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# Cash Transfers and Health

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# Cash Transfers and Health

## *Abstract*

Financial resources are known to affect health outcomes. Many types of social policies and programs, including social assistance and social insurance, have been implemented around the world to increase financial resources. As an overall term, we refer to these as cash transfers. In this article, we discuss whether, how, for whom, and to what extent purposeful cash transfers may improve health, both theoretically and empirically. The overall finding is that cash transfers are very positive, but as usual, there are many complexities and variations. Continuing research and policy innovation—for example, universal basic income and universal Child Development Accounts—are likely to be productive.

**Key words:** social policy, race, income, wealth, social determinants of health, socioeconomic status

## **Introduction**

Financial resources are fundamental for achieving and maintaining good health across the life course (2, 21, 22, 124). They enable “individuals to avoid diseases and their negative consequences through a variety of mechanisms” (78). Conversely, people with fewer financial resources are at greater risk of poor health, including increased comorbidity and disability, diminished quality of life, and lower life expectancy (2, 21, 22).

This paper asks whether and how intentional increases in financial resources to households may improve health outcomes. The answer may indicate that development and implementation of *cash-transfer policies and programs* (broadly defined) could extend our understanding of social determinants of health. In practical terms, cash transfers could support health by addressing immediate needs. Moreover, public-sector cash transfers are linked to health insurance coverage and receipt of health care (92). Overall, cash transfers are understood as a modifiable factor that may improve population health.

By providing monetary resources from the government or nonprofit organizations, cash-transfer policies and programs are intended to improve individual and household financial well-being through increased level of consumption (10, 11, 51). Regarding health, a cash transfer represents the infusion of income and/or assets into a household through intervention to effect physical and mental outcomes.

Cash transfers are typically assumed to be successful because they provide money to recipients. This assumption reflects the strong influence of neoclassical economics, wherein money is a proxy for level of consumption, and level of consumption is an indicator of well-being. The formulation is useful but has limitations. One is that individual circumstances and context matter greatly, as this review indicates. Another is that links between cash transfers and health outcomes may be indirect. Potential pathways or mediators may include material conditions, environmental factors, psychosocial factors, health behaviors, and medical care.

## Social Determinants of Health

Social determinants—including but not limited to race/ethnicity, socioeconomic position (SEP), and gender—are critical to all aspects of individual and population health. These factors are linked to power and privilege: People with more power and privilege generally experience better health outcomes.

For example, girls in many countries lack equitable access to educational opportunities. This affects health across the life course through multiple mechanisms, including fewer socioeconomic resources and reduced political voice. A full discussion of gender and other important social determinants falls beyond this paper’s scope, but we emphasize intersectional relationships among aspects of social identity and position, financial resources, and health outcomes.

Despite the growing discussion of social determinants of health, they have not been a major focus of applied health research until relatively recently (23). Social determinants have been highly explanatory in studies that model them as covariates, but the results have seldom led to testable interventions that might alter those determinants. In research on interventions related to social conditions, cash transfers (broadly defined) provide material means for shelter, nutrition, income security, and other basic social and economic conditions. These interventions comprise most of what is called social policy and underpin the body of applied research into social determinants of family security and development (for summaries, see 108, 98). Health is typically not a main focus in this research—but it might become more so. Growing attention from public-health researchers can positively contribute to the study of well-being that results from cash transfers and other social policies.

## Race/Ethnicity and Health

Race is primary. Racial disparities in health have been well documented for overall mortality and multiple disease outcomes (e.g., 68, 74, 9). It is not a coincidence that the COVID-19 pandemic’s weight falls disproportionately upon African Americans, Native Americans, and Latinos (123). In the United States (as elsewhere), race/ethnicity has a troubling history with ongoing effects. In our view, it is impossible to understand social determinants of health without “putting race at the forefront” (62), and we take that approach in this paper.

Race is a key determinant of health inequities because racism—the social, economic, and political oppression of some racial/ethnic groups—has affected living conditions and health outcomes (e.g., 71, 111, 124, 23, 52, 38). Research has well documented health effects of racism at the individual level (e.g., 52, 53, 93). Nevertheless, less attention has been paid to how structural racism contributes to racial health disparities (38). Racist policies and practices (e.g., redlining) have purposefully created staggering levels of racial residential segregation throughout the United States (100). Structural racism shapes access to resources and fuels inequalities. It shapes access to opportunities such as education, employment, and wealth building (27, 53, 67, 96, 125). These inequalities cascade over the life course and across generations, molding educational preparation, marketable employment skills, and opportunities to accumulate assets among people of color.

