

Swiss Learning
Health System

How to improve individual decision-making within the mandatory Swiss health insurance system?

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Keywords

Health Insurance, Individual Decision-Making, Decision Support, Health Insurance Literacy

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List of Abbreviations

ACA	Affordable Care Act
FINMA	Swiss Financial Market Supervisory Authority
FOPH	Federal Office of Public Health
HL	Health literacy
HIL	Health insurance literacy
HILM	Health Insurance Literacy Measure
HILM-CH	Swiss Health Insurance Literacy Measure
NAV-HL	Navigation health literacy
OBSAN	Swiss Health Observatory
OECD	Organisation for Economic Co-operation and Development
OOP	Out-of-Pocket
US	United States

Policy Briefs and Stakeholder Dialogues of the Swiss Learning Health System

The **Swiss Learning Health System (SLHS)**, as a national platform for health systems and services research, fosters the dialogue between different stakeholders that are relevant in the Swiss health system and facilitates the flow of information at the level of policy, research and practice. This allows to develop and continuously integrate evidence-informed solutions to challenges in the healthcare system. It tries to link all actors – patients, healthcare providers, insurers, researchers and policy-makers – with the final aim to strengthen the Swiss health system, to improve population health, and ultimately to achieve better value for money in healthcare.

In order to achieve the goal of bridging research, policy and practice, the SLHS fosters learning cycles in the Swiss health system, strengthens research capacity, and aims at building management tools to access relevant health information that can support **learning cycles**. Key features of the learning cycles in the SLHS include the development of Policy Briefs and the conduct of Stakeholder Dialogues.

Key Messages

Background and Context

In Switzerland, selecting and adequately using health insurance is something that individuals often struggle with. Not being able to adequately navigate the health insurance system not only impacts one's finances but also an individual's health status. Limited understanding of the health insurance system and a lack of skills to navigate it; namely limited health insurance literacy (HIL), is associated with poor quality health insurance choices as well as inadequate healthcare utilization and access, and thus may not only bear far reaching consequences at the individual level but also at level of the healthcare system.

The Swiss health insurance system is characterized by mandatory basic health insurance coverage with a relatively complex design and continuously growing costs; at the same time, it is increasingly focusing on expanding offers of consumer-directed plans and alternative models. As a result, individuals with limited HIL struggle to adequately navigate it. Empowering citizens to make adequate and well-informed decisions relevant to their health thus becomes an imperative. This includes the appropriate selection, use, and navigation of health insurance.

The Issue

Just as health literacy is crucial for individuals to make appropriate decisions regarding their own health, HIL plays an important role when navigating the health insurance system, making decisions regarding one's coverage, and accessing care. However, trying to improve individual decision-making within the Swiss health insurance system is complicated by the following three challenges:

- Few available HIL assessments and a subsequent lack of information on distribution of HIL in Switzerland.
- No knowledge regarding the consequences and costs of low or limited HIL.
- Limited knowledge on HIL interventions, especially in the Swiss context.

Recommendations for Action

First steps to address the issue involve furthering our understanding of the distribution of HIL and associated factors to identify vulnerable groups in Switzerland. Additionally, individual decision-making must be empowered at different levels. This Policy Brief recommends:

- Further data collection and monitoring to assess the distribution of HIL in Switzerland and to identify vulnerable groups, individuals, and their needs.
- Provision of appropriate decision support tools and information to help individuals make informed choices and navigate the system.
- Develop and strengthen HIL and other relevant skills through compulsory education.

Implementation Considerations

Barriers to implementation include:

1. Limited resources at different levels, such as financial and time constraints, might limit the extent to which it is possible to work on these recommendations.
2. Privacy and data issues may limit organizations and companies from sharing data due to sensitive private information and legal reasons.
3. An overprovision or excess of resources and information might negatively affect individual decision-making due to information overload, making decisions more difficult when there is too much information.

Potential windows of opportunity include:

- One of the objectives of Health2030, the Federal council's health policy strategy for the period 2020-2030, is to promote health literacy to empower citizens to make decisions determinant to their own health. An objective that could be expanded to include HIL related skills.
- Initial efforts to measure HIL in Switzerland have taken place.
- Existing recurrent surveys can be used to assess HIL regularly. Similarly, existing institutions such as the OBSAN (Swiss Health Observatory) can facilitate data collection and monitoring.
- Several organizations, companies, and institutions already provide some information and decision support tools.

Background and Context

Switzerland is known for having a high-performance healthcare system that provides universal health coverage [1]. At the same time, it is also one of the countries with the highest healthcare expenditures [2]. In 2019 for example, health expenditure in relation to the gross domestic product (GDP) was 11.3%, and households financed 63% of health expenditures in Switzerland [3].

Health insurance premiums increase significantly year after year, increasing out-of-pocket payments (OOP) for individuals. For some individuals, high OOP can represent an obstacle for access to healthcare, particularly for those with low socioeconomic status [4]. According to the OECD, both OOP and consultations skipped due to costs are relatively high in Switzerland by international standards; a report from 2017 stated that 11.6% of people in Switzerland would not get prescribed medicines because of costs [5]. According to the Swiss FOPH the amount of people foregoing care increased from 10% in 2010 to 23% in 2016; and is concentrated among those under 50 years old and those with modest income [6]. In 2016, 22% of the Swiss population reported foregoing care due to costs and this rate got as high as 31% among low-income groups [7].

On an individual level, adequate selection and use of health insurance is important for financial security, access to care and efficient healthcare utilization. Unfortunately, numerous studies have shown that individuals do not always choose the best health insurance for themselves, and sometimes make irrational choices that do not align with their own preferences and needs [8–10]. Research has demonstrated that several barriers come into play when choosing and using health insurance plans, as well as navigating the health insurance system. Some of these barriers include literacy and numeracy [11], health literacy (HL), and more specifically, health insurance literacy (HIL) [8, 9, 12, 13]. **These barriers not only affect health insurance choice, but also impact healthcare utilization and access** [14, 15].

Low HIL, meaning the lack of sufficient knowledge and skills to adequately navigate the healthcare system, can have grave consequences, especially for vulnerable individuals and groups. When using health insurance, an individual with limited or low HIL may not know which services are covered by his/her health insurance plan, which providers are in his/her healthcare network, whether desired or needed services are covered by mandatory insurance, or if and how he/she would be eligible to receive subsidies.

