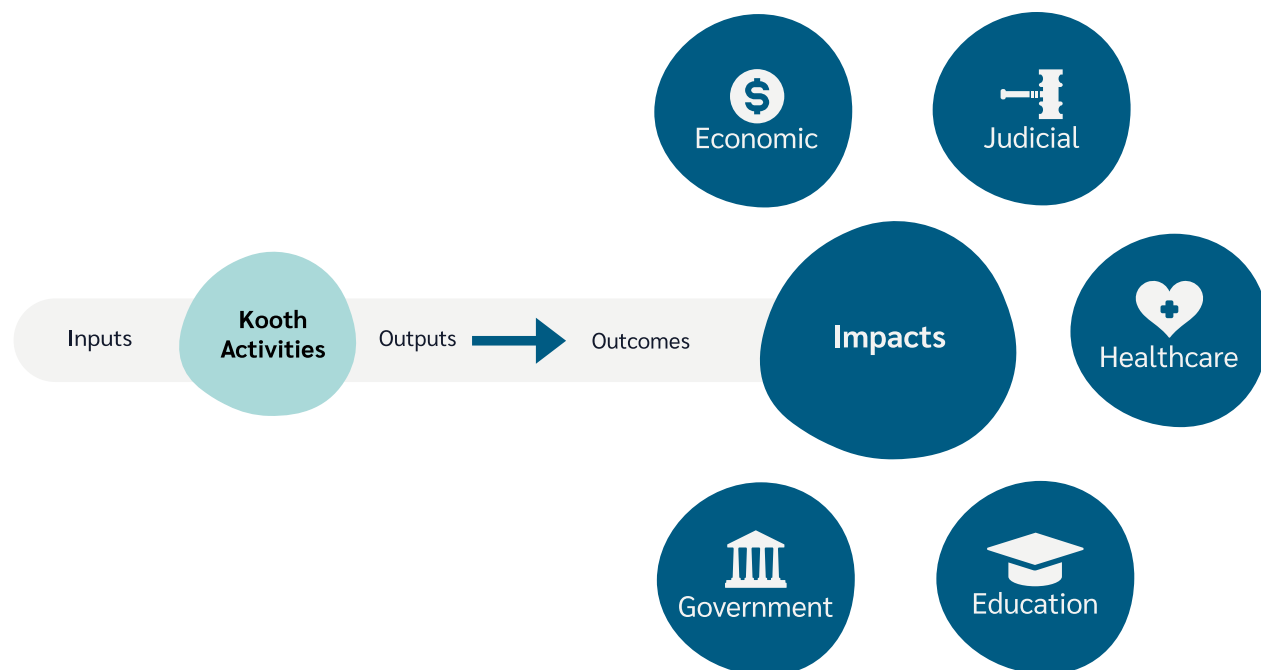
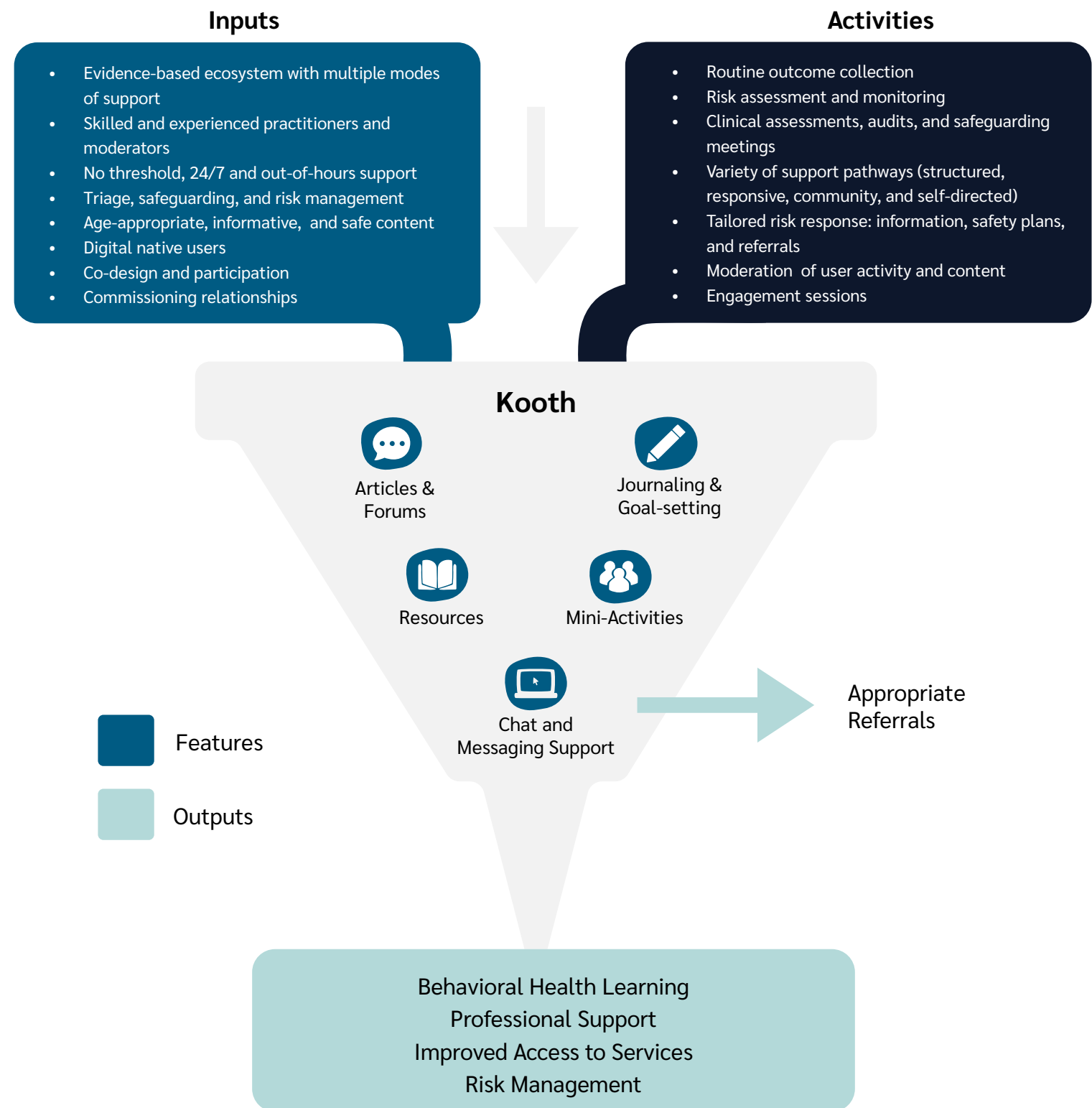