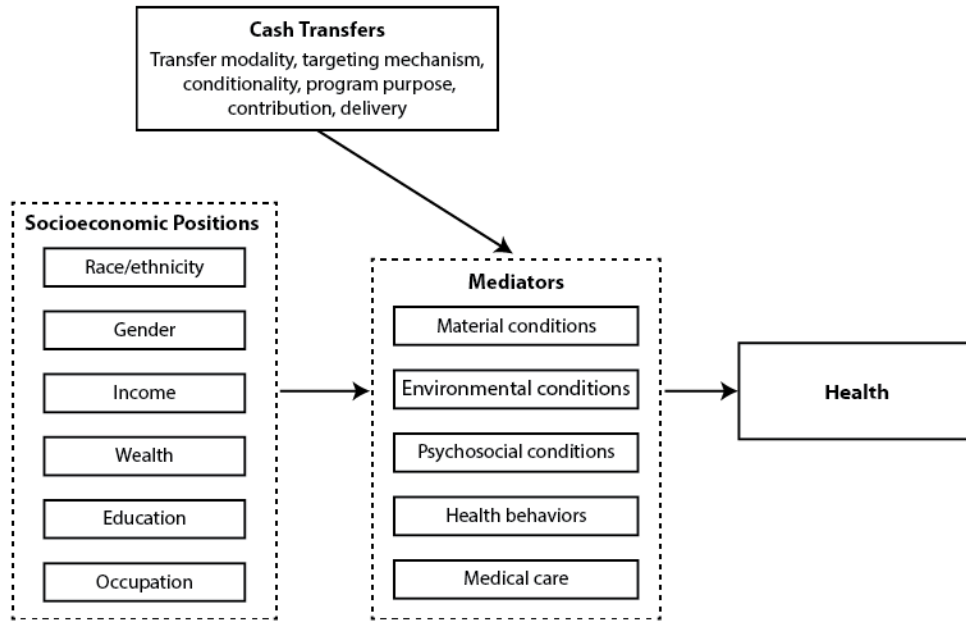


Figure 1. Conceptual model of socioeconomic position, cash transfers, and health.

Thus, race is strongly linked to SEP (86, 21). For example, median annual household income in 2018 was \$65,000 for whites, \$39,500 for African Americans, and \$47,700 for Latinos (119). White men receive higher pay than their counterparts in other racial groups (and women), even when analyses adjust for occupation, years of experience, education, and other credentials (72, 124). Furthermore, the magnitude of the racial wealth gap is immense, deeply entrenched, and not explained by saving or spending habits (88). For every dollar of wealth that white households hold, black households only have seven cents (31).

### Socioeconomic Position and Health

Like race, SEP (measured by income, wealth, education, and occupation) is a strong determinant of health (78, 96), as well as a predictor of several health and illness outcomes (14, 22). SEP involves an array of resources, which all protect health regardless of what health mechanisms are relevant at a given time (78). Individuals with substantial income and assets work in roles with autonomy, job security, and fringe benefits, including paid time off. They have resources to navigate unexpected costs, as well as access to healthy foods and safe green spaces for exercise (64, 76). Their children attend good schools and grow into well-paid jobs of their own (125). These relationships are structural, replicating, and determinative.

### The Relationship between Cash Transfers and Health

Our review of theory and research leads to a summary conceptual model of the relationships among cash transfers, SEP, and health (Figure 1). In this model, race/ethnicity, gender, and many SEP indicators (e.g., income, wealth, education, and occupation) are considered upstream factors that operate through a series of mediators to affect health outcomes. Cash transfers also are modeled to operate through these mediators. In effect, cash transfers supplement SEP. This conceptual model

focuses at the individual and household levels, rather than at the level of society, and some large exogenous factors (e.g., genetics and culture) are not portrayed.