The Swiss health insurance system is a product of decentralization, consumer-driven economic culture, and the unique trajectory of social security systems. This hybrid model consists of two different components that have distinctive natures, prices, rules, and regulations but, at the same time, work together to provide universal health coverage.

1. Mandatory (or basic) health insurance in Switzerland is formed by social law and supervised by the Federal Office of Public Health (FOPH). This insurance is standardized and regulated. Although it is private, its functioning is similar to public health insurance provided in other European countries. Premiums are community-rated, varying across premium regions and age groups.

2. In addition, there is voluntary (or supplementary) health insurance, governed by private law and supervised by the Swiss Financial Market Supervisory Authority (FINMA). This insurance is highly personalized and, unlike mandatory health insurance, can be provided by for-profit organizations. Its price is mostly dictated by risk-rated premiums and it is much less restricted by the regulator.

Overall, the Swiss health insurance model can be seen by many as a fairly complex system with peculiar elements and extended history.

Health insurance literacy

Health insurance is one of the most expensive and complex products individuals consume [16]. As such, being able to select and adequately use the best health insurance plan for oneself requires certain skills and knowledge.

In 2011, an expert roundtable in the US defined HIL as

“the degree to which individuals have the knowledge, ability, and confidence to find and evaluate information about health plans, select the best plan for their own (or their family’s) financial and health circumstances, and use the plan once enrolled” [13].

Despite this definition, assessment of HIL is still in its infancy and, if available, measurement of HIL is still inconsistent, given its context-specific nature [17]. The two most common frameworks used for the conceptualization and assessment of HIL are:

1. McCormack et al.'s conceptual framework (Figure 1)

This framework focuses on individual and system level variables that may have an impact on HIL. It draws from literature on education, literacy, financial literacy and health literacy [18].

2. Paez et al.'s conceptual model (Figure 2)

This model identifies four domains that make up HIL: (1) knowledge, (2) information seeking, (3) document literacy and (4) cognitive skills, with self-efficacy as an underlying domain. In contrast to the previous framework, this framework pinpoints different abilities that would help an individual find, select and use a health insurance plan, rather than identifying personal and external factors that might be associated with HIL. Based on this conceptual model an assessment tool, the Health Insurance Literacy Measure (HILM), was developed. [16].

Figure 1. McCormack et al.'s conceptual framework for Health Insurance Literacy

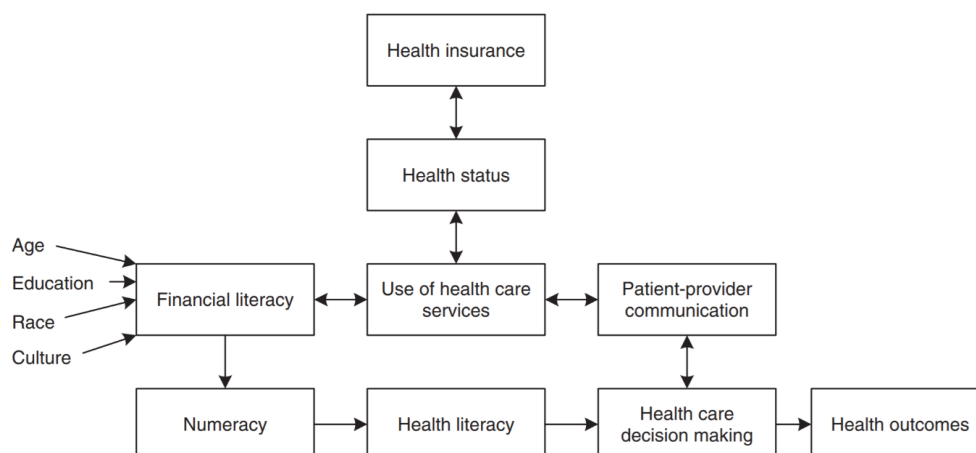
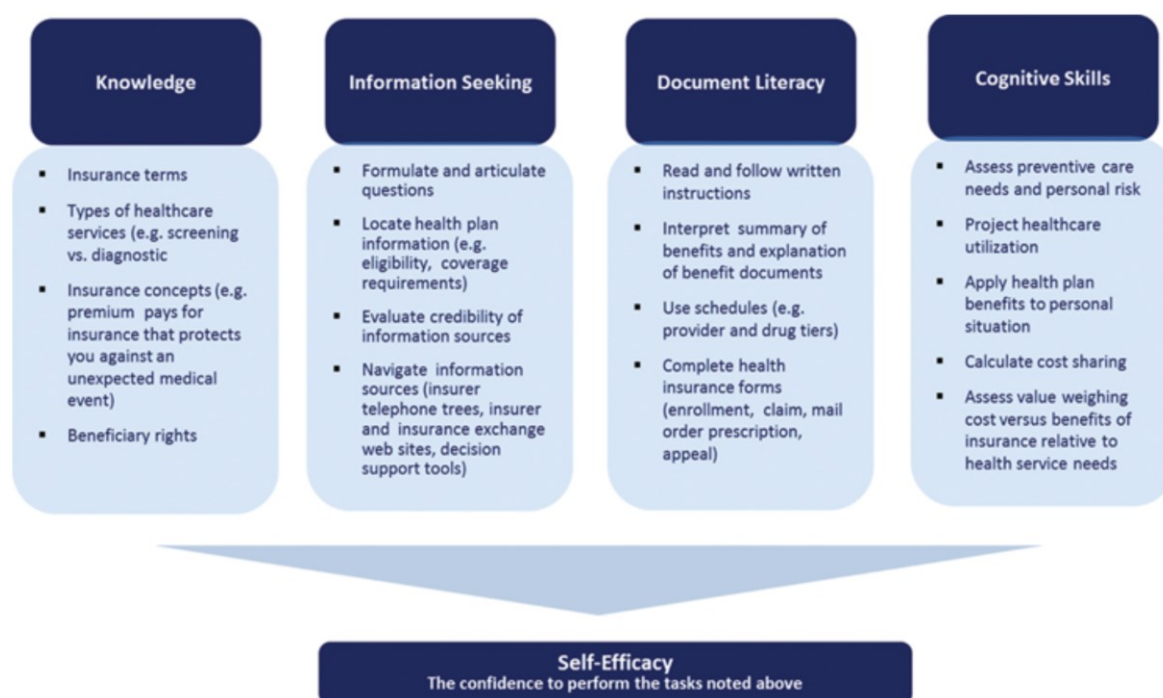


Figure 2. Paez et al.'s conceptual model for health insurance literacy



Distribution of HIL

Most of the research investigating the distribution of HIL, as well as the factors associated with it, has taken place in the United States (US). In the US, lower levels of HIL have been found in younger individuals [19], populations with a high risk of unmet medical needs, such as those with lower socioeconomic status, ethnic minorities, and older populations [14, 20].