Figure 1: The inputs and activities that underpin Kooth features and subsequent outputs.

Inputs

The first stage of the Kooth Theory of System Change describes inputs: the resources Kooth has and needs to achieve the desired outcomes. In line with a whole-school approach, Kooth needs a wide variety of skilled and experienced professionals who provide accessible 24/7 and out-of-hours support with no clinical thresholds or criteria. Kooth develops practitioner and moderation training and guidelines to ensure the provision of effective triage, safe and age-appropriate content, safeguarding and risk management, and an evidenced-based ecosystem with multiple modes of support. The digital therapeutic approach attracts digital native users who contribute and participate in co-design and co-production activities to ensure the delivery of a person-centered service. The Kooth Theory of System change also recognizes the need for agreed objectives and commissioning relationships with Pennsylvania legislators and school districts. Similarly, Kooth requires Engagement Leads to support engagement, outreach, and marketing strategies on the ground in Pennsylvania.

Activities

The second stage of the Kooth Theory of System Change describes activities: the actions and efforts regularly performed to achieve the desired outcomes. Kooth collects routine outcome measures and conducts routine risk assessment and monitoring of young people. Practitioners perform clinical assessments and audits, including safeguarding meetings. Kooth provides support through a variety of pathways: structured, responsive (single-session and intermittent), community support, and self-directed support. Similarly, Kooth offers a tailored response to risk, including the provision of information, safety plans, and onward referrals. Paid moderators review and monitor user-submitted content and journal or goal-setting activities. Engagement Leads facilitate informative engagement sessions for young people, parents, and school staff.



What change occurs and how?