### **Cash Transfers**

In this section, we discuss the main policy forms of cash transfers, offering conceptual tools for understanding and differentiating among them. We do not include as cash transfers the direct provision of public goods (e.g., roads, parks, and clean air) or the provision of particular services (e.g., health care supported by Medicaid or Medicare). It is one thing to identify fundamental causes (or social determinants) of outcomes but quite another to ask whether an intervention—which might represent one or more of these causes—affects health outcomes.

#### **Cash Assistance for the Poor**

In “social welfare” and “economic development” policy and research, cash transfers are often defined narrowly as cash assistance, also known as means-tested transfers and social assistance, wherein money is given to a targeted vulnerable population. Developed countries have long implemented cash-transfer strategies as important components of welfare states. As of June 2020, more than 600 social-assistance (cash and in-kind) programs in more than 170 countries were operating, an increase in response to the COVID-19 pandemic (40).

Means-tested cash transfers became public policy in the United States when some states enacted Mother’s Aid measures in the early twentieth century. Those laws evolved into the federal Aid to Families with Children policy created in the Social Security Act of 1935, and a truncated version continues today as Temporary Assistance for Needy Families (TANF). Quasi-cash (or restricted-currency) transfers in the form of housing vouchers and food stamps serve similar purposes. The Earned Income Tax Credit (EITC) is a rapidly growing federal cash-transfer policy delivered as a refundable tax benefit (in effect, a negative income tax) to low-wage workers and their families. Today, the EITC and SNAP (Supplemental Nutritional Assistance Program, colloquially known as the food stamp program) are large cash-transfer programs for low-income families in the United States. TANF has shrunk and no longer accounts for a large share of safety-net spending (36). In 2019, about \$361 billion, or 8% of the federal budget, went to safety-net programs (24).

#### **Social Insurance**

Social-insurance policies are universal (i.e., not means tested) but conditioned (e.g., for unemployment, old age, or disability). Typically, all people who experience the conditional event are eligible for cash benefits, regardless of their income or assets. Social insurance in the United States evolved from pensions for Civil War veterans into federal, state, and private-sector offerings. Federal social insurance includes Social Security retirement and disability insurance, survivor insurance, and unemployment insurance. In 2019, the social-insurance programs of the Social Security Act distributed cash payments totaling \$1 trillion (23% of the federal budget; see 24).

#### **Cash Assistance to the Wealthy**

Many governments provide cash benefits from public funds to middle- and high-income households through the tax system, where they are effectively hidden from public and congressional scrutiny (55). The two largest categories of individual tax benefits in the United States are for retirement savings (e.g., in 401(k)s and IRAs) and homeownership. Tax expenditures for retirement savings

were over \$250 billion in 2019 and will likely exceed \$1.5 trillion over the period from 2019 through 2023 period. The federal government in fiscal year 2019 provided \$196 billion in tax benefits to subsidize homeownership (116). These benefits aim for asset building rather than consumption.

Asset building tax subsidies benefit the wealthy but do little to help the poor in building wealth (113). Nearly 80% of the benefits for the four largest asset-building tax incentives (for homeownership, financial investment, retirement saving, and college) have gone to households in the top income quintile (44). In other words, this form of cash transfer is very large (more than means-tested social assistance) and is highly regressive (most of the benefits go to the top).

### **Dimensions of Cash Transfers**

To contend with the complexity of this policy landscape, we examine six structural dimensions of cash transfers: transfer modality, universality, conditionality, program purpose, contributions, and delivery.

#### *Transfer modality: Cash versus in-kind benefits*

These two basic forms of social policy provision have generated much discussion on which is the more effective in delivering well-being. In modern states, cash benefits have been more efficient to deliver than alternative in-kind benefits (41), and with information-age finance, this is even more so. Moreover, compared with in-kind goods and services, cash payments may generate greater well-being for recipients, because cash enables flexibility in how people spend the money (30), and mainstream economic reasoning holds that an individual knows best which spending options bring the greatest well-being.

#### *Universality*

Cash-transfer programs can be targeted to select program beneficiaries or universal (offering benefits to everyone). Most cash-transfer programs use targeting to determine eligibility for benefits. Methods include geographic targeting, means testing (with income and/or asset thresholds), and community-based targeting. The targeting mechanism is often selected for reasons of political acceptability, fiscal sustainability, and/or cost-effectiveness. But targeting also carries the burden of administrative oversight. It requires outreach to potential beneficiaries, a registration process, reporting, and program recertification. With some targeting mechanisms, administrative costs for registration, reporting, and recertification can be high. Universality in cash-transfer programs avoids these administrative burdens and avoids the stigma associated with receipt of targeted benefits (11, 41).