Initial efforts to assess HIL in Europe have only recently started to emerge. For example, a survey from 2017 conducted in the Netherlands, whose health insurance system shares some similarities with the Swiss system, showed that in general Dutch citizens recognize the importance of being able to select a health insurance, yet they struggle with assessment of information on different types of health insurance policies, and do not have the necessary skills to choose a plan that fits their preferences and needs [21].

In Switzerland, research shows that certain groups are struggling more than others in navigating the health insurance system. For example, a recent study found that immigrants in Switzerland are 1.75 to 2.5 times more likely to not know their health insurance plan and the level of their deductible compared to non-immigrants [22]. Recently, the previously mentioned HIL measure (HILM) was also validated in Switzerland, representing the first attempt to measure HIL levels in the Swiss context. [23].

Besides HIL, navigation health literacy (NAV-HL) is another relevant construct (Box 1).

NAV-HL refers to

“people’s knowledge, motivation and skills to access, understand, appraise and apply the information and communication in various forms necessary for navigating health care systems and services adequately to get the most suitable health care for oneself or related persons” [24].

NAV-HL is much broader than HIL, but they both overlap in terms of skills described to navigate health and health insurance systems. Recently, the European Health Literacy Population Survey 2019-2021, included an instrument for NAV-HL. The survey found that most countries had low NAV-HL scores, and on average about 45% of the participants found tasks described in the survey either to be “very difficult” or “difficult”. Some of the tasks that individuals found to be more difficult had to do with information on healthcare reforms, patients’ rights, and health insurance coverage or specific health services. In particular, individuals with poorer health, and those who were financially deprived and perceived their levels in society as lower had lower levels of NAV-HL [25].

Consequences of low HIL

Based on current evidence, one of the most salient potential consequences of low HIL is the selection of an insurance plan that is not “ideal” for an individual’s needs and preferences. This might lead to extra costs for individuals [29, 30].

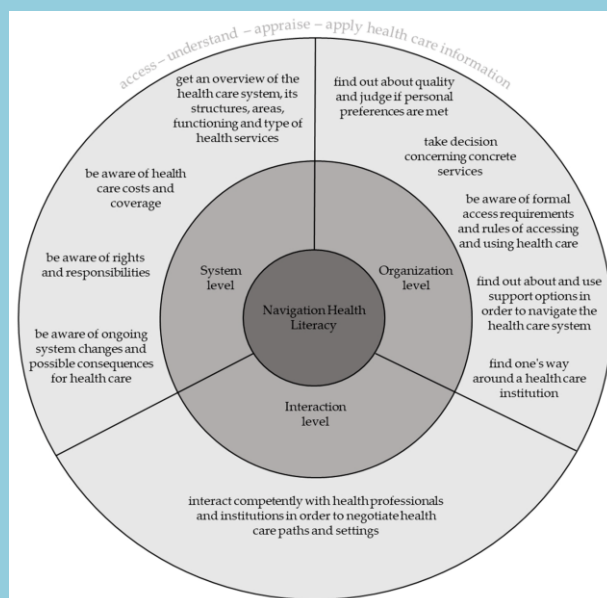
Beyond health insurance selection, HIL also plays a role when it comes to finding providers and healthcare utilization, which can have negative financial and health consequences. For example, individuals who consult with an out-of-network physician when having an alternative model health insurance incur extra costs; as well as when purchasing treatments in out-of-network pharmacies. Research has found that individuals with higher levels of HIL are more likely to use primary care and preventive services, while those with lower levels are more likely to delay or avoid care due to costs [14, 31]. Lower HIL has also been found to be more prevalent among populations with a high risk of unmet medical needs [14]. In Switzerland, a study showed that especially individuals with compulsory education experience unmet healthcare needs due to financial reasons twice as often as people with secondary and tertiary education [32, 33].

Box 1. Health insurance literacy as part of navigation health literacy

As health systems around the world grow more complex, knowledge and skills individuals need to navigate them increase. This might leave certain vulnerable individuals and groups left behind when it comes to accessing healthcare. In the USA for example, “patient navigator programs” have been implemented with the aim of helping individuals to overcome barriers to care and reduce health disparities [26–28].

Recently, a working definition and conceptual framework for navigation health literacy (NAV-HL) was developed. The framework consists of diverse tasks that individuals need to perform at the system, organization, and interaction levels. Within the system level, individuals are required to be aware of health costs and coverage. This awareness is central to HIL. At the same time, other knowledge, information seeking, document literacy, and cognitive skills that form part of HIL, are relevant for navigating both health and social systems [24].

Fig. 3. The main tasks of NAV-HL



Growing relevance of HIL within the Swiss Health System

Consumer and patient empowerment are particularly important in the Swiss consumer-driven healthcare system [34]. One of the objectives of Health2030, the Federal council's health policy strategy for the period 2020-2030, is to promote health literacy in order to empower citizens to make informed and responsible decisions relevant to their own health [35]. **Given its importance for navigating the health systems, and its potential impact on health, HIL is crucial for patient empowerment.**

While the proportion of individuals selecting alternative models has increased in the last 10 years from 47% to almost three quarters; the selection of higher deductibles that could reduce expenses for healthy individuals has not changed as drastically [36]. This is an indicator of individuals making suboptimal choices.

Additionally, healthcare cost containment measures have been recently adopted by the Federal Council. One of these measures includes the "experimentation article", which allows for innovative pilot projects that test new models previously proven to be effective abroad to curb cost development, strengthen quality and promote digitalization [37]. Models such as value-based insurance or managed care are some examples of models that could be tested and potentially implemented through the experimentation article. Acceptable solutions will be possible on a voluntary or opt-in basis [38]. **While the testing of innovative models to improve healthcare delivery and cost containment may be promising, a shift towards increasing the offer of consumer-directed plans and alternative models requires individuals to make better informed choices and take a more active role as consumers in order to have a real positive impact and provide results.**

The Issue

Answering the question on how best to address the issue of low HIL, and on how to support individuals to better choose and use their health insurance plans is complicated by the following three interrelated factors:

1. Lack of HIL assessments and subsequent lack of information on distribution of HIL levels in Switzerland
2. No knowledge regarding the consequences and costs of low and limited HIL
3. Limited knowledge on cost-effectiveness and outcomes of interventions specific to HIL, especially for the Swiss context

These factors are explained in more detail in the following.