Outputs

The third stage of the Kooth Theory of System Change describes the outputs: the service delivered from the activities. The Theory of Systems Change workshops identified five key output themes: (i) Behavioral Health Learning, (ii) Improved Access to Services, (iii) Professional Support, (iv) Risk Management, and (v) Appropriate Referrals.



Behavioral Health Learning

Young people engage with digital content within a practitioner-moderated, supportive community.



Improved Access to Services

Kooth delivers a whole school approach that provides young people with information about mental health and well-being and tailored support when and where they need it.



Professional Support

Where appropriate, young people receive professional support via chat or messaging services with minimal waiting time.



Risk Management

Practitioners monitor the status of a young person's risk and work collaboratively with the young person to create and adhere to a safety plan.



Appropriate Referrals

Practitioners also make appropriate referrals to outside agencies and services, such as telehealth and social care.

How change occurs?

Mechanisms of change refer to the specific ways in which interventions or changes in one step (e.g. activities, inputs, outputs, or outcomes) can initiate changes in other steps and lead to desired outcomes. Identifying these mechanisms allows for a deeper understanding of the underlying drivers of system change.

1. Young people experience an emotional engagement and interaction with content that **allows for choice-making and perspective-shifting**.
2. Young people experience **empowerment, choice, and autonomy** that allow for a personal, non-prescriptive, and more controlled experience and increased engagement.
3. Young people engage in a supportive and safe digital community that allows for **decreased social isolation and stigma and increased relatedness and a sense of belonging**.
4. The young person has an **opportunity to build trust** with a worker on their terms, so they are more likely to engage with suggested actions. This may be a **gateway to engagement with other mental health services**.
5. By going through a positive experience of being helped and learning what works, the young person is more likely to **use their skills to support others and talk about their experiences**.



Outcomes

The fourth stage of the Kooth Theory of System Change describes the outcomes: the benefits that are expected from the outputs. The Theory of System Change workshops identified five key outcome themes: (i) Literacy and Agency, (ii) Social, Emotional, and Mental Well-being, (iii) Downstream Access, (iv) School, and (v) Economy.