#### *Conditionality*

Fund allocation in cash transfers also is based in part on recipient compliance with behavioral conditionalities. Examples include requirements to work, engage in a job search, undergo training, participate in financial education, perform community service, attend school (for children), or submit to health checks. More than 60 countries have implemented programs with cash benefits contingent on participants seeking basic maternal-child health care, or education for school-age children. Assessments of conditional cash-transfer programs in the global context have found a mixed but generally positive record in behavioral change (75, 84, 89, 120).



Table 1. Summary of Dimensions of Cash Transfers

Dimensions	Option Examples
Transfer modality	Cash, voucher, in-kind benefits, services, legal rights
Universality	Universal, targeted (e.g., Means tested, geographically based, community-based, and age-based, gender-based)
Conditionality	Job training, work requirement, school and education, community services, health care
Program purpose	Consumption support, asset building
Contribution	Contributory, noncontributory
Delivery	Cash, check, bank account transfer, electronic benefit transfer card, tax benefits, financial technology application

### *Program purpose*

We categorize the main uses of cash transfers into two program purposes: consumption support and asset building. Most programs aim to alleviate liquidity constraints and provide resources for consumption needs such as food, nutrition, housing, education, and health care. This purpose reflects the traditional paradigm of social-assistance programs, a paradigm that defines consumption as household well-being and uses public transfers outside the marketplace (i.e., a social residual) to alleviate poverty by raising recipients' living standards to a minimally acceptable level. In addition to or in lieu of consumption support, cash transfers may be designed to support asset accumulation for life-course investment and long-term development. Asset building reflects a new paradigm of social investment in social welfare, investment to promote and strengthen individuals' financial and human capabilities and opportunities for inclusive growth (103, 104).

### *Contribution*

The global social welfare discussion on cash transfers generally excludes analysis of programs requiring participants to make contributions in order to be eligible for benefits. Despite contributory social-insurance programs like Social Security and Unemployment Insurance, typical social-assistance cash transfers in social safety nets are noncontributory. A broad view of cash transfers combines both social assistance (noncontributory programs) and social insurance (contributory programs) together in a social-protection system (11, 41).

### *Delivery*

Cash transfers can be delivered through numerous payment mechanisms, and technology continues to expand delivery options that can minimize costs and promote financial inclusion of the poor (107). Electronic delivery has the potential to reduce "leakages" due to bureaucracy, mismanagement, and/or corruption, with funds going directly to individual accounts (11). Further, electronic delivery is more effective than in-kind assistances in maintaining social distancing during COVID-19 pandemic (87). It is possible that, in the foreseeable future, cash transfers can reach target populations on the whole planet. Technologically, this is within reach, but political and economic barriers are not easy to overcome.



## Cash Transfers and Health: Pathways and Mechanisms

In this section, we focus on causal pathways and mediators linking cash transfers and health. Drawing upon prior research, we present five pathways from cash transfer to health.

### Material Conditions

The first pathway linking cash transfer and health is through improved material conditions and declines in unmet social needs. Research has shown that access to emergency savings is associated with reduced material hardship, including reduced food, housing, and energy hardship, as well as lack of access to medical and dental care (43, 37). McKernan and colleagues (83) evaluated the effect of three income-tested programs (SNAP, TANF, and public health insurance) on material hardship in the United States, finding that those programs reduced the total number of hardships experienced in low-income families with children by 48% and food insufficiency by 72%. Basic needs, such as housing, food security, personal and neighborhood safety, ability to pay bills, transportation, and possession of essential material goods, are associated with a wide range of health outcomes (e.g., 16, 15, 35, 45, 101).

### Environmental Conditions

Another pathway from cash transfer to health is through the built environment where people live and work. Built environments can be protective or hazardous and have direct effects on health (e.g., lead exposure and poor housing conditions, occupational hazards, pollution). Moreover, environmental factors can shape health through interactions with behavior. For example, the availability of healthy food outlets interacts with diet; the construction of pedestrian walkways and cycle lanes interacts with physical activity; the availability of liquor and smoke shops interacts with alcohol and cigarette consumption; and neighborhood safety, violence, and crimes interact with psychosocial outcomes. These findings are well established (see, e.g., 1, 18, 82, 124).