Assessment and distribution of health insurance literacy levels in Switzerland

After the introduction of the Swiss Federal Law on Compulsory health Care (LAMal) in 1996, surveys assessed its impact, including how individuals selected insurers. A report published in 2001 by the OECD showed that at that time, 40.8% of respondents selected their health insurer because their parents had always been insured with that same company or because of family and friends' advice, and 15.01% because of automatic procedure by an authority [39]. The report also presented statistics on preferred sources of information when looking for health plans, and reasons for not changing insurances. While the topic of HIL has gained increasing attention in the last few years, as of today only few studies have been conducted in Switzerland. Furthermore, considering that HIL is a fairly young concept and the heterogeneity of health insurance systems, there is currently no gold standard to assess HIL across populations [17].

Early results of a recent survey that validated the Health Insurance Literacy Measure in Switzerland (HILM-CH) show that about one third of the respondents are not likely or only somewhat likely to understand health insurance terms and differences between health insurance plans, know where to get financial help if they cannot pay for health insurance, or if a doctor has a contract with their health insurance before visiting [23]. In terms of costs, about one third of respondents have at least some difficulty knowing how much they have to pay if they visit the emergency room or a specialist, how much they would have to pay out of their own pocket and how much would be reimbursed by their health insurance. Additionally, Swiss nationals, and those 56 years and older, have higher levels of HIL compared to foreigners and younger persons.

Since we are just starting to learn about the distribution of HIL in Switzerland and given that some of the skills and knowledge associated with health literacy overlap with HIL, drawing from already available information on the distribution of health literacy and NAV-HL in Switzerland might be a good starting point to get a better picture of what individuals struggle with the most in the Swiss context [16, 17]. For example, the Swiss health literacy Survey found in 2020 that only 39% of respondents had “adequate”, while 38% had “problematic” levels of health literacy [40]. Further, about half of the Swiss population (49%) was identified as having low health literacy and having difficulties in dealing with health information. When considering four dimensions of health literacy, namely: accessing information, understanding information, appraising information, and applying information; appraising information was rated the most difficult dimension. Additionally, a particular large proportion of the Swiss population (72%) reported that they often had difficulties in dealing with digital information and services. Also, a similar large proportion

(74%) reported having difficulties in dealing with information that serves to navigate the health system, which might be highly relevant for HIL.

The same survey reported factors that were associated with different NAV-HL levels. While those under 25 and over 65 years of age had less difficulties when navigating the health system, those between 25 and 65 years old reported more difficulties. Other associated factors were financial situation, social support, and social status. Persons who have fewer financial difficulties, receive more support from their environment, and have higher social status, experience fewer difficulties navigating the health system on average.

Costs of low health insurance literacy

While the general costs of limited HIL have not been quantified so far, there is literature on the extra costs caused by some of its potential consequences. For example, a recent study by researchers at the University of St. Gallen estimated that about 9.4% of the total annual health costs paid by individuals are financial losses caused by poor mandatory health insurance choices [30].

Furthermore, research has found that individuals with lower levels of HIL are more likely to delay or forego healthcare [31]. This may be problematic since delaying necessary care can lead to worse health outcomes and eventually higher costs [41–43]. Given our current knowledge, it is hard to determine the direction of causality when it comes to HIL. In other words, we do not know whether people with higher demand of health services have more knowledge about the health system and insurance in particular given their increased exposure.

Other associations between different levels of HIL and financial outcomes have been found. Lower levels of HIL have been associated with financial hardship among cancer patients and survivors [44, 45], and a recent study from the US (2021) found that middle-aged adults with higher levels of HIL were less likely to have medical debts [46].

There are some important findings from research on health literacy that may be indicative of the economic impact of HIL as well. In 2006, a study attempted to empirically assess the economic impact of health literacy and its effect on the Swiss economy [47]. The author concluded that a lack of health literacy increases the cost of healthcare because individuals with low levels of health literacy are sicker and treatment is less targeted. The author projected that around 3% of healthcare costs were likely to be attributable to insufficient health literacy in Switzerland. In 2006, this corresponded to an amount of 694 million CHF in compulsory health insurance and 1.5 billion CHF in the entire healthcare system. Further studies have found that low health literacy is an important predictor of inappropriate access to healthcare and higher healthcare costs [48–50]. For example, in the US, on the patient level, the additional expenditures per year per person with limited health literacy ranged from 143 to 7,798 USD.

As the body of evidence grows, not only do we need a better understanding about causality of these and related concepts, but also about the underlying mechanisms through which they affect health insurance choice and healthcare demand. This is crucial to answer questions such as whether higher levels of HIL lead to a more efficient use of healthcare services and lower costs, or if lower levels of HIL are a preventive factor to overutilization or moral hazard, which refers to how health insurance coverage may lead people to take more risks or make fewer efforts to maintain their health [51].

Health insurance literacy interventions

Until today, there is only a limited number of documented interventions available that aim at improving HIL and most of the interventions that are referred to in the literature have taken place in the US. Further, information on the long-term outcomes and cost-effectiveness of such interventions is lacking.

Curriculum-based interventions

Curriculum-based, or educational interventions are learning programs designed to educate individuals on health insurance, increase confidence, and develop skills to make informed decisions.

Box 2. Smart Choice Health Insurance Program

The *Health Insurance Literacy Initiative* was launched in 2012 by the University of Maryland Extension. Its first program, *Smart Choice Health Insurance*, consists of a comprehensive curriculum for the general public. It is a 2-hour interactive workshop composed of modules of lectures, discussions and group activities; as well as an accompanying workbook.

Based on data from participants, it was found that the program significantly increased confidence and capability, and reduced confusion in participants.

Examples include the program *Health Insurance Education: Options for You and Your Family*, developed by the University of Missouri Extension; *Let's Ask 4* from Emory University, or the *Smart Choice Program* from the University of Maryland Extension's *health insurance literacy Initiative* (Box 2) [52].