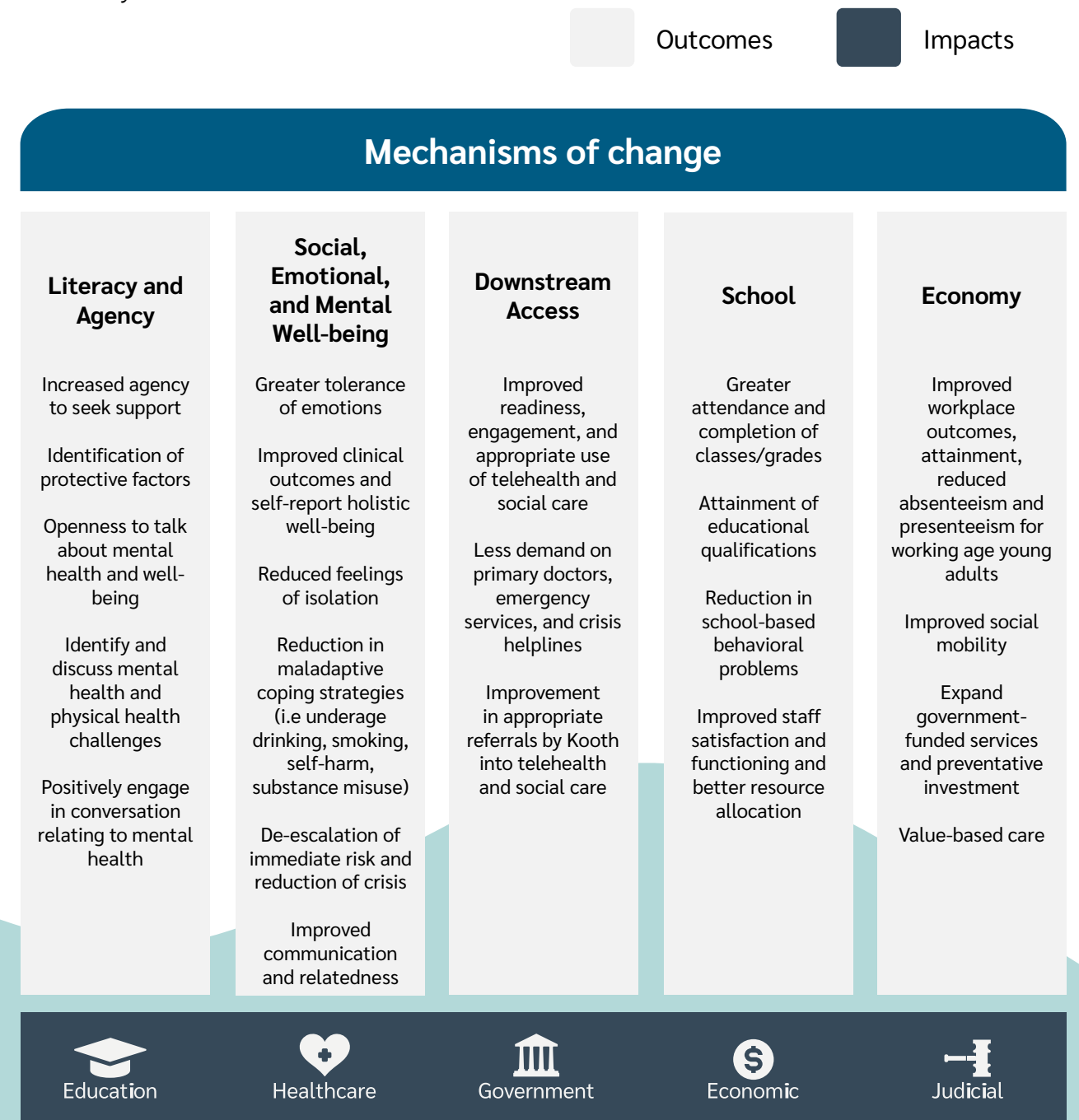


Figure 2: The Kooth outcomes and key areas of impact.

Literacy and Agency

Young people gain an increased sense of agency in their mental health and well-being to seek support. They are able to identify protective factors in their life, and positively engage in conversation relating to their mental health and well-being. Similarly, young people gain an openness to talking about mental health and well-being in a variety of settings when appropriate. They can also identify and discuss both mental and physical health challenges more rapidly.

Social, Emotional, and Mental Well-being

Young people gain a greater tolerance of difficult emotions, improved self-report holistic well-being, improved communication and relatedness abilities, and improved clinical outcomes. Conversely, young people experience reduced feelings of isolation and crisis, reduced inpatient treatment needs, and reduced use of maladaptive coping strategies and risk-taking behaviors.

School

Schools observe greater attendance and completion rates, a greater level of attainment, reduced school-based behavioral problems, and improved staff satisfaction, functioning, and resource allocation.

Downstream Access

Local agencies and service providers observe improved readiness and engagement from young people who are appropriately referred from Kooth. There is less demand on primary care physicians, pediatricians, emergency services, and crisis helplines.

Economic

The economy gains cost-effective, value-based care; improved social mobility; and improved workplace outcomes as young people present reduced rates of presenteeism and absenteeism.

Impacts

The final stage of the Theory of System Change describes the long-term impacts of Kooth. The workshops identified five key areas of systemic impact: (i) Education, (ii) Healthcare, (iii) Government, (iv) Judicial, and (v) Economic.



Education

The Theory of Systems Change theorizes that Kooth support improves student behavior, academics, and engagement by providing access to well-being support and behavioral learning. This change may also be observed through improved attendance and completion rates which allows for improved resource allocation. These benefits could also lead to improved school culture and connectedness while improving staff satisfaction and functioning. School support staff and counselors may observe improvements in workload management as students with mild to moderate needs are sufficiently supported by Kooth. Similarly, teachers may observe reduced disruptive classroom behavior, allowing for increased teaching time and improved academic performance. Students may gain an improved sense of school connectedness as a result of the school districts prioritizing student mental health and well-being. Lastly, a whole-school approach provides equitable access to knowledge and services. Kooth may address certain disparities among students, resulting in increased capability and opportunity for individual students to engage with the education system.