### Psychosocial Conditions

Psychosocial explanations for the link between cash transfers and health focus on the consequences of social inequality and lack of resources. Evidence suggests that level of assets is positively associated with optimism, future orientation, self-efficacy, hopelessness, depression, and self-esteem (3, 50, 66, 109). Psychosocial mediators, such as lower stress and higher aspirations, are associated with fewer risky health behaviors, such as sexual risk-taking intention, suicide, juvenile delinquency, crime, and addiction (26, 54, 112).

### Health Behaviors

Health behaviors are important determinants of health. However, as discussed above, upstream factors shape individual health behaviors, and health behavior happens in a social context. Evidence is mixed on the relationship between cash interventions and health behaviors. One study found that TANF implementation and resulting reductions in welfare caseloads were associated with declines in binge drinking but not with other health behaviors examined (i.e., smoking, diet, exercise; 65). Another study found that unemployment compensation significantly attenuated job-loss-related increases in alcohol use and weight loss but not smoking (17). In a systematic review, Pega and associates (94) found a small and methodologically limited body of evidence suggesting that in-work tax credits have no health effects, except for mixed evidence favoring a reduction of tobacco smoking among women.

## Medical Care

Access to and utilization of medical care, both preventive and curative, are important determinants of health status. In 2018, 20% of uninsured US households went without needed medical care because of cost (117). Moreover, even insured people with low levels of liquid assets can face difficulties in paying out-of-pocket medical expenses such as deductibles and coinsurance premiums. Farrell and colleagues (34) found that liquidity from the tax refund enabled an increase in health-care spending, such that consumers increased total out-of-pocket health-care spending by 60% in the week after receiving a tax refund.

## Additional Evidence on Cash Transfers and Health

### Targeted Social Assistance and Health in High-Income Countries

Shahidi and colleagues (102) summarized the impact of social-assistance programs (including cash transfers and in-kind benefits) on population health among high-income countries. Outcomes examined included self-rated health, mental health, chronic conditions, health behaviors, and mortality. Concluding that the health outcomes of social-assistance recipients were worse than those of non-recipients, they speculated that this may be due to reverse causation (e.g., people with preexisting health conditions selected into social-assistance programs) and unobserved systematic differences between the groups. Further, evidence suggests that the scope and generosity of those policies and programs are inadequate to offset effect of preexisting socioeconomic disadvantages on health. Moreover, finding that efforts to limit the receipt of social assistance, reduce its generosity, or increase work conditionalities were associated with adverse health trends, Shahidi and associates (102) suggested that welfare reform led to negative effects on the health of socioeconomically disadvantaged populations.

In the US context, researchers have extensively examined the health effects of the federal EITC (e.g., 4, 5, 8, 20, 33, 48, 56, 77) and state EITCs (e.g., 12, 13, 70, 79, 115, 121). These studies generally find improvements in various measures of maternal and child health but note evidence of differences by race/ethnicity (5, 70), age (13) and geographical area (12). Other studies challenged prior findings (32) or found mixed or no health effects with certain measures (46, 47). Overall, this body of work finds that earned income credits (a form of negative income tax) are positively associated with health.

### Social Insurance and Health in High-Income Countries

Examining effects of Social Security Act amendments in the 1970s, Ayyagari (6) found that Social Security benefit increases led to significant improvements in functional limitations and cognitive functioning. A systematic review of international evidence on unemployment insurance concluded that it generally attenuates the effects of unemployment on poverty and health (99). The study also found that more generous unemployment insurance systems tend to have a greater protective effect on the health of the unemployed (99). Another study found that higher unemployment insurance generosity increases health insurance coverage and utilization, as well as self-rated health, with stronger effects during periods of higher unemployment rates (73). However, the study found no effect of unemployment insurance on risky behaviors or on health conditions. A study on US Social Security Disability Insurance found that higher payments were associated with lower mortality rates among low-income beneficiaries (39). Using internationally harmonized panel data from the United States and Europe, another study found that self-reported health stabilized after disability insurance

benefit receipt; mental health improved more for recipients than non-recipients, and the effect was stronger in countries with more generous disability insurance programs (19). Other objective health outcomes were positive but statistically non-significant (19).