Navigation aids and decision support interventions

In contrast to curriculum-based interventions, navigation aids and decision support interventions refer to the provision of resources and tools to make health insurance selection and use easier for individuals. These resources and tools vary widely, in-

cluding in-person assistance, provision of information sources, and interactive tools.

For example, a study evaluated the effectiveness of the *Insuring Good Health* Intervention [53], a US based website and video series designed to improve engagement with health insurance and the Affordable Care Act (ACA) reforms in medically underserved areas within the Detroit, Michigan metropolitan area. The main purpose of the intervention was to effectively link individuals to enrollment assisters, who support individuals to make decisions in the ACA Health Insurance Marketplace, a state-based platform through which individuals can purchase health insurance. The *Insuring Good Health* website includes key information on health insurance provisions, eligibility, enrollment, applicability and navigation, as well as eight videos of superhero characters who navigate the health insurance system with the help of assistants. The study found that the intervention had good acceptability and participants reported learning a lot and finding the information useful. After 9 months, the intervention group demonstrated greater intention to seek help related to health insurance navigation.

Other non-educational interventions and programs to support individuals navigating the health insurance system and market place in the US include decision support tools, such as the *Show Me My Health Plan*. This tool uses plain language and simplified information, graphics, assesses knowledge to ensure comprehension and integrates health status to estimate OOP costs [54, 55].

Additionally, as part of the ACA, a system for health insurance enrollment assistance has been implemented. This consists of professionals that help consumers apply for financial assistance, select plans, etcetera [56]. These professionals, referred to as assisters or navigators, have improved access to insurance among several underserved and hard-to-reach

groups. For example, a recent study found that more generous funding of navigator programs in expansion states (states in which the Medicare coverage and eligibility was expanded) was associated with an increase uptake of Medicaid, which provides coverage free of charge to eligible individuals with low income and resources [57]. On the other hand, cuts in the funding of such navigator programs have shown to significantly decrease coverage among people with lower income, adults under 45 years old, Hispanics and those who speak a language other than English at home [58].

As the importance of HIL and NAV-HL proves to be more and more relevant, some research and interventions begin to develop also outside of the US. For example, an intervention for promoting NAV-HL has been recently developed in Germany (Box 3). The *Nebolus* intervention, is game-based and consists of three components: (1) a rally app for adolescents, (2) an online planning tool for health service providers to be able to plan rallies, and (3) teaching material to be used before and after the rallies [59, 60].

Given that implementation of HIL interventions is scarce and fairly recent, there is not a lot of evidence regarding their long-term effects, cost effectiveness or economic impact. In comparison, health literacy interventions have taken place for a longer period of time, and there is some evidence regarding their impact. Unfortunately, just like HIL interventions, very few studies have attempted to quantify their economic benefits [61].

While the use of similar interventions to address HIL and health insurance system navigation can be promising, there are several aspects to take into consideration. Many of these programs or interventions are online and participation is voluntary. It is likely that such interventions do not reach the target populations or those individuals who are in need, since these can be hard-to-reach-groups. Instead, they may only benefit individuals who already have relevant knowledge or the means to acquire it. Additionally, to be able to attribute real effects on outcomes of such interventions, HIL has to be assessed at baseline to determine the effectiveness of such interventions and whether they improve HIL and decision-making.

Box 3. Nebolus

The aim of the *Nebolus* intervention is to strengthen skills of adolescents within their living environment; including the ability to find, understand, assess and use information about services provided in their community.

Nebolus uses Location based Games (LbG) and the Entertainment Education approach. It was co-created using the Living Lab Approach, a user-centered, open innovation ecosystem-based co-creation approach.

The intervention is aimed at adolescents between 12 and 16 years old. It is expected to strengthen ability to find and understand information about health services and providers, as well as improve attitudes towards help seeking and health service utilization, particularly for those related to health promotion and prevention.

Recommendations

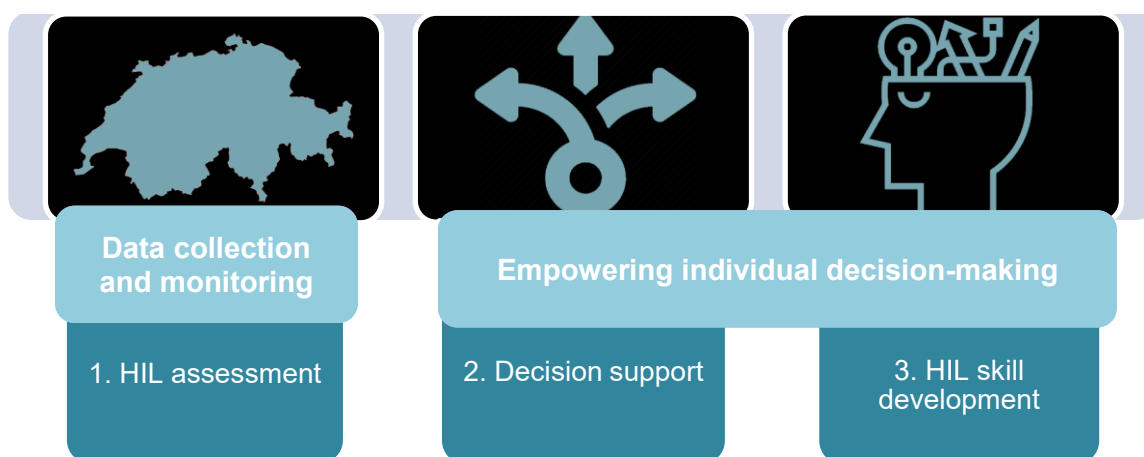
Taking into consideration the factors described in the previous sections, addressing HIL in the Swiss context is a difficult task. Initial efforts to learn about the distribution of HIL within the country have started, and while this represents an important first step, further challenges lie ahead.

First, further research is needed to get a better picture of the distribution of HIL in Switzerland and what consequences this may have for individuals, as well as the system at large. Focusing on the individual's perspective, we need to learn more about which groups in particular are affected by low levels of HIL and in which ways, in order to identify vulnerable groups and implement appropriate interventions.

Yet, as we already know from the little evidence available, individuals with higher levels of HIL are more likely to select a health insurance plan that is appropriate for their health and financial situation, as well as use more primary and preventive healthcare services; whereas individuals with lower levels may have difficulties selecting and using an adequate health insurance plan, struggle to navigate the health and health insurance system, and are more likely to experience financial hardship. As a result, implementation of effective interventions to address HIL by empowering individual decision-making might help contain costs for individuals as well as for the health system.