Mechanisms of change

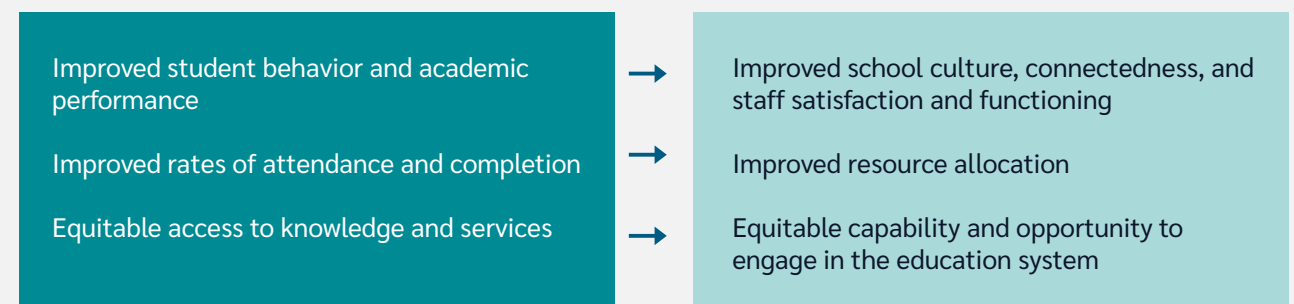


Figure 3: Kooth outcomes and impacts on the education system.



Healthcare

It is theorized that Kooth provides young people with the knowledge and skills that improve their readiness, engagement, and appropriate use of other healthcare services. These benefits may lead to reduced rates of non-attendance, premature termination (service drop-out), and related costs to the healthcare provider. Similarly, the provision of appropriate referrals from Kooth may allow other services to observe improved triage and assessment processes while increasing capacity and cost efficiency. Kooth is able to sufficiently support young people with mild to moderate needs, allowing for less demand on primary care physicians, emergency services, and crisis helplines. Alleviating pressure on already stretched healthcare providers may result in reduced waiting times, improved staff functioning and satisfaction, and reduced related costs. Finally, by facilitating more rapid identification and discussion of mental health and well-being challenges, Kooth provides early intervention support leading to reduced long-term needs and costs of more severe difficulties, such as inpatient care.

Mechanisms of change

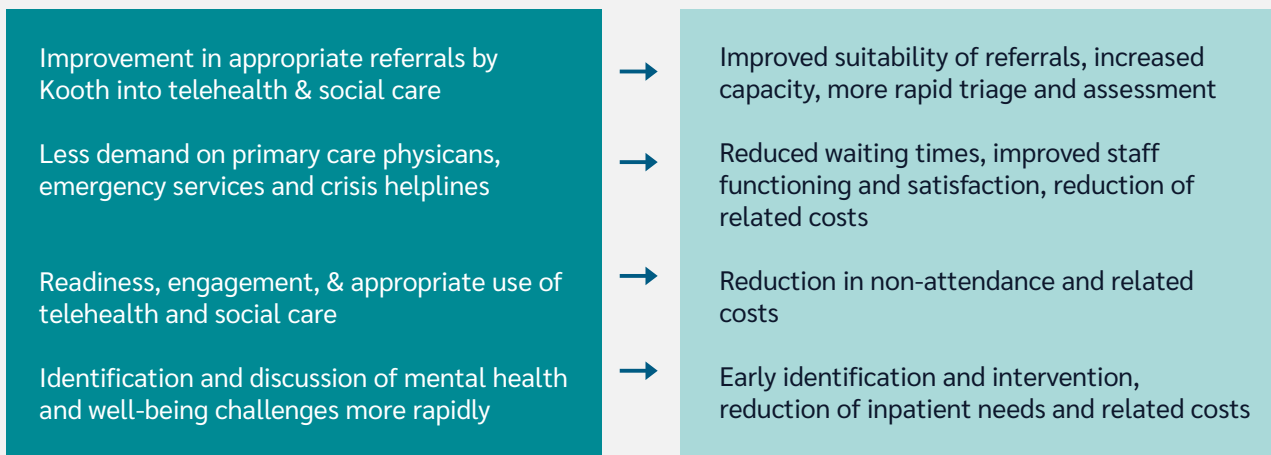


Figure 4: Kooth outcomes and impacts on healthcare systems.