### **Cash Transfers and Health in Low- and Middle-Income Countries**

Evaluations of cash-transfer programs have examined such outcomes as financial poverty, savings and investment, resilience and empowerment, productive capital, education, health-care utilization, nutrition, employment, child labor, housing condition and quality, birth registration, child deprivation, social capital and social cohesion, civic participation, morbidity, mental health outcomes, and sexual behaviors (for a summary, see 11, 91). Several systematic reviews have summarized findings on the health effects of cash-transfer programs (11, 29, 63, 75, 89, 91, 95, 102, 110). Outcomes in the reviewed studies included mental health, sexual debut, health service utilization, immunization coverage, anthropometric outcomes, nutritional status, infant and neonatal mortality, health behaviors (contraception use, smoking, and drinking), and morbidity (e.g., diarrhea, anemia, respiratory disease, hypertension, and diabetes).

Bastagli and associates (11) summarized 41 studies that report effects of cash-transfer programs on health and nutrition indicators. Conducted from 2000 to 2015, the reviewed studies covered Latin America, sub-Saharan Africa, South Asia, and the Asia-Pacific region. The reviewers concluded that cash-transfer programs in LMIC countries improve dietary diversity and increase utilization of health-care services, especially when conditionalities are attached to the program.

Reviewing 17 studies published between 2006 and 2016 on the health outcomes of children under age 5 in LMIC countries, Cruz and colleagues (29) concluded that cash transfers were positively associated with immunization rates, vaccination coverage, and improvements in morbidity among disadvantaged children. However, they noted mixed results for the child mortality indicators and the biochemical and biometric health outcomes. Reviewing five randomized, controlled trials, Pega and associates (95) found that unconditional cash transfers reduced by 37% the likelihood of having any illness (95% CI [0.57, 0.93]). A recent narrative review of heterogeneous health effects of cash-transfer programs in LMICs found substantial heterogeneity on child and adult health but little on sexual and reproductive health (28).

## **Discussion and Directions: Research**

### **Health Effects Should Be More Frequently and Thoroughly Examined**

Many types of policies affect inequality in society (e.g., minimum-wage, income and consumption taxation, affordable-housing) and thus have a direct bearing on the extent to which people from different social circumstances have access to health-related resources. However, these policies are rarely discussed in terms of their health implications. To assess their effects on health inequalities, we should produce research-based health-impact statements for such policies (78).

### **Mechanisms of Change**

Despite evidence on the relationships among cash transfers and health outcomes, the mechanisms of change remain understudied. This area of scholarship would benefit from more specified theoretical work, to ground evidence in program contexts, and illuminate mediating and moderating effects of change (90). Moreover, studies showing variations in health outcomes of cash-transfer

programs by gender (128, 25) suggest the importance of disaggregating evidence by subgroups. Future research should explore how and why cash-transfer programs work. In particular, studies should identify design and implementation features that influence the effectiveness of cash-transfer programs by specific circumstances and for specific populations.

### **Data Availability**

Many barriers impede access to data and measurements for future research. Three categories of data have been used for quantitative evaluations of the health effects of cash-transfer policies. First, experimental data have been used in purposeful examinations of the health outcomes of cash-transfer programs. Second, population-based survey data have been used (a) to analyze health of transfer recipients and nonrecipients and (b) to leverage statistical techniques (e.g., regression discontinuity, difference-in-differences) in evaluations of large-scale policy change. Third, program administrative data have been linked with health surveys. Most of the experimental data has come from regional experiments with targeted populations. Thus, generalizability of the resulting findings is limited. Moreover, these experiments usually collect short- to medium-term data, preventing analysis of long-term health effects. In population-based surveys, small samples for some vulnerable groups (e.g., immigrants, Native Americans) preclude tests of pathways and mechanisms.