In summary, three main recommendations can be considered to address the issue of navigating the health insurance system in Switzerland. One of them focusing on data collection and monitoring of HIL, and two of them aimed at empowering individual decision-making:

1. Further data collection and monitoring to assess the levels of HIL and to identify vulnerable groups in Switzerland,
2. Provide appropriate tools and information for decision support,
3. HIL skill development and strengthening through compulsory education.



Recommendation 1: Data collection and monitoring to assess HIL distribution in Switzerland and identify vulnerable groups

Several measurement tools have been used to assess HIL, most of which have been developed in the US. One of these tools, the Health Insurance Literacy Measure (HILM), represents one of the most reliable ways of assessing HIL so far [62] (Box 4). A translated and culturally validated version of the HILM has been recently used to assess the distribution of HIL in Switzerland (HILM-CH). While this initial effort is significant, further steps will be necessary to identify factors associated with HIL in Switzerland. Further, the identification of vulnerable groups is essential for the development and implementation of effective interventions, including the development of skills through the educational system, and provision of decision support tools and information.

While the inclusion of a relatively long instrument, like the HILM-CH in a recurrent survey might be difficult, the inclusion of a few items or a relevant proxy in surveys such as the Swiss Health Survey [63] or the Swiss Household Panel [64] might be more accessible. For example, one item asking about how one perceives their own understanding of health insurance has shown to be highly correlated with the HILM-CH, which might provide enough information to measure HIL levels in Switzerland [65].

One of the obstacles in assessing HIL, is the fact that currently there are no guidelines or literature informed cut-off points to define what constitutes low HIL when using the HILM and other measurement instruments [66]. Given that HIL is highly context-specific due to variations in health insurance systems, different levels of HIL might have different implications or consequences in different contexts. As a result, the definition of what constitutes low or high levels of HIL in the Swiss context is yet to be defined. Cutoffs previously used in the literature may serve as initial guidance (some examples are provided in appendix 1), but might need to be adjusted in line with the skills and knowledge necessary to successfully navigate the Swiss health system.

Beyond HIL, it is important to get a better understanding of the specific challenges that individuals may face when navigating the health insurance system in Switzerland, since little is known about their experiences. A first step towards achieving this goal is to conduct qualitative research to understand the needs and perceived barriers of vulnerable populations that might need more support when navigating the Swiss health insurance system, such as those living in rural areas, those with low socio-economic status, immigrants, older adults, young individuals with little knowledge regarding health insurance, as well as those who are critically ill. This research can serve as a starting point for developing person-centered information sources and tools that meet the needs of the people they are intended to help.

Box 4. Health Insurance Literacy Measure (HILM) [16]

The HILM is a 21-item self-assessment measurement tool for HIL in the general population that has been tested for validity and psychometric properties. Its conceptual basis is the health Insurance Literacy conceptual model by Paez et al. (figure 2).

The HILM assesses 4 different dimensions: (1) confidence choosing a health plan, (2) behavior choosing health plan, (3) confidence using a health plan, and (4) behavior using a health plan. Items are answered on a 4-point scale ranging from "Not at all likely" to "Very likely, or "Not at all confident", to "Very confident".

Scores are calculated for each scale. Scores for two domains (choosing and using health insurance) can also be averaged together.

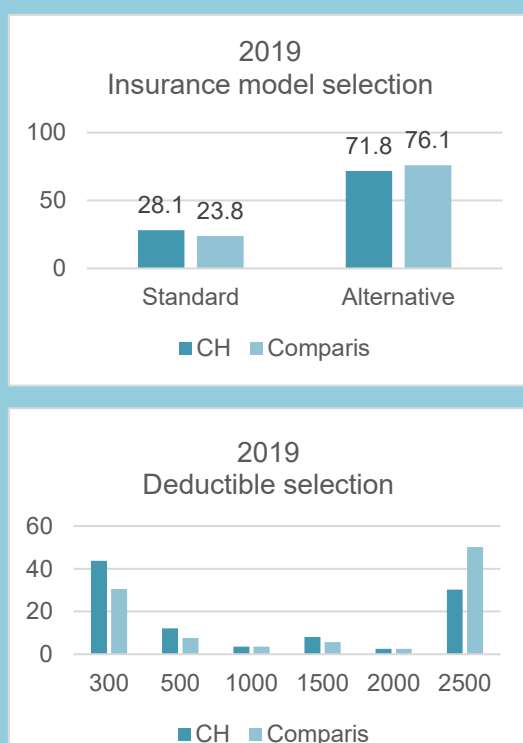
Recommendation 2: Decision support with appropriate tools and information

The Swiss health insurance system is fairly complex, and there are many sources available to consumers providing information on how to navigate the system. Nevertheless, the simple provision of information may not always result in better choices from consumers, since other factors such as financial literacy, numeracy, document literacy, proactiveness and self-efficacy are important as well [16, 18, 19]. For these reasons, information and decision-support tools must be provided in a simple way, through accessible means, and at an appropriate time [67–69].

While the FOPH, health insurance companies, and other organizations already provide information through different means, such as websites, brokers, and brochures; individuals still have difficulties to find, assess and use the provided information. The simplification of choice interfaces or provision of decision support tools is an effective way of supporting individuals with lower levels of HIL who might struggle when navigating the system and making choices for themselves [70, 71], particularly when comparing and selecting health insurance plans. For instance, experiments in Switzerland and other contexts have demonstrated that the provision of personalized information and decision aids when selecting health insurance, greatly improves decision quality [72, 73].

Box 6. Comparis

The Comparis website has more than 80 million visits per year, and allows consumers to compare rates and different services, such as health insurances, banks and telecommunication providers. The website's aim is to bring transparency to the markets and strengthen decision-making competences. A recent report, states that among their users, those with alternative models of mandatory health insurance tend to select higher deductibles, which corresponds to lower monthly premium payments. In 2019, consumers who shopped for health insurance using the Comparis website, were more likely to select an alternative insurance model (telemed, HMO, family doctor) rather than the standard model. Similarly, consumers selecting their health insurance through Comparis, were more likely to select the highest deductible with lower monthly premiums.



The next sections summarize some ways in which the navigation of the health insurance system can be facilitated through support tools and adaptation of information materials to make them more accessible.