Government

By facilitating the more rapid identification and discussion of mental health and well-being challenges, Kooth supports the effectiveness and utility of population health models and early intervention approaches. This benefit promotes the appropriate allocation of government funding to prevent long-term, severe mental health difficulties, and related increased costs. Moreover, Kooth helps evidence the expansion of government involvement in mental healthcare to increase access to funding and address the increasing needs of young people.

Mechanisms of change

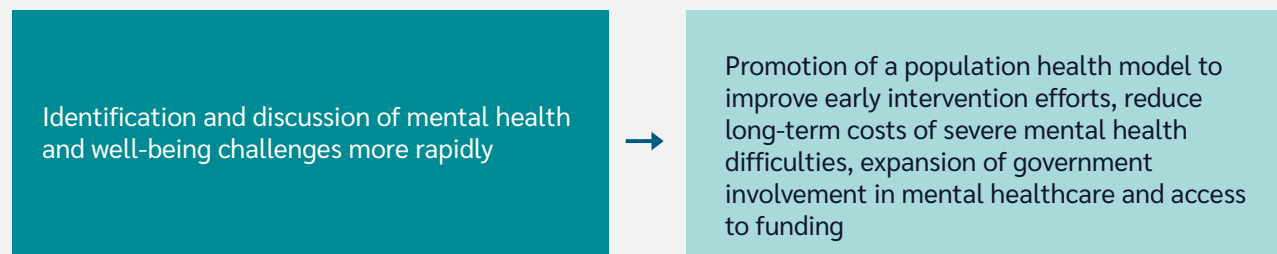


Figure 5: Kooth outcomes and impacts on government systems.





Judicial

It is theorized that Kooth supports the reduction of maladaptive coping strategies such as underage drinking, smoking, substance misuse, and self-harm. It is possible that a reduction in this behavior may be observed within the judicial system as a reduction in youth criminal offenses and risk-taking behavior. Furthermore, facilitating the development of greater tolerance of difficult emotions is theorized to result in improved emotion regulation and reduced incidents of anger and violence.

Mechanisms of change



Figure 6: Kooth outcomes and impacts on judicial systems.



Economic

The Kooth Theory of System Change theorizes that improved clinical and well-being outcomes may have a long-term impact on the emerging workforce of young adults by reducing rates of absenteeism and presenteeism. Additionally, the facilitation of educational attainment may result in improved social mobility, and a greater-educated workforce.

Mechanisms of change

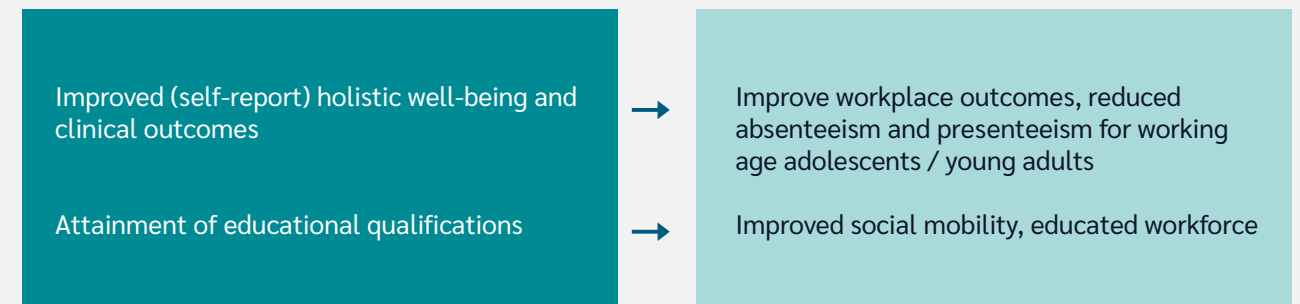


Figure 7: Kooth outcomes and impacts on economic systems.



Summary

The early Kooth Theory of System Change outlines the predicted long-term change as a result of the Kooth whole-school approach to mental health and well-being. The framework describes sequential events within the Kooth service (inputs, activities, outputs, and outcomes) and theorizes the potential impacts on wider systems. By providing the Kooth service and enabling mechanisms of change, Kooth can contribute to improved literacy and agency; social, emotional, and mental well-being; downstream service access; school and economic outcomes. Therefore, it is theorized that Kooth meaningfully impacts wider systems in Pennsylvania, such as the education, healthcare, government, judicial, and economic systems, leading to positive systemic change.



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