### **Measurement**

Several steps would improve the ability to measure the effects of transfer programs on health. First, making available the dimensions and characteristics of cash-transfer programs would enable further examinations of design implementation features. These measures may be available in administrative and experimental data. Population-based health surveys provided little accurate information on program participation or the specification of benefits received. Second, few survey datasets have both comprehensive SEP indicators and health measures. Few panel surveys that document longitudinal dynamics of SEP (e.g., the Survey of Income and Program Participation) collect information on respondents' health. As for population health surveys that examine self-reported health outcomes, SEP measures are fuzzy. Despite the consensus that SEP is complex and multifactorial, most health studies that consider SEP used a single socioeconomic variable measured at a single period and level or include variables explaining why some measures were selected over others (21). Wealth is an underutilized yet important indicator of SEP, and future health studies should measure wealth (97). Third, to further examine mechanisms of change, we should separate measurement of mediators and distal health outcomes. Some studies have conceptualized mediators (food security, health-care utilization, health behaviors, and self-efficacy) as proxy measures of distal health outcomes, which in our view does not contribute to conceptual clarity.

### **Long-Term Effects and Cost-Effectiveness**

Most evidence stems from evaluations of short-term effects, but cash transfer policies and programs address fundamental causes and effects on distal health outcomes over time. Program effectiveness should be evaluated over the long-term, ideally with a life-course or intergenerational perspective, to capture these effects. In addition, future research should compare cost-effectiveness of those policies and programs, because at the end of the day, cost-effectiveness is a central factor in sustainability.

## Discussion and Direction: Policy

### Temporary Cash Assistance Versus Structural Equity

Giving temporary cash assistance is different from tackling structural socioeconomic and racial inequity. We cannot eradicate health inequity without addressing socioeconomic and racial inequity. Eradication requires mitigating, resisting, or undoing the structural influences on health (42). Williams and Collins (126) argued that reparations are essential to eliminate the negative effects of segregation and are likely to dramatically reduce racial differences in health. With America apparently waking up to structural racism in 2020, one option may be to incorporate reparations and similar historical remedies into cash-transfer policy designs.

### Inclusiveness and Progressiveness

Asset-based policies in the United States are mostly tax based. However, these policies are not inclusive, and the policy functions as a series of institutional barriers that exclude disadvantaged families, people of color, immigrants, refugees, and others who do not own a home or have full-time employment benefits such as health insurance and retirement accounts. As we have noted, these cash-transfer policies are designed to build assets, and we might ask why equivalent asset-building subsidies are not offered to the poor (103).

Inclusiveness may not be enough. A policy that is merely inclusive would likely not be sufficient to reduce inequality in American society, and research suggests that an effective remedy requires progressive measures. The term *progressive* refers to the allocation of subsidies and supplements to compensate for disadvantage. For example, progressive features in Child Development Account (CDA) policies might include larger initial deposits, additional deposits for the poorest children over time, and greater savings matches for financially vulnerable families. Policy proposals such as “baby bonds” (49), which provide deposits based on intergenerational asset positioning, would also be progressive.

### Moving Beyond Local Experiments

Cash transfers, social assistance, and social protections have been tested worldwide, very often with experimental research designs. But the scope and duration of most of these experiments (commonly called randomized, controlled trials) tend to be limited. Most use “selected” (not population) samples, and most occur over short periods of time. We might summarize by saying that this body of research employs rigorous methods, but often with limited implications. In our view, more applied research on cash transfers should move from local applications (which are often not scalable) to inclusive, efficient, and stable policy tests (which can demonstrate scalability). This would require increased funding and partnerships among researchers, practitioners, and policy makers. In this regard, Williams and Cooper (127) have suggested investments to enhance awareness, build public support, and foster political will. This is of course ambitious, but examples below document that steps are being taken in this direction.

### Policy Innovations Toward Large Cash Transfers: Two Examples

Social policy is ever changing, and the two policy innovations discussed below illustrate the potential for cash-transfers. We briefly review evidence on Universal Basic Income (UBI) and CDAs as a strategy for universal basic assets. Both offer universal, unconditional cash transfers. UBI has



attracted widespread attention, but evidence from applied research is quite limited. CDAs are perhaps less well known, but research evidence and policy innovation are more advanced.

### **Universal Basic Income**

Designed to improve household consumption and material well-being, UBI has garnered attention from policymakers in high- and low-income countries (41, 57). Additional applications of the UBI concept continue to emerge, and the idea has gained a foothold in US public discourse during the 2020 US presidential primary campaigns (41, 129).