Providing user-friendly interfaces and tools

The use of interfaces that simplify information and are easy to navigate, has proven to help individuals to better evaluate their options and make better choices [74]. In the case of health insurance selection, experiments have shown that improving “choice architecture” by sorting premiums or showing total yearly expected costs, helps consumers make more cost-effective choices when selecting a health insurance [75].

For example, the platform Comparis allows consumers to easily compare health insurance plans based on their needs and preferences, it also uses prompts to inform users about products that might save them

money if they spend more or less than a certain amount on healthcare (Box 6)[68]. Another example, is the Medicare Navigators program in the US; this consists of an unbiased in-person service provided by individuals and organizations to help consumers search for and select coverage plans; this includes completing eligibility and enrollment forms and service is free for consumers [26].

Facilitating access to reliable and neutral sources for information provision

In Switzerland, the FOPH offers accessible information on mandatory health insurance in different languages [69]. While these are valuable resources, simple information provision does not always help individuals. The inclusion or use of graphical display of information makes it easier for a wider audience to understand and use information in their own decision-making process, particularly when coupled with further personalized information regarding expected costs [73, 76]. Alternative sources or ways of accessing information can benefit those who do not know where to look for information. A variety of tools can be developed for this purpose, including websites, hotlines, chatbots, radio and TV spots, etcetera.

These tools might be particularly beneficial when used as part of *just-in-time* education strategies, during periods when individuals have the opportunity of switching health insurance plans [77].

Adapting and creating culturally-centered resources

A qualitative study from the US published in 2021 summarized lessons learned from immigrant communities regarding health and health insurance literacy resources [78]:

- Apply a cultural-centered approach to develop and refine content and tools. This builds trust and allows to adapt to the community's experience and needs.
- Respond to translation and tailoring needs. Given that Switzerland has four official languages, and a growing international community, this is particularly important. Translation should be tested with a subset of the target population and consider the reading level of the materials. This includes the use of clear and simple language to facilitate the access and use of information, least amount of words possible, plain language, limiting sentence length and paragraph sizes, readable fonts and appropriate contrasts, helpful visuals, avoiding clutter; and in the case of websites responsive designs, and making them accessible to people with disabilities.
- Use community-specific channels to disseminate messages and materials. This includes considering alternative ways of communication besides written material, such as videos or audio. Alternative formats can help improve reach and impact. At the same time, it is important to take into consideration what individuals and communities think are credible information sources.
- Incorporate interpersonal communication. In a lot of cases, in-person or interpersonal interactions are a preferred channel of communication.
- Leverage organizational partners to build networks and increase reach. Existing NGOs, institutions and associations can play an important role when developing and distributing information and materials through their networks.

Recommendation 3: Health insurance literacy skill development and strengthening through compulsory education

Skills necessary to navigate the health system are important to take care of one's health and wellbeing; not only physical but also financial. Furthermore, higher levels of not only HIL, but health literacy, NAV-HL, digital health literacy, among others; have the potential to benefit not only individuals, but also communities and health systems at different scales. While there is a positive relationship between these skills and education, even highly educated individuals struggle with selecting and using health insurance [20]. In light of this evidence, it becomes clear that reinforcing such skills is of paramount importance.

With this in mind, advocacy to embed and strengthen health literacy in compulsory schooling for children and adolescents, as well as the implementation of educational programs for adults has increased in the last few years [61, 79–81].

The inclusion of objectives and competencies that develop HIL skills in the basic education curriculum, such as financial literacy, can provide individuals and their communities with the necessary tools to adequately navigate the health insurance and health system. At the same time, these skills would also help the navigation and understanding of other products and services, particularly if the focus is on general skill development rather than context-specific tasks. For example, financial skills could not only benefit individuals' selection of health insurances but also their planning for saving and retirement [82]. For example, a review that evaluated the effectiveness of financial literacy education programs and interventions for children and adolescents in primary and secondary school concluded that a promising method to teach financial literacy is "experiential learning", a process of learning by doing through "hands-on pedagogy", particularly in elementary and secondary school; adding real-world experiences to lessons in secondary schools was another important characteristic mentioned. In the case of college or equivalent education, inclusion of short courses, seminars or presentations have been shown to be effective [83].

Given the context-specific nature of HIL, there is no one-size-fits-all for the delivery and development of HIL competencies. As a result, existing models such as the Health Promoting Schools framework from the World Health Organization [84] can provide valuable guidelines, but content and approaches should be adapted to the Swiss national and local health end education systems [85].

Finally, it is also crucial to strengthen skills such as information literacy and critical thinking through compulsory education [86, 87]. In recent years, information literacy has been referred to as a 'metaliteracy' [88], which encompasses many skills, such as recognizing when information is needed, finding it, and evaluating it. Due to digitalization, these abilities will become increasingly important as participatory media and environments become more prevalent [89]. Participatory media and environments include communication sources where the public can play an active role in collecting, creating, and distributing information. Examples include online communities, social media platforms, blogs, and podcasts. While these sources provide access to vast amounts of information, they might not all be reliable or trustworthy, making it essential for individuals to evaluate them critically.

Box 7. Finland and its HL-friendly school curriculum [80, 81]

The most recent Finnish curriculum for basic education was implemented in 2016. As part of the curriculum, the overall aim of Health Education is to support the development of health literacy through competence-based curriculum and cross-curricular and subject-bound competencies, rather than a list of contents.

Health literacy was used as a framework to set the teaching objectives and learning criteria for grades 1-9. These objectives, are divided according to the core components of health literacy in an age-appropriate manner: (1) theoretical knowledge, (2) practical knowledge, (3) self-awareness, (4) critical thinking, and (5) citizenship.

Implementation Considerations

Based on different categories of groups of people and organizations, the following two tables summarize possible barriers (Table 1) and facilitators (Table 2) for the implementation of the three recommendations discussed in the previous section.

Table 1: Barriers to implement recommendations

Levels/Groups	Recommendation 1: Data collection and monitoring to assess HIL distribution in Switzerland and identify vulnerable groups	Recommendation 2: Decision support with appropriate tools and information	Recommendation 3: health insurance literacy skill development and strengthening through compulsory education
Consumer/Individuals	Unwilling to participate: Consumers/individuals might not be willing to participate in data collection, due to privacy issues, time constraints, etc.	<p>Information overload: Too much information and sources might negatively affect decision-making.</p> <p>Choice paradox: Too many options or products to compare might negatively affect decision-making.</p> <p>Individual characteristics: Limited literacy, reading level, and numeracy might limit individual's ability to find and use the right information and tools.</p> <p>Lack of trust: There might be a lack of trust for certain information sources.</p>	NA
Health insurers	Unwilling/unable to share information: Companies might not be willing or able to share data due to competitive advantage, privacy or legal issues.	<p>Lack of impartial information: Information provided by private companies might be aimed towards selling products rather than helping individuals.</p> <p>Lack of incentives to address the issue.</p>	Unwillingness to contribute towards educating consumers: Companies might profit from consumers' poor choices and not be interested in them being better informed.

Table 1: Barriers to implement recommendations (continued)

Levels/Groups	Recommendation 1: Data collection and monitoring to assess HIL distribution in Switzerland and identify vulnerable groups	Recommendation 2: Decision support with appropriate tools and information	Recommendation 3: health insurance literacy skill development and strengthening through compulsory education
Healthcare providers	Unwilling/unable to share information: Might not be able to share data due to privacy or legal issues.	<p>Lack of health insurance knowledge: Healthcare staff might not be well informed or able to provide information needed by patients regarding health insurance and coverage.</p> <p>Lack of incentives to address the issue: Healthcare staff might not be motivated to provide this information as it may cost time and resources and there is no gain for them.</p> <p>Limited resources: Limited time resources to train practitioners or provide information.</p>	
Research Organizations	Lack of urgency and limited resources: Other issues or topics may be more urgent.	NA	NA
Other organizations		NA	NA
System		Lack of urgency: Other issues or topics may be more urgent.	<p>Lack of resources: Limited time and financial resources available.</p> <p>Prioritizing other areas or competencies: Inclusion of extra material or competences might imply eliminating or limiting others.</p>

Table 2: Facilitators to implement recommendations

Levels/Groups	Recommendation 1: Data collection and monitoring of HIL	Recommendation 2: Provision of decision support tools and information	Recommendation 3: Development and strengthening of HIL skills through compulsory education
Consumer/Individuals	Consumer-patient organizations: existing organizations may already have knowledge or information on what patients struggle with regarding health insurance.	Existing resources and platforms: Some cantons offer advisory service with dedicated phone numbers and experienced consultants to support individuals when choosing health insurance. Expat organizations and patient organizations provide spaces for discussion and sharing information (forums, websites, communities, etc).	NA
Health insurers	Experience with consumers and knowledge about struggles and preferences: Some insurers might have information on what consumers struggle with or what their most common questions are. There are existing research institutes like the CSS empirical research institute.	Better customer service and engagement: Engagement and customer retention may improve by providing better customer service and consumer-centered information through timely interactions. Existing sources: Companies already provide some information through websites, brokers, etc. Availability of information: Health insurance companies might have information or data on what consumers struggle with or what their questions and issues are to develop material that is appropriate.	NA
Healthcare providers	Existing data and knowledge: Providers might be interested in sharing data or collaborating to improve patients' experience.	Healthcare providers can use direct contact with patients: Might be able to explain what is covered or not by someone's insurance or	Healthcare professionals undergoing training: Practitioners teaching or studying could benefit from training coming from

		which health insurance would cover what is needed.	existing institutions and infra-structures.
Research Organizations	<p>FORS: Carries out regular surveys such as the Swiss Household Panel and Swiss Health Survey.</p> <p>Careum: organization already works on HL.</p>	Available evidence: Evidence from behavioral economics, user experience, etc. can help guide design of tools, information and materials for decision support.	NA

Table 2: Facilitators to implement recommendations (continued)

Levels/Groups	Recommendation 1: Data collection and monitoring of HIL	Recommendation 2: Provision of decision support tools and information	Recommendation 3: Development and strengthening of HIL skills through compulsory education
Other organizations	<p>Ongoing initiatives: health literacy organizations and initiatives in different cantons.</p> <p>Health Insurance Literacy Measure validation in Switzerland: Initial efforts to measure HIL in Switzerland have taken place.</p>	<p>Existing platforms: Websites and organizations such as Comparis and moneyland.ch already provide comparison tools and information. Other official and public tools are also available (https://www.priminfo.admin.ch/de/praemien).</p> <p>Existing resources and support: Some employers provide HI information and resources.</p>	Existing organizations working on promoting health literacy: Allianz, Health Promotion Switzerland, Careum.
System	Health literacy prioritization: One of the objectives of Health2030 is to promote health literacy to empower citizens' decision-making determinant to their health. This objective could be expanded to include HIL related skills.		
	Existing infrastructure: Surveys such as the Swiss Household Panel and Swiss Health Survey already in place.	Available evidence: FOPH – there is evidence of existing tools that help decision making through user friendly interfaces and choice architecture.	Current compulsory school curriculum can be used and strengthened: Some competences

	Other organizations and infrastructure can be used: For example, OBSAN – they monitor many indicators related to Health System.	Existing resources: There are already resources and information being provided by FOPH.	cies already included in the curriculum are related to HIL (numeracy, digital skills, etc.).
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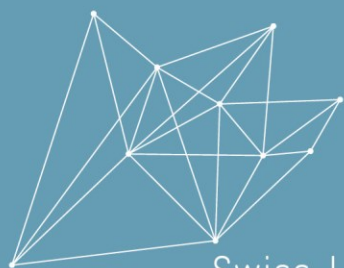
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Appendix I

HIL cutoff points used in the literature

<i>Authors (year)</i>	<i>Cut-off point used</i>
Vardell (2017)	No cutoffs were used. Distribution of HILM scores is discussed and scores are compared between different races/ethnicities and by selected HI coverage.
Adepoju O, Mask A, McLeod A (2018)	Authors use the average HIL score as a point of reference (i.e. "limited or below average health insurance literacy").
Tipirneni R, Politi MC, Kullgren JT, Kieffer EC, Goold SD, Scherer AM (2018)	Higher scores indicate greater levels of HIL. Scale was categorized into 12-point intervals to facilitate the interpretation of regression results.
Edward J, Wiggins A, Young MH, Rayens MK (2019)	Respondents who answered at least "somewhat confident" were coded as having "adequate" knowledge or confidence. Those who answered less confidently to at least one item were coded as having "inadequate" HIL.
Call et al. (2021)	One item of the HILM was dropped. Participants answering "Very likely" to all domains were categorized as having "high HIL" Literacy fell on a gradient with remaining "not high" HIL, which contained moderate and low HIL.



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