The Stockton Economic Empowerment Demonstration (SEED) illustrates the UBI concept. The first mayor-led guaranteed income pilot in the United States, SEED started in 2019. The treatment group's 125 randomly selected participants reside in a Stockton, California, neighborhood with median income at or below \$46,033. They receive \$500 per month for 18 months with no work requirement or consumption restrictions (114). Measured health outcomes include psychological distress and physical functioning, as well as some intermediary outcomes: material hardships, health-care utilization, perceptions of hope, and stress (80). SEED also measures how cash transfers may interact with other means-tested benefits and income thresholds (7). Evidence from the SEED experiment is now being collected.

### **Child Development Accounts (a Step Toward Universal Basic Assets)**

Proposed in the context of lifelong asset-building policy (103), universal and progressive CDAs are subsidized asset-building accounts to support investments toward life-course goals, such as education, homeownership, and eventually greater retirement security. CDAs give all children and families (especially those in vulnerable conditions) a structured, unconditional opportunity to accumulate assets over time. The policy is envisioned as universal in that every newborn would receive a CDA, progressive in that greater subsidies should be provided for vulnerable populations, and potentially lifelong in that they start at birth. Ideally CDAs should be delivered through an established and efficient account structure (e.g., in the United States, state 529 college savings plans offer such a structure). As designed, CDAs build assets through contributions from the public and nonprofit sectors, business organizations, families, and friends, and the design encourages individual contributions from parents. Financial subsidies and incentives from the public sector, nonprofit organizations, and businesses can be delivered through various mechanisms, including initial deposits at the CDA opening, milestone deposits for children's birthdays and achievements, savings matches for family deposits, and tax exemptions for earnings. Investment growth builds assets over time.

A long-term experiment on CDAs has been underway since 2007, sampling in the full population of births in the state of Oklahoma and known as SEED for Oklahoma Kids (106). The policy model being tested is sustainable, and the rigorous research design permits attribution of causality and generalizability to the full state population. Findings indicate that the CDAs helped treatment parents maintain high expectations for their children's education (69), reduced the intensity of maternal depressive symptoms (60), reduced punitive parenting practices (58), and improved the early social-emotional development of children (59). Other studies conducted in sub-Saharan Africa have reported that a CDA intervention improved mental-health functioning for children and caregivers (e.g., 118, 122) and reduced intentions to engage in sexual risk-taking behavior (81, 112).

Overall, findings suggest that CDAs enable disadvantaged families build long-term savings and achieve positive health outcomes.

These research results have directly influenced policy. To date, seven US states have adopted statewide CDA policies. After 2020, the CDA asset-building platform will add more than 900,000 child beneficiaries each year (the size of birth cohorts in states with CDA policy). All CDA policies in the United States designate the assets for postsecondary education, and about 85% of participants are in a CDA program based on a state 529 plan, for efficiency, investment growth, and sustainability over time. In this example, we emphasize the difference between testing a small scale project that may not be sustainable and testing a fully inclusive and sustainable policy.

Singapore has the most comprehensive CDA system, which builds assets for purposes (e.g., education, health, and others) that shift focus across life stages. Israel created a universal CDA policy in 2019. It covers all children under age 18. CDAs have also been implemented in the United Kingdom, Canada, South Korea, Taiwan, and sub-Saharan Africa countries (105, 61).

UBI and UBA (imagining Universal Basic Assets, beginning with CDAs) could become large-scale cash-transfer policies during the twenty-first century. Both UBI and UBA are attempts to be responsive to the social and economic conditions of the information era, wherein labor income may not be sufficient to support a large portion of the population. The long history of cash transfers shows that they have been adapted to fit social and economic conditions of their era. The overall finding that cash transfers have a positive relationship to health outcomes (along with other well-being outcomes not discussed in this review) provides a rationale for expansions of these large cash transfers in the information era.

But much remains to be done. We lack knowledge of how particular populations, social conditions, and mechanisms affect the relationship between cash transfers and health. Applied research should embrace two primary goals: (a) document the effectiveness and sustainability of the cash-transfer interventions, and (b) document the health and other outcomes among participants, along with the mechanisms of these effects. Cash transfers will never be the central health policy, but the wide scope of these policies and programs, the vast resources transferred, and documented impacts on health suggest that cash transfers cannot be ignored in an assessment of social policy and health outcomes.



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